UNIVERSITY OF EDINBURGH
Business School

CRC Credit Research Centre

Financial Resilience and Credit Landscape of Public Sector Workers

Report 2 – August 2022

Prepared for Salad Projects by

Professor Tina Harrison
Professor Galina Andreeva
Dr Johanna Garzon Rozo
Junfeng Zhang

About this report

Salad Projects commissioned the Credit Research Centre at the University of Edinburgh Business School to analyse the financial lives and behaviour of NHS and public sector workers who have applied for a loan from Salad Money, a social enterprise which lends exclusively to public sector staff.

Salad uses Open Banking technology to make affordability assessments based on the income and expenditure shown in applicants' banking data for up to two years previously.

The University of Edinburgh analysed nearly 174 million transactions, most spanning a year or longer, for each of 104,661 NHS and public sector workers who applied for a Salad loan. Most were declined on the basis that they could not afford to repay a loan.

The year's report extends the analysis conducted in last year's initial report, which was based on a sample of 9,516 individuals. It provides new insights into NHS and public sector workers' financial resilience, use of credit, loans and Buy-Now-Pay-Later products, and rejected loan applicants' behaviour.

Salad Projects Limited is registered in England 10988702. Registered Office: 49 Greek Street, London, W1D 4EG.

Foreword by Theodora Hadjimichael, CEO, Responsible Finance

They keep the wheels turning for our public services, look after us when we are ill and are used to making tough choices at work. But when some NHS and public sector workers have such low financial resilience that they must choose between heating or eating or whether they can even afford to get to work, we need to question the fairness of a system that allows that to happen.

Imagine the stark reality of having just £79 left in a bank account with two weeks until payday. There's nothing in the pot for emergencies; the overdraft is scant protection.

Many people ask me what happens when Responsible Finance's members, purpose-led community lenders, say 'no' to an applicant. After all, community lenders exist to serve the under-served, the millions of people excluded from mainstream credit because of their circumstances or credit score. The reality is we can't lend to everyone. Responsible providers only lend if an applicant can afford the repayments. That means we turn some applicants away and we too wonder where they might turn next.

Until now, we didn't know. But because Salad Money uses Open Banking for its affordability assessments, and the University of Edinburgh has analysed this data-set featuring more than 100,000 applicants, we now have evidence which shows how people cut back but also the harm which under-regulated credit and irresponsible lending is causing.

It is shocking to read about the thousands of declined applicants who secured credit from a Buy Now Pay Later provider. How can it make sense that if a responsible lender says 'no, this loan is not affordable,' an under-regulated, well-funded tech darling can say yes?

I'm also struck by the increasing levels of financial difficulty, vulnerability, and debt enforcements these (and many other) key workers are experiencing. Six out of ten of the mainly low-paid workers in this analysis showed evidence of being 'in difficulty.' Nearly half had evidence of debt enforcement and fines, up from a third last year.

Some will point to low wage growth versus inflation as the reason, but this report covers data up to the start of January, before most of the dramatic rises in the cost of living. It is also striking to see how a lack of financial resilience affects every income level of applicants, with people typically spending up to half of the month with either very low or negative account balances.

Credit is not the answer to the cost of living crisis or low pay, which are issues for politicians and employers to address. But credit is a fundamental part of how we live our lives in the UK today, used by more than 9 out of 10. Yet we can't all access it on the same terms, leading to financial exclusion. Note that only a tiny percentage of the entire data set have access to high street credit. That is why initiatives such as Fair4All Finance's Affordable Credit Scale Up Programme, which has supported Salad Money and other community lenders, are so important, as they are designed to increase the supply of fair and affordable credit for people in financially vulnerable circumstances.

Everyone should be able to get finance on fair terms if they need it. Community lenders increase choice for those with the fewest options. They cannot extend a loan to everyone who applies. But they can, and do, try to help everyone, whether a customer or not, build their financial resilience through a range of other services. This is why we need more community lenders focused on making a social impact, which exist to improve people's lives even if they are walking a financial tightrope, and design their products to help their customers succeed – like the wraparound support and benefits checkers our members offer.

We have the means to expand the responsible lending sector now. Dormant Assets have already played an important role through Fair4All Finance in helping more people access finance when they need it from community lenders. The expanded Dormant Assets Scheme could have a huge impact on boosting financial resilience by enabling community lenders to scale up and serve the millions of people still unable to access a fair loan when they need one.

Back this up with more investment from banks and impact investors. Some already back social lenders like Salad, but others could do much more to build up communities.

And restrict practices which harm borrowers. Government should accelerate its regulation of BNPL and enable the FCA to act against regulated firms which do not meet the high standards of financial inclusion adhered to by community lenders.

Theodora Hadjimichael

Chief executive, Responsible Finance

Contents

Foreword by Theodora Hadjimichael, chief executive, Responsible Finance 2
Executive summary 5
1. Introduction 8
2. Sample characteristics 9
3. Financial resilience 12
4. Income 14
5. Credit and loan use 16
6. Overdraft use 18
7. Gambling 19
8. Rejected Applications 21
9. Buy Now, Pay Later (BNPL) 27
Conclusion by Lord Iain McNicol, Chair of the Public Responsibility Oversight Body, Salad Money 47

Executive summary

This is the second report commissioned by Salad Projects that presents the analysis of the financial lives and financial behaviours of individuals that have applied to Salad Money for a loan. The report builds on and extends the analysis conducted in last year's initial report. The available dataset on which this year's analysis has been based covers a much larger sample of 104,661 individuals (compared with 9,516 last year) and draws from a wider population of public sector workers (compared to only NHS workers in last year's report).

Overall, the sample comprises mainly younger, lower earning public sector workers; 51% are aged 35 or younger and 63% are earning £20k after deductions. Two-thirds (65%) of the sample are female and 69% are living in rented accommodation.

Salad Money uses Open Banking data and not credit reference scores to make lending decisions, and lends exclusively to public sector staff. Through Open Banking, Salad Money collects, where available, every transaction going through an applicant's bank account for up to a maximum of two years. It is a rich and powerful dataset providing a detailed insight into the financial lives of individuals.

This report provides an update on a number of key aspects from last year's report (relating to overall financial resilience and credit and loan use) and makes corresponding comparisons. Additionally, the report focuses in detail on two new topics: analysis of rejected loan applicants and behaviour and use of Buy-Now-Pay-Later.

Low financial resilience

The analysis continues to raise serious concerns about financial resilience, which is particularly worrying given the significant increase in this year's dataset analysed (a ten-fold increase in the sample size compared to last year) and the inclusion of a much wider segment of public sector workers. On average individual monthly account balances are below £79 half the time in a month, and average minimum monthly account balances are -£213. Evidence of returned direct debits (an indicator of difficulty in being able to meet financial obligations) continues to be prevalent, with 54% displaying evidence of returned direct debits in the last six months of their accounts. Taken together, there is evidence to suggest that many individuals would struggle to sustain an unexpected expenditure of £100 in a month, without causing their bank account to go into overdraft, or further into overdraft.

Reliance on benefits

Slightly over half (52%) of individuals are receiving benefits which make up a significant proportion of income for many, on average contributing £3,757 to annual income. 40% of individuals with benefits are receiving Universal Credit and/or Working Tax Credit, which is higher than 36% in last year's analysis. Universal Credit and Working Tax Credit have the greatest impact, contributing on average 15% and 13% respectively to total annual account income for those that receive it.

High use of credit and loans

Use of credit and loan products is extremely high with 95% using one or more type of credit or loan. Loans are being used by 91%, with continued evidence that traditional 'high street' banks account for a very small proportion of loan transactions (7% of all loan transactions that could be attributed to a lender) compared with non-traditional lenders that account for the vast majority of lending to this sample. The proportion of individuals paying debt enforcement and fines has increased from 33% in last year's analysis to 48% this year, although values remain low. The value of loan repayments account for 7% of total outgoings on average, which is the same as last year. The use of Buy Now Pay Later (BNPL) has increased significantly compared with last year relative to other credit and loan use, and there is evidence that use of BNPL is displacing use of some non-traditional lenders. Clearpay and Klarna accounted for the largest number of transactions of all lenders (including BNPL) used in the sample, with 23% and 8% respectively.

Persistent overdraft use

A significant proportion of individuals' accounts are in overdraft for at least some of the time. Half (51%) of all accounts are in overdraft up to five days per month and one-fifth (20%) of accounts are in overdraft 10 or more days per month. This continues to show a worrying picture and suggests that the vast majority of individuals are struggling to live within their means, which is only going to get worse with the cost of living crisis.

Gambling

Almost three-quarters (73%) show evidence of gambling. For many individuals (40%) gambling amounts are low at £20 or less a month on average. However, a significant proportion (30%) are spending on average £100 or more a month on gambling. Also worrying is that, compared to last year, there is evidence of a higher proportion of both small (£1-£10) and larger (£1000+) value monthly gambling transactions.

Rejected applicant behaviour

Analysis of rejected loan applicant behaviour shows rejected applicants typically experience a drop in income following a loan rejection. An anticipated drop in income may partially explain the application for the loan. Following the loan rejection, there is evidence that individuals (1) adjust their spending to account for the drop in income, (2) increase spending to improve their credit score, (3) increase credit card spending, and (4) seek alternative credit and loan options.

Overall, reduction in fixed expenditure is modest, as may be expected, but includes average reductions in fees and charges (21%), council tax (almost 12%), utilities, transport and fuel (between 6% and 10%). The reduction in council tax and utilities suggests that some individuals may be deciding not to pay or delay paying bills that could have other consequences.

Most of the spending adjustment comes from flexible spending, with the most pronounced cuts observed in gambling (over 20%), subscriptions (17%) and eating out (13%). However, there are also less pronounced decreases in categories of groceries and household, fun and leisure.

Spending increases are observed in relation to credit card payments (12% increase in the month following a loan rejection) suggesting that this is a way of compensating for the rejected loan, and a 43% increase in spending on improving credit scoring (i.e. paying for information from credit bureau reports), although the increase is modest at an average £7.

In terms of other credit and loan options, rejected loan applicants mainly turn to Buy Now Pay Later (BNPL) providers: Klarna, Clearpay, Zilch, Laybuy, as well as retailer credit (e.g. Very) and also new credit card or loan providers (Aqua, Vanquis, Safety Net/Tappily).

Buy Now Pay Later (BNPL)

Overall, 60% of individuals had used BNPL. The majority of BNPL users (40%) had only used one BNPL provider; 30% had used two BNPL providers and 10% had used four or more. The main BNPL providers used are Clearpay (accounting for 50% of all BNPL transactions in the dataset) and Klarna (accounting for 17% of BNPL transactions).

Compared with non-BNPL users, BNPL users appear to be more financially active (i.e. have more transactions), spend more relative to their incomes, have higher overdrafts and a significant minority are heavily indebted, although it is not possible to draw any causal relationship with BNPL use. Regarding demographics, women and younger people show a higher tendency to use BNPL.

The majority of BNPL users currently do not show excessive overindebtedness and overindulgence. This may be partly due to some individuals having relatively recent use of BNPL. Our analysis shows that use of BNPL increases with time, with a relatively fast acceleration, especially for medium and high users. A significant minority of individuals are high users of BNPL, showing use of several (up to seven) BNPL providers, and also demonstrating the highest level of indebtedness. This small segment of individuals may be at risk from continued use. Given the relatively fast acceleration over time in the amounts spent on BNPL and the financial circumstances of heavy users, we recommend more information sharing and affordability assessments.

1. Introduction

This is the second report commissioned by Salad Projects that presents the analysis of the financial lives and financial behaviours of individuals that have applied to Salad Money for a loan. The report builds on and extends the analysis conducted in last year's initial report. The available dataset on which this year's analysis has been based covers a much larger sample of 104,661 individuals (compared with 9,516 last year) and draws from a wider population of public sector workers (compared to only NHS workers in last year's report).

Salad Money uses Open Banking data and not credit reference scores to make lending decisions, and lends exclusively to public sector staff. Through Open Banking, Salad Money collects, where available, every transaction going through an applicant's bank account for up to a maximum of two years. It is a rich and powerful dataset providing a detailed insight into the financial lives of individuals.

This report provides an update on a number of key aspects from last year's report (relating to overall financial resilience and credit and loan use) and makes corresponding comparisons. Additionally, the report focuses on two new topics:

1. **Analysis of rejected loan applicants and behaviours** – Not all loan applicants meet the affordability criteria to receive a loan. These criteria are set for good reasons to ensure that the loan does not have a detrimental impact on individuals' financial situations, and ensure that individuals can afford to repay the loan. A key question of interest here is what happens when individuals are turned down for a loan and what impact does this have on their subsequent behaviour? Declined loan applicants may apply to different credit providers, which may have different criteria for lending decisions and/or higher costs of borrowing. To understand what happens after a loan application has been rejected, we analyse the most frequent credit facilities used following the rejection decision, and compare changes in behaviour before and after rejection.
2. **Buy Now Pay Later (BNPL)** – Since the initial analysis in last year's report, the use of BNPL and evidence of this in financial transaction histories has increased considerably. This type of interest-free credit is also attracting much attention from a regulatory perspective; it is effectively unregulated. The concern is that the use of BNPL, if continued unchecked, could potentially lead to harmful consequences for consumers as a result of being over-burdened with multiple repayments, which could have an impact on individuals' creditworthiness and access to affordable credit. We provide a detailed analysis of the volume and frequency of BNPL use among the loan applicants in the dataset, and identify segments for whom use of BNPL can be disadvantageous.

Our analysis is based on 173,897,834 transactions between 06 July 2014 and 26 January 2022. Within this overall timeframe, the individual transaction histories vary. For 90% of individuals, we have at least one year of transaction data to observe, and 15 months for half of the individuals.

In line with the previous report we considered the data relating to only one loan application per user (the most recent one), in order to avoid duplicate transactions from overlapping time periods. The majority of individuals (86%) made only one application for a loan. Different to

the previous report, we used all bank accounts per individual, in order to capture the fuller picture of financial lives and account for situations where individuals use different bank accounts for different purposes (e.g. where one account may be used for salaries, and a different one is used for expenses).

There are some limitations to the dataset that need to be acknowledged and taken into account in reading the results. First, the observed accounts may not give a complete picture of an individual's financial situation. These data capture financial transactions typically from a bank/current account and may not capture other financial behaviours outside of a bank account (for example, payments made towards loan repayments or into savings via payroll deduction would not be captured).

Second, the data gives a snap-shot in time and we may not see the full extent of an individual's relationship with a particular financial product. For example, in many cases we can observe loan repayments, but for some we do not know the value of the loan advanced to the individual because this was received outside the period observed in the dataset, hence, we may miss certain information as a result.

Third, in some cases it was not possible to fully discern the nature of a transaction, due to data redaction for confidentiality purposes. We note these limitations where they may affect interpretation of the results we present.

Finally, it should be noted that the dataset is not a random or representative sample of the full population of public sector workers, there is a self-selection bias, i.e. people that apply to Salad Money are generally higher credit users and may be experiencing more financial problems.

2. Sample characteristics

The report and analysis is based on a sample of 104,661 individuals (out of which 77,543 could be linked to the transactional history). Since publication of the previous report, Salad Money has significantly widened its customer base to all public sector employees. Hence, this year's sample is not only considerably larger than the sample of 9,516 individuals last year, but also draws from a wider population of public sector employees, compared to only NHS employees in the previous year's report. This should be taken into account in making comparisons to the previous year's report. Moreover, the sample is not a representative sample of all public sector workers; it is a self-selecting sample of individuals who have applied to Salad Money for a loan, rather than a random sample. Notwithstanding, the sample comprises a significant number of public sector workers and provides an important and unique insight into their financial lives.

Overall, in common with last year's sample, this year's sample is skewed towards lower earners, women, younger ages (under 35 years) and those living in rented accommodation. In contrast to last year's sample, this year's sample comprises a greater proportion of individuals aged 18-25, individuals living with parents and housing association tenants.

Figure 1 shows that around two-thirds (63%) have earnings of £20,000 or less. This is the same compared with the previous year, although this year's sample contains a higher proportion of very low earners; 28% earning less than £10,000 compared with 14% last year.

Figure 1: Annual Earnings

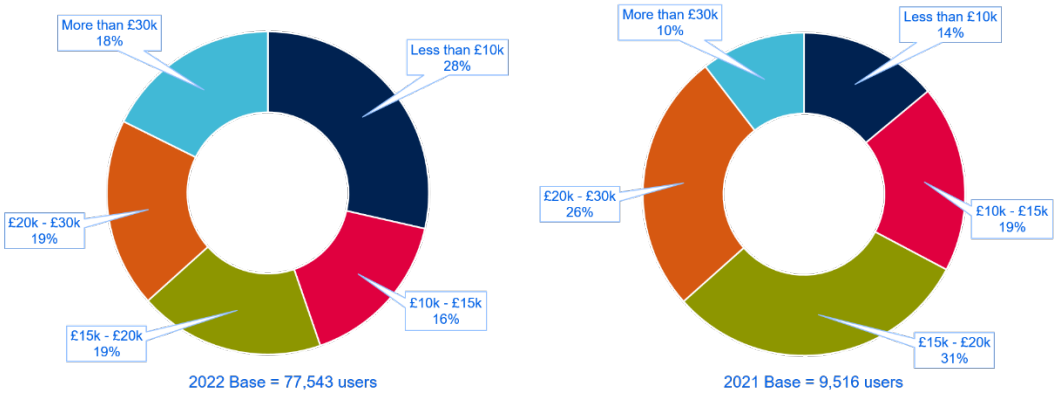


Figure 2 shows the gender distribution, comparing this year's sample with the previous year's sample. Women continue to make up the around two-thirds of the dataset (65%). The proportion of 'gender not specified' has reduced, which may account for the greater proportion of men in this year's sample (28% vs 15%).

