

# **High-cost Credit Review: Overdrafts consultation paper and policy statement**

Technical Annex

**Consultation Paper**

CP18/42\*\*\*

December 2018

## Contents

- 1 Data
- 2 The UK market for overdrafts
- 3 Vulnerability
- 4 Repeat use
- 5 Availability of alternatives
- 6 Policy Analysis
- 7 Consumer research
- 8 Profitability

# Chapter 1-Data

## Introduction

1. This annex provides a description of the raw data used for the analysis supporting the consultation. We first provide an overview of the datasets we used and then discuss data issues and other relevant remarks.

## Datasets we used in our analysis

2. We use a wide range of data in this work. We build on existing data collected by the FCA for policy purposes:
  - anonymised personal current account and retail banking behaviour data for 2015 and 2016, covering a large sample of personal current account customers
  - anonymised complete credit file data for 10% of the UK population

Where required, we supplemented these datasets with publicly available data, for example local area demographic and economic data.

### *Personal current account data*

3. We built on the personal current account (PCA) data originally collected for the prompts and alerts research programme carried out in 2017. This includes the full transactional history of 1.5 million PCA customers drawn from the 6 largest PCA providers covering a 2-year period (2015 and 2016).<sup>1,2</sup>

### **Transaction data**

4. For each account, the dataset shows credit and debit transactions, balances, fees and disaggregated overdraft charges, e.g. arranged and unarranged overdraft charges and refused payment fees.

### **Account-level data**

5. The data include account level characteristics such as: account opening dates, switching/closing dates, product name, and overdraft limits.

### **Customer-level data (including behavioural)**

6. The data also include age, gender, and postcode of the account holders. For each customer, it also covers information on mobile, telephone and internet banking usage, alert sign-ups, and communications between the bank and the customer.

### **Supplemental data**

---

<sup>1</sup> In 2017, as part of the prompts and alerts research programme for the competition remedies, we gathered account-level information for a representative sample of 250,000 PCA customers from the 6 largest retail banking groups in the UK. These were: Barclays, HSBC Group, Lloyds Banking Group, Nationwide, RBS Group, and Santander UK. In total these firms represent around 90% of the UK personal current account market. The data do not include any PCA customers who opened a PCA before 1 January 2014 and have not recorded any debit or credit transaction (excluding fees and interest), in any of their PCAs with the same bank between 1 January 2014 and 1 January 2015. Similarly, the data do not include customers who were younger than 16 years of age on 1 January 2015

<sup>2</sup> Close to publication of this report, we discovered that one of the firms in the data made a mistake in implementing the sampling approach. On reviewing the impact of the error on the average characteristics of those sampled, and the size of the firm in relation to the overall market, we consider that correcting this error would be unlikely to alter our conclusions. We also examined the results of our analysis without this firm in the data and found that this did not materially alter our conclusions.

7. We augmented this core dataset with additional information from the same banks on: rewards, customer savings, ATM and branch visits, and more granular data on current account fees. We further supplemented with other financial information such as funds transfer prices (FTP), various personal current account unit costs, and charge-off costs.

#### *Credit reference agency data*

8. This dataset covers a six-year period and contains the credit history (i.e. credit file data) for a random sample of around 10% of the adult UK population and their financial associates. For each credit product held,<sup>3</sup> the dataset shows opening and closing dates, limits, regular repayments (amount, duration and frequency), balances, and arrears status.
9. The dataset includes metrics created by the credit reference agency (CRA) such as credit risk scores, affordability metrics, and income estimates for each individual included in the sample at two points in time: January 2015 and January 2017.
10. By merging the PCA data described above with the CRA data, we have created a unique resource for studying which consumers use their overdrafts, the patterns of this behaviour and the context of their borrowing against their wider credit position. As both datasets are random samples themselves, and the CRA dataset includes empty files for those without any credit products, the combined dataset is also a representative random sample of the PCA market covered by the PCA dataset.

#### *Demographic and economic data*

11. We also use publicly available data on local area demographics and economic conditions from a variety of public providers including: The Office for National Statistics (ONS), Ministry of Housing, Communities and Local Government (MHCLG) and the UK data service.
12. In particular, we use the MHCLG Index of Multiple Deprivation (IMD) as a proxy for consumer vulnerability across any analyses where consumer vulnerability is relevant. For more detail on why we use this measure see Chapter 3-Vulnerability. For more detail on the index itself see the IMD documentation on the MHCLG website.<sup>4, 5</sup>

### Relevance of the data to the current market

13. While our PCA data include transactions for both 2015 and 2016, most of our analysis focuses on 2016. Findings based on 2016 data are more relevant to the present, and firms were generally more able to provide complete data for 2016 due to data archiving processes or IT systems changes. In addition, key features of certain account types changed in 2015 due to industry and regulatory initiatives.
14. While some pro-competition remedies relating to alerts, open banking, and the maximum monthly charge have been implemented since 2016, these have not

---

<sup>3</sup> These are, for example, credit cards, current accounts, mortgages, personal loans, high cost short term credit, home credit, household bills, catalogue credit, motor finance, rent-to-own, retail finance, Small and Medium-sized Enterprise finance, store cards, and so on.

<sup>4</sup> See <http://opendatacommunities.org/home>

<sup>5</sup> The Ministry of Housing, Communities and Local Government (MHCLG) was previously known as Department for Communities and Local Government (DCLG).

dealt with the core harms that the package of remedies presented in this Consultation Paper seek to address. The prior interventions do not address the harm we have identified from the level of unarranged charges and refused payment fees, the concentration of charges on vulnerable consumers, or the harm from repeat overdraft use.

15. We also compared aggregate data on market size for overdrafts for 2016 and 2017, and found them to be very similar. Table 1 summarises data gathered from firms in the context of our Strategic Review of Retail Banking Business Models.<sup>6, 7</sup>

**Table 1: Gross revenue and lending from overdrafts and refused payment fees, 2016 vs 2017**

	2016	2017
Arranged overdraft lending assets	£7.1bn	£7.1bn
Unarranged overdraft lending assets	£270m	£279m
Total gross revenue from overdrafts	£2.4bn	£2.4bn
Refused payment fee revenue	£274m	£236m

## Data issues and other remarks

16. In some cases firms do not record data in exactly the same way. For example, the way transactions types are recorded, or branch visits are classified by type. In these cases we worked with firms to identify a common categorisation to allow for market-wide comparisons.
17. PCAs can have more than one account holder, and an individual account holder can have more than one PCA. Our general approach to defining a 'customer' is to group across all the content of accounts held solely in the customers' name, and half the content of accounts held jointly with another customer. Where we refer to an account, this is an individual PCA account and may be associated with more than one customer.
18. In general, our dataset is based on complete time series for each account as it includes transaction-level information for the entire period. However, for some accounts the time series does not cover the full period of two years: these were either opened after the beginning of the reference period, or closed before the end of period, or both.<sup>8</sup>
19. In some parts of the analysis we filter to active customers only. In those cases the threshold we use for activity is the median of monthly account deposits being more than £500 over a 12 month period.<sup>9</sup>
20. As discussed above, customer deprivation is proxied using the Index of Multiple Deprivation (IMD) for the area where the PCA customer resides. As the IMD is defined for England rather than the UK as whole, where we look at a relationship

<sup>6</sup> To produce market wide figures in Table 1 we took data on revenues and lending provided by the biggest six PCA providers and simply divided by their share of the market. Chapter 2-UK market for overdrafts, provides further information on market share data used.

<sup>7</sup> Note that our estimates of 2016 market size figures using our PCA transaction data are really close to figures obtained from firms and shown in Table 1. Chapter 2-UK market for overdrafts describes in more detail how we used both the PCA transaction data and evidence gathered from firms to provide an overview of the market for overdrafts.

<sup>8</sup> This is expected in a properly randomised sample of PCAs. Where we consider annual averages, we only include accounts that were open for the full year.

<sup>9</sup> For example, a customer who deposited £550 per month for 7 of the last 12 months would be considered active. A customer who deposited £10,000 in one month then nothing for 11 months would not be considered active.

between IMD and another variable or outcome the analysis is also restricted to England. Given that England represents a large majority of the UK population, and accounts covered by our dataset, we do not believe any of the overall results would be materially different if data for Wales, Scotland or Northern Ireland were available.

# Chapter 2-The UK market for overdrafts

## Introduction

1. This annex provides more details on our approach to estimating the size of the UK market for overdrafts.

## Data

2. The source data for our analysis are the personal current account (PCA) data outlined in Chapter 1 – Data. The outcome variables in this analysis are gross annual charges for:
  - arranged overdraft fees: including all charges incurred for using an arranged overdraft, whether interest or fees
  - unarranged overdraft fees: including all charges incurred for using an unarranged overdraft, whether interest or fees, including paid transaction fees
  - refused payment fees: including all charges incurred for refusing outgoing transactions<sup>1</sup>
3. The analysis is based on a representative sample of the full customer dataset, after filtering for customer activity (see paragraph 9 of this annex for more details).
4. In addition to the PCA data, we have asked firms for aggregate data on gross revenues and lending from overdrafts in the context of our Strategic Review of Retail Banking Business Models.<sup>2</sup>
5. We also use Office of National Statistics (ONS) data on UK population and Competition and Markets Authority (CMA) market share data to measure gross revenues and lending from overdrafts.

## Findings and methodology

6. This section explains how we estimate:
  - total number of customers having a PCA in the UK
  - gross revenues from overdrafts and refused payment fees and average amounts outstanding for arranged and unarranged overdrafts
  - effective daily interest rates for arranged and unarranged overdrafts
  - concentration of overdraft charges
7. To get the number of total customers having a PCA in the UK we use an estimate of the UK adult population from the ONS<sup>3</sup> and combine that with the CMA's finding that 97% of UK adults have a current account.<sup>4</sup>
8. We estimate that firms made around £1.7bn gross revenues from arranged overdrafts in 2017, lending an average of around £7.1bn each day through their arranged line (Figure 1). In the same year they also made around £688m from

<sup>1</sup> Note that banks can charge different fees for refused payments depending on whether the payment is above or below a certain threshold.

<sup>2</sup> See Chapter 8 – Profitability and Strategic Review of Retail Banking Business Models.

<sup>3</sup> See table 1, ONS's Overview of the UK Population: July 2017:

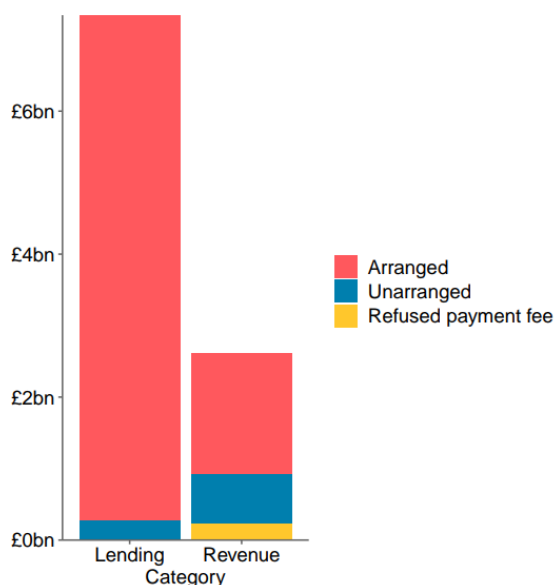
<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/articles/overviewoftheukpopulation/july2017>

<sup>4</sup> See para 14, Final Report of the CMA's Retail Banking Market Investigation (2016):

<https://www.gov.uk/cma-cases/review-of-banking-for-small-and-medium-sized-businesses-smes-in-the-uk#final-report>

unarranged overdrafts, lending an average of around £279m each day through their unarranged line. Annual revenues from arranged overdraft were around 25% of the average amount outstanding. Annual revenues from unarranged overdrafts were around 250% of the average amount outstanding, which is over 10 times higher than for arranged overdrafts.

**Figure 1: 2017 split of lending balances and revenues between arranged and unarranged overdrafts and refused payment fees**



9. In CP18/13, we used the following the methodology to estimate market size in terms of lending and revenue. We first take our sample of PCA transaction data and make sure we consider customers having at least £500 per month median deposits. This is consistent with what the CMA defined as a 'main account' in its Investigation into Retail Banking Market.<sup>5</sup> Note that we use only transaction data for which we have 12 months of data for the customer and year combination.
10. We then build a representative sample of the raw customer data weighted using market shares. We use market share data calculated by the CMA for their investigation into the Retail Banking Market.<sup>6</sup>
11. We finally aggregate data taking the average of charges and overdraft use by charge types. To obtain market wide figures for the UK, we scale outcomes up by multiplying the averages by the total number of PCA customers retrieved from ONS and CMA data (52m), as explained in paragraph 7 of this annex. We have treated the accounts not covered by our sample (about 10% of the market for PCAs) as being broadly similar to the accounts we observe in our sample.
12. The method described in paragraphs 9-11 results in estimates that line up with aggregate figures provided by banks for 2016. This gives us further confidence that our sample is fully representative.
13. We also estimate how much customers borrowed through arranged and unarranged overdrafts and compared this with charges paid to see what their effective daily rate of interest was for their overdraft use in 2016 (Figure 2).
14. First, we take our representative sample of PCA transactions weighted by market shares and apply some filters. We exclude cases where the data indicate an issue with the recorded limit (for instance, we drop customers who have borrowed less through their arranged line than through the unarranged one but have paid more in

<sup>5</sup> See para 4.17, Final Report of the CMA's Retail Banking Market Investigation (2016):

<https://www.gov.uk/cma-cases/review-of-banking-for-small-and-medium-sized-businesses-smes-in-the-uk#final-report>

<sup>6</sup> See Table 3, Appendix 5.1 of the CMA's Retail Banking Market Investigation (2016):

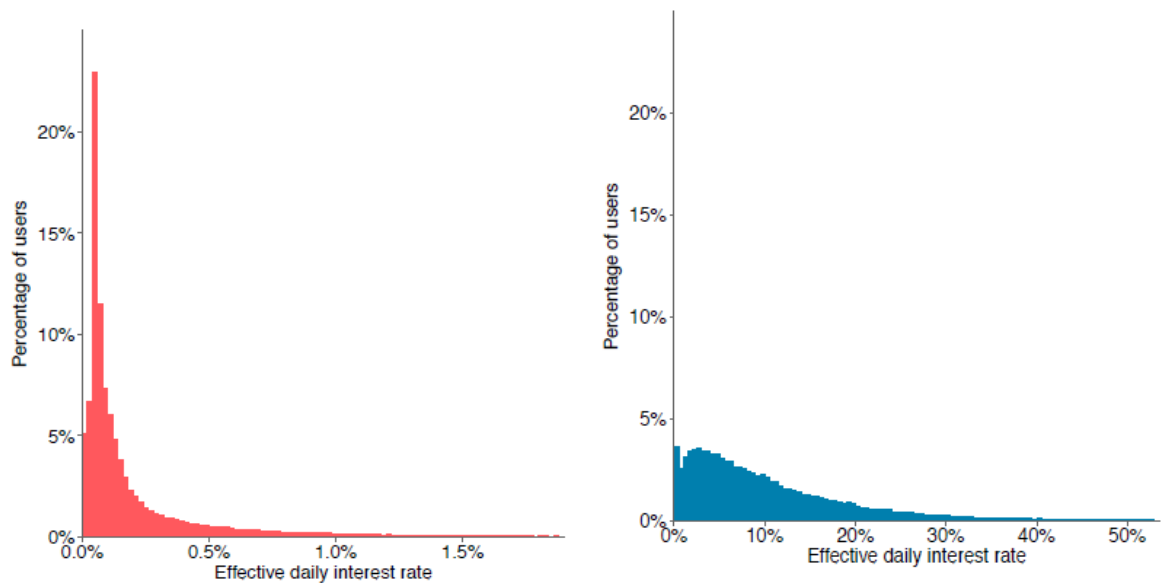
<https://www.gov.uk/cma-cases/review-of-banking-for-small-and-medium-sized-businesses-smes-in-the-uk#final-report>



arranged overdraft charges). These filters drop less than 1% of customers and do not materially affect our analysis, they remove outliers.

15. Second, we divide arranged and unarranged charges paid by the amount borrowed to get a daily interest rate for each customer. As we are interested in calculating a measure of the effective interest rate paid, we exclude people who pay nothing for their overdraft use.<sup>7</sup>

**Figure 2: Effective daily interest rates for arranged (left) and unarranged (right) overdrafts in 2016**



16. We also find that charges were highly concentrated. In 2016:
  - 100% of all arranged charges were paid by 32% of PCA customers
  - 50% of all arranged charges were paid by 3.5% of PCA customers
  - 100% of all unarranged charges were paid by 14% of PCA customers
  - 50% of all unarranged charges were paid by 1.5% of PCA customers
  - 100% of all refused payment fees were paid by 10% of PCA customers
  - 50% of all refused payment fees were paid by 1.2% of PCA customers
17. We calculate these charge concentration figures using the same representative sample of PCA transactions data described in this annex.

<sup>7</sup> We find that, in 2016, around 11% of customers who used an arranged overdraft and around 36% of customers who used an unarranged overdraft paid nothing for their overdraft use.