Figure 2: Gender

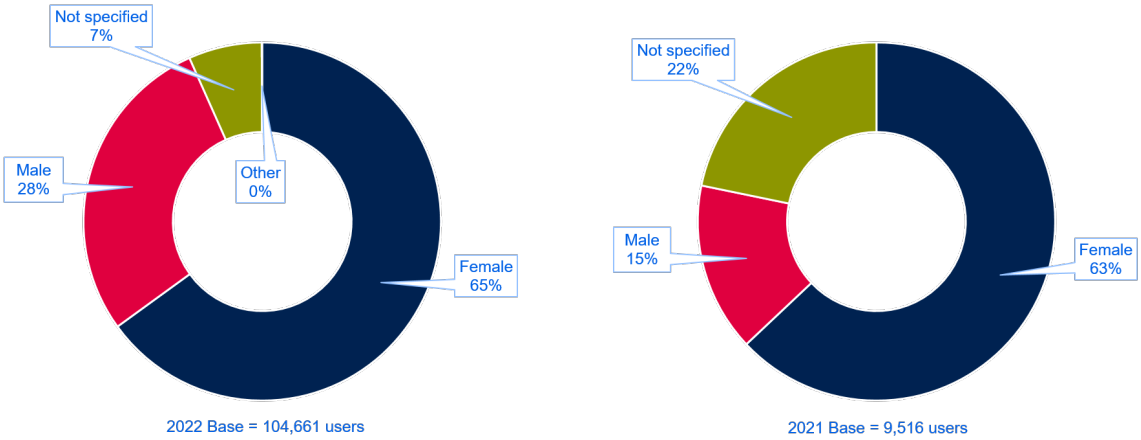
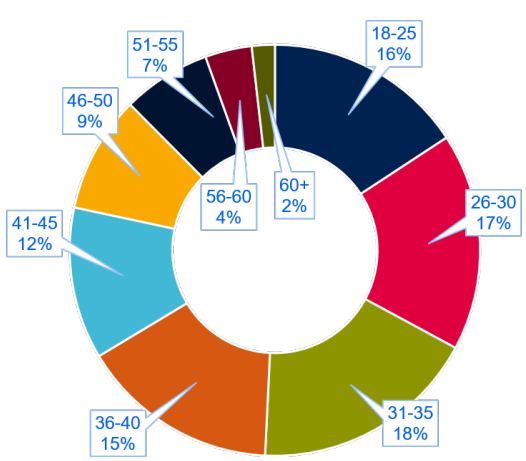
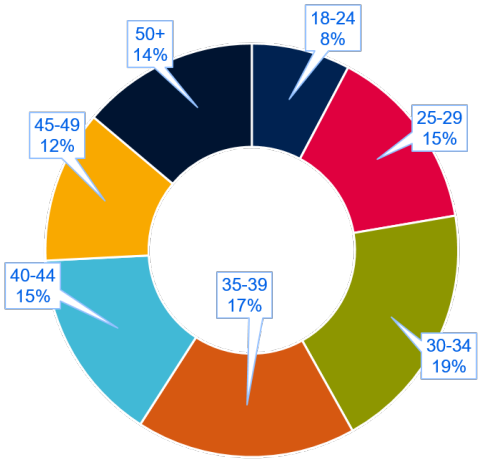


Figure 3 shows the age distribution within the sample, compared with last year's sample. Despite the slight difference in the age bands, this year's sample comprises a higher proportion of younger individuals; the proportion of individuals aged 18-25 is double that compared with the sample last year (16% vs 8%). This is potentially worrying that an increased proportion of younger individuals, especially young adults, are seeking credit. The proportions in all age groups over 30 years old are lower compared with the previous year.

Figure 3: Age



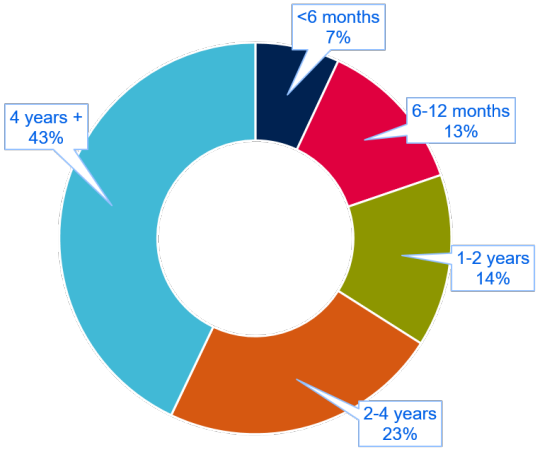
2022 Base = 104,661 users



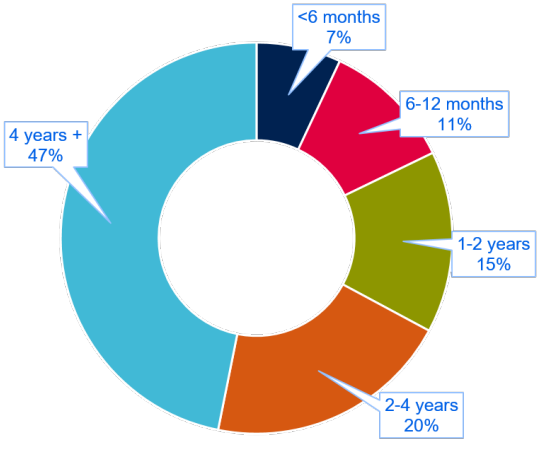
2021 Base = 9,516 users

In terms of employment length, Figure 4 indicates that the majority of individuals in the sample (43%) have been in employment for more than 4 years, and one-third (34%) have been employed for 2 years or less. The employment length distributions are broadly the same as the previous year's sample.

Figure 4: Employment length



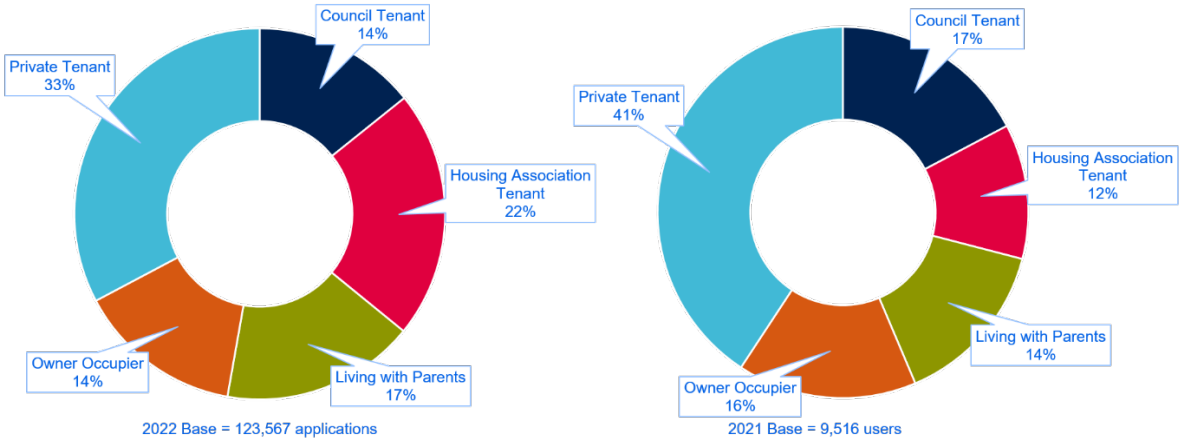
2022 Base = 123, 567 applications



2021 Base = 9,516 users

In terms of residential status, 69% are living in rented accommodation; the proportion of housing association tenants is noticeably bigger in this year's sample (22% compared with 12% last year). The proportion living with parents is slightly higher at 17% (compared with 14% last year). Owner occupiers continue to account for a relatively small proportion at 14%, which is also slightly lower than last year.

Figure 5: Residential status



3. Financial resilience

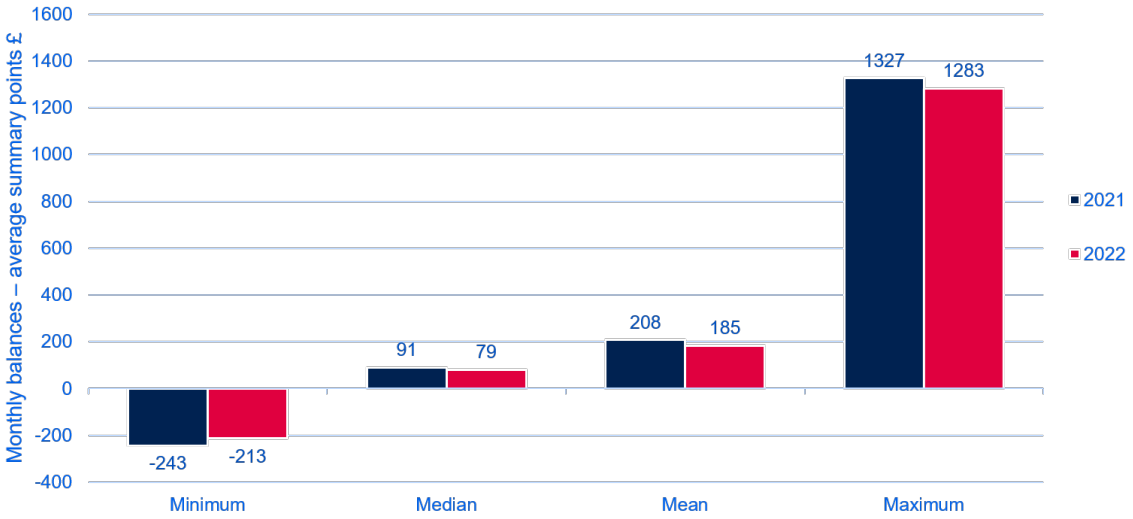
According to the FCA Financial Lives Survey 2020,[1] 20% of UK adults had low financial resilience. The FCA defines financial resilience as being over-indebted or having little capacity to withstand even a small financial shock (such as a £50 reduction in income or losing the main source of household income for even a week).

To provide a broad understanding of financial resilience, we first conducted an analysis of monthly account balances. For each individual's monthly account balance, we take the minimum balance for each month as the worst case-scenario, and the maximum balance, as the best case. We also calculated summary measures – the mean or the average values of the account balances in a given month, and the median or the mid-point of the account balances within a month. Figure 6 shows the average (mean) of all monthly minimum, median, mean and maximum account balances for all individuals, comparing this year's sample with the previous year's sample.

The average of all individuals' mean monthly account balances is £185, which is slightly lower compared with last year's sample (£208). The average median (mid-point) monthly account balance is £79 (compared with £91 last year); meaning that on average individuals' monthly account balances are below £79 half of the time during a month. The average minimum monthly account balance is -£213, which compares favourably with the average minimum of -£243 for last year's sample. However, this may not necessarily suggest an improvement in the management of overdraft balances, but may reflect a lack of access to overdraft facilities. Subsequent analysis of credit and loan use supports this. The average maximum account balance is £1,283. This is slightly lower than the average account balance for last year's sample (£1,327). Maximum account balances are likely to be at their highest when salary and other significant income payments are made into the account each month.

[1] https://www.fca.org.uk/publication/research/financial-lives-survey-2020.pdf

Figure 6: Average of summary points for monthly account balances



Within these averages there is a considerable variation. For example, the bottom 25% of average median monthly account balances are below or equal to zero, which is similar to the last year. The highest 25% of average monthly balances are £254 or greater, which is slightly lower than last year's value of £284. In terms of the range of minimum and maximum monthly account balances, the bottom 25% of average minimum monthly account balances are -£202 or lower, which is a slight improvement on last year's value of -£247; yet three-quarters (75%) of average minimum monthly account balances are still at or below zero, suggesting that most months individuals are experiencing zero or negative account balances. In terms of the maximum monthly account balance, the lowest 25% of average maximum monthly account balances are £609 or less, again a slight improvement on £560, and the highest 25% are £1,725 or more (£1,710 last year).

Overall, this suggests that for most individuals their account balance is at its highest when salary and other significant income payments are made into the account. Average monthly incomes from earnings amount to £944, rising to £1,939 taking into account benefits and pensions. However, on average individuals are spending up to half of the month with either very low or negative account balances.

An aspect of financial resilience is the extent to which individuals are able to meet their bills and credit commitments. According to the FCA Financial Lives Survey 2020, 7% of the UK population were defined as 'in difficultly' prior to Covid-19 because they had missed paying bills or meeting credit commitments in three or more of the previous six months. Since publication of the FCA's 2020 survey, increases in the cost of living have plunged more people into financial difficulty. A July 2022 report by Abrdn Financial Fairness Trust and Bristol University[2] found 1.6 million more households are struggling than nine months ago, and estimated that one in six households across the whole population (4.4 million households in

[2] https://www.financialfairness.org.uk/en/our-work/publications/coronavirus-financial-impact-tracker-2022

total) are in “serious financial difficulties” – this is more than double the proportion reported by the FCA (approx. 16%).

A key indicator of being ‘in difficulty’ is whether individuals have missed paying domestic bills or meeting credit commitments in at least three of the last six months. We use returned direct debits as a measure of missed bills. It is not a perfect indicator since we do not know whether the direct debits are for domestic bills or credit commitments, but it is still an important indicator. Returned direct debits occur when a company attempts to take money from an account (in accordance with an agreed direct debit mandate), but there are not sufficient funds in the account to cover the amount requested.

We examined the incidence of returned direct debits for all individuals within the last six months of data for each individual. Slightly over a half of the sample (54%) had evidence of returned direct debit payments in the last six months, suggesting a potential difficulty in meeting financial commitments. This is a modest improvement on last year’s figure of 59%.

A further key indicator of financial resilience, is whether individuals could withstand a sudden income shock or unexpected increase in expenditure. We considered the impact of a £100 unexpected expenditure on average monthly account balances.

We used the average of the user-monthly median (mid-point) account balance as the reference point, which is £79 (see Figure 6). This means that on average individuals have an account balance above £79 half of the time during a month and half of the time below this. This suggests that on average individuals would struggle to meet an unexpected expenditure of £100 and would be forced into overdraft unless they had savings to fall back on.

Combined with the insight elsewhere in this report that reveals the high use of credit and loans and persistent overdraft use, this suggests an ongoing significant concern for the financial resilience of these individuals.

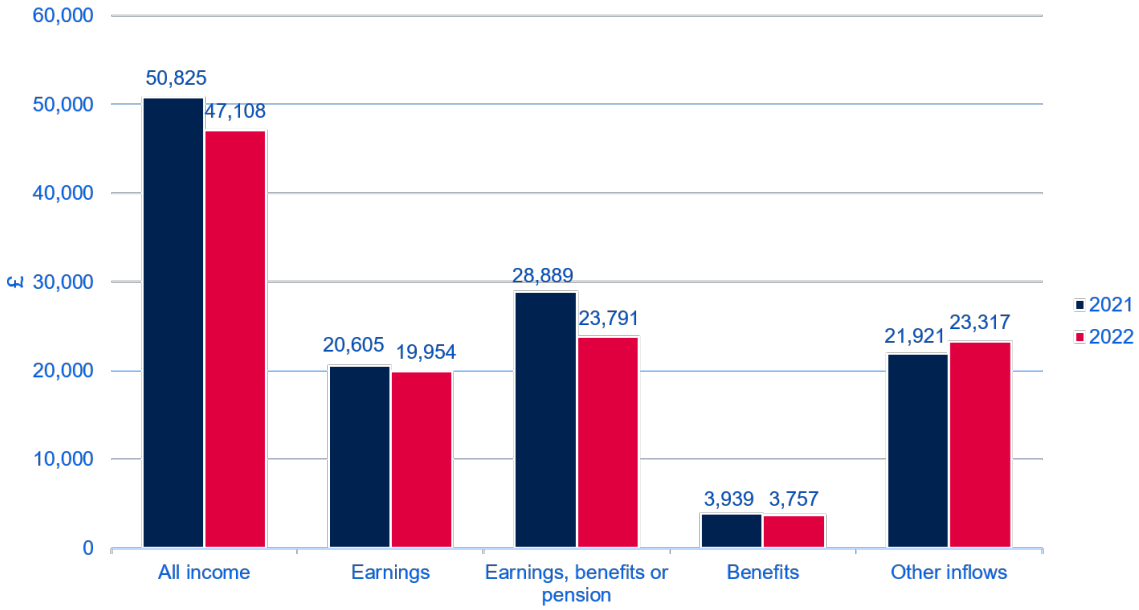
4. Income

Income is derived from a number of sources. We categorise income into five different types:

- All income – which takes into account all incomings into the bank account;
- Earnings – income derived from salaries primarily;
- Earnings, benefits or pension – salary payments plus benefits and/or pension;
- Benefits – income from benefits on their own;
- Other inflows – captures other incomings not defined as earnings, benefits or pension and which make up the rest of total incomings.

Figure 7 shows that average total annual account income amounted to £47,108, which is lower than total income for last year’s sample (£50,000). Roughly half of this (£23,791) is made up of income from earnings, pensions or benefits, with earnings (£19,954) accounting for the larger part. Other inflows account for half of all total account income (£23,317) and include, amongst other things, bank transfers and credit and loan payments into accounts. Compared with last year’s sample, the total annual average income for this year’s sample is lower, reflecting lower average annual earnings, pensions and benefits, but higher overall average other inflows.

Figure 7: Mean annual income by income type



Slightly over half the sample (52%) are receiving benefits. The average annual income from benefits is £3,757. Females derive more income from benefits than males: this is largely due to benefits related to children being paid into their accounts.

Table 1 shows the range of benefits received and the number and proportion of individuals from both this year's and last year's samples who are receiving them. A number of individuals will be receiving more than one type of benefit. The benefits most widely received are Child Benefit (received by 32% of individuals) and Universal Credit (received by 33%). The slightly lower proportion in receipt of Child Benefit is consistent with a higher proportion of younger aged individuals in this year's sample. The higher proportion receiving Universal Credit may be partly explained by changes to Working Tax Credit. Nevertheless, 40% of individuals are receiving Universal Credit and/or Working Tax Credit, which is higher than in last year's sample of 36% and highlights the importance of benefits to a significant proportion of individuals in this sample.

In terms of the impact of the value of benefits on total annual account income, Universal Credit and Working Tax Credit have the greatest impact, contributing on average 15% and 13% respectively to total annual account income for those that receive it. For half the sample, Universal Credit accounts for at least 10% and Working Tax Credit account for at least 11% of total annual account incomes.

Table 1: Benefits as a proportion of total income

Benefit type	% in receipt of benefits		Benefits as a proportion of total annual income			
	2021	2022	Mean 2021	Mean 2022	Median 2021	Median 2022
Carer allowance	1.58%	2.65%	6%	6%	5%	5%
Child benefit	35.05%	31.57%	4%	4%	4%	3%
Child tax credit	13.42%	7.13%	7%	7%	4%	4%
Disability benefit	6.41%	7.39%	9%	9%	8%	8%
Employment support allowance	1.44%	1.79%	10%	11%	7%	7%
Housing benefit	0.09%	0.04%	6%	2%	3%	1%
Income support	0.78%	0.6%	4%	4%	2%	3%
Jobseekers allowance	0.69%	n/a	2%	n/a	1%	n/a
Pension credit	0.11%	0.08%	7%	6%	6%	4%
Universal credit	22.33%	33.15%	13%	15%	8%	10%
Working tax credit	13.04%	7.17%	13%	13%	10%	11%
Other benefits	7.01%	9.92%	2%	1%	1%	1%

5. Credit and loan use

Almost all individuals (95%) are using one or more type of credit or loan. Only 5.42% do not have evidence of credit use in their bank account transactions. These individuals may still be credit users, but we have not been able to determine this from the available data.

Figure 8 shows the breakdown of credit use by type of credit or loan product category. The largest category of use (91%) is loans (comprising both credit received and repayments). Over half the sample (59%) have evidence of fees and charges. This is a slightly lower proportion compared to last year's sample, but still represents a very high proportion overall. Over one-third (35%) are making payments to credit cards. Of concern is that the proportion of individuals in this year's expanded sample paying debt enforcement and fines has increased considerably; just under half (48%) showed evidence of debt enforcement and fines in their accounts compared with 33% in last year's sample. The proportions in this year's sample in debt management and using solvency providers has more than doubled compared with last year's sample, but remain low at 7% and 4% respectively.

Figure 8: Credit use by type of credit/loan

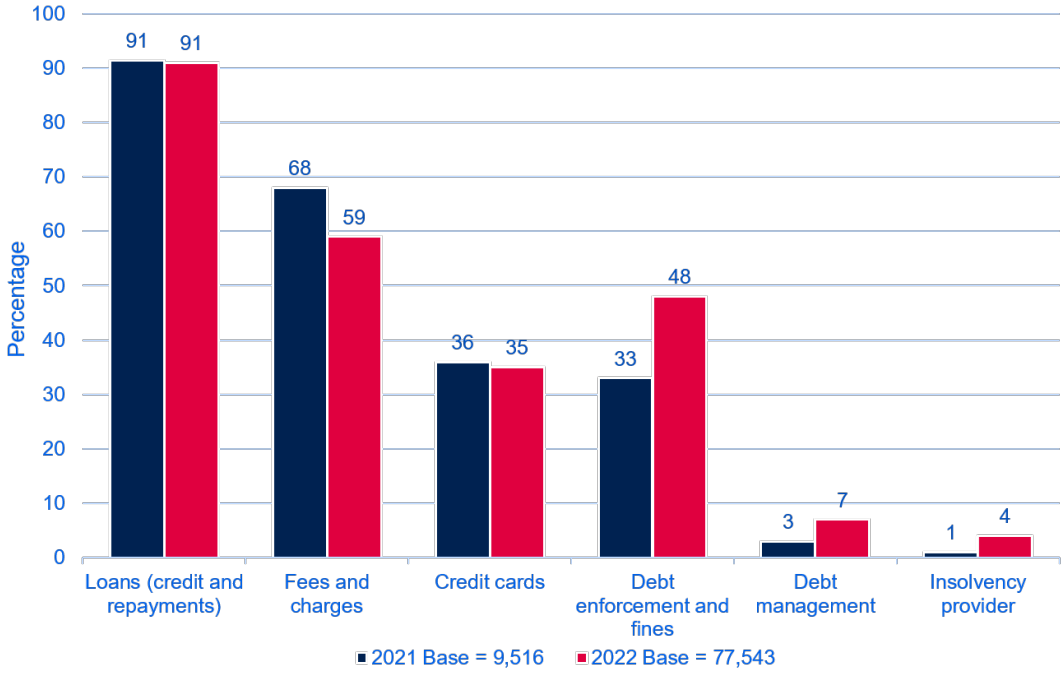


Table 2 shows the proportion of total annual outgoings spent on credit and loans. Loans and repayments as a total group make up on average 7% of total account outgoings for the 91% of users that use them. The other categories account for a much smaller proportion of total outgoings on average.

Table 2: Proportion of total annual outgoings

Credit type	% users		Credit payments as a proportion of total annual outgoings			
	2021	2022	Mean 2021	Mean 2022	Median 2021	Median 2022
Loans and repayments	91%	91%	7%	7%	5%	5%
Fees and charges	68%	59%	1%	0%	0%	1%
Credit card payments	36%	35%	3%	2%	1%	1%
Debt enforcement and fines	29%	48%	1%	1%	1%	1%
Debt management	3%	7%	3%	2%	2%	1%
Insolvency provider	1%	4%	2%	3%	2%	2%

In terms of understanding where individuals are borrowing money from, comparisons with last year's report are difficult due to redacted data, which makes it impossible to identify all lenders. In last year's analysis, traditional lenders accounted for 9% of all loan transactions and non-traditional lenders, many of which are high-cost lenders, accounted for 73% of all loan transactions. We were unable to attribute 17% of loan transactions to a particular lender.

In this year's analysis, we have not been able to attribute 43% of loan transactions to a particular lender (because of redacted transaction reference data). It would appear that traditional lenders still account for a small proportion of loans (7% of transactions could be attributed to traditional providers), while 50% of loan transactions could be attributed to non-traditional providers. It is very likely that the unattributed transactions belong to non-traditional lenders, suggesting that non-traditional lenders continue to account for a significant majority of the loans taken by these individuals.

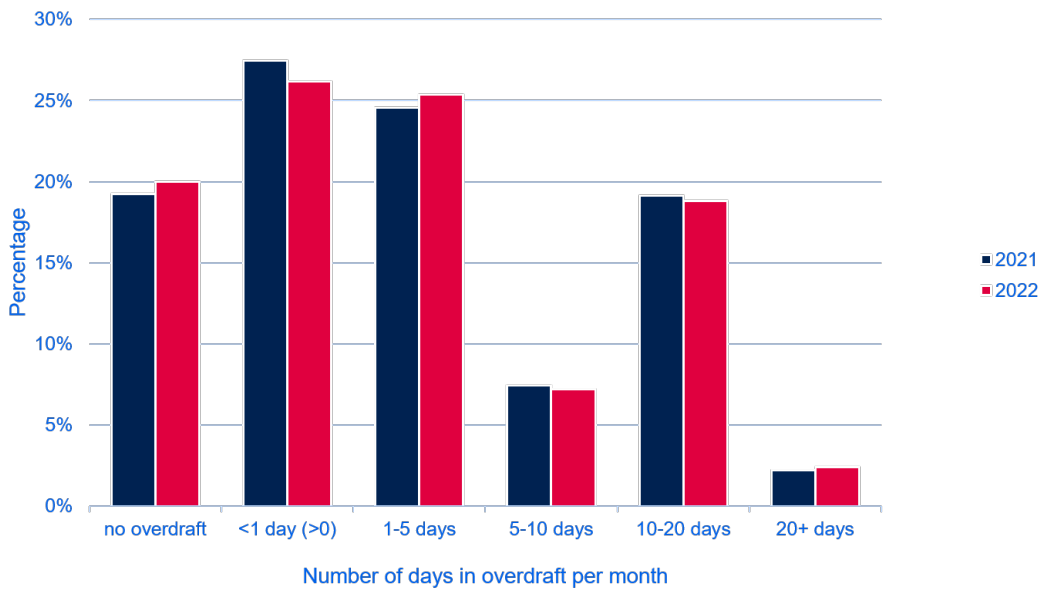
The top non-traditional lenders by transaction volume are: Clearpay (accounting for 23% of all credit transactions); Klarna 8%; Laybuy 7%; Zilch 5%. Clearpay's share of credit transactions has increased from 12% of all transactions last year to 23% of transactions this year. Klarna has similarly increased from 4% to 8% of transactions since last year. The later section specifically examines Buy-Now-Pay-Later transactions.

6. Overdraft use

Reliance on overdrafts is still prevalent. Over the period observed, less than 20% of individuals had not used an overdraft. It should be noted that our definition of overdraft is any instance of a negative balance irrespective of its magnitude. It should also be noted that not all accounts provide an overdraft facility to individuals, although we cannot tell which accounts these are.

Looking at the number of days per month that accounts were in overdraft, Figure 9 shows that half (51%) of all accounts were in overdraft up to 5 days per month, and one-fifth (20%) were in overdraft 10 days or longer per month. The incidence of overdraft is broadly the same as for last year's sample and continues to show a worrying picture.

Figure 9: Number of days per month in overdraft



7. Gambling

Almost three-quarters of the sample (73%) have at least one gambling transaction in their account history, comprising either money spent on gambling or income from gambling. This is an increased proportion compared to last year's sample, where over two-thirds (68%) had evidence of gambling transactions. Given that the data cannot capture cash transactions on gambling and may therefore under-represent the extent of gambling activity, this is even more significant.

Figure 10 shows the average amount per month spent on gambling. The majority of monthly gambling expenditure is low: 40% of monthly gambling transactions are £20 or less, with the majority of these £10 or less. A sizeable proportion of monthly gambling transactions (30%) amount to £100 or more (compared with 25% in last year's sample). In comparison to last year's sample, this sample shows a higher proportion of both very small (£1-£10) and larger (£100+) value monthly gambling transaction.

Figure 10: Average monthly amount spent on gambling

Figure 11 shows total annual expenditure on gambling as a proportion of total annual outgoings. Just over one-quarter (27%) of individuals have not spent anything on gambling over the account periods observed. This proportion is lower than that observed in last year's report. Two-thirds (67%) have spent less than 25% of their total annual outgoings on gambling, which has also increased when compared with last year's sample. Just over 5% spent more than 25% of their annual outgoings on gambling, which has also increased slightly compared with last year.

Figure 11: Gambling expenditure as a % of total annual outgoings

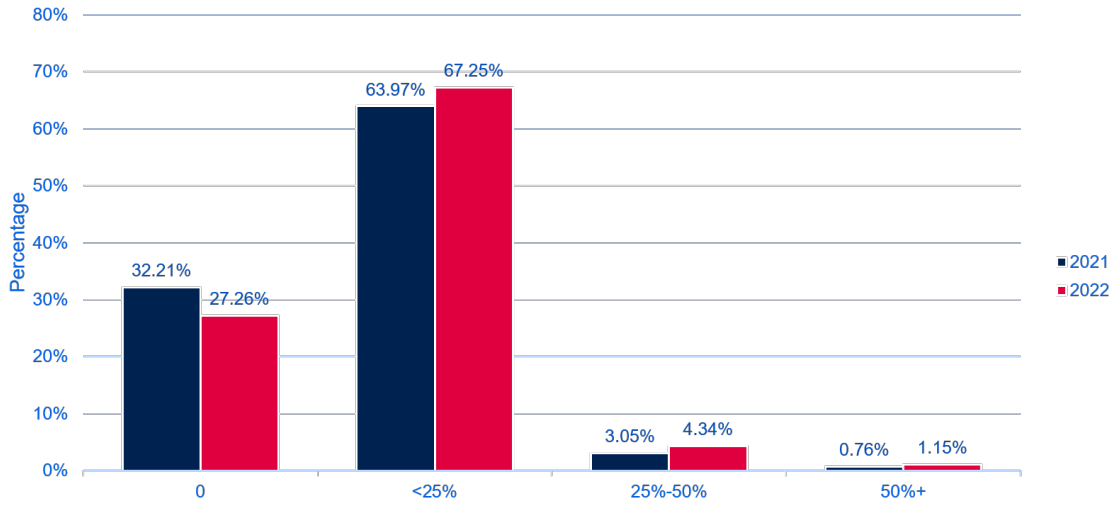
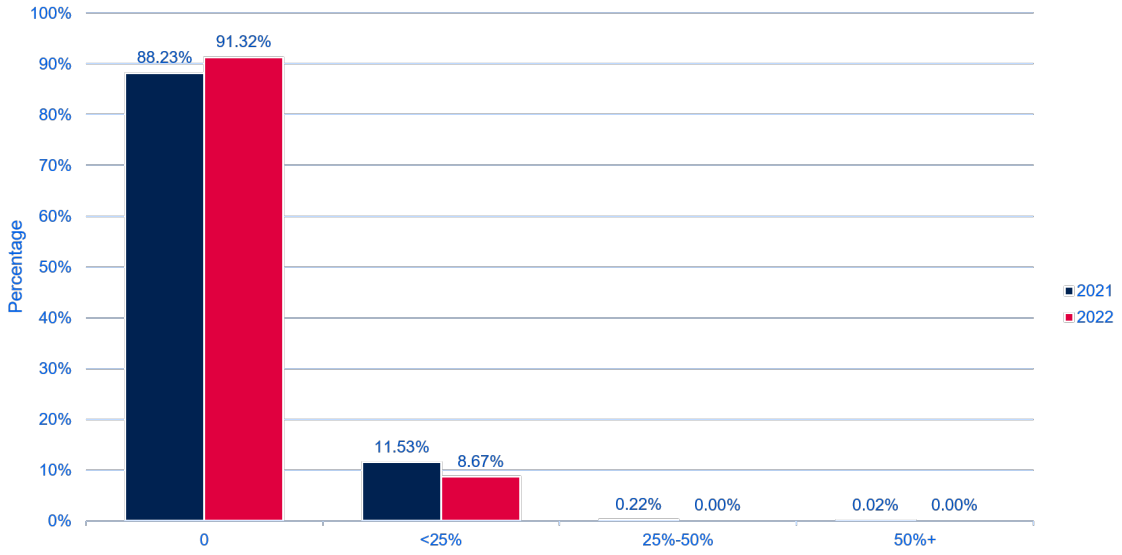


Figure 12 shows annual income from gambling as a proportion of total annual income. The vast majority (91%) have not made any money from gambling. This needs to be read with some caution as individuals may elect to have gambling winnings paid into a different bank account. Only 9% of individuals derived 25% or less of total annual income from gambling. Nobody made more than 25% of total annual income from gambling.

Figure 12: Gambling income as a % of total annual income



Overall, compared with last year, this sample shows a slightly higher tendency to gamble, an increase in the proportion of higher value gambling transactions, but also potentially less likely to profit from gambling, from the data observed.

8. Rejected Applications

Rejected applications were identified by matching transactions with information on applications and individuals. The rejection decision date is not recorded, so we used 'ApplicationCreated' date as a proxy for the date when the applicants received the decision, since the decision process is very quick and rarely exceeds more than a couple of days.

Whilst the transactional history is quite extensive before the application date, because it is required for making a credit decision, not all applications are followed up after this decision. Only 25% have 59+ days of transactions after 'ApplicationCreated' date, 50% of rejected accounts matched with transactions have only 1 day of transactions.

The major part of the analysis is restricted to applications that have transactions available within -/+ 1 month of 'ApplicationCreated' date, and that gives 27,953 individuals/ applications (about one-fifth of the larger dataset).

8.1 Changes in general financial situation

We measure the financial situation by looking at two metrics: (1) the minimum Account Balance for the month before and after the rejection, this is the worst case scenario; (2) the median Account Balance for the month before and after the rejection, this is the mid-point for all values the Account Balance takes during the month, or a 'typical' value for the Account Balance. The most popular measure of a 'typical' value is the mean or arithmetic average, however, it can be heavily affected by outliers/ extreme values, therefore, median is more representative in such situations.

Table 3 below demonstrates the percentile distributions of the two measures discussed above, i.e. each measure is sorted in ascending order, and then the values for percentiles of interest are obtained, e.g. the lowest 1%, 5%, 25% or the sample, etc. Even before the rejection half of the applications (50%) in our sample are below -£37.51, i.e. they are already in overdraft for their lowest point during the month. It becomes slightly worse after the rejection with the 50% of the applications going to below -£40.57. The corresponding means show very little deterioration, although the absolute values are significantly low, around -£300. Yet these low values for the means are caused by extreme values at the lower end of the distribution, where 1% of the lowest values of all accounts are around -£3,000. This illustrates the point mentioned above of the arithmetic average being sensitive to outliers. It also demonstrates that a small percentage of the sample are in a very difficult financial situation. The 5% of applications at the extreme end of financial difficulty show a modest improvement after rejection, but the improvement is negligible given the negative balance of -£1,700. Equally, there is a positive change at the upper end of the distribution after the rejection. Yet again whilst the extreme values (top and bottom 1%-5% of distribution) provide insights into the situation of small number of applications at the margins, they cannot be taken as typical or representative values for the whole sample or population. Extreme values are more prone to random fluctuations as compared to the central part of the distribution.

Table 3: Changes in minimum and median Account Balance before/after rejection.

	Minimum Balance		Median Balance	
	Before	After	Before	After
mean	-310.79	-308.82	20.14	8.01
1%	-3002.69	-3000.78	-2439.02	-2464.1
5%	-1725.71	-1720.09	-1285.91	-1329.3
25%	-302.12	-308.79	0	0
50%	-37.51	-40.57	79.81	71
75%	0	0	233.06	219.77
95%	0.61	5.14	725.9	704.77
99%	100.16	142.6	1677.67	1696.8

The median Account Balance is a more balanced representative measure. It is striking that a quarter of all applications have their mid-point value at 0 or below, both before and after the rejection. The mid-point of the median balance, which is around £80 before the rejection, drops to £71 after it. However, almost the whole distribution demonstrates a shift to lower values, except for the top 1%. Therefore, following the rejection, 99% of the sample experience a deterioration in their financial position (as measured by median Balance), which was not healthy to begin with.