# Chapter 3-Vulnerability

## Introduction

1. This annex provides more detail on our analysis of consumer vulnerability and overdraft charges.

## Data

2. The source data for this analysis are the personal current account (PCA) data outlined in Chapter 1-Data. The outcome variables in this analysis are gross annual charges for:
  - **Unarranged overdraft fees:** including all charges incurred for using an unarranged overdraft, whether interest or fees, including paid transaction fees
  - **Refused payment fees:** including all charges incurred for refusing outgoing transactions
3. The analysis is based on a representative sample of the full customer dataset, after filtering for customer activity.
4. In addition to the PCA data, we use some publicly available data to measure consumer vulnerability to harm from overdraft charges. These are:
  - **Index of Multiple Deprivation:** these data are produced by the Ministry of Housing Communities and Local Government (MHCLG). This index measures local area deprivation across several domains including income, employment, health, and education.<sup>1</sup> These data are available for all lower layer super output areas (LSOAs) in England.
  - **Area Classifications and Pen Portraits:** this data is produced by the Office for National Statistics (ONS). The area classifications group all LSOAs in the UK into 8 groups with similar demographic and socio-economic characteristics as measured in the 2011 census. The 'Pen Portraits' are plain-English descriptions of these areas in terms of their distinguishing features.
5. The area definition these datasets use (LSOAs) was designed for the 2011 census – there are 42,619 of these areas in the UK, 32,844 of which are in England. The areas are designed for reporting local area statistics, and contain relatively small numbers of individuals - on average 1,500 people per area.
6. The Area Classifications use 2011 census data to construct the groups of areas. The Index of Multiple Deprivation (IMD) uses the same area definitions, but uses some bespoke data sources only available to central government. The index itself was constructed in 2015, though the data used typically comes from prior years.<sup>2</sup>

## Definition of vulnerability

7. The FCA defines vulnerable consumers as 'someone who, due to their personal circumstances, is especially susceptible to detriment, particularly when a firm is not acting with appropriate levels of care'.<sup>3</sup>

---

<sup>1</sup> And also crime, barriers to housing and services, and living environment deprivation.

<sup>2</sup> We are not concerned with the age of these data. Local area characteristics are highly persistent. For example, the 'English Indices of Deprivation Research Report 2015' Table 5.1 shows that the ranking of areas within the IMD was very stable from 2010 to 2015, especially for the most and least deprived areas.

<sup>3</sup> The FCA's [Approach to Consumers](#)

8. As outlined in Chapter 2-UK market for overdrafts, unarranged overdraft charges are high in an absolute sense and in relation to the amount of credit provided. Refused payment fees are also high. Vulnerable consumers are much more susceptible to detriment from high charges in relation to their current account use at times where they are already financially strained.
9. In this context, we then consider that vulnerable consumers are those who are more deprived. For example, because they are more financially strained, or less likely to have the financial resilience to cope with income or expenditure shocks at short notice.
10. By their structure, unarranged overdraft charges and refused payment fees are paid by consumers who have run out of current account funds. In principle that could happen to consumers who are not financially strained. For example, a consumer with substantial savings not moving their funds around as required to meet outgoing payments, or consciously engaging in discretionary spending aware of the fees they will incur but valuing the convenience. Our analysis shows that this is not the case for unarranged overdraft charges or refused payment fees. Both these charges exhibit strong relationships with measures of vulnerability.<sup>4</sup>

## Measures of vulnerability

11. We use four measures of consumer vulnerability, three derived from publicly available data and one constructed from the PCA data. These are:
  - **IMD, overall measure:** this is a combined measure of local area deprivation across several domains, with the most weight placed on income and employment deprivation
  - **IMD, income domain:** this measure focuses specifically on local area income deprivation. This is measured by the rate at which residents are eligible for specific types of income support benefits<sup>5</sup>
  - **Pen Portraits:** one of the pen portrait area classifications, ‘hard-pressed communities’, is more likely to be vulnerable than the other area classifications
  - **Individual benefit receipts:** some types of benefits, for example Job Seekers Allowance (JSA) and Employment Support Allowance (ESA) are identifiable as deposits into customer accounts.<sup>6</sup> Receipt of some of these benefits may also indicate consumer vulnerability
12. Our preferred measure of vulnerability is IMD. We have also used this measure in other elements of the high cost credit review analysis, including the recent consultation on Rent-to-own<sup>7</sup>, and our work on consumer level contribution in the Strategic Review of Retail Banking.<sup>8</sup> We prefer this measure as it captures a wider range of consumer characteristics that may indicate vulnerability than other options, and does so in a rigorous way using very granular data.
13. To look at low income as a measure of vulnerability, we also considered using income estimates derived from the PCA data, or regional estimates of income from public data sources. We found that estimates derived from the PCA data were poor. It is hard to distinguish income payments from other deposits or consumers transferring

<sup>4</sup> We also looked the relationship between these measures and arranged overdraft charges—there was not any clear pattern.

<sup>5</sup> For example, families receiving working tax credit and child tax credits, or asylum seekers eligible for subsistence or accommodation support.

<sup>6</sup> We infer these by matching the specific size of the deposit, and verifying that the account receives at least 3 of these payments.

<sup>7</sup> See [CP 18/35](#)

<sup>8</sup> The FCA's [Strategic Review of Retail Banking](#)

money between their accounts.<sup>9</sup> At low levels, it is hard to know whether the observed deposits are a customer's complete income, a partial view of their income, or something else.<sup>10</sup> Regional estimates of incomes tend to focus on averages, and combined with their relatively wide area coverage are not a good indication of low incomes at the level of an individual.

14. While the IMD income component does not measure income in cash terms, it does measure the rate of income deprivation for very local areas. This is the best indication of low income for a consumer that we could source.

## Findings

15. The below subsections present the key findings on the relationship between charges and the measures of vulnerability.
16. In all cases, we find that more vulnerable consumers are more likely to incur unarranged overdraft charges and refused payment fees, and more likely to incur large amounts of these charges. Although differences in average charges may be small in absolute terms, in practice these averages are driven by a small number of consumers incurring very large charges, while the majority incur none at all.

### *Index of Multiple Deprivation*

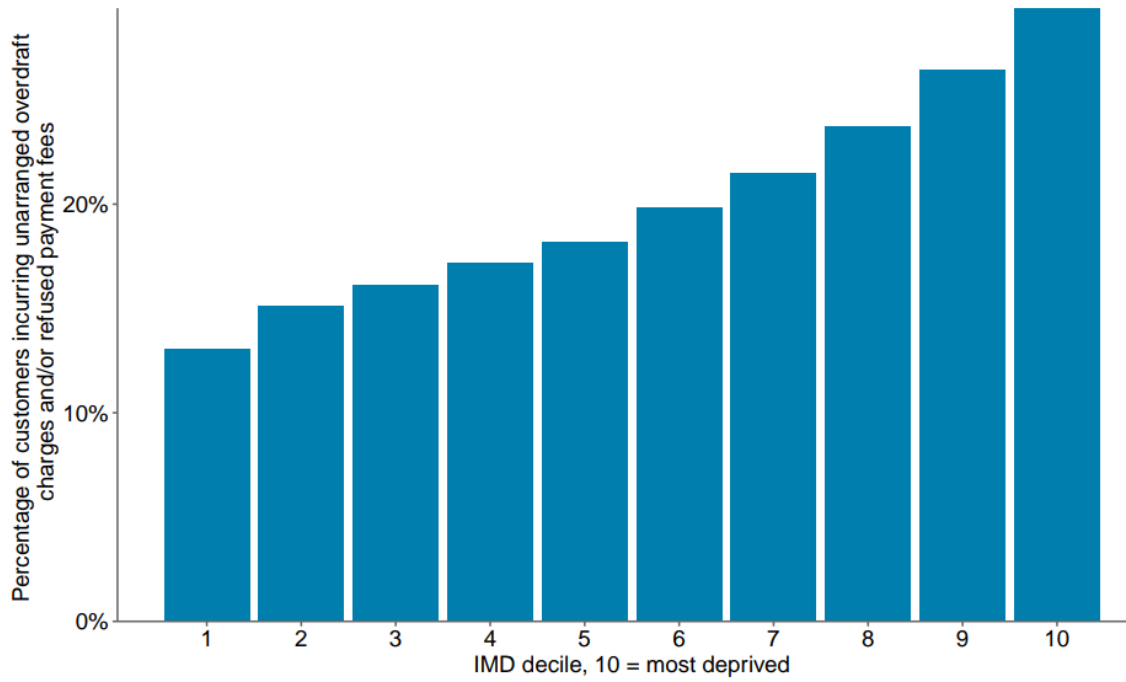
17. Unarranged overdraft charges and refused payment fees exhibit a strong correlation with IMD. This is driven by consumers living in more deprived areas being more likely to incur these charges, and being more likely to incur large amounts of these charges.
18. The figures below group consumers according to their decile of deprivation within the PCA data. Each decile represents 10% of the sample, and the deciles are ordered from least to most deprived.

---

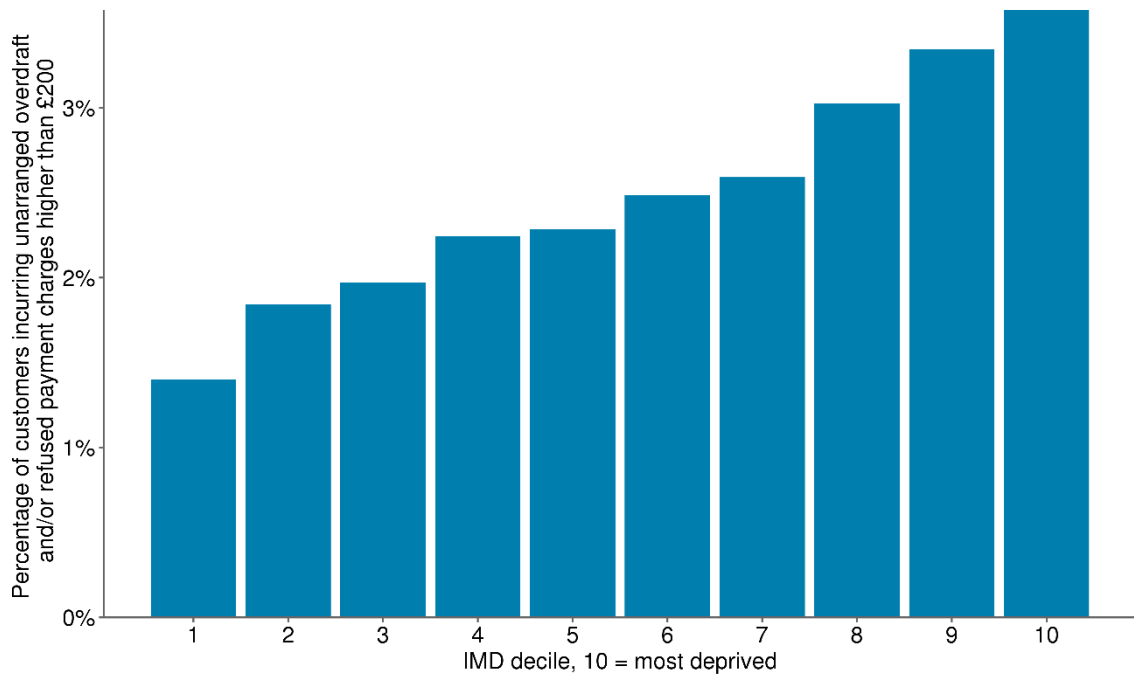
<sup>9</sup> For example, tenants in house shares may pay the rent and bills through one resident's account. That resident would appear to have a very high income if we tried to measure it from deposits into their account.

<sup>10</sup> For example, the account we observe could be a secondary account, or the customer might manage a large part of their finances in cash.

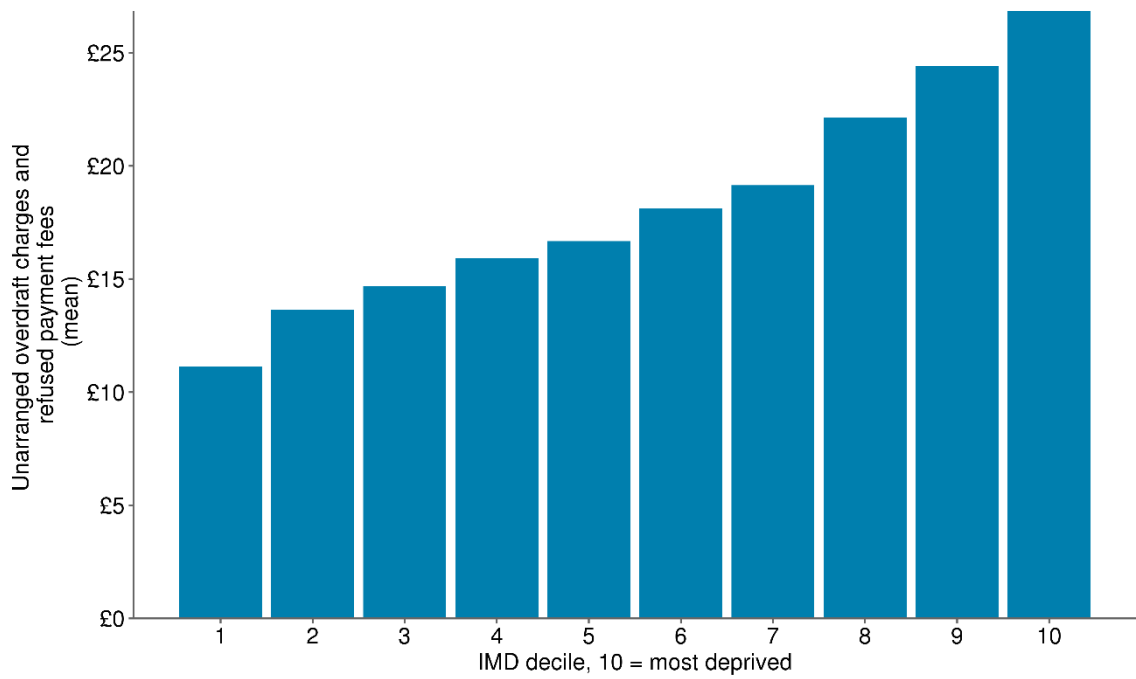
## Percentage of customers incurring fees



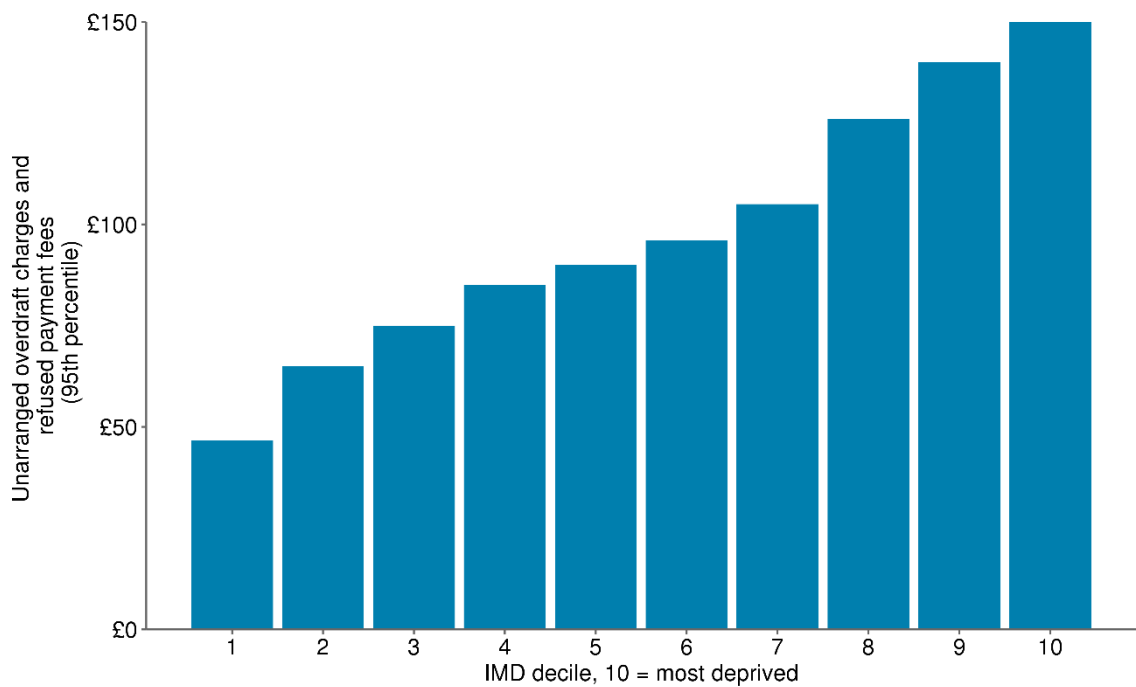
## Percentage of customers incurring more than £200 in fees