An obvious concern when analysing Account Balance is that people without an overdraft (28.65% of the sample) cannot go below 0, therefore should be treated separately. Table 4 below presents the results of such segmentation. Both groups (with and without overdraft) show deterioration in the median account balance following the rejection.

Table 4: Changes in median Account Balance Before/After rejection by Overdraft.

	OD Group (n=19,944)		no OD Group (n=8009)	
	Before	After	Before	After
mean	-79.81	-93.14	269.03	259.91
1%	-2738.16	-2730.12	0	0
5%	-1554.78	-1592.27	0	0
25%	-180.86	-199.87	0	0
50%	76.24	67.25	94.02	88.69
75%	212.04	196.64	294.44	279.49
95%	648.67	618.14	934.76	926.53
99%	1437.54	1393.83	2502.94	2365.16

8.2 Changes in Income Before/After rejection

For this section of analysis, the amounts of transactions in a specific category are summed up, giving the monthly amount in £. Then the percentage difference of 'After' as compared to 'Before' is calculated. As shown in Table 5, there is a significant drop in income of almost 20%, and a drop in benefits of almost 4%. This may be a reason for applying to Salad Money for loan, in anticipation of an expected shortfall in the inflow. The largest decrease is observed for pensions, this is, however, related to 355 users, which is in line with the demographics of the sample, consisting mainly of younger and middle-aged individuals.

The increase of 10% in other inflows does not compensate for the observed shortfalls.

Table 5: Changes in Inflows Before/After rejection, total sum of transactions in a category.

Classification	Before	After	% Change	# users
income	57,941,728	46,558,231	-19.65%	27,195
benefits	8,389,343	8,057,095	-3.96%	19,564
pension	368,189	214,786	-41.66%	355
other_inflows	76,403,776	84,284,524	10.31%	27,918

To get a more detailed insight into affected categories of income, the total volume of transactions is divided by the number of users making transactions in this category. Therefore, the numbers in Table 6 below are volumes in £ for a month Before/After the rejection, normalised by an individual/application. Table 6 below reports the categories that have at least 1000 users/applications. There is almost 20% drop in Earnings, and substantial reduction in many benefits (Working Tax Credit, Child Tax Credit, Child Benefits, Disability Benefits, Universal Credit), ranging from 2% to almost 8%. Combined with an average drop of £420 in monthly earnings, this is a significant deterioration of the financial situation.

There is also a reduction of 8.5% in credit, which may be another reason for applying to Salad Money, i.e. the need to refinance existing loans.

The categories that demonstrate the increase following the rejection, include Returned Direct Debits, which can be treated as a proxy of financial difficulties (2%). There is also a 27.5% increase in credit internal transfers, which represent bank transfers from other accounts, possibly family and friends. This informal credit becomes the most significant source of income in order to cope with a financial shortfall.

Table 6: Changes in Inflows Before/After rejection, total sum of transactions in a category per user, sorted in increasing order of % Change.

Category	Before	After	Change(%)	# Users
earnings	2135.7	1716.1	-19.65	27130
credit_loans	621.63	568.86	-8.49	14355
working_tax_credit	831.99	766.62	-7.86	1136
child_benefit	160.09	149.79	-6.43	8593
child_tax_credit	468.12	438.52	-6.32	1110
credit_internal_transfer	1409.3	1347	-4.43	10493
universal_credit	721.51	703.32	-2.52	6101
disability_benefit	477.04	466.22	-2.27	1788
returned_direct_debit	191.56	195.78	2.2	13096
refund	62.85	67.48	7.38	7545
other_inflows	1008.8	1102.1	9.25	24833
credit_bank_transfer	1410	1798.3	27.54	17470

8.3 Changes in Spending Before/After rejection

Given the reduction in income, people partially adjust by cutting certain spending categories, as shown in Table 7 below. The majority of reduction comes in discretionary or flexible spending (12-13%). Fixed expenses show modest reduction around 3%.

Table 7: Changes in Outflows Before/After rejection, total sum of transactions in each class of categories.

Classification	Before	After	% Change	# users
fixed_expenditure	-97,643,017	-94,923,235	-2.79%	27,950
flexible_expenditure	-37,148,945	-32,511,149	-12.48%	27,716
other_expenditure	-15,440,055	-13,416,524	-13.11%	27,618

Similar to income categories, we look at normalised volumes of spending per user, for categories with at least 1,000 applications. Here we do not report categories with less than 1% change.

Although the combined decrease in fixed expenditure is modest, the aggregate information hides drops in fees and charges (21%), council tax (almost 12%), utilities, transport and fuel (between 6 and 10%). It should be noted that there is almost 12% increase in credit card payments, demonstrating that this is another way of compensating for the rejected loan.

Table 8: Changes in fixed expenditure Before/After rejection, total sum of transactions in a category per user, sorted in increasing order of % Change.

Category	Before	After	Change(%)	# Users
fees_and_charges	-39.06	-30.81	-21.12%	12,054
council_tax_and_rates	-138.22	-121.97	-11.75%	5,077
utilities - water	-53.04	-47.54	-10.37%	5,998
tv_licence	-21.84	-19.58	-10.36%	7,437
transport_and_fuel	-107.92	-96.85	-10.26%	24,888
debt_management	-152.18	-137.76	-9.48%	1,478
insurance_and_pension	-100.39	-91.15	-9.20%	16,036
utilities - mobile & broad	-124.62	-114.28	-8.30%	24,752
utilities - tv & entertain	-85.61	-78.84	-7.91%	23,085
medical_and_health	-25.95	-24.32	-6.29%	6,473
utilities - energy	-113.86	-106.92	-6.10%	10,544
bank_transfer	-1,847.32	-1,777.41	-3.78%	27,614
housing	-551.56	-532.62	-3.43%	5,830
health_and_fitness	-37.88	-37.06	-2.17%	2,221
child_and_school	-57.96	-59.17	2.08%	5,097
debit_internalTransfers	-1,300.06	-1,329.72	2.28%	11,156
credit_card_payments	-165.98	-185.36	11.68%	7,882

As for flexible spending, the most pronounced cuts are observed in gambling (over 20%), subscriptions (17%), eating out (13%). However, there are also less pronounced decreases in categories of groceries and household, fun and leisure. There is also a 43% increase in spending on Improving Credit Scoring, i.e. paying for the information from credit bureau reports. Although the increase is not massive per user (£7), this is observed for more than 3000 users. This is a natural reaction, following the loan application rejection, however, this also implies the need for better financial education / dissemination of information, since credit reports are available for free, and there is also free advice.

Table 9: Changes in flexible expenditure Before/After rejection, total sum of transactions in a category per user, sorted in increasing order of % Change.

Category	Before	After	Change(%)	# Users
gambling	-719.16	-571.36	-20.55%	16,416
subscriptions	-26.12	-21.50	-17.71%	6,540
eating_out_and_take_aways	-107.97	-94.37	-12.60%	25,457
charity_and_donation	-17.24	-15.14	-12.15%	3,624
groceries_and_housekeeping	-390.85	-352.00	-9.94%	27,114
cash	-290.45	-262.04	-9.78%	24,122
fun_and_leisure	-100.70	-93.70	-6.95%	20,899
fashion_and_beauty	-115.15	-117.42	1.97%	22,118
improving_credit_scoring	-16.21	-23.24	43.35%	3,231

8.4 Use of credit following the rejection

The reduction in spending and reliance on informal credit sources are the main ways of coping with the drop in income and rejected loan application. However, some applicants will also try to re-apply to different lenders. It is interesting to see which lenders are prepared to extend credit to those not considered to be creditworthy by Salad Money. We cannot observe the credit applications made in our data (that would require credit bureau information). However, we can observe lender names in transaction references and can filter those lenders that did not appear before the rejection, but appeared afterwards. We do this using Natural Language Processing (NLP) tools.

Table 10: Lenders that appear After (1 month) but do not appear Before (1 month).

Lender	# of users	% from total users
KLARNA	1173	4.2
CLEARPAY	1145	4.1
TAPPILY/ SAFETYNET	1016	3.63
ZILCH	623	2.23
VERY	614	2.2
LAYBUY	444	1.59
AQUA	414	1.48
VANQUIS	408	1.46
ZILCH	623	2.23

It is clear from Table 10 that the users mainly turn to Buy Now Pay Later (BNPL) providers: Klarna, Clearpay, Zilch, Laybuy. They also buy on credit from on-line retailers (Very) and borrow from new credit card or loan providers (Aqua, Vanquis, Safety Net/ Tappily).

We also look at the full history of transactions available to us, excluding only those who have less than 7 days of history before or after the rejection. These results are given in Table 11, and generally confirm the conclusion that following the loan rejection, people turn to BNPL providers, most of all. The next section will provide the analysis of BNPL spending of all applicants in the sample (including the rejected ones).

Table 11: Lenders that appear After (7 days +) but do not appear Before (7 days +).

Lender	# of users	% from total users
ZILCH	988	3.62
TAPPILY/ SAFETYNET	958	3.51
CLEARPAY	879	3.22
KLARNA	800	2.93
LAYBUY	423	1.55
PAYPAL	398	1.46
AQUA	391	1.43
VANQUIS	355	1.3
VERY	352	1.29
OPENPAY	194	0.71

9. Buy Now, Pay Later (BNPL)

9.1 BNPL market overview[3]

BNPL is a fast growing financing solution that allows consumers to finance a purchase at the point of sale (this can be in-store or online) by paying in instalments free of interest. BNPL plans do not charge interest on payments and are often easier to get approved compared to lines of credit or traditional credit cards. Thus, BNPL is a short term unsecured credit[4] that involves the interaction of consumers, merchants and BNPL providers.

To check the customer's eligibility, the provider performs a soft search with a credit reference agency and this check will not affect the customer's credit score. The BNPL provider spreads the cost, usually, in 3 or 4 interest-free payments. The first payment is made at the point of purchase, with the remaining 2 or 3 payments scheduled automatically every 30 days or 2 weeks -depending on the chosen option. No fees are involved if paid on time. More expensive items (£200 - 3,000) can be financed over the payment period of 12 to 48 months, and in these cases there might be an interest ranging from 0% to 35% APR.

[3] We acknowledge the support of two MSc students in Banking & Risk (Marvin Batterman and Rui Hu) for their contributions to the BNPL market overview.
[4] Financial Conduct Authority (2018), CP18/43 High cost credit review, London.

Consumers can access BNPL services in two main ways either through the merchant's website/app/in-store or directly through the BNPL provider's website/app. The first one is experiencing a growing tendency to embed one or more BNPL providers in the merchant's checkout flows. The second one is offered by the largest players (e.g., Klarna, Afterpay, Affirm, and Paypal), who are building integrated shopping platforms where customers can browse products and buy them with BNPL as the payment method. Their aspiration is to become a "super app", which potentially provides shopping, payments, financing, and banking products in a single platform[5].

BNPL providers generate income by charging fees to both merchants and customers. Most point-of-sale finance providers do not charge explicit interest to customers, but depending on the provider, some may charge an interest fee or flat fee for late payments. For merchants, accepting BNPL is very similar to accepting credit card payments—merchants pay a fee(s) to complete a sale. Merchants are also gaining significant additional benefits with these solutions, e.g. access to growth opportunities for the market over the next 5 years.

The global credit originated at point of sale or BNPL market size is expected to reach USD 20.40 billion by 2028, registering a compound annual growth rate (CAGR) of 22.4% from 2021 to 2028[6]. The market growth is attributed to the straightforward and numerous advantages offered by BNPL, including convenience, interest-free payments, easy registration process on BNPL platforms and instantaneous approval for bills. And, these factors are expected to continue contributing to the market growth over the next few years.

The rapid adoption of BNPL solutions is also explained by the faster growth of online retail in the past decade. For example, UK online sales had over a ten-fold increase from November 2006 to February 2020[7], showing how online retail sales were already growing strongly prior to the pandemic. The Covid-19 pandemic also fuelled the popularity of BNPL. The pandemic left millions of consumers unemployed and lead to global financial instability, exacerbating the need for greater flexibility when purchasing.

As a result, this proposition is becoming increasingly popular as the preferred payment option when shopping online in many developed countries. According to the BNPL Survey conducted by ResearchAndMarkets in Q4 2021, BNPL payments in the UK are expected to grow by 50.5% on annual basis.[4] Nonetheless, the UK BNPL market remains nascent showing modest penetration of their ecommerce volumes (3%) compared to other European countries[8] (e.g. 25% in Sweden, ~18% in Germany, ~8% in Australia). Sweden shows the highest penetration

[5] Dikshit, P., Goldshtein, D., Karwowski, B., Kaura, U., & Felicia, T. (2021). Buy now, pay later: Five business models to compete. McKinsey & Company. https://www.mckinsey.com/industries/financial-services/our-insights/buy-now-pay-later-five-business-models-to-compete

[6] United Kingdom Buy Now Pay Later Market Report 2022: https://www.researchandmarkets.com/reports/5304990

[7] ONS. (2021, 27 July 2021). *Economic trends in the retail sector, Great Britain: 1989 to 2021*. https://www.ons.gov.uk/economy/nationalaccounts/balanceofpayments/articles/economictrendsintheretailsectorgreatbritain/1989to2021#online-retail-in-the-uk-analysis-by-sector

[8] Payments, Processors, & FinTech report, Credit Suisse, February 2021 https://research-doc.credit-suisse.com/docView?language=ENG&format=PDF&sourceid=em&document_id=1083376791&serialid=Xv39ocygAc3ZfJnVd7%2Bd46T7aoIwVSA1Nyw3xJ%2Fgi0o%3D&cspId=null

because Klarna was founded there in 2005. This explains the high rise of usage of BNPL in this country, with Germany and Australia (home of Afterpay) also having seen high relative levels of BNPL penetration.

The global BNPL market is dominated by Klarna, Afterpay, Affirm, and Paypal. These financing providers generated around USD 70 billion in 2021 (Table 1) and are expected to rise to USD 90 annually by 2023 and to generate around $4 billion to $6 billion in revenues, not including revenues from other products they will cross-sell.[9] Although, Paypal has entered into this market relatively recently, it has experienced a fast growth of 'Pay in 4' boosted by the pandemic crisis. As for 2021, it reported that 40,000 merchants and 7 million consumers have used its BNPL services.

Table 12: Finance index from leading global BNPL providers[10].

	Merchants (thousand)	Customers (million)	AVO	GMV $b		Growth GMV	Net Income $m		Growth Income
				H12020	H12021		H12020	H12021	
Klarna	250	90	$140	$22.00	$39.00	77%	$466.00	$766.00	64%
Afterpay	75	16	$150	$4.75	$9.80	106%	$179.81	$374.00	108%
Affirm	29	7.1	$602	$4.64	$8.30	79%	$153.10	$261.80	71%

In the UK it is estimated that BNPL has been used by 17 million people, including 30% of those aged in their 20s.[11]

There are some concerns regarding a quick rise of BNPL, e.g. according to the US survey by Motley Fool 45% of the respondents use BNPL services to buy things that do not fit into their budgets, which is worrying. As is the 17% of people using BNPL because their credit cards are maxed out (Figure 13).

In many countries worldwide, authorities raised concerns about the current state of the BNLP industry regulations. Often the practice does not fit the definition of traditional loans, which require interest rate payments, therefore, special rules are needed for these services.

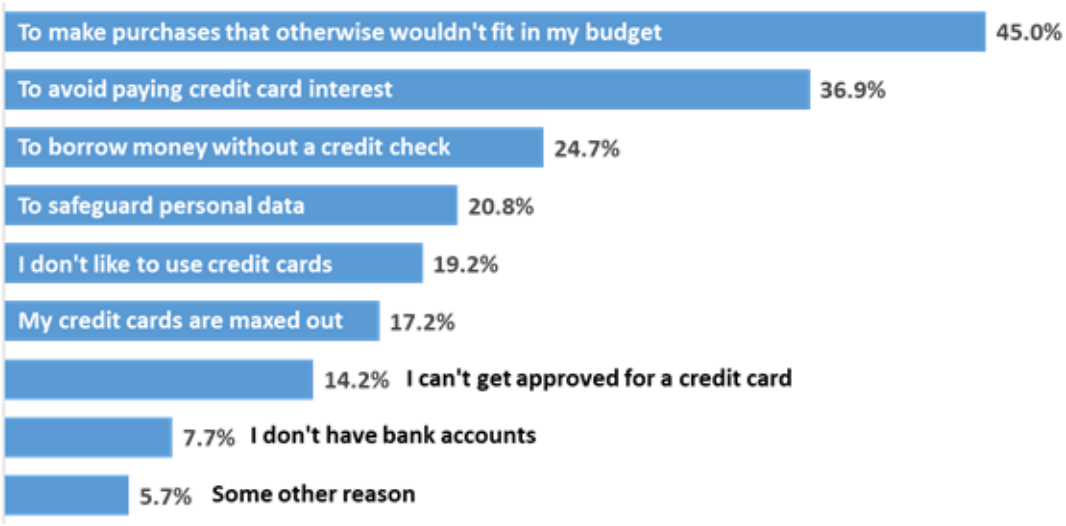
For example, the European Commission announced the update of current consumer credit agreements to include BNPL service providers; the UK's Financial Conduct Authority is to introduce new regulations in 2021 and the Reserve Bank of Australia is also contemplating new rules.

[9] Dikshit, P., Goldshtein, D., Karwowski, B., Kaura, U., & Felicia, T. (2021). Buy now, pay later: Five business models to compete. McKinsey & Company. https://www.mckinsey.com/industries/financial-services/our-insights/buy-now-pay-later-five-business-models-to-compete

[10] Notes. AVO stands for Average Order Value. Gross merchandise value (GMV) is the total value of merchandise sold over a given period of time through a customer to customer (C2C) exchange site. It is a measure of the growth of the business or use of the site to sell merchandise owned by others (Investopedia).
Source. Information gathered from financial reports provided by the companies.

[11] https://www.bbc.co.uk/news/business-61293257

Figure 13: Reasons why US consumers use BNPL[12]



National and regional regulators are mainly concerned about consumer default issues due to overspending and lack of transparency about the BNPL service conditions, e.g. in the USA, there is evidence of BNPL users missing payments, and at the time of first BNPL use more than half of users were already close to the limit of their credit cards[13].

Consumer groups warn that "BNPL can create a slippery slope to unmanageable debt which is largely hidden, to all but those getting into a financial mess"[14].

In response to these concerns, Klarna started sharing the information on repayments of its customers with credit reference agencies. For customers paying on time, this could have a positive effect on their credit rating. For those falling behind with repayments, this could make it more difficult for them to get credit.

Following the issues raised by regulators and consumer groups, our analysis in subsequent sections looks into BNPL presence and patterns of behaviour among our customers.

[12] Source: The Motley Fool (2021), Is "Buy Now, Pay Later" PayPal's Next Mega Growth Opportunity?" https://www.fool.com/investing/2020/12/05/is-buy-now-pay-later-paypals-next-100-billion-oppo/
Note: Respondents were able to select multiple answer categories
Methodology: The Ascent survey of 2,000 US adults, conducted March 2021
[13] United Kingdom Buy Now Pay Later Market Report 2021, ResearchandMarkets.com
[14] https://www.bbc.co.uk/news/business-61293257

9.2 Data preparation and preliminary analysis

For the analysis of BNPL, we have selected 7,431,258 transactions in 'loans and repayments' and 'credit loans' categories from the total of 174,392,725 transactions. We used Natural Language Processing (NLP) tools to identify BNPL lenders from 'Transaction Description' or transaction reference field. BNPL transactions account for 45.9% (3,414,570 observations) of all 7,431,258 credit transactions. From 77,543 unique users in the sample that could be matched to transactions, almost 60% (46,441) make at least one repayment to a BNPL lender. We define them as BNPL users. If we look at all 174,392,725 transactions in all categories, BNPL users account for almost 70% (120,762,408) of them, which can be interpreted that they are more financially active as compared to non-BNPL users.

We have identified eight different BNPL providers in our dataset. Clearpay has the highest presence covering almost 50% of all BNPL transactions. This is followed by Klarna (16.5%), Laybuy (14.5%) and Zilch (12%). Other providers have much smaller shares.

Table 13: The number and percent of BNPL transactions.

Provider	# transactions	%
CLEARPAY	1,692,692	49.57
KLARNA	564,202	16.52
LAYBUY	494,130	14.47
ZILCH	406,534	11.91
OPENPAY	170,611	5
PAY	42,955	1.26
PAYPAL	36,995	1.08
MY PAY	6,451	0.19

The majority of individuals in the sample (nearly 40%) use only one BNPL provider, with additional 30% using two providers. However, 10% use four providers or more, up to seven.

Table 14: The number of BNPL providers per user.

# BNPL	Frequency	%	Cumulative Frequency	Cumulative %
1	18501	39.84	18501	39.84
2	15135	32.59	33636	72.43
3	8222	17.7	41858	90.13
4	3458	7.45	45316	97.58
5	968	2.08	46284	99.66
6	146	0.31	46430	99.98
7	11	0.02	46441	100

9.3 Comparison of BNPL and noBNPL users

Given the concerns about potential risks presented by BNPL, it would be interesting to compare the financial status of BNPL users to those that do not use this service (noBNPL). We start by comparing the monthly account balances, similar to the analysis of changes in the financial status of rejected individuals. However, in this section we analyse the whole transactional history of accounts available to us. For each month we can observe the minimum, mean, median and maximum values the account balance takes. BNPL users collectively have 761,895 months. The minimum account balance represents the worst case scenario for each of 761,895 months, we can then look at the percentile distribution of 761,895 minimum or worst case values.

On average BNPL users have slightly lower minimum balances (around £10) as compared to noBNPL. In half of the months the lowest point for BNPL users is below -£13.9 (median), whilst for noBNPL it is -£7.2. Both categories have minimum above 0 in only 25% of their months. Whilst there are very small differences in the middle part of the distribution, with noBNPL showing slightly higher (and therefore better values), the extremes of the distributions show more pronounced divergence. NoBNPL users are more volatile, i.e. the range between the bottom 1% and top 1% is larger. One percent of the months, the minimum value is around -£3.000 or even lower for noBNPL, whilst for BNPL the corresponding value is approximately at -£2600. The top 1% is c.£830 (noBNPL) v £590 (BNPL). It should be noted that 1% in this context means 7,618 months for BNPL users.

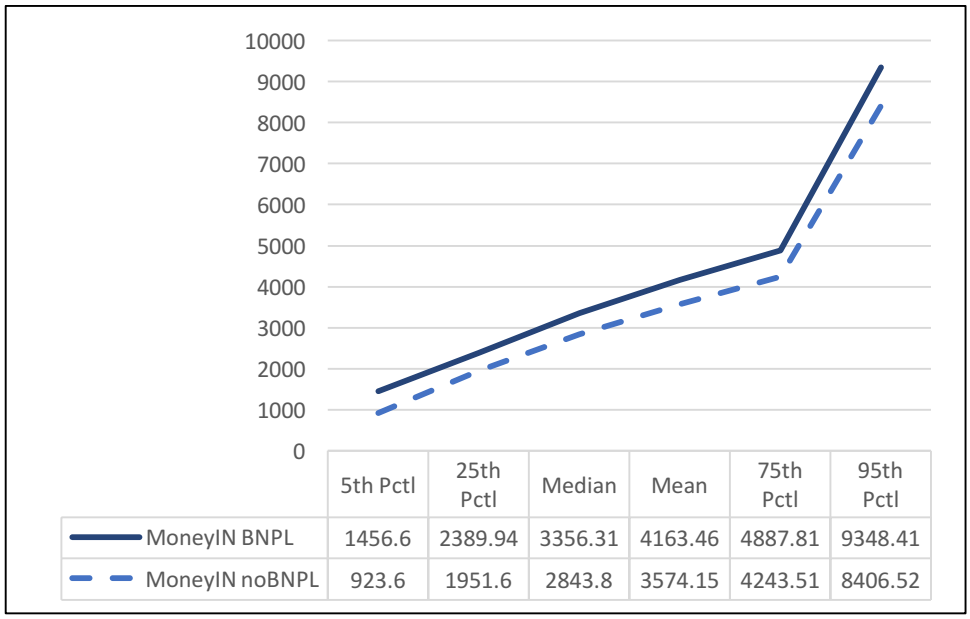
The median or mid-point for monthly Account Balance shows the same pattern – with very little difference in the middle, and more significant divergence at the extremes. However, on average NoBNPL are c.£10 better off. Nevertheless, the financial status for both segments does not look healthy: in 25% of the months the middle point of their account balances is at 0 or negative.

Table 15: Comparison of minimum and median Account Balance for BNPL / NoBNPL users for each month of their combined history.

	Minimum Balance		Median Balance	
	BNPL	noBNPL	BNPL	noBNPL
mean	-232.5	-222.9	71.4	82.5
1%	-2588.6	-2979.1	-2070.1	-2378.3
5%	-1513.5	-1518.8	-1071.6	-1070.1
25%	-245.2	-211.2	0	0
50%	-13.9	-7.2	78.1	68.5
75%	0	0	234.3	232.2
95%	40.6	45.6	775.4	845.5
99%	587.3	826.8	1910.9	2246.9

Next we compare the income streams for the two segments. Figure 14 summarises the total amount of inflows into the accounts. We have summed all positive transactions for each user and divided the sum by the number of months of the user's transactional history, therefore the graph shows the percentile distribution of monthly inflows per user, from the lowest 5% to the top 5% (or 95th percentile). There is also the arithmetic average in the middle. As can be seen from the graph, BNPL segment has consistently higher inflows, although the difference is not that big. Half of the BNPL segment have inflows below £3,356 whilst noBNPL – below £2,844.

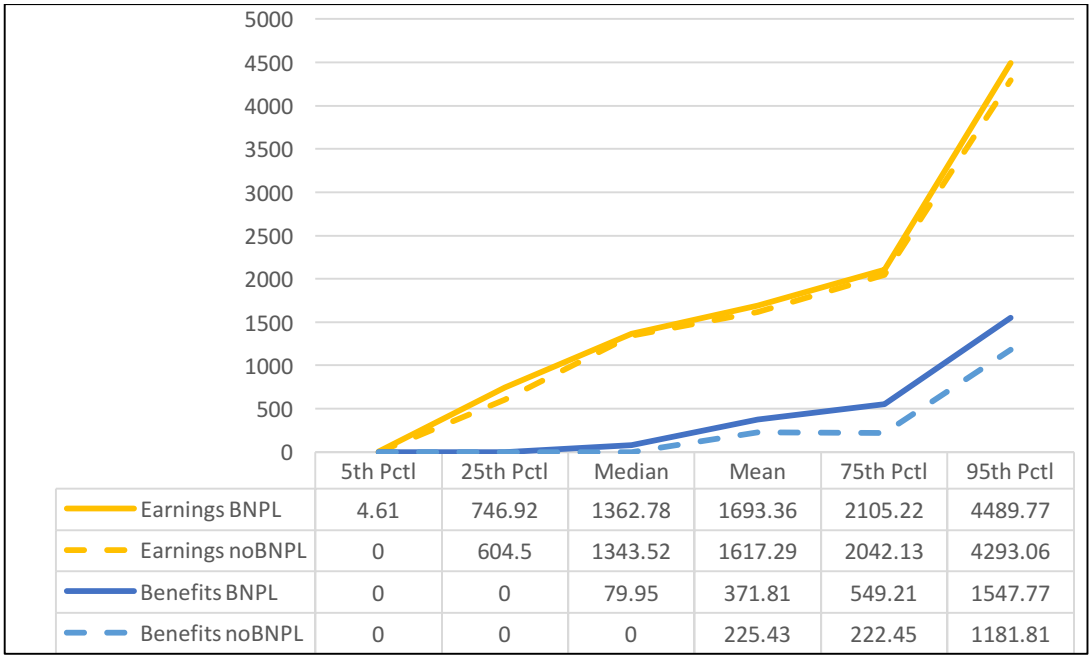
Figure 14: Comparison of monthly inflows for BNPL / NoBNPL users



	5th Pctl	25th Pctl	Median	Mean	75th Pctl	95th Pctl
MoneyIN BNPL	1456.6	2389.94	3356.31	4163.46	4887.81	9348.41
MoneyIN noBNPL	923.6	1951.6	2843.8	3574.15	4243.51	8406.52

However, this measure is too optimistic and over-represents the income, since it includes credit, refunds, bank transfers from other accounts. Figure 15 provides distributions for earnings and benefits, the two main income stream of this population. Although the median values are close for BNPL/noBNPL, there is a difference in other parts of the distribution. Thus, 25% of noBNPL segment earn below £605 per month, whilst BNPL – below £747. The highest earning quarter of no BNPL segment earns above £2,042, whislt BNPL – above £2,105.

Figure 15: Comparison of monthly earnings and benefits for BNPL / NoBNPL users.



	5th Pctl	25th Pctl	Median	Mean	75th Pctl	95th Pctl
Earnings BNPL	4.61	746.92	1362.78	1693.36	2105.22	4489.77
Earnings noBNPL	0	604.5	1343.52	1617.29	2042.13	4293.06
Benefits BNPL	0	0	79.95	371.81	549.21	1547.77
Benefits noBNPL	0	0	0	225.43	222.45	1181.81

As for benefits, the top quarter of BNPL users receive above £549, whilst the same part of noBNPL receive only above £222. For the top 5% the difference is even more pronounced, with BNPL receiving at least £1,548 and noBNPL at least £1,182.

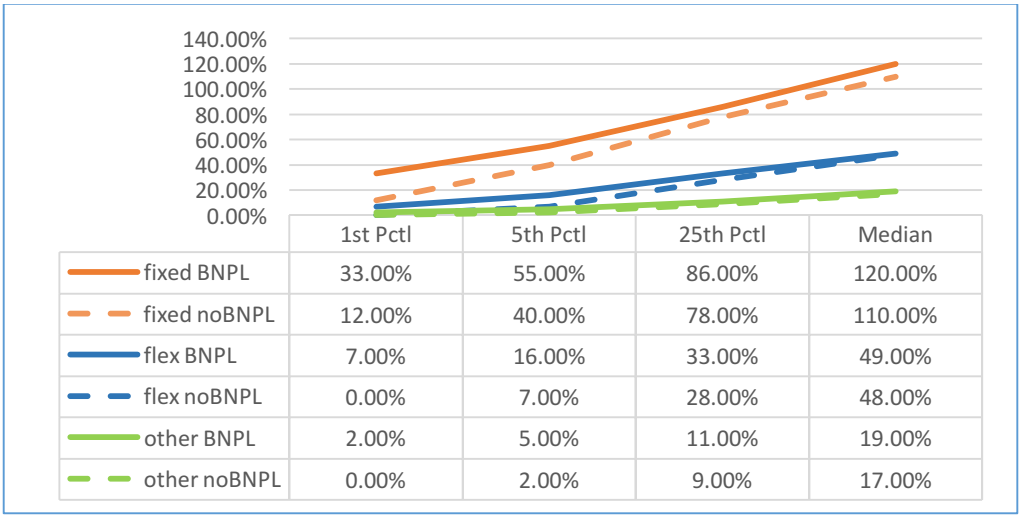
For the different types of expenditure/ outflows, we look at sums of Transaction Amount in a relevant category per user as the ratio to income. Income is defined in two ways: Income 1 includes only earnings, and Income 2 includes earnings and benefits. Income 2 is presented subsequently, since benefits form an important part of inflows for this population. Besides, there is a small proportion of the population, where no earnings nor benefits are observed in the transactional history, so no ratios can be calculated. For Income 2 this proportion is lower.

From Figure 16a it can be seen that BNPL users spend more than noBNPL segment as a percentage of their income. What is also striking that at least half of both segments live beyond their means, e.g. median values are 120% for fixed expenditure (such as housing, utilities, child and school, loan repayments, etc.) for BNPL, and 110% for noBNPL. These numbers should be interpreted with caution, since as we mentioned in Introduction, we do not observe the full picture of individual's financial resources, there might be secondary accounts, there might be partners, who are the main earners, or there might be support from family. We also use only earnings and benefits in denominator, excluding other sources of inflows, such as formal or informal credit. Our previous measure, median Account Balance, takes into account all inflows and outflows, and although it shows positive values (£68-78), these values are not particularly high.

The picture becomes even more worrying in the upper part of the distribution (Figure 16b). Here noBNPL segment spends relatively more in comparison to BNPL. The top 5% of high spenders for noBNPL pay out at least 819% from their Income2, as compared to 665% for BNPL. It should be noted that the mean values, although reported here for completeness, are not representative, since they are heavily affected by outliers or extreme values.

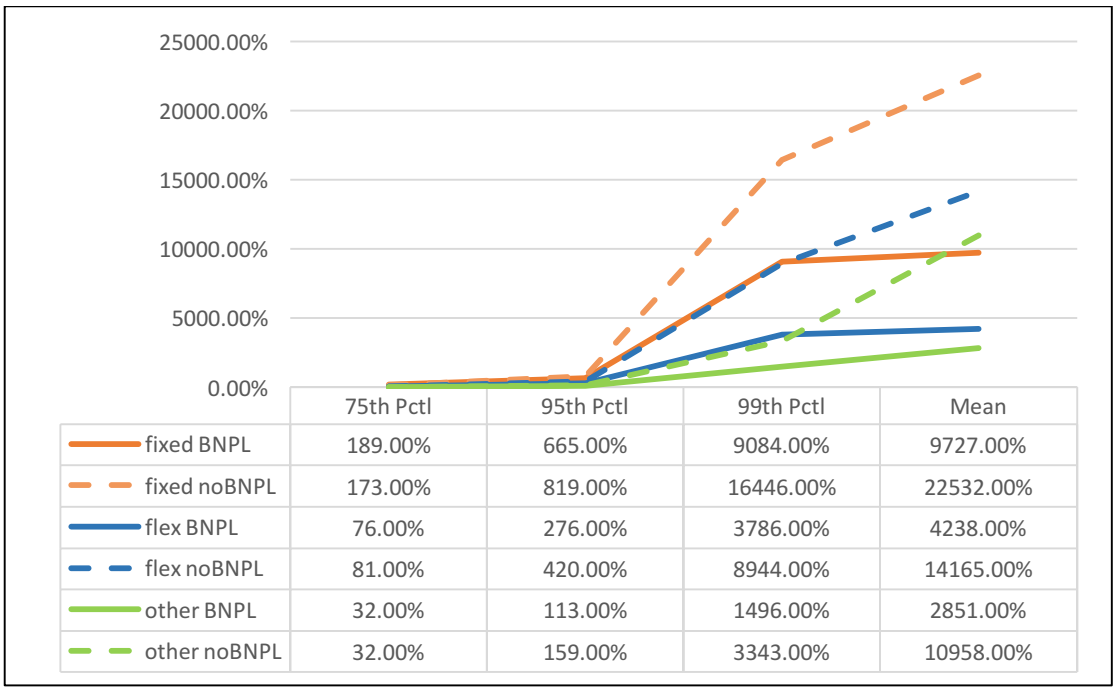
For flexible (fun and leisure, subscriptions, etc) and other expenditure the percentages are more modest, but there are the same patterns observed, BNPL users spend more in the lower part of distribution, whilst in the top 5% this pattern is reversed.