## Average fees



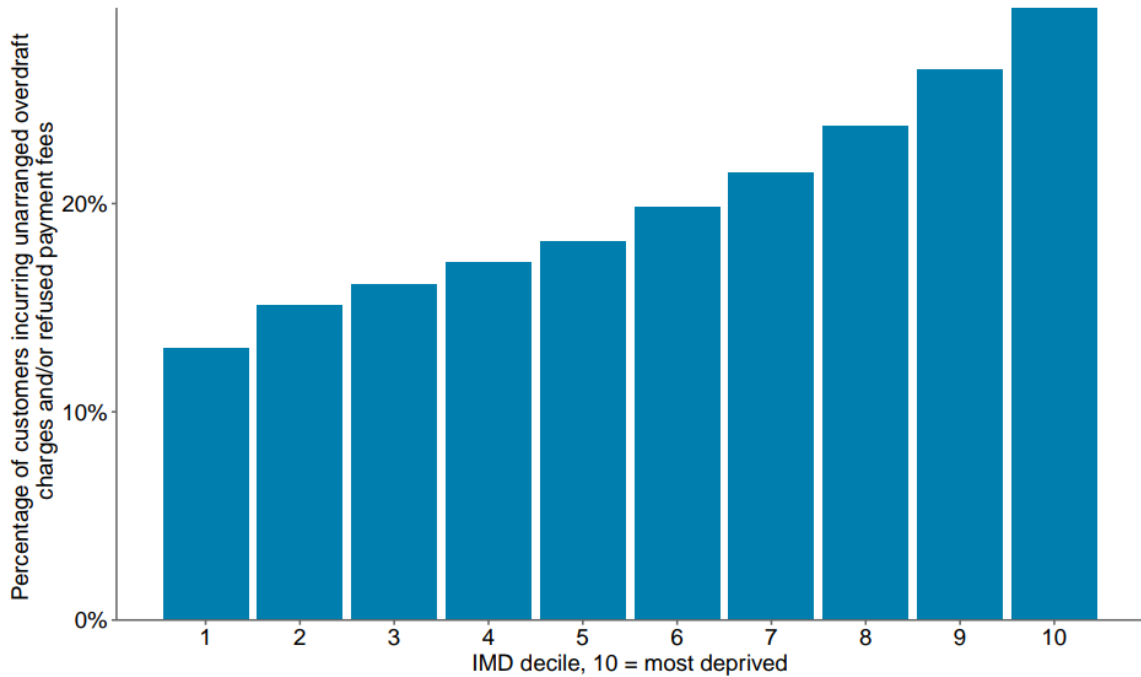
## 95<sup>th</sup> Percentile of fees



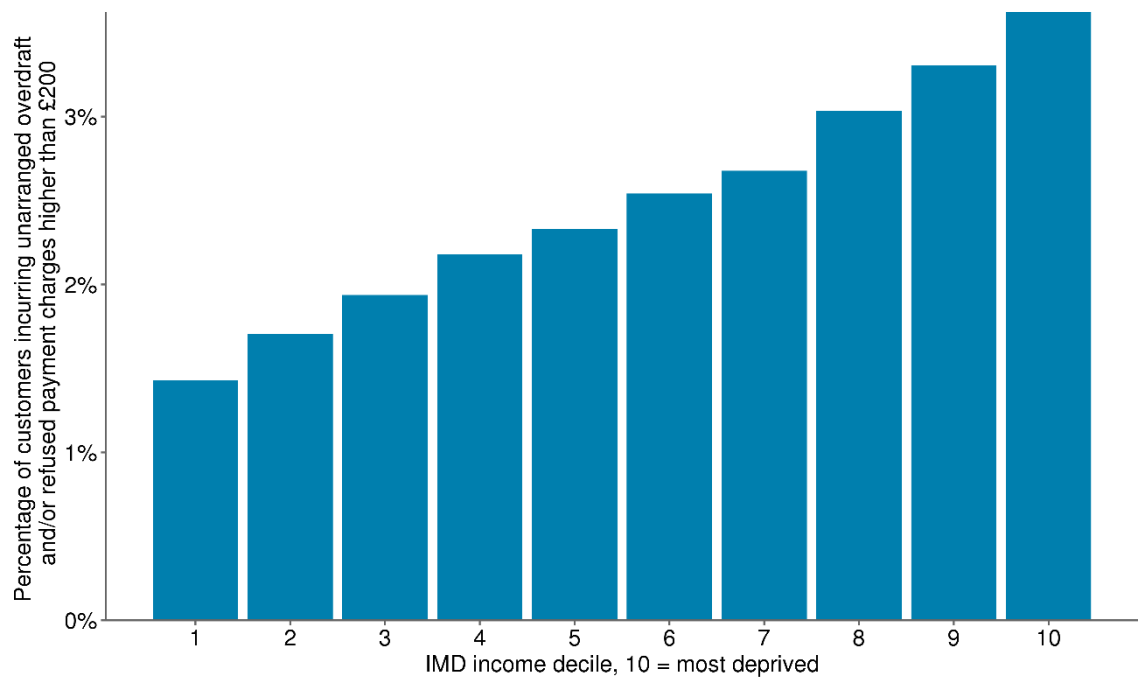
*Index of Multiple Deprivation: Income domain only*

19. The below figures are similar to those in the previous subsection. The difference is here consumers are split into deciles of deprivation using the income domain of the IMD only, not the overall score. See paragraph 14 above for more detail.

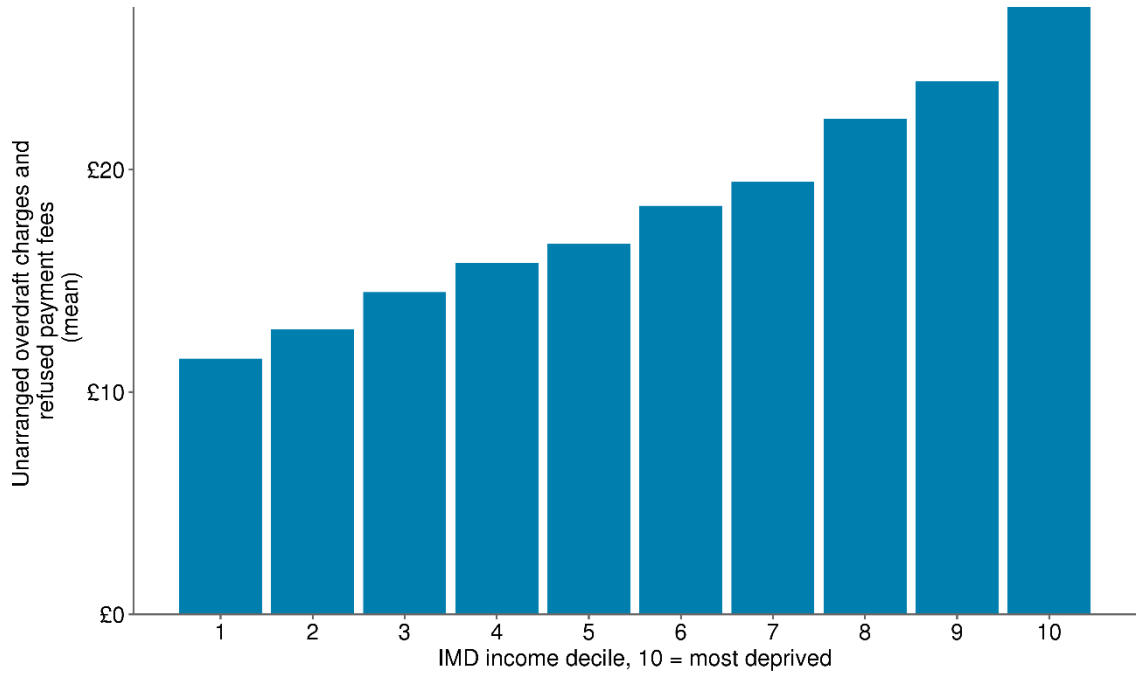
**Percentage of customers incurring fees**



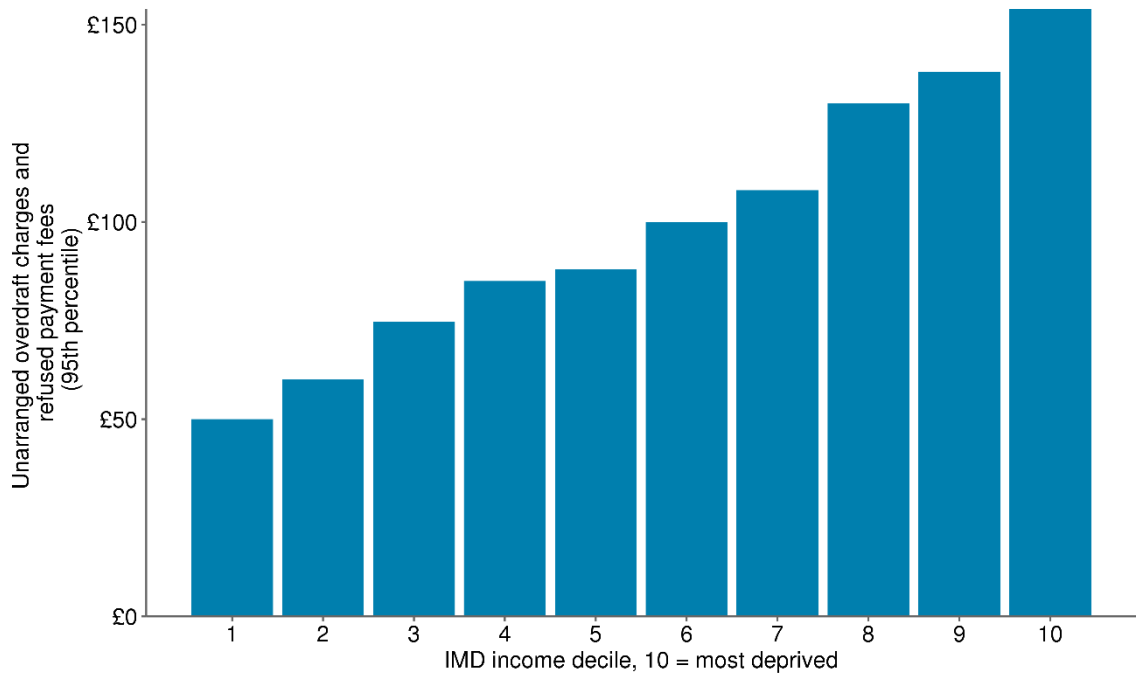
**Percentage of customers incurring more than £200 in fees**



**Average fees**



**95<sup>th</sup> percentile of fees**

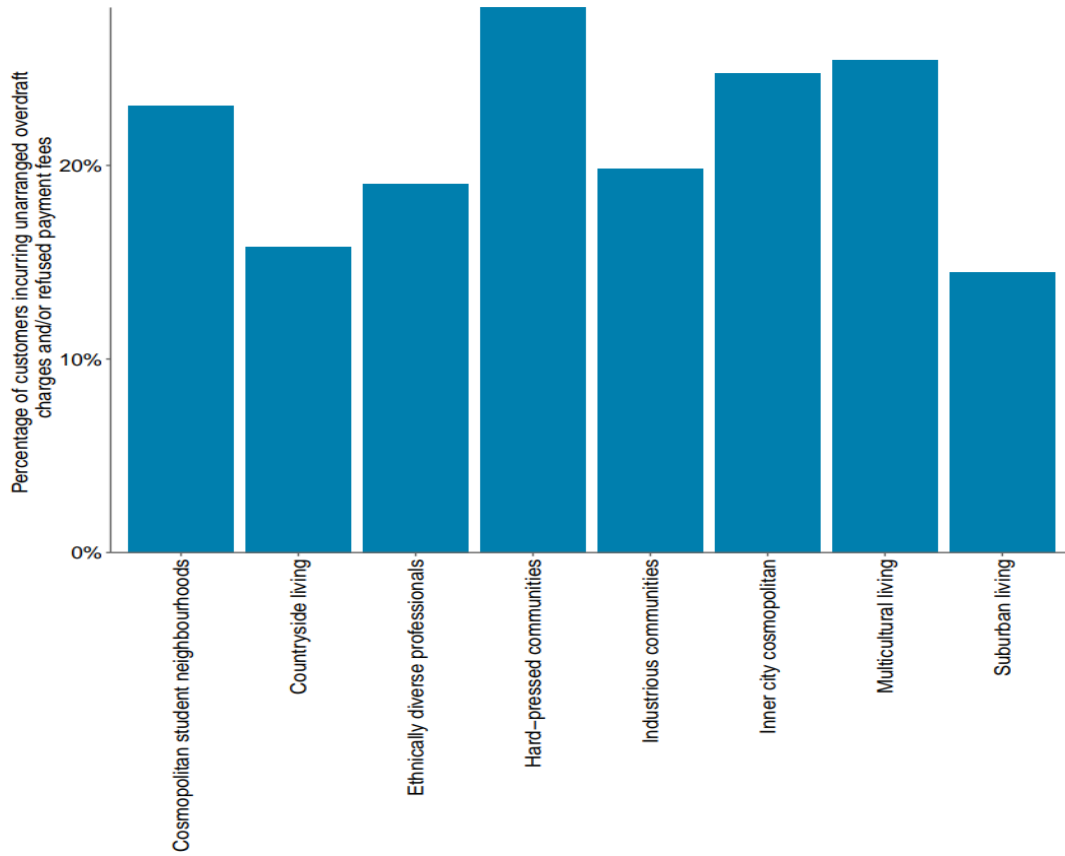




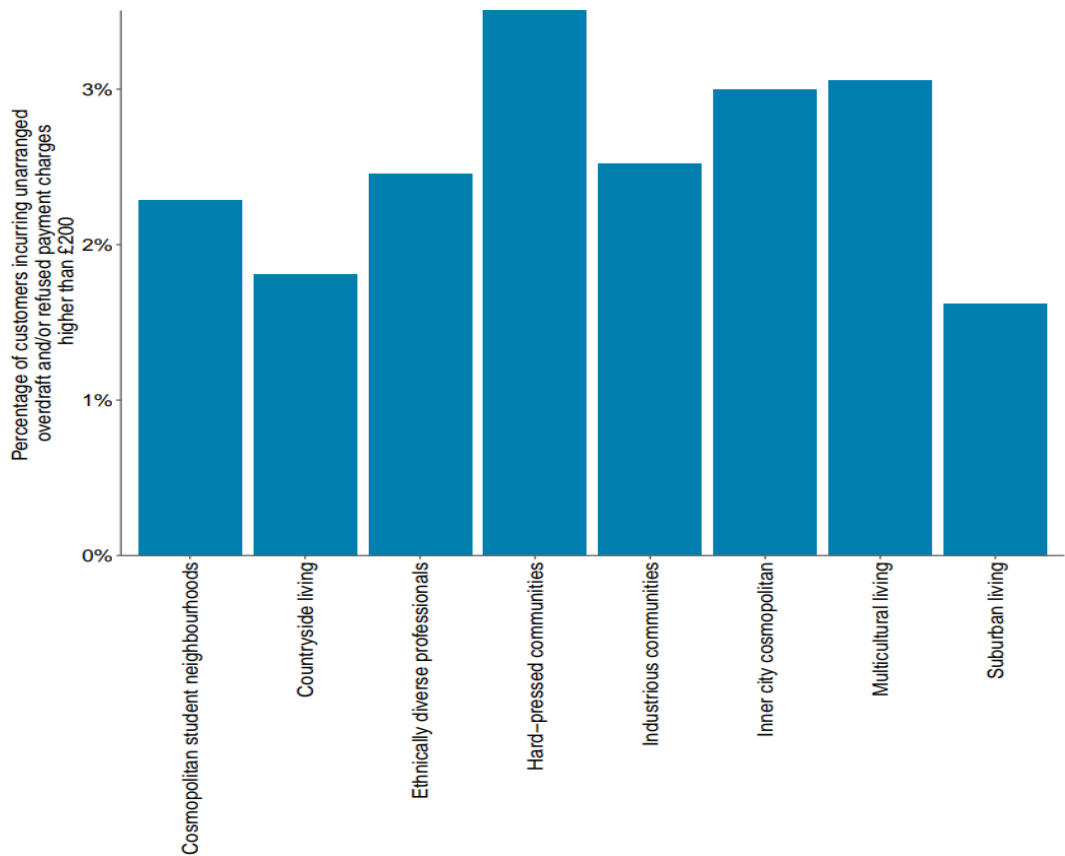
*Area Classifications and Pen Portraits*

20. The below figures show how unarranged overdraft and refused payment fees vary by area classifications. On each measure, those living in 'hard-pressed communities' exhibit the worst outcomes, usually followed by those living in 'multicultural living' and in 'inner city cosmopolitan' areas.

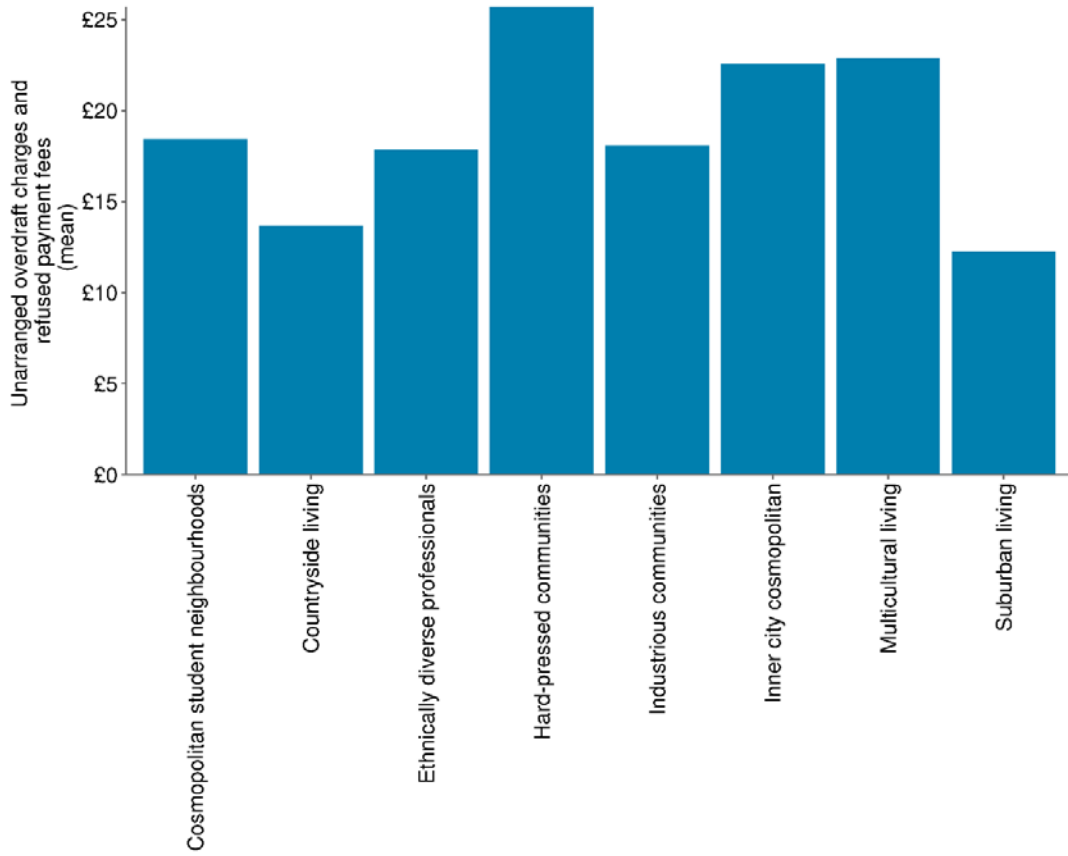
### Percentage of customers incurring fees