Figure 16a: Comparison of ratios of different types of expenditure to Income 2 for BNPL / NoBNPL users. Lower part of the distribution



	1st Pctl	5th Pctl	25th Pctl	Median
fixed BNPL	33.00%	55.00%	86.00%	120.00%
fixed noBNPL	12.00%	40.00%	78.00%	110.00%
flex BNPL	7.00%	16.00%	33.00%	49.00%
flex noBNPL	0.00%	7.00%	28.00%	48.00%
other BNPL	2.00%	5.00%	11.00%	19.00%
other noBNPL	0.00%	2.00%	9.00%	17.00%

Figure 16b: Comparison of ratios of different types of expenditure to Income 2 for BNPL / NoBNPL users. Upper part of the distribution



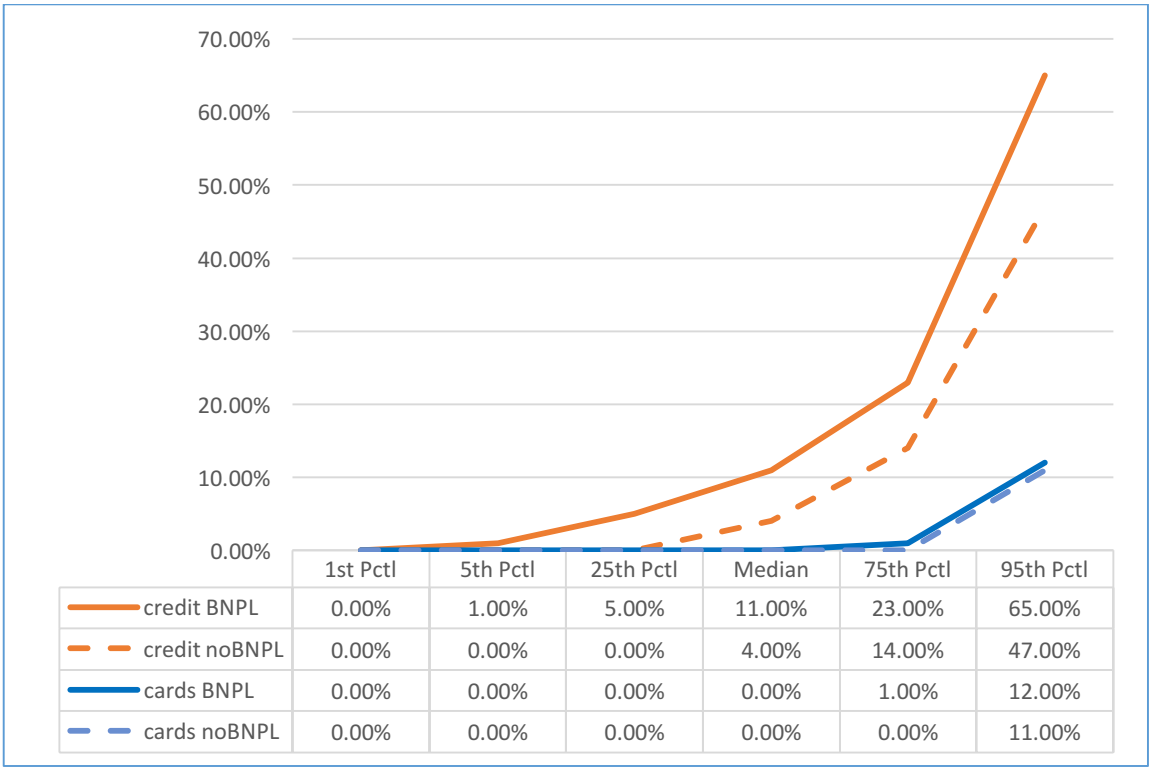
	75th Pctl	95th Pctl	99th Pctl	Mean
fixed BNPL	189.00%	665.00%	9084.00%	9727.00%
fixed noBNPL	173.00%	819.00%	16446.00%	22532.00%
flex BNPL	76.00%	276.00%	3786.00%	4238.00%
flex noBNPL	81.00%	420.00%	8944.00%	14165.00%
other BNPL	32.00%	113.00%	1496.00%	2851.00%
other noBNPL	32.00%	159.00%	3343.00%	10958.00%

Next we look at certain sub-categories of spending. Credit repayments are, of course, very important, and Figure 17 shows credit/loans and credit cards outflows as percentage of Income2. This is total credit, which includes BNPL payments. It is clear that BNPL users have heavier credit burden as compared to noBNPL. There are significant proportions of people with any credit at all, at least 25% for no BNPL, and maximum 1% for BNPL. For credit cards the corresponding numbers are at least 50% and at least 95%, so credit cards are not very popular among this population, especially among no BNPL segment. We cannot separate if

not having credit or credit cards is the individual's personal choice or these people are excluded from credit markets. However, it is reasonable to assume that the majority without credit might be deemed as not worthy of credit by lenders. The proportion of those with 0 credit are higher for noBNPL, and this again may reflect lenders' view on creditworthiness: BNPL segment has a higher income, therefore, better capacity to borrow. Besides, having some credit already may be helpful in getting more credit, because this gives the credit history (hopefully, a positive one), which is necessary to pass a standard credit risk assessment. Therefore, higher proportions with credit among BNPL segment may have a reinforcement effect for borrowing more. However, there is a certain threshold, beyond which borrowing becomes unsustainable.

Figure 17 shows that 50% of BNPL users spend 11% or lower on credit repayments from their Income2, in contrast noBNPL spend 4% or lower. Top 25% of users spend 23% and 14% or higher, correspondingly. The top 5% for BNPL show a worrying figure of 65%, no BNPL – relatively lower, but still worrying 47%. The top 1% (or 99th percentile) is not shown here, simply because the graph then becomes unreadable, but the corresponding values are 726% and 348%. In terms of numbers of individuals 1% corresponds to almost 800 people, and 5% to almost 4,000. This highlights the importance of affordability assessment, otherwise the already overburdened individuals may be put even under greater repayment stress.

Figure 17: Comparison of credit repayments to Income2 for BNPL / NoBNPL users.



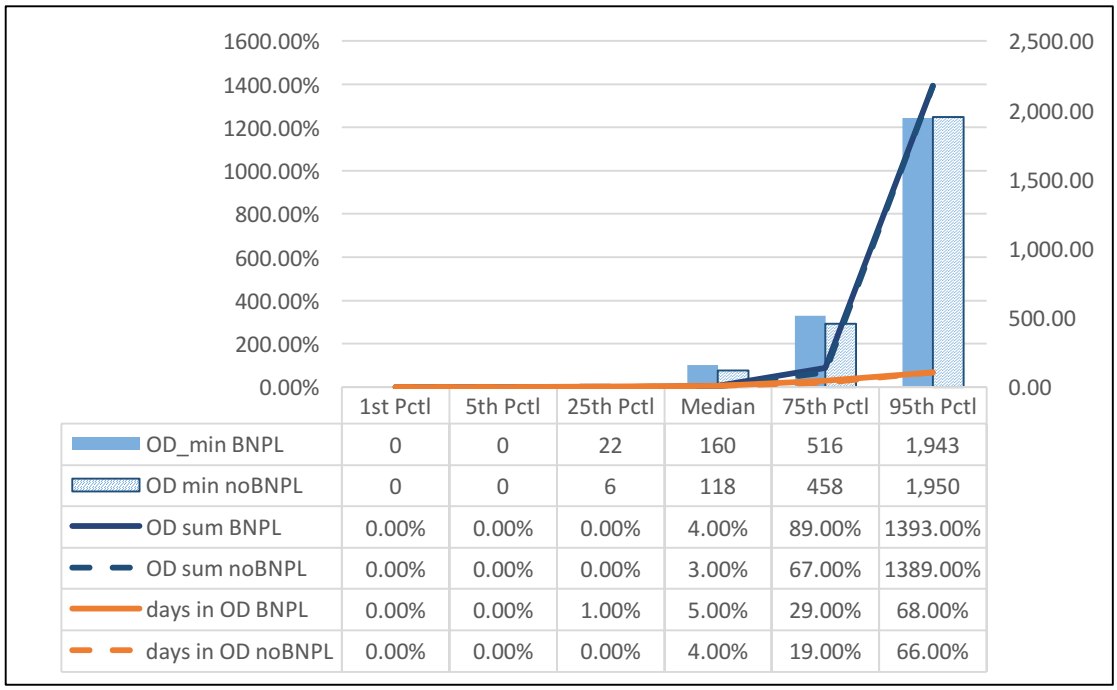
	1st Pctl	5th Pctl	25th Pctl	Median	75th Pctl	95th Pctl
credit BNPL	0.00%	1.00%	5.00%	11.00%	23.00%	65.00%
credit noBNPL	0.00%	0.00%	0.00%	4.00%	14.00%	47.00%
cards BNPL	0.00%	0.00%	0.00%	0.00%	1.00%	12.00%
cards noBNPL	0.00%	0.00%	0.00%	0.00%	0.00%	11.00%

The analysis of credit use and abuse would be incomplete without the analysis of overdraft. Figure 18 shows percentile distributions for three different measures:

- Sum of maximum daily amounts in overdraft as the percentage of Income 2 (left axis). For each day in overdraft, the maximum (or rather minimum/lowest) value is selected, and these values are summed up for each user. This corresponds to the amount on which lenders would charge the overdraft fees. For presentation reasons the values are shown as positive numbers.
- Percentage of days in overdraft from the total number of days in transaction history (left axis). The day is counted as being in overdraft, if the balance is below 0.
- The maximum value of overdrawn balance observed for each customer during the whole transactional history (right axis). This reflects a possible overdraft limit, and also the view of bankers on the individual's creditworthiness.

NoBNPL users show slightly lower values on all three measures, implying they use overdraft less in comparison to BNPL users, but the difference is very small. In general, 18% of BNPL users do not show any overdraft, as compared to 22% of noBNPL.

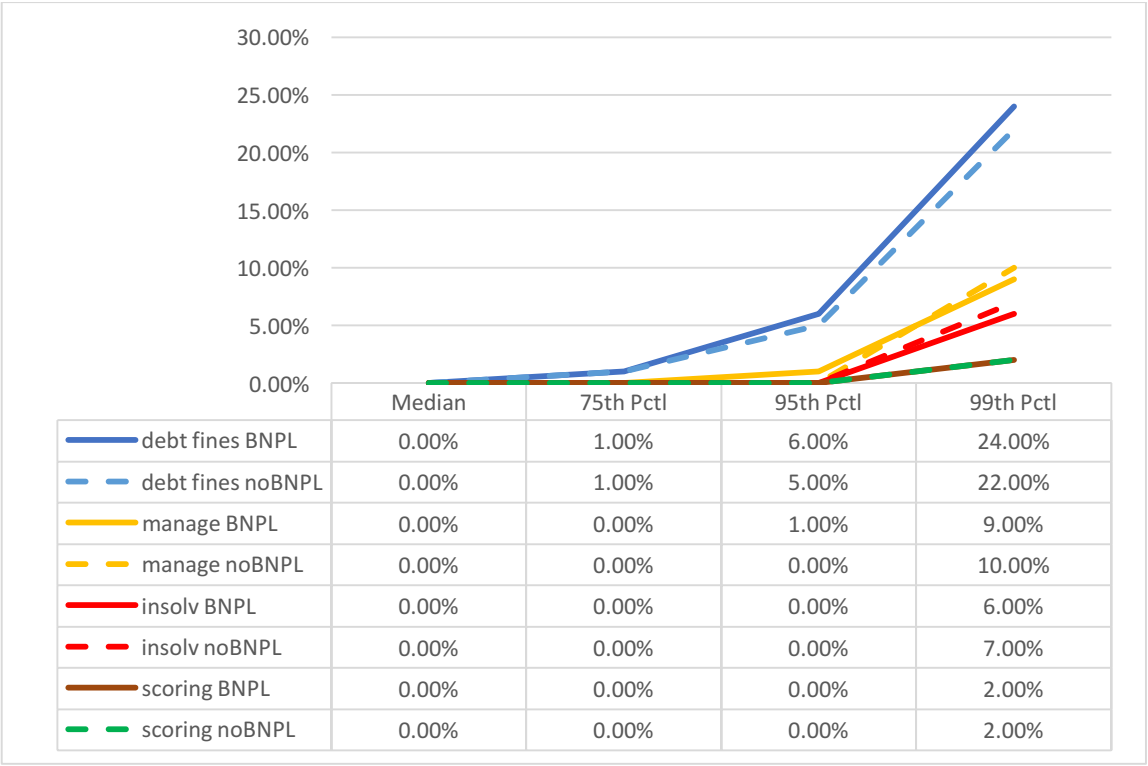
Figure 18: Comparison of overdraft amount to Income 2, percentage of days in overdraft (left axis) and maximum level of overdraft per user (right axis) for BNPL / NoBNPL users.



	1st Pctl	5th Pctl	25th Pctl	Median	75th Pctl	95th Pctl
OD_min BNPL	0	0	22	160	516	1,943
OD min noBNPL	0	0	6	118	458	1,950
OD sum BNPL	0.00%	0.00%	0.00%	4.00%	89.00%	1393.00%
OD sum noBNPL	0.00%	0.00%	0.00%	3.00%	67.00%	1389.00%
days in OD BNPL	0.00%	0.00%	1.00%	5.00%	29.00%	68.00%
days in OD noBNPL	0.00%	0.00%	0.00%	4.00%	19.00%	66.00%

We also look at the categories that signal some debt or financial problems: debt enforcement and fines; debt management, paying to insolvency provider, improving credit scoring. However, we could not observe substantial differences in these categories.

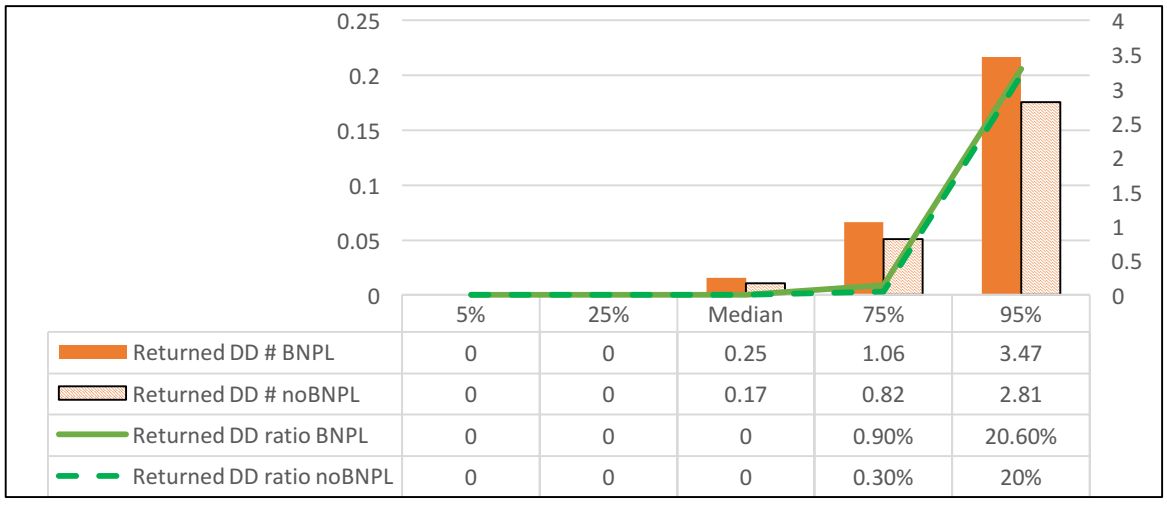
Figure 19: Comparison of debt indicators to Income 2 for BNPL / NoBNPL users.



	Median	75th Pctl	95th Pctl	99th Pctl
debt fines BNPL	0.00%	1.00%	6.00%	24.00%
debt fines noBNPL	0.00%	1.00%	5.00%	22.00%
manage BNPL	0.00%	0.00%	1.00%	9.00%
manage noBNPL	0.00%	0.00%	0.00%	10.00%
insolv BNPL	0.00%	0.00%	0.00%	6.00%
insolv noBNPL	0.00%	0.00%	0.00%	7.00%
scoring BNPL	0.00%	0.00%	0.00%	2.00%
scoring noBNPL	0.00%	0.00%	0.00%	2.00%

Returned Direct Debits (RDD) occur when there are insufficient funds to cover scheduled payments, and can be interpreted as signals of financial distress. The number and percentage of the amount of RDD to Income2 are relatively higher for BNPL users. Overall, 65% of BNPL users experience at least one instance of RDD as compared to 60% of noBNPL users. These numbers are different to those reported earlier in Section 3, because here the whole transactional history is used, not only the last 6 months.

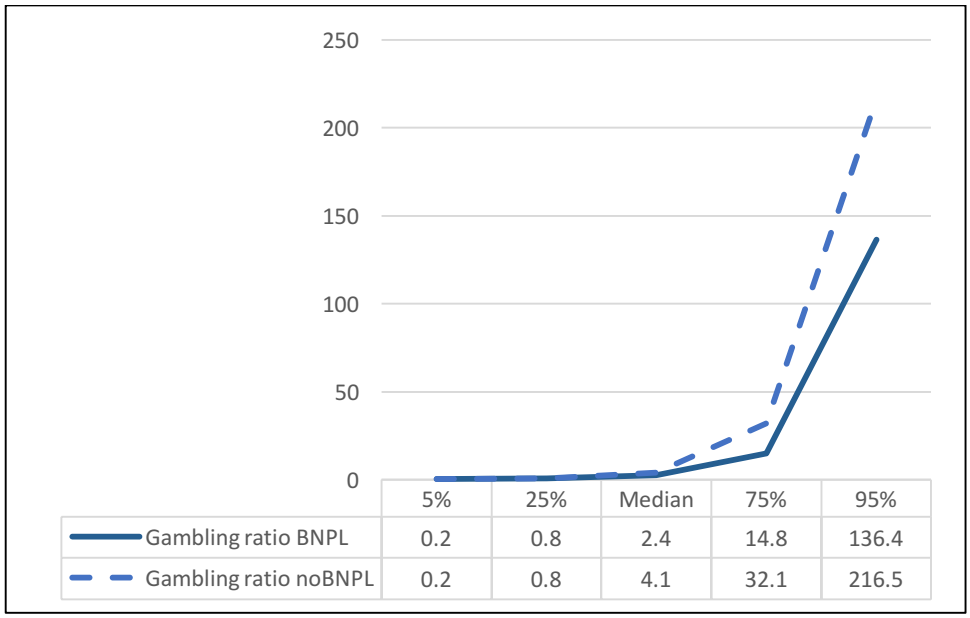
Figure 20: Comparison of percentage of the amount of returned Direct Debits to Income 2 (left axis) and # returned Direct Debits (right axis) for BNPL / NoBNPL per user (adjusted be months of transactional history).