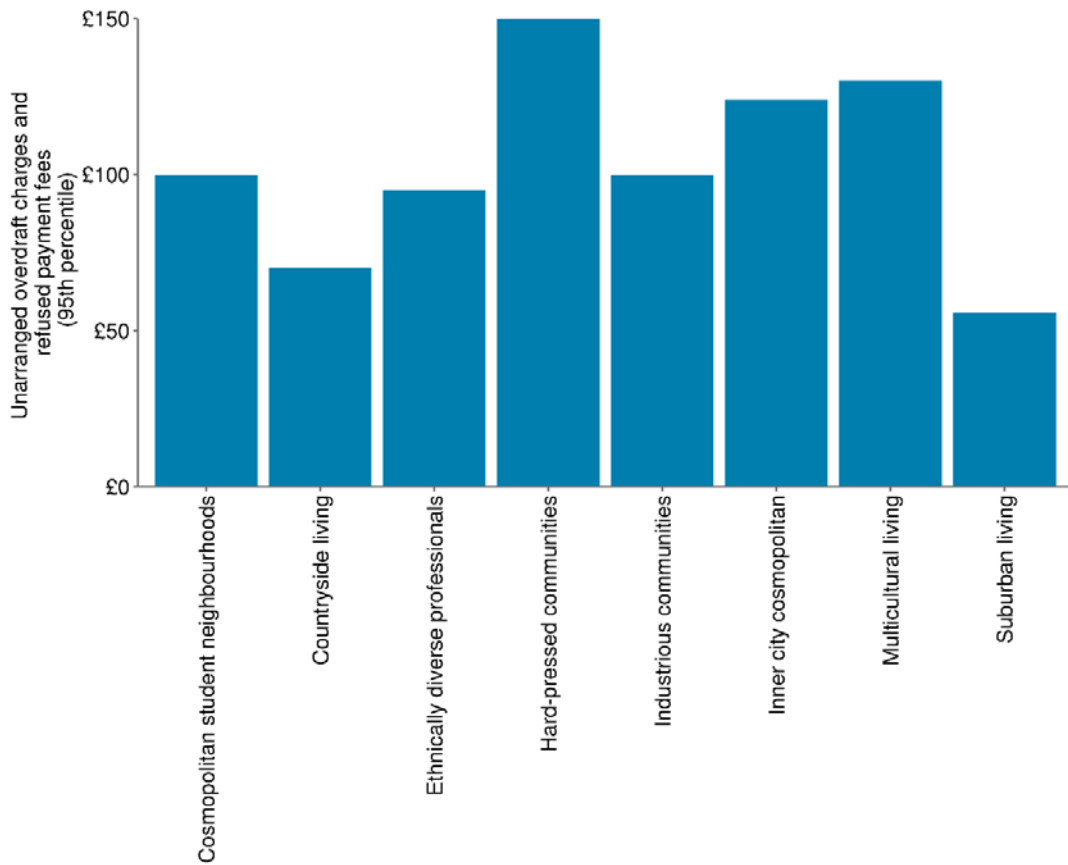
### Percentage of customers incurring more than £200 in fees



### Average fees



### 95th percentile of fees



### *Benefits receipts*

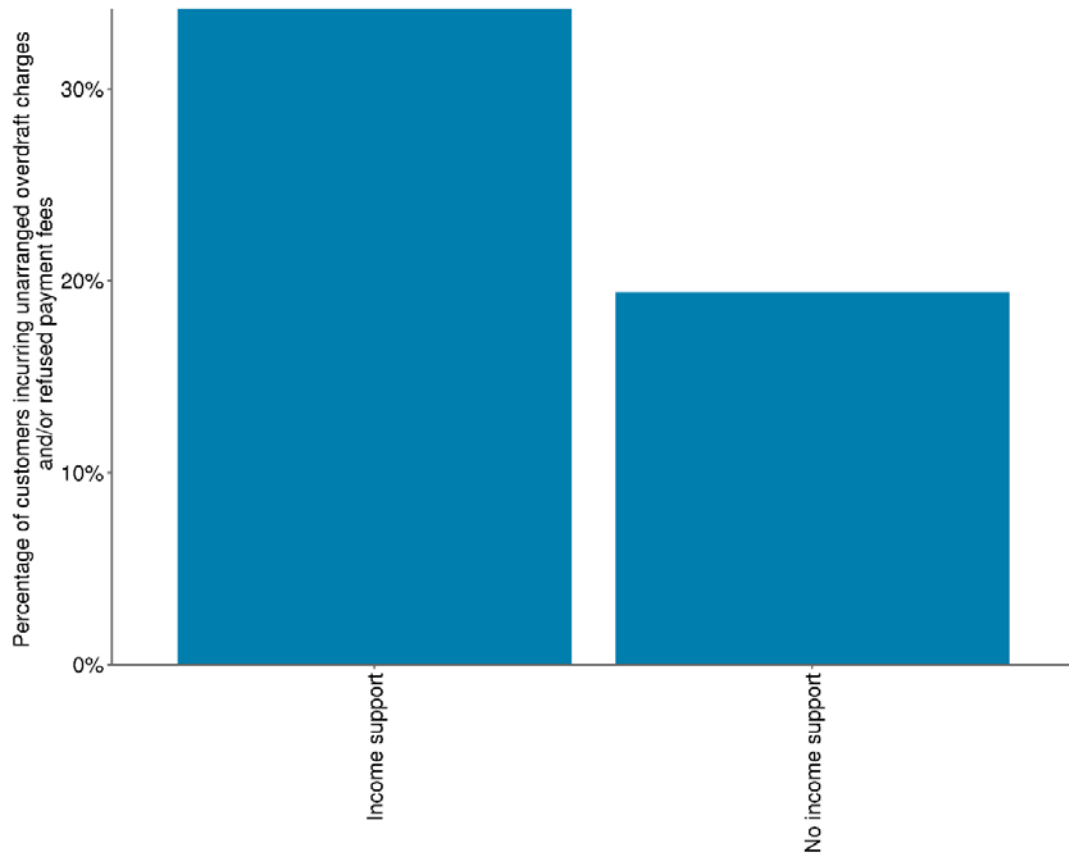
21. The relationship between benefits receipts and unarranged overdraft and refused payment fees is specific to certain types of benefits. Working age benefits that are intended as income support - for example receiving Job Seekers Allowance, or the maximum amount of Child Tax Credits<sup>11</sup> - do correlate strongly with incurring unarranged overdraft and refused payment fees.
22. Other types of benefits that do not relate to working age income support, for example Personal Independence Payments, do not correlate with incurring unarranged overdraft and refused payment fees. This is consistent with what we would expect. Consumers receiving income support payments must generally meet criteria around the level of income they receive from other sources, and have very limited access to savings. The same is not necessarily true for those receiving other types of benefits.
23. The figures below show how unarranged overdraft charges and refused payment fees vary between those receiving income support related benefits that we can identify at least once in 2016, and those that did not.<sup>12</sup>

---

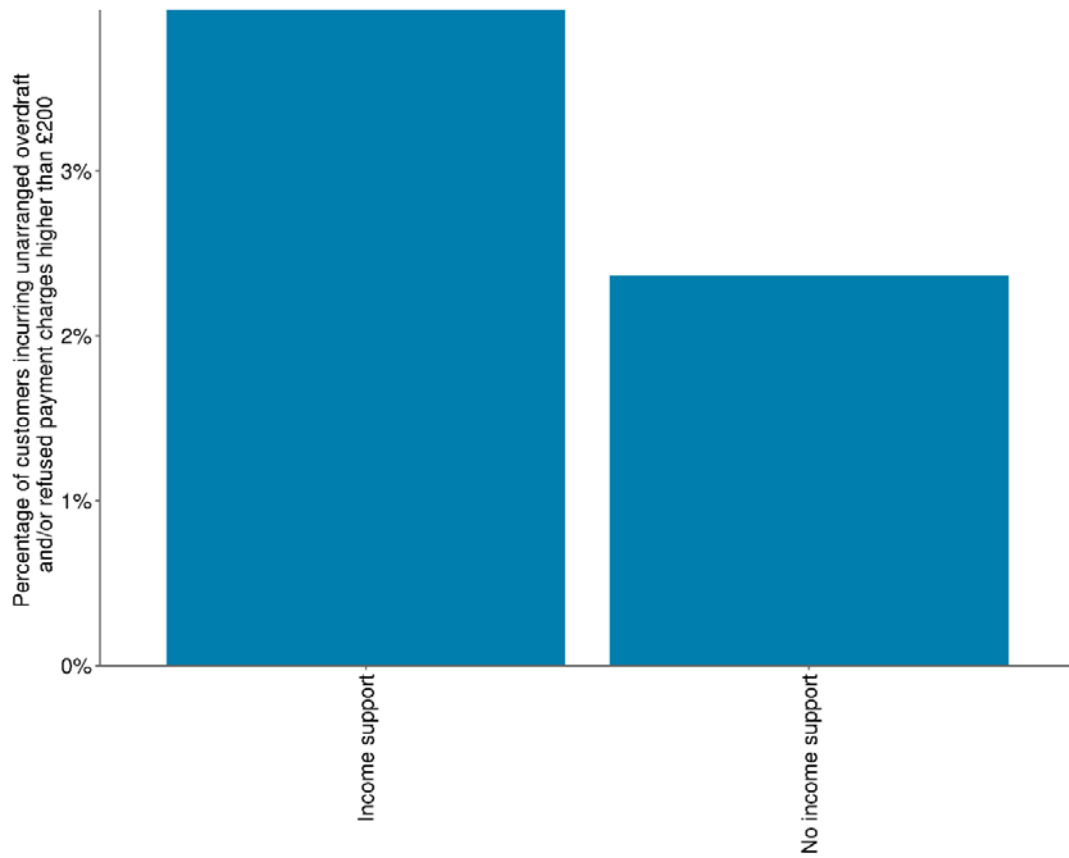
<sup>11</sup> We can only identify those receiving the maximum amount of this, as it is a specific number. Where people are only eligible for partial payment, we cannot identify it.

<sup>12</sup> Job seekers allowance, employment and support allowance, receiving the maximum amount of child tax credits, and carers allowance.

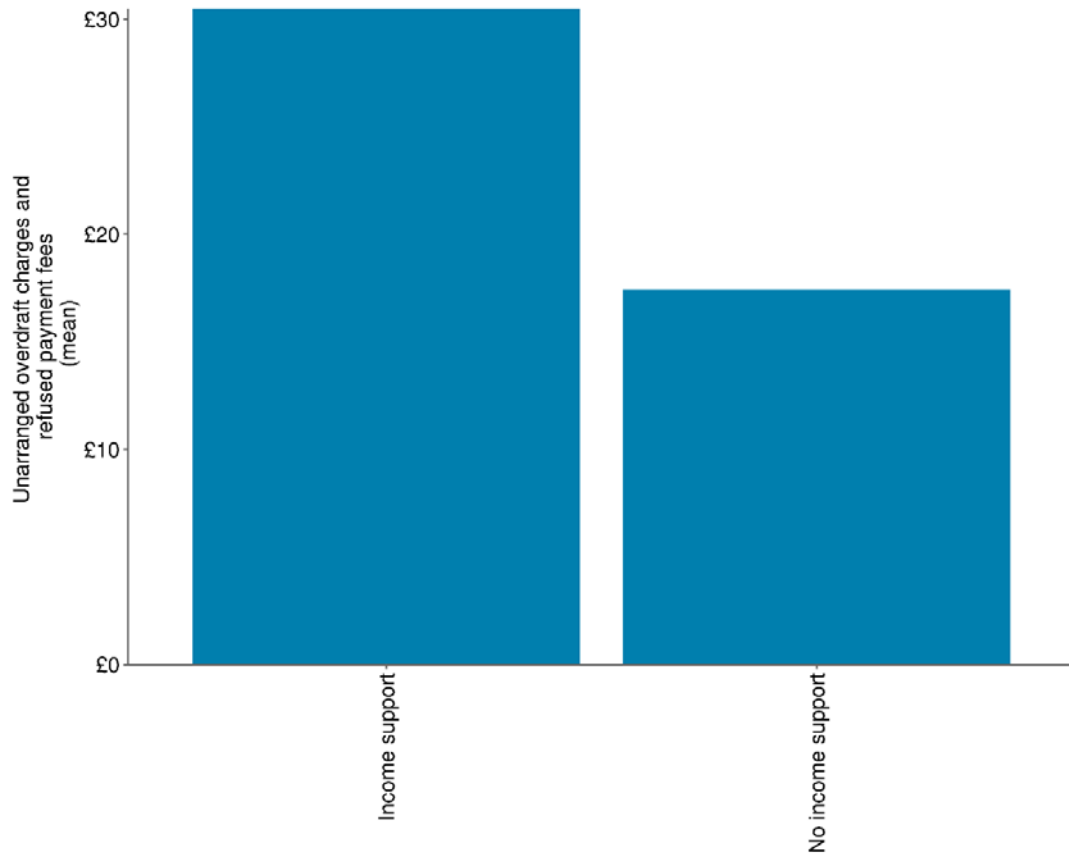
### Percentage of customers incurring fees



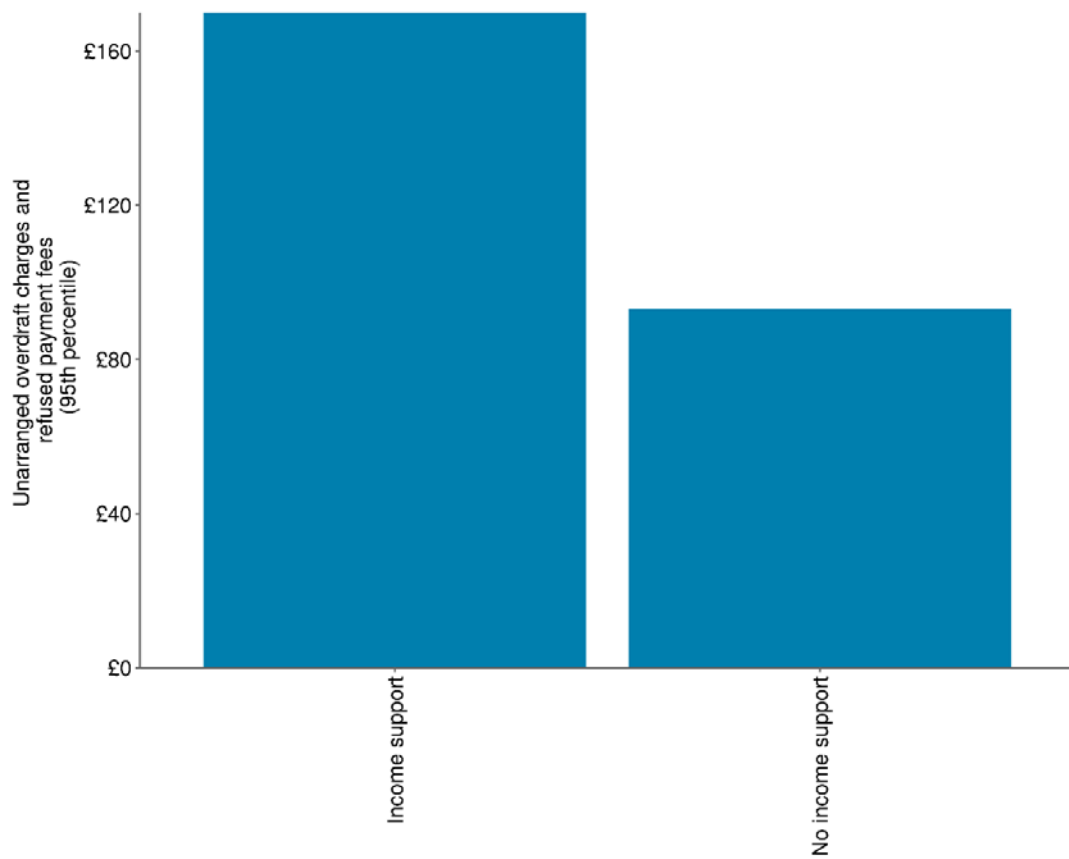
### Percentage of customers incurring more than £200 in fees



### Average fees



### 95th percentile of fees



# Chapter 4-Repeat overdraft use

## Introduction

1. Overdrafts are primarily intended as a short-term form of borrowing, but a significant number of people use their overdraft repeatedly over long periods. This repeat overdraft use can harm people because it is an expensive way to borrow and it increases the risk of building up debt over time.
2. This annex provides more details on our analysis of repeat overdraft use.

## Data

3. The source data for this analysis are the personal current account (PCA) data outlined in Chapter 1 – Data. The outcome variables in this analysis are gross annual charges for:
  - arranged overdraft fees: including all charges incurred for using an arranged overdraft, whether interest or fees
  - unarranged overdraft fees: including all charges incurred for using an unarranged overdraft, whether interest or fees, including paid transaction fees
  - refused payment fees: including all charges incurred for refusing outgoing transactions
4. The analysis is based on a representative sample of the full customer dataset, after filtering for customer activity (see paragraph 10 of this annex for more details).
5. In addition to the PCA data, we have asked firms for aggregate data on gross revenues and lending from overdrafts in the context of our Strategic Review of Retail Banking Business Models.<sup>1</sup>
6. We use some information from the credit reference agency (CRA) data to investigate the link between repeat overdraft use and users' financial position. The outcome variables for this analysis are customers' daily credit, debit transactions, daily balances, and the limits on their account. CRA data are outlined in Chapter 1 – Data.
7. We also use Office of National Statistics (ONS) data on UK population and Competition and Markets Authority (CMA) market share data to measure gross revenues and lending from overdrafts, as described in Chapter 2 – the UK market for overdrafts.

## Findings and methodology

8. This section explains how we estimate:
  - gross revenues from overdrafts and refused payment fees and amount lent, split by those who used overdraft 12 or more months in 2016 vs. all other users
  - relationship between charges and repeat use

---

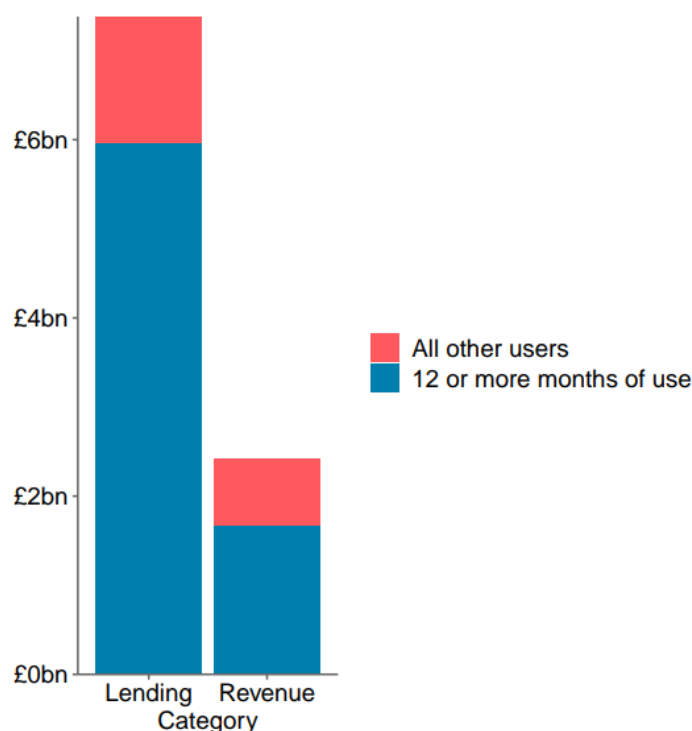
<sup>1</sup> See Chapter 8 – Profitability and Strategic Review of Retail Banking Business Models.

- dependency on overdrafts. This includes probability of using an overdraft next month once you have previously used it as well as number of days in arranged overdraft since use started
- relationship between repeat use and users' financial position

### Gross revenues and lending from repeat use

9. We estimate that in 2016 firms made 69% of their gross revenues from people who have used an overdraft for 12 months or more and lent 81% of their total overdraft lending to them (Figure 1). Further details on how we calculated gross revenues and lending figures are included in Chapter 2 – the UK market for overdrafts.

**Figure 1: Repeat use revenue and lending for those using every month in 2016 vs all other users**



10. To produce these estimates, we take our sample of PCA transaction data and make sure we consider customers having at least £500 per month median deposits. This is consistent with what the CMA defined as a 'main account' in its investigation into the Retail Banking Market.<sup>2</sup> Note that we use only transaction data for which we have 12 months of data for each customer and year combination.
11. We then build a representative sample of the raw customer data weighted using market shares. We use market shares data calculated by the CMA for its Investigation into the Retail Banking Market.<sup>3</sup>
12. Finally, we aggregate data averaging charges and overdraft use by type of borrowers (i.e. people who have used an overdraft for 12 months or more versus everyone else in the sample).

<sup>2</sup> See para 4.17, Final Report of the CMA's Retail Banking Market Investigation (2016):

<https://www.gov.uk/cma-cases/review-of-banking-for-small-and-medium-sized-businesses-smes-in-the-uk#final-report>

<sup>3</sup> See Table 3, Appendix 5.1 of the CMA's Retail Banking Market Investigation (2016):

<https://www.gov.uk/cma-cases/review-of-banking-for-small-and-medium-sized-businesses-smes-in-the-uk#final-report>

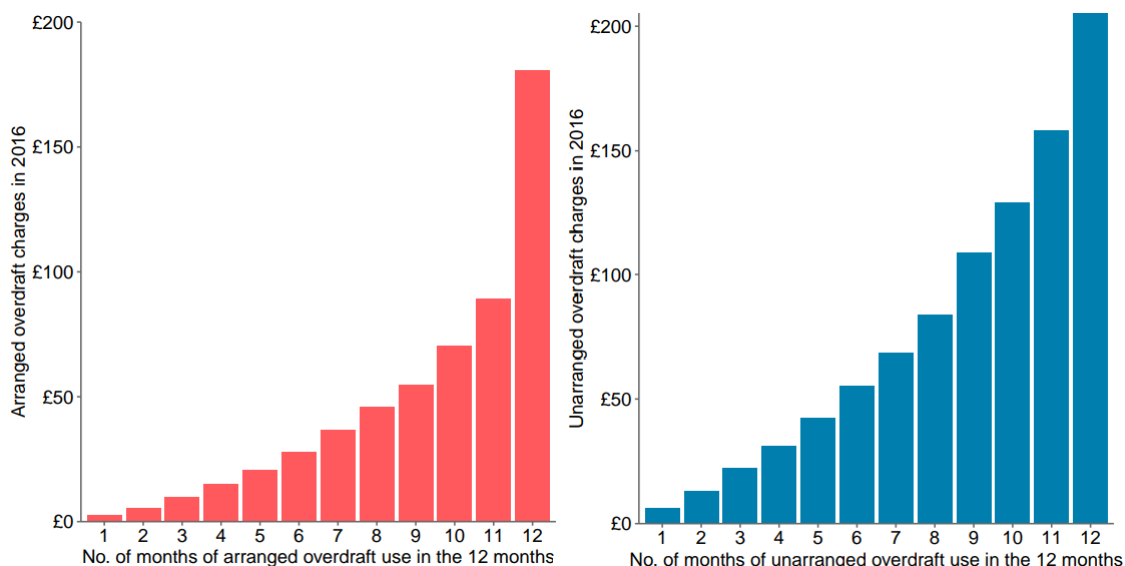


13. Once we obtain the percentage splits of revenues and lending from our estimates (i.e. how much of revenues and lending come from repeat users vs. other users), we apply those splits to firms aggregate data. These data on revenues and lending have been collected through our Strategic Review of Retail Banking Business Models work.
14. We scale figures to market-wide level using ONS and CMA data as described in Chapter 2 – the UK market for overdrafts.

### Relationship between charges and repeat use

15. We find that there is a clear link between repeat use and paying higher arranged and unarranged overdraft charges (Figure 2). Note that for this analysis we consider non-consecutive months of use.
16. For arranged overdrafts we observe a large jump in average charges paid at 12 months of use in 2016. This is likely to capture customers who have used their overdrafts beyond 12 months. The average arranged charges paid by these consumers is around £180 and this goes up to around £197 when we consider consumers using an arranged overdraft in every month across 2015 and 2016. Furthermore, we find that the more customers have used an overdraft the more it is likely that they will use it in the future. This latter aspect is described in more detail in paragraphs 21-25 of this annex.
17. For unarranged overdrafts use we find greater levels of average charges paid by months of use, reflecting the larger fees paid for using an unarranged overdraft. The average charge paid by consumers who have used an unarranged overdraft for 12 months in 2016 is around £205. As before, the jump in charges at 12 months can reflect people being stuck in their overdraft use.

**Figure 2: Average charges for arranged (left) and unarranged (right) overdraft by months of use in 2016 [months are not consecutive]**



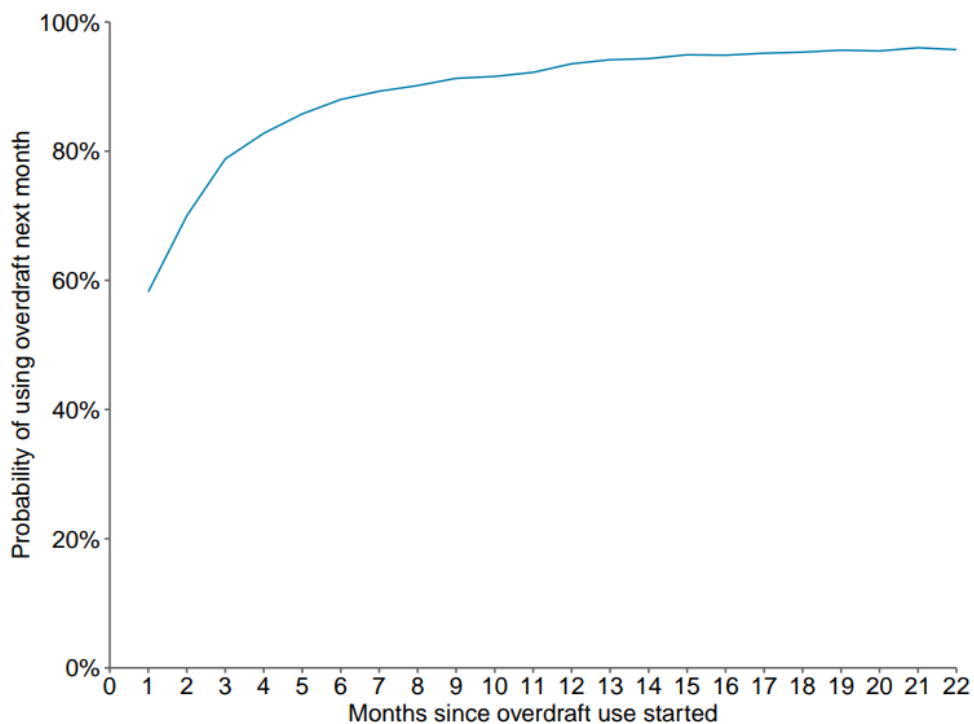
18. To produce these estimates, we take the sample of PCA transaction data and apply the same filters we used for estimating gross revenues and amount lent out. As before, we build a representative sample of the raw customer data weighted using market shares.

19. We then aggregate data by number of months of overdraft use for both arranged and unarranged overdrafts. Note that these outcomes do not necessarily account for consecutive months of use but reflect how many months a customer has used an overdraft in the year.
20. We finally use these groups to calculate mean charges by overdraft type and months of usage.

### Dependency on overdrafts

21. We use the same sample of PCA transaction data to calculate:
  - the probability of using an arranged overdraft the next month given how long the customer has already been using it
  - the probability of using an unarranged overdraft or incurring a refused payment fee given how long the customer has been using an arranged overdraft
22. We find that once customers use an arranged overdraft for one month there is a 58% chance that they will use it again the next month (Figure 3). This likelihood increases and plateaus around 94% after 12 months of consecutive overdraft use.<sup>4</sup>

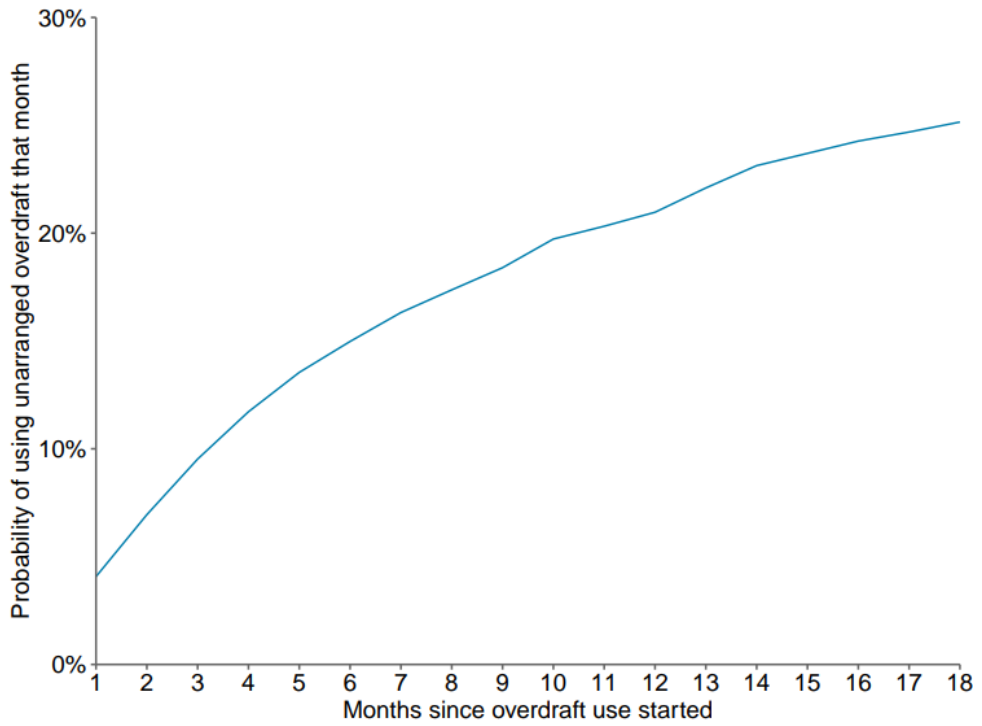
**Figure 3: Probability of using an arranged overdraft next month given arranged overdraft use**



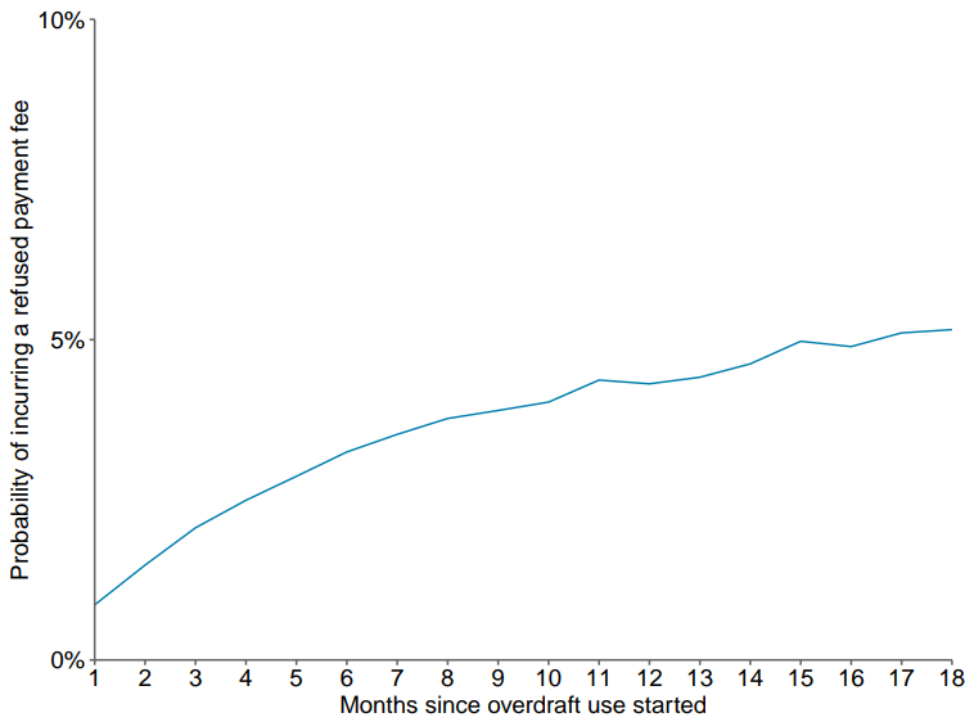
23. We also estimate that the probability of unarranged usage increases from around 10% after 3 months to 15% after 6 months and to over 20% by 12 months (Figure 4). The chances of a customer receiving a refused payment fee increase from around 2% after 3 months to 3% after 6 months and to 4.5% by 12 months (Figure 5). The combined effect of these is shown in Figure 6.

<sup>4</sup> We calculate probabilities using a simple survival function, which tells us the number of customers that will keep using their overdraft for the specified length of time.

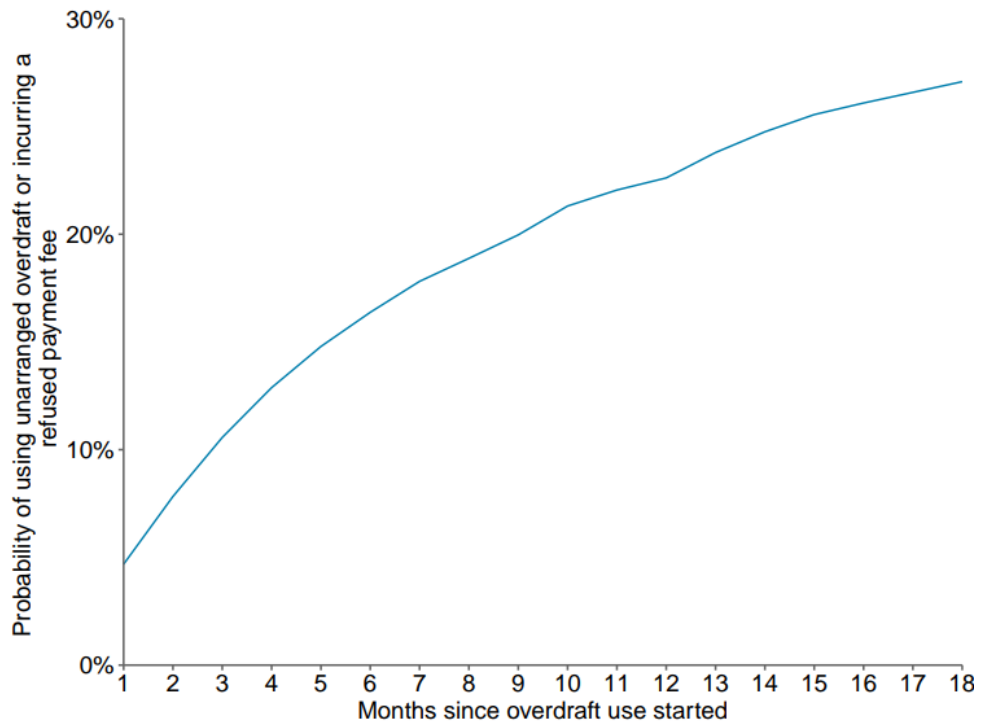
**Figure 4: Probability of using an unarranged overdraft given arranged overdraft use**