	5%	25%	Median	75%	95%
Returned DD # BNPL	0	0	0.25	1.06	3.47
Returned DD # noBNPL	0	0	0.17	0.82	2.81
Returned DD ratio BNPL	0	0	0	0.90%	20.60%
Returned DD ratio noBNPL	0	0	0	0.30%	20%

Finally we compare the amount spent on gambling as percentage of Income 2 for BNPL and noBNPL segments. NoBNPL users spend relatively more in comparison to BNPL, and for both segments the top 5% spend more than 100% of Income2 on gambling.

Figure 21: Comparison of gambling spend to Income 2 for BNPL / NoBNPL users.



	5%	25%	Median	75%	95%
Gambling ratio BNPL	0.2	0.8	2.4	14.8	136.4
Gambling ratio noBNPL	0.2	0.8	4.1	32.1	216.5

9.4 Analysis of BNPL use depending on the volume of the spend

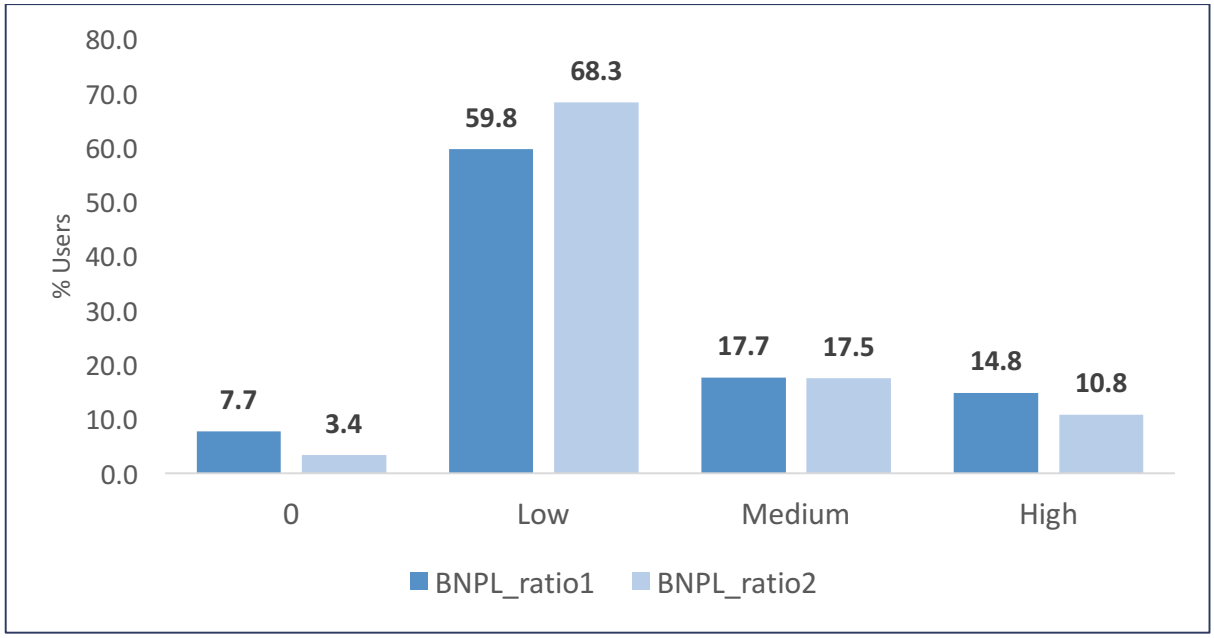
Obviously, the whole segment of BNPL users is not homogeneous, there might be differences in behaviour depending on how much the individuals spend on BNPL, therefore we perform a separate analysis within BNPL segment.

We considered two versions of segmentation: based on Income1 (earnings) and Income2 (earnings+ benefits). All BNPL users are divided into the following groups based on the average monthly percentage of BNPL volume to Income1 and Income2:

- 0: No Income (impossible to calculate the ratio)
- Low: at most 10%;
- Medium: 10%-30%;
- High: at least 30%.

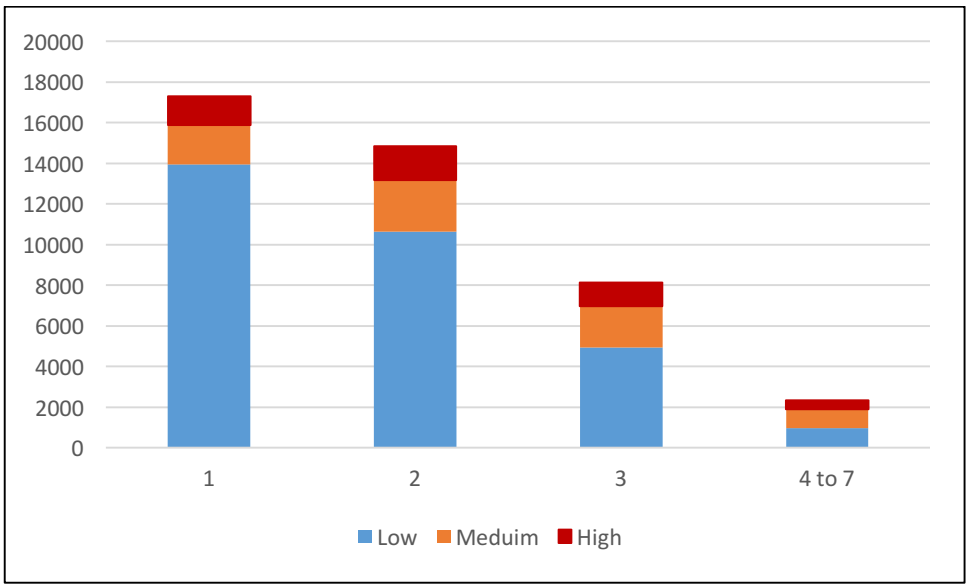
As can be seen from Figure 22, the majority of individuals are in Low use category with almost 60% for BNPL ratio to Income 1 and 68% for Income 2. Around 17-18% are in Medium group, and 15% /11% are in High use segment. For a small percent of users (7% and 3% respectively) it is not possible to calculate BNPL ratio, since there are no earnings or benefits. Following the rationale, explained previously, we focus on Income 2. However, both segmentations are very close. The users where the ratio cannot be calculated (3.4%) are excluded from subsequent analysis .

Figure 22: BNPL use segmentation, percentage of all BNPL users.



The level of spend on BNPL is associated with a number of different BNPL providers (Figure 23). There is a positive correlation, the higher is the level, the more providers are being used. Thus for Low use group, the majority of them use 1 or 2 providers, their share drops considerably as the number of providers increases. In contrast, relative shares of Medium and especially High users, increase, they tend to use more than 2 providers.

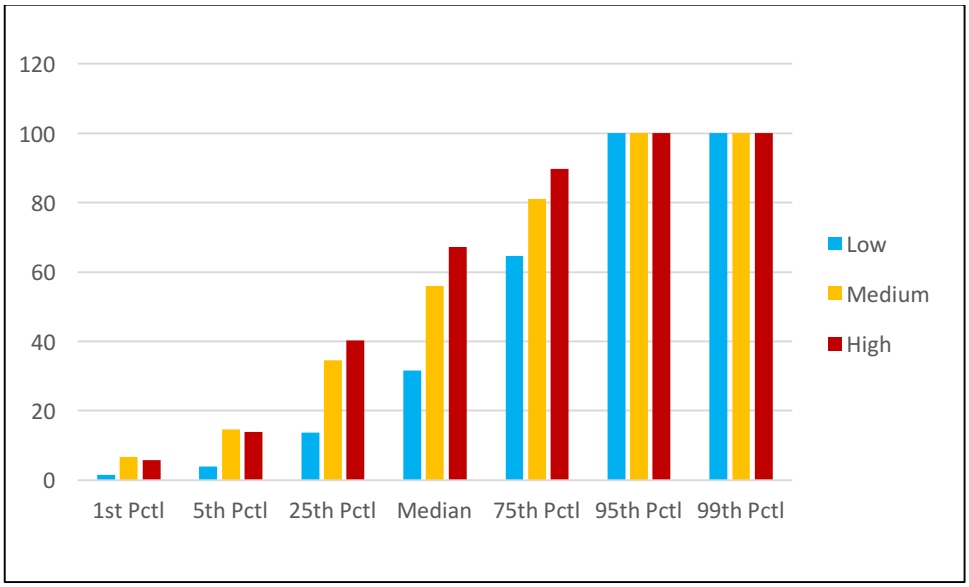
Figure 23: The number of BNPL providers by user segment, Income 2



9.5 Analysis of BNPL as part of the total credit volume

The level of spend on BNPL is also associated with a share of BNPL in overall credit volume, which ranges from a modest 1% to 100%. It should be noted that we cannot observe BNPL purchases, we can only see repayments that go from accounts to different BNPL providers. Therefore, we can calculate the share of BNPL in overall repayments associated with other types of credit. The median value is 35% for Low users, almost 61% for Medium and almost 66% for High users. For all three segments at least 5% of users do not have other types of credit, their credit use is limited to BNPL only (100% of credit repayments).

Figure 24: The average % of BNPL in monthly credit repayments per user by BNPL User Segment.



We also analyse how the level on indebtedness varies across the BNPL use segments. For this we calculate the ratio of total credit repayments, excluding BNPL, to Income 2, and we do it separately by the segment. The difference between the segments is so striking that we have to show the results in two graphs with different values on the vertical scale, otherwise it is impossible to see low and medium groups.

It should be noted that high values at the top of the distribution are driven by low values of Income 2, which is in denominator of the ratio. To remind, our definition of Income 2 only includes earnings and benefits, and does not include other inflows.

For Low group 50% of users spend 12.2% or lower of their income on credit repayments, for Medium group the same share is 15.4%, whilst the top 5% in Low group spend over 67% on credit repayments. For Medium group the top 5% spend more than 100%.

Figure 25a: % total credit (excl BNPL) to Income 2, Low/Medium segments.

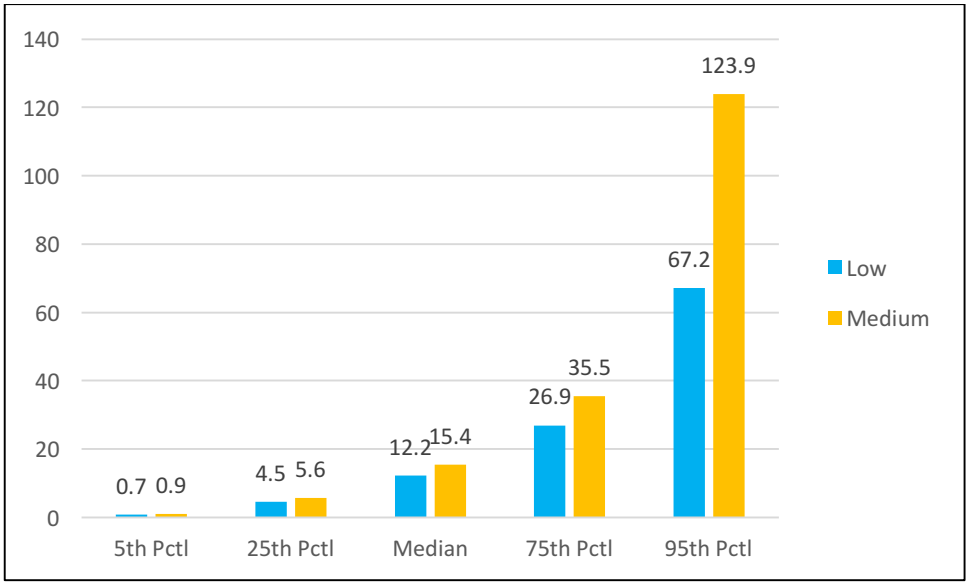
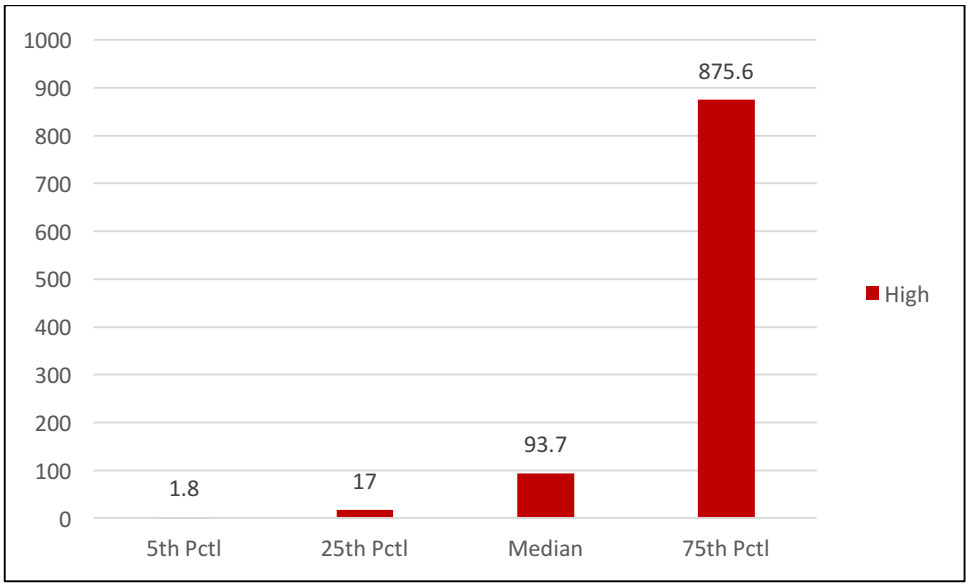


Figure 25b: % total credit (excl BNPL) to Income 2, High segment.



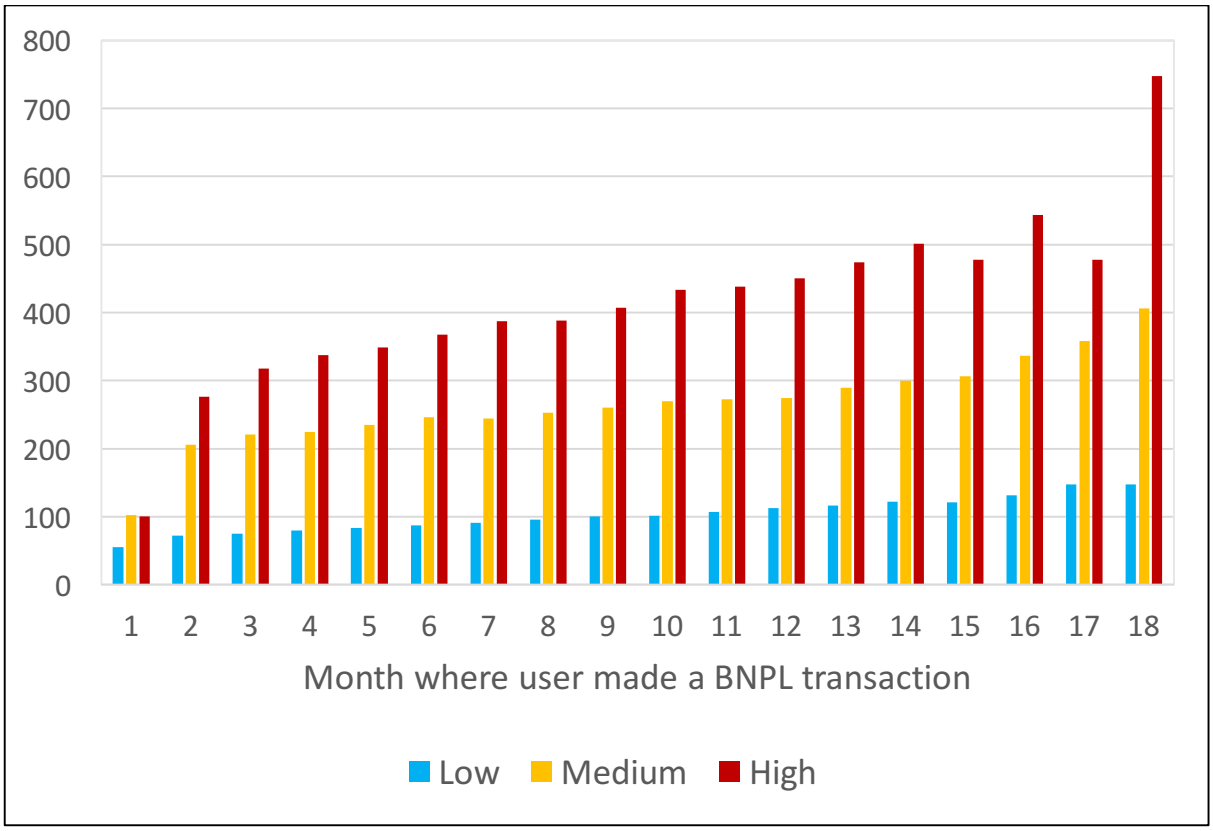
Yet for High group 50% of users spend already over 90% on debt servicing, and the top 25% spend over 800% from their Income 2. In terms of numbers, 25% corresponds to approximately 1200 people. It is a relatively small number compared to the whole population of almost 78,000, and as noted before, the income may be underestimated, nevertheless, the pattern is concerning.

9.6 Temporal BNPL use dynamics

To understand how the use of BNPL changes over time, we select BNPL users with at least 6 months of BNPL transactional history, and months with BNPL transactions. The monthly values are then tracked over time starting from Month 1 (the earliest BNPL transaction) and up to Month 18 (the latest). It should be noted that not all users will have that long transactional history, so the numbers in the top part of the distribution are low.