**Figure 5: Probability of incurring a refused payment fee given arranged overdraft use**

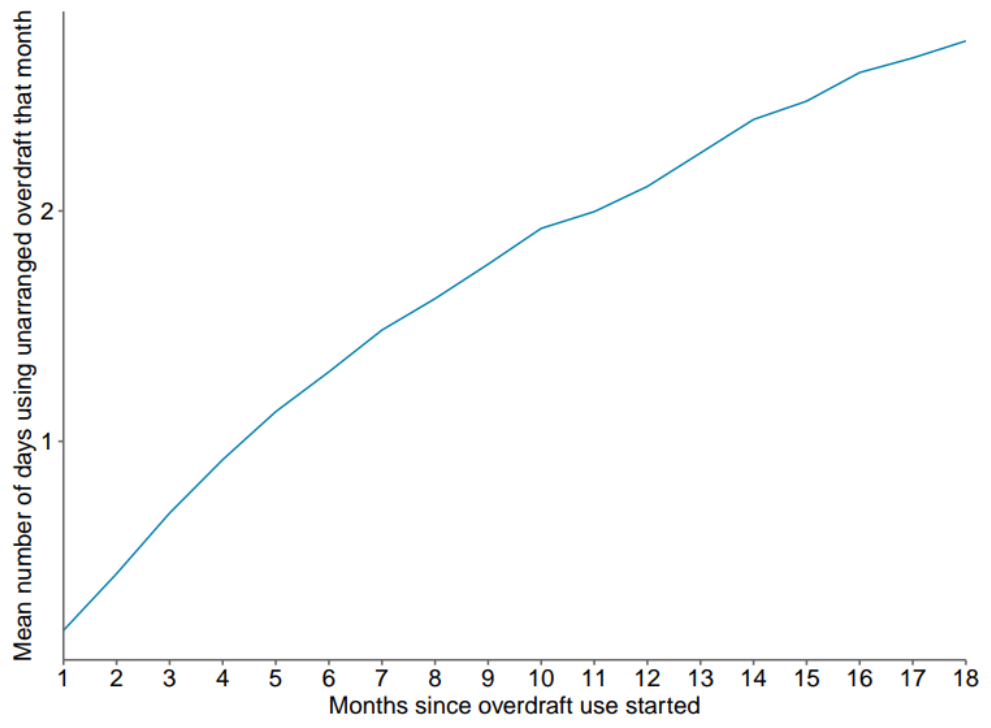


**Figure 6: Probability of using an unarranged overdraft or incurring a refused payment fee given arranged overdraft use**



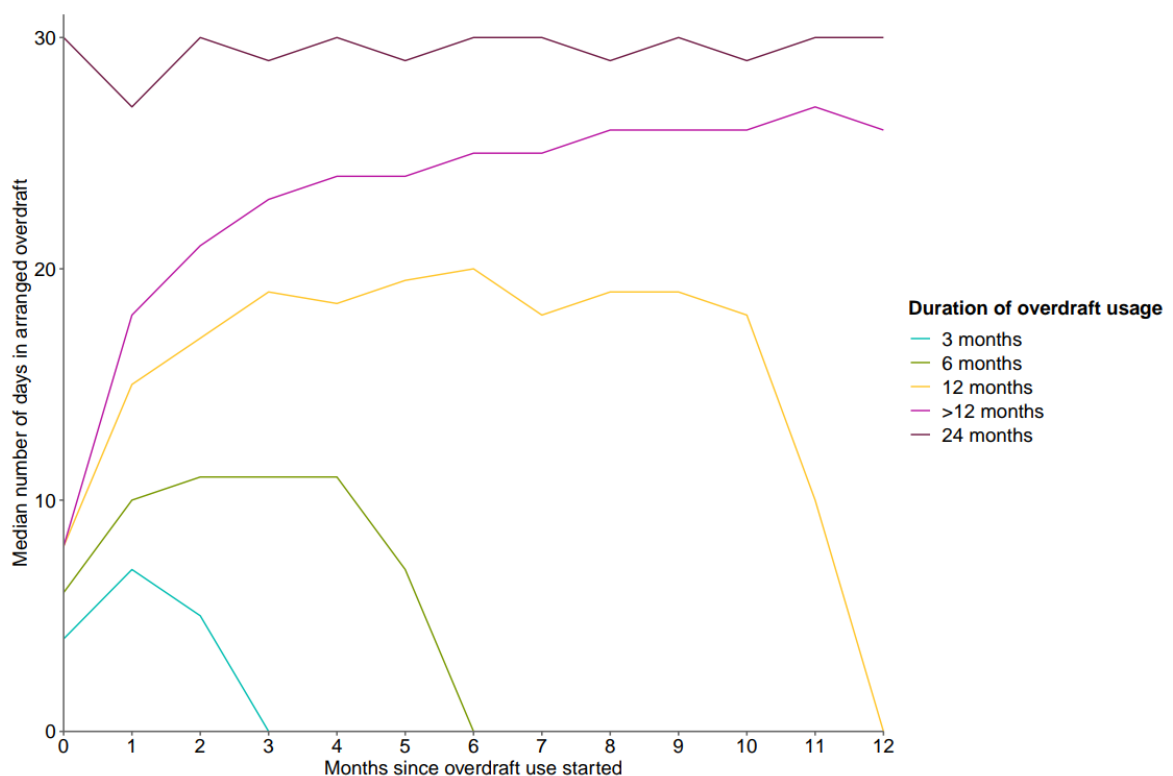
24. Figure 7 shows that the mean number of days of unarranged overdraft use increases with number of months of arranged overdraft used, from 1 day for those using arranged overdraft around 4.5 months to 2 at 12 months and continues to increase beyond.

**Figure 7: Mean number of days in unarranged overdraft given arranged overdraft use**



25. As well as looking at the average outcome by ongoing duration of overdraft use, we also looked at average patterns of use for customers who begin to use their overdraft for different lengths of time after a period of not using it. For this analysis, we identified spells of overdraft that started after a period of at least 3 months with no overdraft use, and went on to last for 3 months, 6 months, 12 months, and more than 12 months. For contrast we also include the average outcome for those who use an overdraft for every month of our sample period, 24 months.
26. The increased dependency on overdrafts is reflected by an increase in the median number of days overdrawn each month (Figure 8). Although there are small differences to begin with, the longer the period people go on to use arranged overdrafts the more the time they spend each month overdrawn. We find that PCA customers who went on to use arranged overdrafts for 3 months are typically overdrawn for around 4 days each month. For those who went on to use arranged overdrafts for 6 months, they are typically overdrawn for around 10 days each month. For those who went on to use arranged overdraft for 12 months, they are typically overdrawn for around 18 days per month. Note that the high median number of days observed at 24 months of use (30 days) is likely to capture customers who have been in overdraft beyond 24 months—their use may well have started before the sample period.

**Figure 8: Median number of days in arranged overdraft by months since arranged overdraft use started**

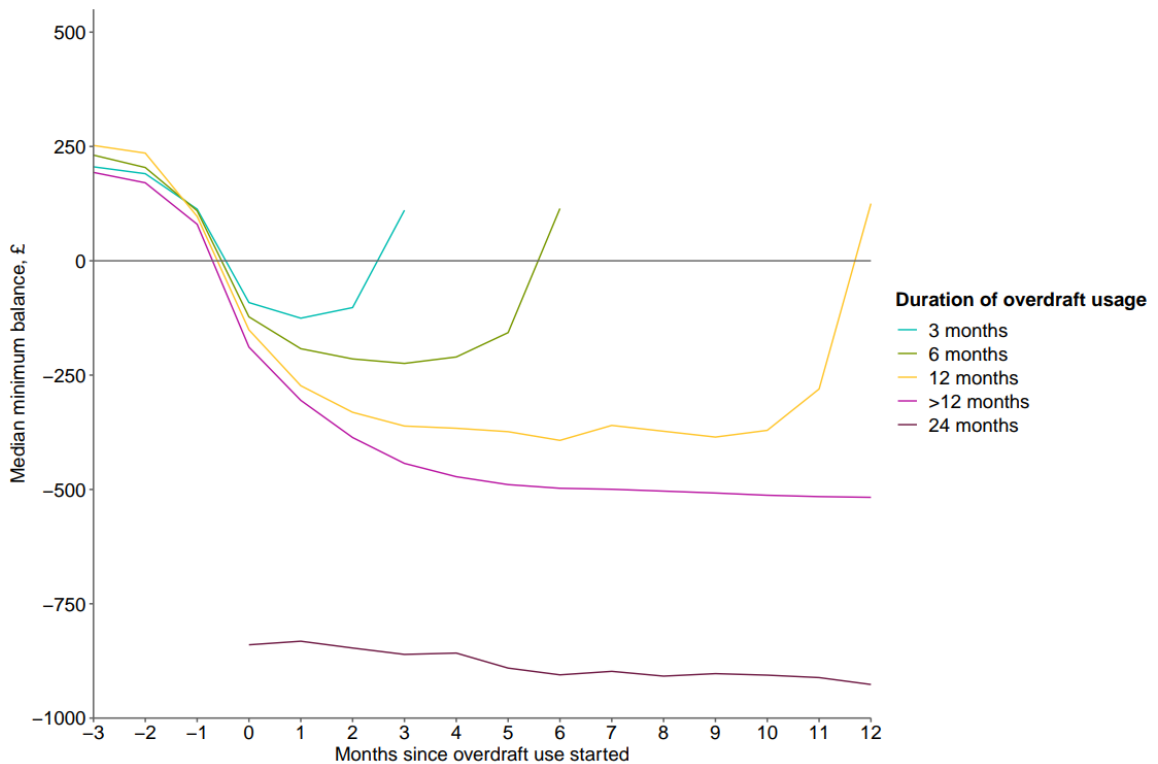


### Relationship between repeat use and users' financial position

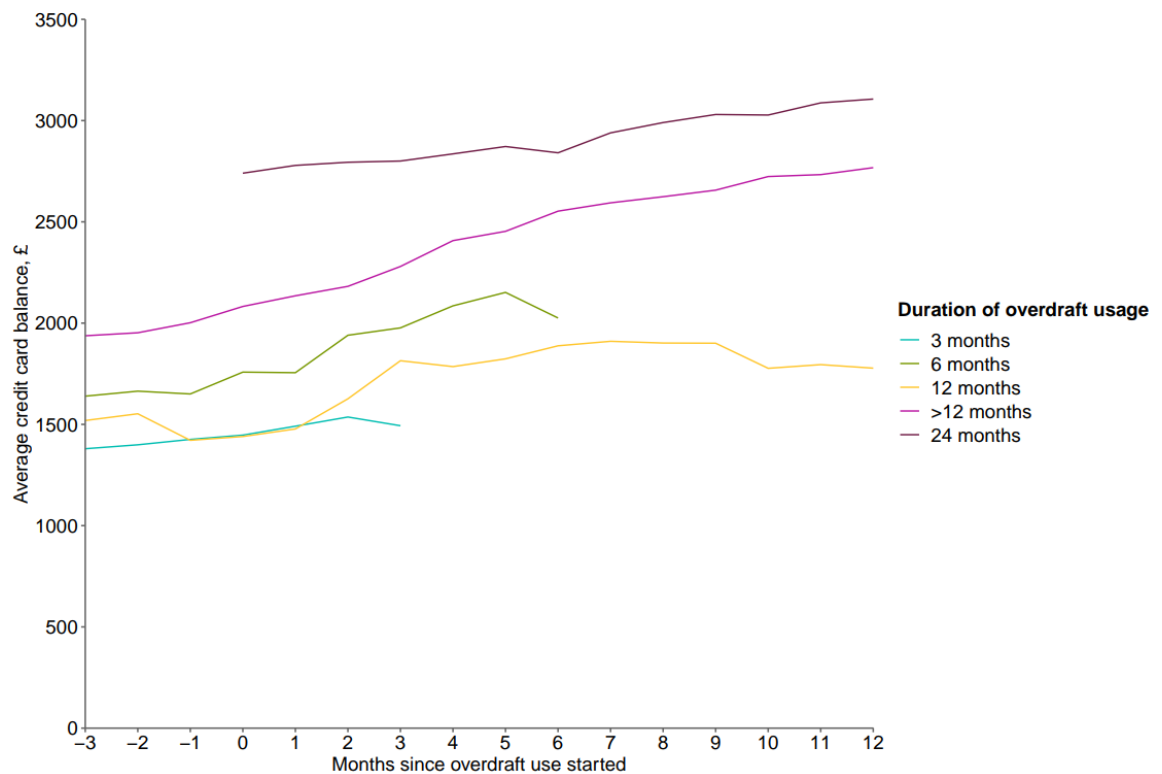
27. As we set out in CP18/13, repeat overdraft users usually have a deteriorating financial position. This is reflected in current account balances (Figure 9), even though some users may be clearing their balances every month, as well as for other credit products such as credit cards (Figure 10).

28. To produce these figures we match the CRA data to the PCA data. Note that in this analysis, the duration is for consecutive months of use.

**Figure 9: Median lowest account balance by months since overdraft use started<sup>5</sup>**



**Figure 10: Average credit card balance by months since overdraft use started**



<sup>5</sup> We consider the median lowest current account balance during the month.

# Chapter 5-Availability of alternatives

## Introduction

1. This Annex sets out our approach to analysing availability of overdraft alternatives, what sources of funds or credit might be available to existing overdraft users.
2. We look into the availability of overdraft alternatives because, while we do not consider it likely, we recognise that a potential unintended consequence of our proposed interventions on pricing and repeat use could be loss of access to overdraft credit for some consumers. The two analyses presented here help us understand to what extent overdraft users are credit constrained and whether overdraft could be avoided in the first place.
3. Further, one of our proposed policy's goal is to make overdrafts easily comparable to other credit products, to increase competition between overdraft and other credit products. We want to understand the overlap between the overdraft and credit card markets, to get an indication of the scope for competitive pressures on overdraft from other products. We focus on credit cards as we think this form of credit is likely to be the closest substitute to overdraft.
4. We are also interested in availability of alternatives as it gives us an insight into whether an overdraft is used when cheaper alternatives are available. Consumers may use an overdraft when cheaper forms of credit are available to them because (i) of the complexity of current overdraft pricing structures, which make it hard for them to compare overdrafts to other credit products, (ii) they do not consider overdrafts as debt.<sup>1</sup>
5. The aim of these analyses, therefore, is to understand how many overdraft users could access other forms of credit or could have avoided using an overdraft in the first place. We recognise that there may be rational reasons why consumers would not want to make use of available alternatives (for example, savings may be earmarked for expected future expenditures, or to ensure availability of emergency funds were they to lose access to overdraft) and therefore some consumers may have preferences for using an overdraft over other available alternatives.
6. Our approach focuses on two types of alternatives to overdrafts:
  1. **Readily available alternatives at time of overdraft.** These include available cash or unused arranged overdraft limits in pre-existing current accounts, as well as unused limits in pre-existing credit cards. For this analysis, we take a retrospective approach and estimate how many days and which proportion of an overdraft spell consumers could have avoided using alternatives to which they already had access to.
  2. **Credit alternatives to existing overdraft.**<sup>2</sup> These include unused limit in pre-existing credit cards as well as additional limit on credit cards that consumers could have reasonably obtained if they were to apply. For this analysis, we

---

<sup>1</sup> It is also possible that some consumers prefer overdrafts to other forms of credit, and are willing to pay more to borrow through overdrafts rather than using other alternatives available.

<sup>2</sup> In this analysis, we only consider credit limits available to consumers in addition to any existing credit, rather than retrospectively estimating how much consumers could have borrowed had they not used an overdraft in first place. This means that our analysis of available alternative is likely to be an under-estimate.



estimate how many consumers would be able to move their existing overdraft balance on to a credit card.<sup>3</sup>

7. The rest of this Annex first presents the data used for the analyses, and then describes the methodology and key findings of each of the two analyses.

## Data

8. To estimate readily available alternatives to overdraft we use Personal Current Account (PCA) data and complement them with information from Credit Reference Agency (CRA) data.
9. From the PCA dataset we use credit and debit transactions, balances and limit on current accounts. We supplement these data with information on the balance held in savings accounts with the same bank, also sourced from the PCA data.
10. The PCA data are a daily dataset containing the full transactional history of 1.5 million PCA customers drawn from the 6 largest PCA providers. These data cover a 2-year period across 2015 and 2016. For this analysis, we use 2016 data only. A description of the PCA data is available in Chapter 1-Data.
11. We also match the PCA data to the CRA data to obtain information on available credit card balances, where available.
12. To estimate credit alternatives to overdrafts we used the credit holdings position, credit score and income as of January 2017, and the application and product opening activity in the credit card market in the first 3 months of 2017. We obtained this information from the CRA data.
13. The CRA data consist of a main dataset containing monthly snapshots of the credit position of a random sample of around 10% of the adult UK population and their financial associates. This is supplemented by information on personal characteristics, including credit score and income, as well as information on product applications.
14. The CRA data are briefly described in Chapter 1-Data, and in more detail in two previous FCA publications:
  - the High-cost credit review technical annex 1<sup>4</sup> explains how these data are constructed, and
  - chapter 4 of the Occasional Paper 28<sup>5</sup> sets out in more detail data limitations.

## Readily available alternatives to overdrafts

15. For this analysis, we identify sources of funding that were readily available to consumers when they used an overdraft and were either cheaper than an overdraft, or not substantially more expensive. We then estimate how many people could have avoided using an overdraft, completely or partially, by using these alternative sources of funding. The analysis is for 2016, the latest year of data available in PCA.

---

<sup>3</sup> By using a credit card instead of a debit card, consumers could move their overdraft balance on credit cards over time. We do not mean transferring the overdraft balance in one transaction on to a credit card. However, consumers could also use a money transfer credit card, and use it to pay cash directly into the account in overdraft, effectively moving the overdraft balance onto a credit card in one solution.

<sup>4</sup> FCA (2017) High-cost credit review technical annex 1: Credit reference agency (CRA) data analysis of UK personal debt. See: <https://www.fca.org.uk/publication/feedback/fs17-02-technical-annex.pdf>

<sup>5</sup> FCA (2017) Preventing financial distress by predicting unaffordable consumer credit agreements: An applied framework. See: <https://www.fca.org.uk/publication/occasional-papers/op17-28.pdf>

16. We consider cash in other current accounts, cash in a savings account, and unused credit card limits as readily available sources of funds. Cash in other current accounts or savings accounts will generally be cheaper than arranged overdrafts, and almost always cheaper than unarranged overdrafts.<sup>6</sup> Most credit cards would be competitive with arranged overdrafts, and almost always cheaper than unarranged overdrafts. When considering unarranged overdrafts, we also consider unused arranged overdraft limits as a better alternative, because arranged overdrafts are usually cheaper than unarranged.

## Our approach

17. We take a market representative sample of consumers, and calculate their total funds from each of the sources outlined above, and their total arranged and unarranged overdraft usage on each day of 2016. We then calculate how many days of use were avoidable with combinations of their alternative funds.
18. For each consumer, the four combinations we look at are:
- available cash in another current account,
  - available cash in another current account and/or a positive savings balance,<sup>7</sup>
  - available cash in another current account, and/or a positive savings balance (for unarranged borrowing we also consider unused arranged overdraft limit in other current account), and
  - available cash in another current account, and/or a positive savings balance or unused credit card balance (again, for unarranged borrowing we also consider unused arranged overdraft limit in other current account).
19. Due to the limitations of the data available, we are not able to account for cash or savings held with other banks or in other saving vehicles. As a result, our results likely underestimate the amount of people who would have been able to avoid using an overdraft.
20. We look at these combinations separately for arranged and unarranged overdraft, as the two are not equivalent. We assume that an arranged overdraft is preferable to an unarranged, so we consider unused arranged overdraft limit in other current accounts with the same provider when looking at the alternatives to unarranged overdraft.
21. Under each combination, an overdraft is considered avoidable on a given day if the maximum overdraft use that day is lower or equal to the total funds (calculated according to each combination) available that day.
22. For each combination of alternative funds, we look at the scope for avoidance under different measures. These are: the overall number of days of overdraft that were completely avoidable, and the cash value of borrowing that could have been avoided. We also look at these measures for days of overdraft use over a particular threshold of borrowing, to understand how scope for avoidance varies with intensity of use.
23. For arranged borrowing, the thresholds are set at:
- any borrowing (£0),

---

<sup>6</sup> There may be technical exceptions to this, for example cases where unarranged overdraft use is within a charge free buffer, or funds are only needed for a very short period of time and the savings account has a early withdrawal penalty.

<sup>7</sup> By comparing cash in savings accounts to overdrafts, we implicitly assume that all cash in savings accounts can be accessed instantly. We recognise that in some cases this may not be the case: some saving may be accessible only after the payment of a fee, while a minority of savings accounts may have amounts which have to be retained as a minimum. However, this is unlikely to result in material overestimation of consumers' savings, given that our estimates are extremely conservative (i.e. underestimate consumers savings) due to the lack of data on savings held in other accounts.

- maximum borrowing over £500, and
  - maximum borrowing over £1000.
24. For unarranged borrowing, they are set at:
- any borrowing (£0),
  - maximum borrowing over £100, and
  - maximum borrowing over £250.
25. These thresholds are inclusive, so if a customer's maximum arranged borrowing is £1200, then they would belong to all three groups.
26. For arranged overdrafts, we also look at proportion of days in which at least 50% of the value of the overdraft borrowing was avoidable. This is because arranged overdraft fees tend to be charged per day, and increase with the size of the overdraft balance. As our remedies may increase arranged overdraft fees for those with large overdraft balances, we are also interested in the extent to which consumers are able to substantially reduce their usage, not necessarily avoid it completely.<sup>8</sup>

### Key findings and conclusions

27. Our analysis shows that in many cases people using their overdraft could have used another source of funds to avoid the use of the overdraft functionality of their account, as shown in the tables below.
28. Tables 1, 2 and 3 show the resulting percentage of days, cash value, and days where 50% of the overdraft balance were avoidable respectively.
29. Table 1 shows the days of overdraft use that can be avoided across varying sources of funds and amount of borrowing. For all arranged borrowing, we find that up to 60% of overdraft days could have been avoided using cash in other accounts, savings and available balance on a credit card. Even when considering days with borrowing of over £1000, there were still 45% of days that could have been avoided. For unarranged borrowing we get a similar result: across all thresholds of borrowing, around 50% of all overdraft days could have been avoided.

**Table 1: Percentage of days of borrowing that were avoidable**

Overdraft type	Threshold	Percentage of days in this threshold	Avoidable with cash	Avoidable with cash and savings	Avoidable with cash, savings and arranged overdraft limit	Avoidable with cash, savings, credit card balance and arranged limit (for unarranged borrowing)
Arranged	0	100%	11%	27%	N/A	60%
Arranged	500	45%	4%	14%	N/A	49%
Arranged	1000	25%	3%	11%	N/A	45%
Unarranged	0	100%	10%	27%	34%	50%
Unarranged	100	14 %	7%	19%	28%	50%
Unarranged	250	4%	7%	17%	27%	51%

This table summarises the % of days of overdraft use that could be fully avoided using other sources of funds at the customer's bank and using available credit card funds.

<sup>8</sup> See Chapter 6- Policy analysis.

30. Table 2 shows the cash value of borrowing, again we find that up to 50% of all cash borrowed could have been avoided using the other sources of funds we considered.

**Table 2: Percentage of cash value of borrowing that was avoidable**

Overdraft type	Threshold	Percentage of total cash value in this threshold	Avoidable with cash	Avoidable with cash and savings	Avoidable with cash, savings and arranged overdraft limit	Avoidable with cash, savings, credit card balance and arranged limit (for unarranged borrowing)
Arranged	0	100%	5%	15%	N/A	49%
Arranged	500	86%	4%	12%	N/A	46%
Arranged	1000	67%	3%	10%	N/A	44%
Unarranged	0	100%	8%	21%	30%	50%
Unarranged	100	60%	7%	19%	28%	51%
Unarranged	250	34%	7%	18%	27%	52%

This table summarises the % of balances of overdraft use that could be fully avoided using other sources of funds at the customer's bank and using available credit card funds.

31. Table 3 shows how many days a customer could have reduced their usage of overdrafts by 50% or more. We find that the proportion of days where half of the overdraft was avoidable is at most 8 percentage points higher than the results showed in Table 1, where we consider the days in which all of overdraft usage was avoidable. This is not a large increase and suggests that consumers generally have alternative sources of funds available to them or don't, without being able to reduce rather than eliminate their usage of arranged overdrafts.

**Table 3: Percentage of days where 50% of the cash borrowed were avoidable**

Overdraft type	Threshold	Percentage of days in this threshold	Avoidable with cash	Avoidable with cash and savings	Avoidable with cash, savings and credit card balance
Arranged	0	100%	13%	31%	65%
Arranged	500	45%	7%	19%	57%
Arranged	1000	25%	5%	15%	53%

This table summarises the % of days that 50% of a customer's overdraft use could be avoided using other sources of funds at the customer's bank and available credit card funds.

32. From these three tables, we see that approximately 50% of all arranged and unarranged borrowing could have been avoided once all sources of funds are taken into account, both in terms of days and cash value.

## Credit alternatives to overdraft

33. For the analysis of credit alternatives, we estimate whether each overdraft user could move their overdraft balance<sup>9</sup> on to:
- available limits on existing credit cards, as observed in the CRA data, or
  - available limits on existing credit cards plus an estimate of the additional credit they could get if they applied.
34. We look into credit alternatives to existing overdraft as we want to understand to what extent overdraft users are credit constrained.
35. We focus on credit card borrowing in this analysis for two reasons. First, credit cards are the most substitutable product for overdraft borrowing. Both are running account products, and they can be used for many of the same types of spending. Although credit cards are primarily used for point of sale and online transactions, they can also be used for cash withdrawals and transfers.<sup>10</sup> For example, money transfer credit cards are designed to move credit from overdrafts to credit cards. They allow to borrow at 0% interest for a set amount of time, but charge a fee to do so. Second, credit cards are typically competitive on price with existing arranged overdraft products. Precisely which would be cheaper depends on the specific products being compared and the pattern of use.

## Our approach to estimate total credit card limit

36. The total credit card limit accessible to each overdraft user is obtained by taking any unused pre-existing credit card limit and adding on an estimate of how much additional credit each consumer could obtain:

### **Figure 1: Estimating total credit card limit for overdraft users**

$$\text{Total credit card limit} = \text{Observed unused credit card limit} + \text{Estimated additional credit card limit}$$

37. For a given overdraft user, the additional credit card limit available is estimated by observing how much credit other consumers with similar characteristics have obtained in the credit card market over a short period. This includes both new credit cards and limit extensions on existing credit cards. Since consumers do not necessarily apply for the maximum amount of credit they would be eligible for, we use a quantile regression approach to estimate additional credit: instead of estimating the average amount of additional credit obtained by people with similar characteristics, we estimate the upper end of the distribution of the amount of credit people with similar characteristics obtained.
38. Our methodology to estimate additional credit card limit can be summarised into 3 main steps:
- calibrate models using data on consumers who applied for credit cards,
  - validate models on held-out data to pick the one with the best fit,<sup>11</sup> and

<sup>9</sup> As recorded in the CRA dataset, rather than the PCA dataset.

<sup>10</sup> These cards tend to attract higher rates of interest and fees, but these are small compared to typical unarranged overdraft charges.

<sup>11</sup> Since we are interested in how accurately the models estimate what credit consumers could get if they applied, we validate the models by testing their in-sample fit, and their out-of-sample fit on the remaining 10% random sample of the available data. See 'model validation' section below.

- predict the additional credit that each consumer using overdraft could have got if they applied.

39. We discuss these in turn in the sections below.

### *Model specification*

40. The dependent variable is the observed additional credit card limit obtained by all consumers in the CRA sample who applied for a credit card between December 2016 and March 2017 or obtained credit card limit between January 2017 and March 2017. We include the consumers who applied for a new credit card but did not obtain one to ensure we capture cases where no credit was available to consumers.
41. We control for the following characteristics, all observed as of January 2017:
- past behaviour, captured by a consumer's credit score, and
  - affordability, captured by:
    - income,
    - committed repayments on all existing credit products,
    - total limit on existing credit products, and
    - total balance on existing credit products.
42. We use the raw data as contained in the CRA dataset. This is consistent with the information that would have been available to a firm performing a credit or income verification check. This is not perfect, as some firms may have access to additional data that we do not observe.
43. The model is estimated on applicants only. This will introduce a selection effect to the estimation because the choice to apply will not have been random - however, those who apply for credit are generally less creditworthy than the population as a whole, and therefore we expect our estimates to be conservative.
44. In constructing the dependent variable, we only consider additional credit card limit obtained within a maximum of 90 days from when we observe their credit score and estimated income. This is to ensure that consumers' credit scores and incomes at the time we observe outcomes in the market are unlikely to have changed substantially, but also allows us to capture a much larger sample of successful and unsuccessful applicants than looking at one month alone.<sup>12</sup>
45. Due to the matching between the credit holding information, the credit score and the affordability indicators, we did not have complete information for a minority of entries in the CRA data. We exclude these from the model estimation.
46. We trained the model on a random sample of 90% of the consumers in our sample, testing several methodologies: linear quantile regression (with and without interaction terms), penalised quantile regression (with and without interaction terms), and a quantile random forest.

### *Model validation*

47. For our purposes we care about accurately estimating what credit consumers could get if they applied. We are not interested in the precise relationships between input

---

<sup>12</sup> We compared the credit score and income in January 2017 to that in January 2015 (which is the only other month for which this information is available in the CRA data) and found that for most of the population, both credit score and income are stable over the two years. This supports our view that credit score and income are unlikely to change in the 3 months period of the analysis.

variables and the outcomes, we are only interested in maximising the accuracy of our estimated outcome.

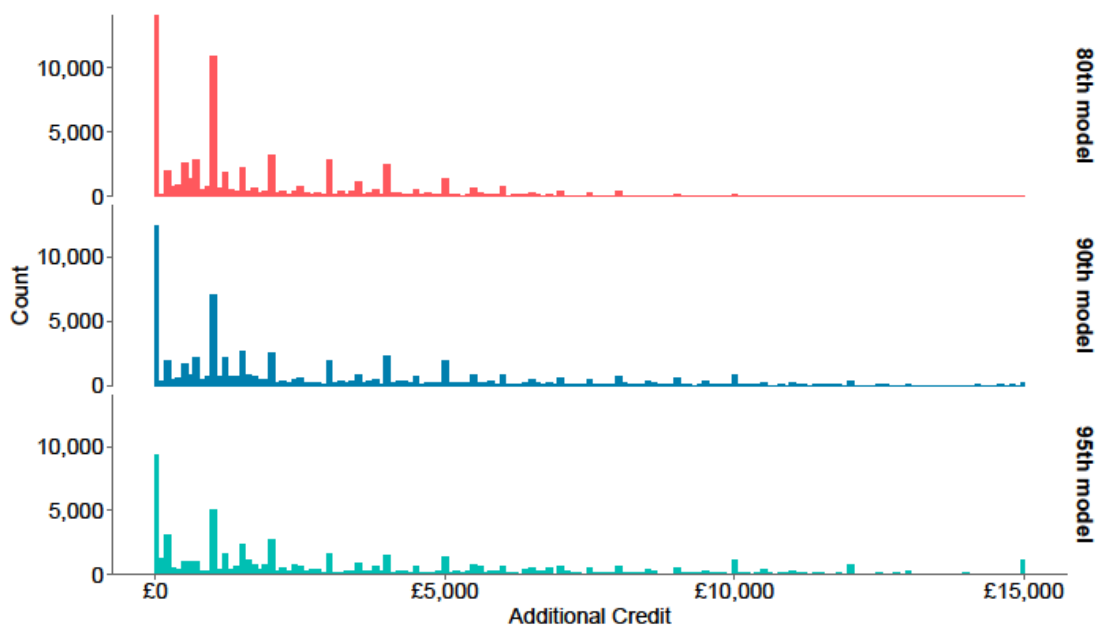
48. As a result, we validate the models by testing their in-sample fit, and their out-of-sample fit on the remaining 10% random sample of the available data. We benchmark the models' performance using the R1 measure of goodness of fit developed by Koenker and Machado (1999).<sup>13</sup> We find that quantile random forest model performs substantially better than the alternatives both on the in-sample and out-of-sample measures.
49. The quantile forest approach has other desirable properties in this context. It estimates quantiles using an empirical distribution of the credit similar consumers actually received. This results in realistic estimates of the amount of credit consumers could actually get. For example, the model picks up that credit is typically issued in round numbers, with smaller increments closer to zero and larger increments further away from zero.

*Prediction of additional credit card limit*

50. We use the quantile random forest model to predict the additional credit card available for the consumers in overdraft in January 2017. We choose estimates of additional credit at three percentiles:
  - 80<sup>th</sup> percentile: 1 in 5 applicants with similar characteristics got *more* additional credit than this amount.
  - 90<sup>th</sup> percentile: 1 in 10 applicants with similar characteristics got *more* additional credit than this amount.
  - 95<sup>th</sup> percentile: 1 in 20 applicants with similar characteristics got *more* additional credit than this amount.

The distribution of additional credit estimated under the 3 models are shown in the figure below.

**Figure 2: Distribution of estimated additional credit card limit for overdraft users for three models**



<sup>13</sup> The R1 measures goodness of fit by comparing the sum of weighted deviations for the model of interest with the same sum from a model in which only the intercept appears. See: Koenker R. & Machado J. (1999) Goodness of fit and related inference processes for quantile regression, *Journal of the American Statistical Association*, 94. pp. 1296-1310.



51. As the figure shows, while the amount of additional credit card limit available to consumers in overdraft spikes at zero, there is a significant number of consumers who could obtain additional credit card limit, either by extending the limit on existing credit cards or by applying for new ones.

### Key findings and conclusions

52. We find that 35% of overdraft users could move their overdraft onto unused limits in existing credit cards in full, and 40% could move half of their overdraft. The proportion is only slightly lower for consumers with larger overdraft balances, as shown in Table 4 below.
53. Once we take into account our estimates of the additional credit consumers could get if they applied, these proportions increase substantially: almost 70% of consumers could borrow enough to move their entire overdraft on to credit cards, and almost 80% could move half of it.<sup>14</sup>
54. In reality, it is likely that an even greater proportion of overdraft consumers would have access to alternatives (see Chapters 4 and 5 in the main Consultation Paper for further details on our proposal on transitional arrangements).
55. This suggests that there is significant scope for competition between credit cards and overdrafts, and thus our proposed policies, which would increase comparability between the two credit products, will likely result in more competition and therefore better outcomes for consumers.
56. While there is a minority of overdraft users who would not be able to move their overdraft onto their credit card, these consumers may be able to obtain other forms of credit if required.

**Table 4: Share of overdraft users with a credit alternative**

How many overdraft users would have been able to avoid overdraft thanks to:	Unused limit in existing credit cards	Unused credit card limit in existing credit cards + Estimated additional cards credit limit (either extending limit in existing credit cards or getting new ones)		
		80 <sup>th</sup> quantile	90 <sup>th</sup> quantile	95 <sup>th</sup> quantile
All overdraft users	35%	61%	69%	75%
All overdraft users – half the balance	40%	74%	78%	82%
Overdraft users with balance > £500	31%	55%	64%	71%
Overdraft users with balance > £1000	28%	45%	55%	64%

69. The consumers who would not be able to move their overdraft on to credit cards tend to have lower credit scores and income than those who can, as shown in the table below.

<sup>14</sup> As mentioned at the beginning of this annex, when talking about moving overdraft balance, we are not imagining that consumers could move an overdraft balance on to a credit card in one shot, but rather that, by starting using a credit card, over time consumers would effectively move the balance from the overdraft to the credit card. The numbers quoted in the text refer to the 90<sup>th</sup> quantile model.