All three groups of users show increasing tendency to spend on BNPL over time, they start with relatively small amounts and then spend more and more. The rate of increase varies across the groups, with Low group demonstrating modest upward trend, whilst for Medium and High groups the acceleration is more pronounced. It may be partially attributed to BNPL lenders strategy to start with low credit limits and then gradually increase them. However, there should be a hard limit depending on the borrower's capacity to repay in order not to increase the burden on potentially already stretched consumer. This analysis coupled with the one in the previous section calls for information sharing from and between BNPL lenders and rigorous affordability assessment. This becomes even more important in situations when a person uses multiple BNPL providers within a short period of time.

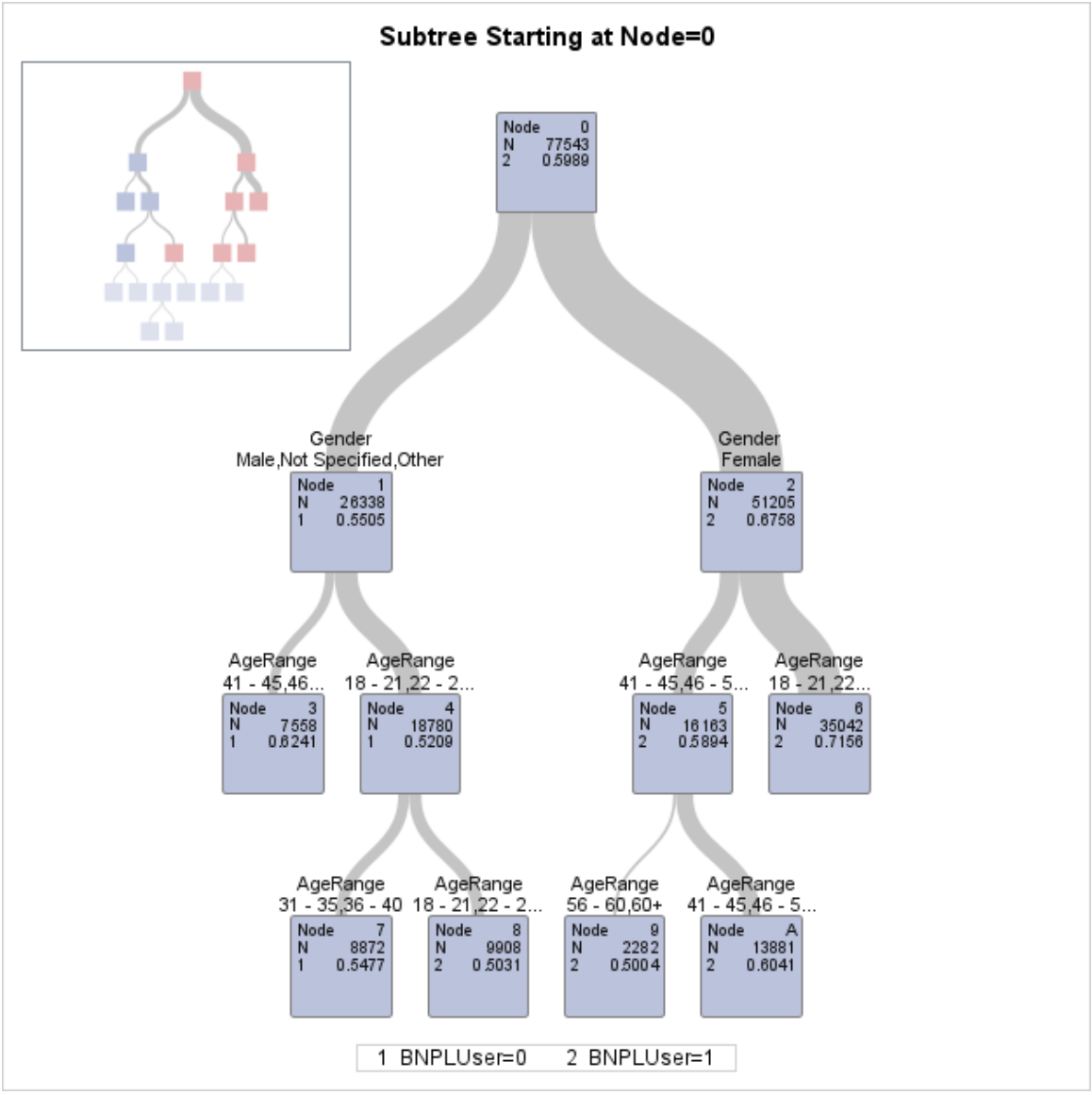
Figure 26: Average Total BNPL Value Spent Per User Per Month by Low/ Medium/ High group



9.7 BNPL demographics

To analyse the demographics of BNPL users, we apply the method called classification or decision tree, which splits the whole sample into segments based on the strength of association with a selected target variable. In this section, the target variable is BNPL (labelled 2) v noBNPL (labelled 1). The algorithm then finds the variable with the highest association with the target variable, in our case, this turns out to be Gender, and splits the sample into Females v Males, see Figure 27. The boxes in the graph represent the groups or nodes, with the total number in this node shown and also proportion of the target variable. At the start or Node 0 there are 77543 individuals, almost 60% of them are BNPL users. Among women there are almost 68% of BNPL users, in contrast to 45% of BNPL in the Male segment (or 55% noBNPL as shown in the graph). For women then the most significant split is on Age: below 40 with 72% BNPL users, and 41+ with almost 59% BNPL. For men, the similar split gives 48% and 38%.

Figure 28: Classification tree for BNPL v noBNPL, node 0 or whole population.

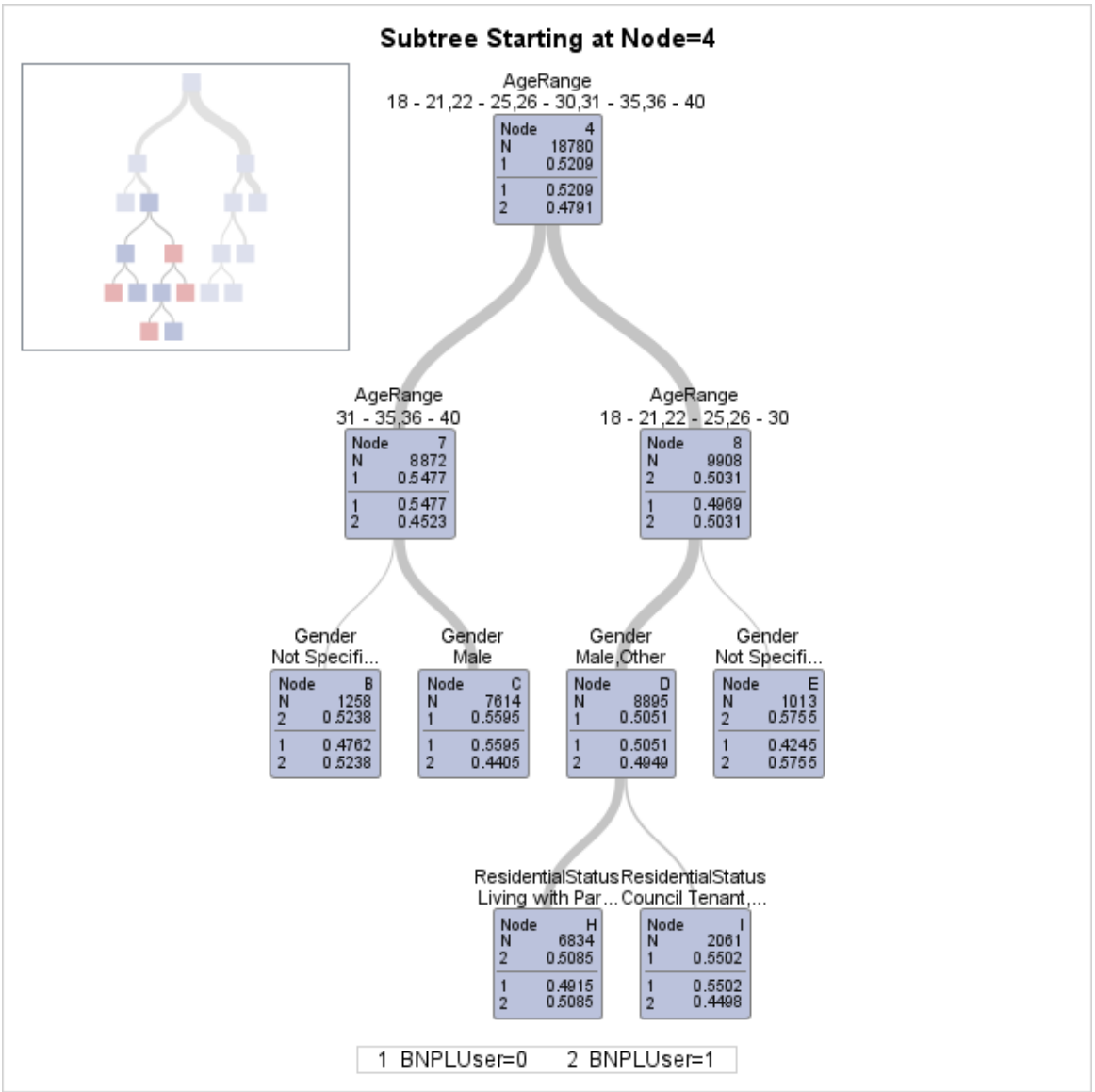


The process continues until there are no more significant associations. Table X summarises the importance of demographic variables based on the strength of their association with BNPL.

Table 16: Demographic variables and their importance for separating BNPL from noBNPL users.

Variable	Importance
Gender	42.37
AgeRange	11.32
BanksWith	7.14
Area	2.43
Residential Status	2.31

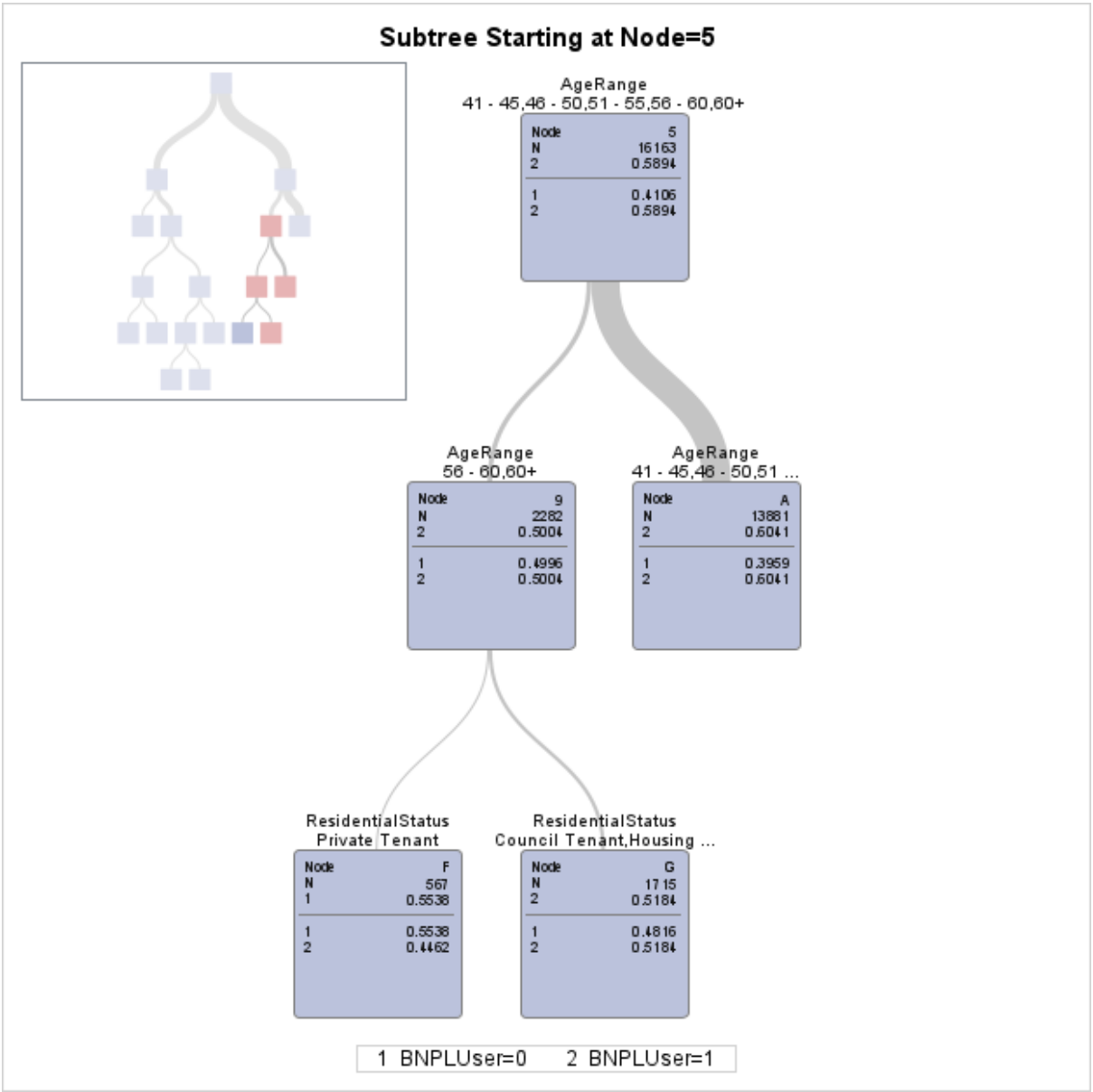
Figure 28: Classification tree for BNPL v noBNPL, node 4 or Younger Men



Residential Status comes in relatively late in the process, for Men at most 30 year old, among this group those Living with Parents have slightly higher proportion of BNPL users, whilst Council Tenants are mainly non-users. For Women after 55, private tenants are less likely to use BNPL in contrast to Council Tenant. It should be noted, that at these lower nodes in the tree the numbers in the segments are relatively small.

In general, younger women have higher propensity to use BNPL.

Figure 2929: Classification tree for BNPL v noBNPL, node 5 or Older Women



Conclusion by Lord Iain McNicol, Chair of the Public Responsibility Oversight Body, Salad Money

Two years ago, we stood on doorsteps to clap for nurses, hospital porters, cleaners and healthcare assistants. This analysis and report by the Credit Research Centre at the University of Edinburgh Business School raises significant concerns about the financial resilience of many people who saved our lives, looked after our loved ones and ensured services carried on running during the pandemic.

The report demonstrates why we need a purposeful, social-led approach to credit and financial inclusion. Millions are now excluded from mainstream credit, and financial exclusion is, in the words of Sacha Romanovitch of Fair4All Finance "an economic, health and social emergency." We need solutions which are not only technologically innovative but designed to improve financial resilience, whether or not an applicant for credit is granted a loan.

Here's an example which is now boosting household incomes for some NHS and public sector workers to the tune of thousands of pounds a year. Many households are unaware of benefits they are rightfully due. Or they wrongly assume they are not eligible for any benefits or think an application is too complicated. £16 billion of benefits remain unclaimed annually. And because of common misperceptions like "I'm not eligible" or a lack of understanding of the system, plenty of people who could claim benefits simply don't check benefits calculators on Government websites.

This is why Salad Money and another community lender, Scotcash, have embedded a benefits calculator into our loan application processes. Across both social enterprises, it has helped households which needed finance (so were applying for credit) find more than £100m in annual benefits to which they are entitled. Good news for them immediately, boosting their financial resilience over many months ahead.

Using their loan application data, the calculator automatically checks whether there are benefits which applicants are entitled to and shows details of what they are and how to go on to make claims. Remarkably seven out of ten applicants are entitled to benefits they were unaware of before applying to Salad, with the calculator finding an average of around £434 in benefits due but unclaimed every month for each applicant, and more for those with dependent children.

That's around £5,000 added to the annual household budgets for tens of thousands of lower-paid NHS and public sector workers. A life-changing amount at any time and especially when faced with rocketing costs of living, which disproportionately affect households with the lowest incomes.

It's one example of financial inclusion powered by a social-led approach to credit. In her foreword to this report, Theodora Hadjimichael wrote about how the expanded Dormant Assets Scheme could help to scale up the overall 'community lending 'sector, which plays a crucial role not only in ensuring people have access to finance on fair terms if they need it, but also building financial resilience like this.

Others make the same point. As the consultation on the future uses of new Dormant Assets monies opened, Fair4All Finance called for financial inclusion funding to be prioritised. The FT's consumer editor Claer Barrett argued that improving financial inclusion should become an even higher priority than it has been. I agree – but not only for Government. Some banks, impact and social investors already understand they have a responsibility to address financial exclusion. Salad could not serve the customers we do without the backing we have received. Others are now waking up to their need to work with community lenders.

Financial inclusion goes hand in hand with resilience. Even Salad Money, a specialist, responsible, socially-minded lender, designed to help the excluded if it can, is unable to offer credit to tens of thousands of salaried NHS and public sector workers who apply. As you have read in this report, that's because of affordability or other reasons identified through our pioneering use of Open Banking. We can and do help in other ways, like with the benefits checking tool I have described above. But their fractured financial resilience is worrying and organisations wanting to help the most vulnerable should consider how our anonymised data can help to prioritise support.

What's also alarming is how this report shows people are still being offered credit by both FCA-regulated firms and under-regulated BNPL providers, even though they've been turned down elsewhere for affordability reasons.

Last year, Salad's founder wrote that this annual report by the University of Edinburgh would provide unique insights into the financial resilience of NHS (and now also public sector) workers, and allow employers "to implement interventions necessary to alleviate the emotional distress arising from a reliance on persistent overdrafts and high-cost credit."

This year's report is based on a data set more than ten times larger. In light of its evidence, we must ask why so many NHS and public sector workers are financially vulnerable and what interventions are necessary to rebuild their resilience whilst creating the environment for their financial inclusion?

Lord Iain McNicol

Chair of the Public Responsibility Oversight Body, Salad Money