**Table 5: Comparison of overdraft users without a credit alternative to those with a credit alternative**

Overdraft users without credit card alternatives compared to overdraft users with credit card alternatives	Unused limit in existing credit cards	Unused credit card limit in existing credit cards + Estimated additional cards credit limit (either extending limit in existing credit cards or getting new ones)		
		80 <sup>th</sup> quantile	90 <sup>th</sup> quantile	95 <sup>th</sup> quantile
Average credit score difference (in credit score's points)	-58	-60	-63	-64
Average income difference	-35%	-31%	-31%	-37%

78. The finding that 35% of overdraft users could avoid overdraft completely through available limit in existing credit cards could at first appear in contradiction with the finding of the previous section, where we showed that up to 60% of arranged overdraft days could have been avoided thanks to readily available funds.
79. To avoid confusion, it is worth emphasising that the two analyses measure different things. The first analysis considers as alternatives both available sources of credit (available overdraft or credit card limit) and available funds (cash in current accounts on savings accounts), while the analysis presented here only considers credit alternatives. The analysis of readily available alternatives at time of overdraft is based on the number of accounts in overdraft, while the analysis presented here is based on the number of consumers in overdraft. Finally, the first analysis is retrospective, in that it estimates how many overdrafts could have been hypothetically avoided, while the second one takes existing overdrafts as given, and looks at whether consumers could access enough credit to move their overdraft despite being in overdraft.

# Chapter 6-Policy analysis

## Introduction

1. This annex provides more detail on our analysis of the impacts of our proposed remedies, focusing on the changes in the distribution and level of charges.

## Data

2. The source data for this analysis is the personal current account (PCA) data outlined in Chapter 1-Data. The analysis is based on a representative sample of the full customer dataset for 2016, after filtering for customer activity.
3. The key data taken from the PCA dataset is:
  - Gross overdraft charges and refused payment fees;
  - Actual daily borrowing behaviour; and
  - Daily declined transactions that would result in a refused payment fee.<sup>1</sup>
4. To measure how the proposed policy changes could impact vulnerable consumers, we use the Index of Multiple Deprivation (IMD) discussed in Chapter 1-Data and in more detail in Chapter 3-Vulnerability.
5. To inform the design of specific parts of the analysis we have also used data provided by firms regarding their pricing plans, internal firm strategy documents and board presentations, and firms' experience of consumer responses to previous price changes.

## Methodology

6. The analysis uses stylised scenarios of market developments under the core policy proposals of alignment and simplification of overdraft prices, and providing for a reduction in refused payment fees.
7. We model the fees and charges individual consumers would have incurred under the alternative scenarios, accounting for consumer responses to the differences in the prices they would pay.
8. We then compare the outcomes for customers under each of the scenarios against a baseline to investigate the potential impact of the changes.
9. This analysis is used to confirm our understanding of the likely impact of an aligned simplified charging structure across the market. It necessarily makes assumptions about consumer and firm behaviour that cannot be tested. We believe these assumptions are reasonable, and have investigated the impact of changes in the assumptions where practical.
10. The key **assumptions** the modelling makes are discussed below.

*Consumers maintain a similar balance profile*

---

<sup>1</sup> This data is not available for all firms. Where it is not, we impute the number of declined transactions from the incurred charges.

11. We model consumer response to changes in fees in terms of a percentage change in their daily balance, driven by a change in their total annual fees. We do not try to reconstruct consumers balances to take account of changes in the level of charges they accrue over time.
12. This assumption is strongest where we model behaviour for consumers for whom the changes would result in larger increases or decreases in total charges over a year. That said, the same principles apply to all customers whose charges increase or decrease relative to the baseline.
13. For example, some unarranged overdraft users could see their charges decrease substantially, theoretically allowing them to pay off their overdraft entirely. We are assuming that these customers would continue to use unarranged overdrafts and incur refused payment fees despite paying less in overall fees. Effectively we are assuming that they would use the cash freed up by lower charges to fund expenditure, rather than pay down overdraft debts. At the other end of the scale, we are assuming that those consumers who incur larger fees pay them off and maintain a stable balance rather than allowing them to accrue and compound.
14. We are not modelling consumer response in terms of the number of days or months they use their overdraft. Nor are we modelling the complex incentives consumers face around charging thresholds or fee-free buffers.

*Consumer responsiveness to price changes*

15. Based on firm experiences from previous price changes, we assume that consumers with larger average overdraft balances are much more responsive to price changes than those with lower average balances.
16. We assume that consumers with very low average overdraft balances do not respond at all to the price changes in terms of their borrowing behaviour.

*Firms adopt a single interest rate across their portfolio of products and customers*

17. Our proposals would not prohibit firms charging different interest rates on different products, or using risk based models to set prices for individual consumers. However, we model a single interest rate for each firm as in our discussions with firms, most opted for a single price for all chargeable balances across all brands and products.

*Firms maintain the same approach to fee-free buffers across scenarios*

18. We assume that firms set their prices with respect to existing or planned chargeable balances, i.e. taking any fee-free buffers as given. Hence, they do not modify their policies around the size of buffers from one scenario to another.

*Refused Payment Fees*

19. We assume that, following guidance around the relevant costs, refused payment fees decrease. The assumption used in the model is £2 per transaction, and is based on the limited information firms have been able to provide in response to our data requests.<sup>2</sup> The model was not sensitive to this assumption overall. This is a figure that will be set by firms with reference to costs and will likely vary by bank.
20. Where firms' existing or planned policies involve not charging for refused payments, we assume they would not charge for them under any of the scenarios. We also

---

<sup>2</sup> See Chapter 8-Profitability for more detail on the information received.

assume that any caps that apply under existing or planned pricing policies would do so under all scenarios.

21. We assume that consumers would incur the same number of refused payments they did in reality. Effectively this assumes that consumer behaviour around trying to put through over-limit payments is not affected by the price of unarranged overdrafts or refused payment fees and firms operate similar policies when deciding to accept or reject each attempted over-limit payment.

#### *Repeat use and transitional arrangements*

22. We do not account for the impact of new principles around repeat use, or transitional arrangements offered by firms to customers who may experience increases in their charges following changes in price structures.
23. These are both measures that are designed to help customers relying heavily on an overdraft currently, and we would expect them to substantially mitigate the impact of what could otherwise be a large increase in charges.

## Scenarios

24. We benchmark three hypothetical scenarios to the baseline scenario. These are discussed below.

#### *The baseline*

25. The baseline is consumer borrowing behaviour and charges in 2016. Towards the end of 2016 the FCA published a Call for input, marking the beginning of the high cost credit review. Firms have responded to the findings, and some remedies have been introduced over the course of the review. For the purposes of this analysis, the market as it was in 2016 is a good benchmark. It represents how the market would look today if the FCA had not raised concerns about how the market was working for consumers or indicated our intention to intervene further.
26. Although some pro-competition remedies relating to alerts, open banking, and the maximum monthly charge have been implemented since 2016, these have not dealt with the core harms that the package of remedies in this consultation seek to address. In particular, the interventions since 2016 do not address the harm we have identified from the level of unarranged charges, the concentration of charges on vulnerable consumers, or the harm from repeat overdraft use.
27. One large firm, Lloyds Banking Group (LBG), also made substantial changes to their overdraft pricing model in late 2017, and announced further changes in November 2018. We use LBG's 2016 pricing structure in the baseline.

#### *Scenario 1: Firms set prices to recover existing or planned income*

28. In this scenario, we assume that firms would seek to recover a similar amount of income from their overall overdraft offering. To do so they would set an aligned price for all overdraft borrowing in the form of an interest rate.
29. Where firms have already outlined pricing plans that differ from their 2016 offer, we set these rates to recover the income they would make under their planned prices, not what they earned in 2016.

*Scenario 2: Firms set prices towards the upper end of existing yields in the market*

30. In this scenario, we assume that the alignment and simplification of prices pushes prices towards a market norm, and this norm is toward the upper end of existing or planned firm yields.

*Scenario 3: Firms set prices towards the lower end of existing yields in the market*

31. In this scenario, we assume that the alignment and simplification of prices pushes prices towards a market norm, but increased competitive pressure also pushes prices towards the lower end of existing or planned firm yields.

## Results

32. We are interested in the outcome of the proposals on two key metrics:
- **Price levels.** The prevailing prices in the market, and whether the proposals address our concerns about the extremely high charges for unarranged overdrafts that exist in the market currently.
  - **Distribution of overdraft charges.** How the burden of overall overdraft charges shifts across customers, in particular whether the proposals result in an increased degree of protection for vulnerable consumers.

### *Price levels*

33. Under all scenarios, although prices are high relative to other mainstream credit products like credit cards and personal loans, the prevailing rates in the market at high street banks under each of the scenarios would be substantially below benchmark rates for high cost credit products like payday loans, rent-to-own services, or home collected credit.
34. Importantly, these prevailing rates would apply to any level of borrowing<sup>3</sup> because of the need for there to be a single interest rate for each consumer. In turn, this would prevent some of the harmful outcomes in pricing we observed in the market. It would not be possible for a consumer to incur substantially more fees as a result of altering their borrowing behaviour slightly, because charges would be proportional to the amount and duration of use. No consumers would pay very high effective interest rates on relatively small amounts of borrowing.

### *Distribution of overdraft charges*

35. Under all scenarios, by moving to a proportional charging structure across all chargeable balances, the distribution of overdraft charges shifts between consumers. In general, a larger number of consumers benefit from the changes, and a smaller number are worse off. Heuristically, these can be broken down into:
- **Users of unarranged overdrafts and those incurring refused payment fees:** these consumers typically benefit from the proposals as charges for unarranged overdrafts and refused payment fees would be lower. This is essentially always the case when the consumer does not use an arranged overdraft. Even when consumers are also using an arranged overdraft that may have become more expensive, this is still usually the case.
  - **Low/Medium balance arranged-only overdraft users:** as the proposals would remove daily and monthly fees which can be triggered by relatively small amounts of overdraft borrowing, consumers at banks that operated such pricing models would typically benefit from the proposals. Consumers at banks

---

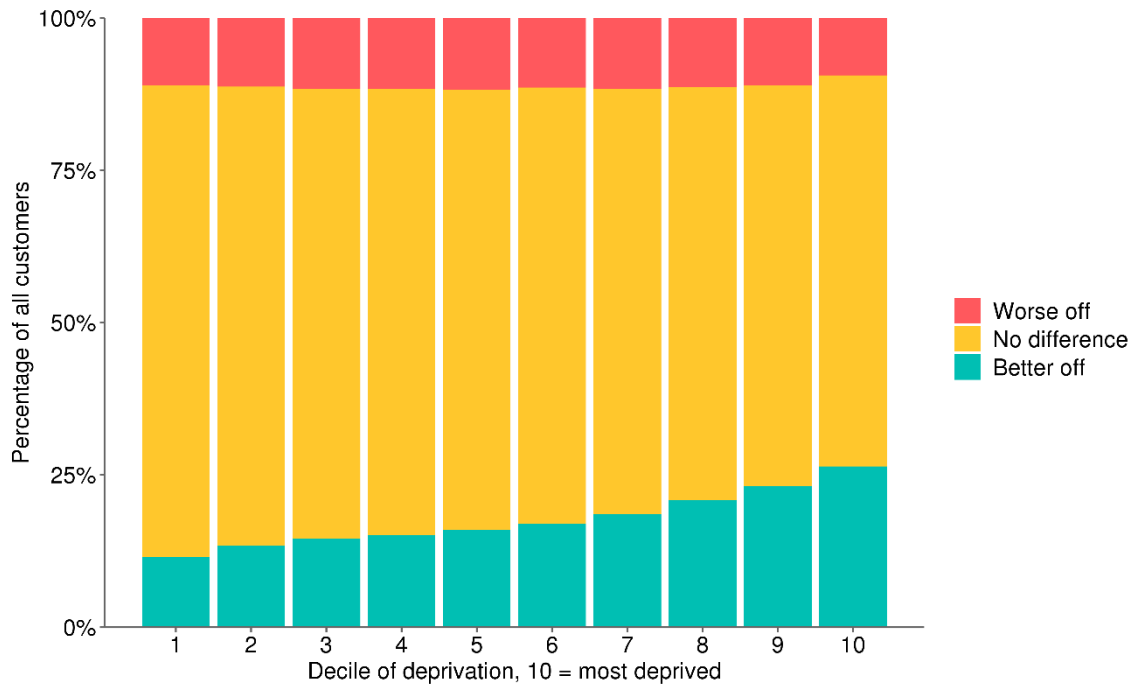
<sup>3</sup> Strictly, borrowing beyond a single charge free buffer that may be applied to the account.

that operated an interest-only model for arranged overdrafts would typically be slightly worse off, as the interest rate on arranged overdrafts would likely be higher.

- **High balance arranged-only overdraft users:** by making charges proportional to the amount borrowed, these consumers would see increased charges for their use, without an offsetting reduction in other charges as they did not incur them. This would typically be true regardless of the arranged overdraft charging model the consumers bank operated.

36. The figures below show how the change in the distribution of overdraft fees varies with our preferred measure of consumer vulnerability, the IMD.<sup>4,5</sup>

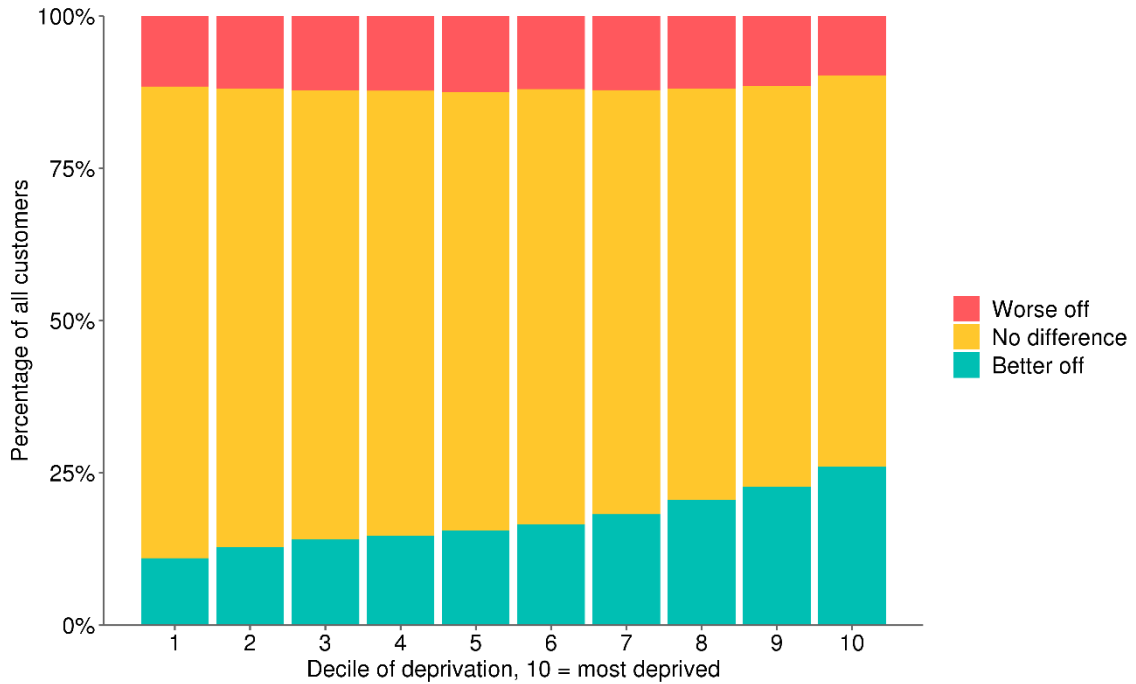
Scenario 1



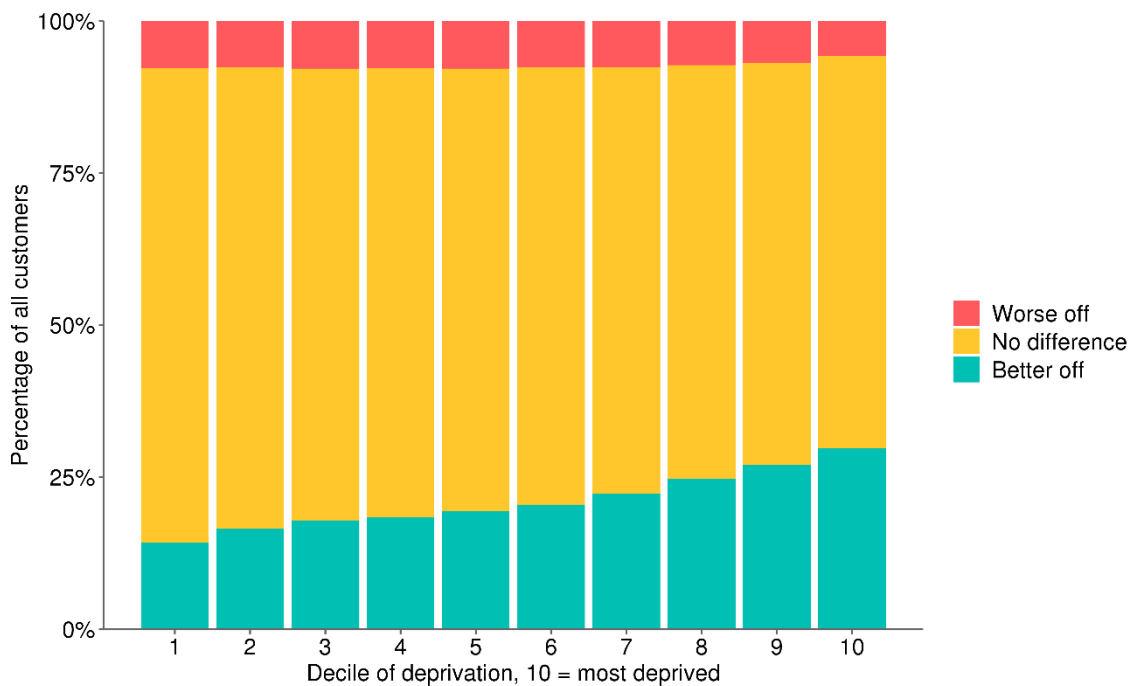
<sup>4</sup> See: [Ministry of Housing, Communities, and Local Government](#)

<sup>5</sup> For more detail on this, see Chapter 3-Vulnerability.

Scenario 2



Scenario 3

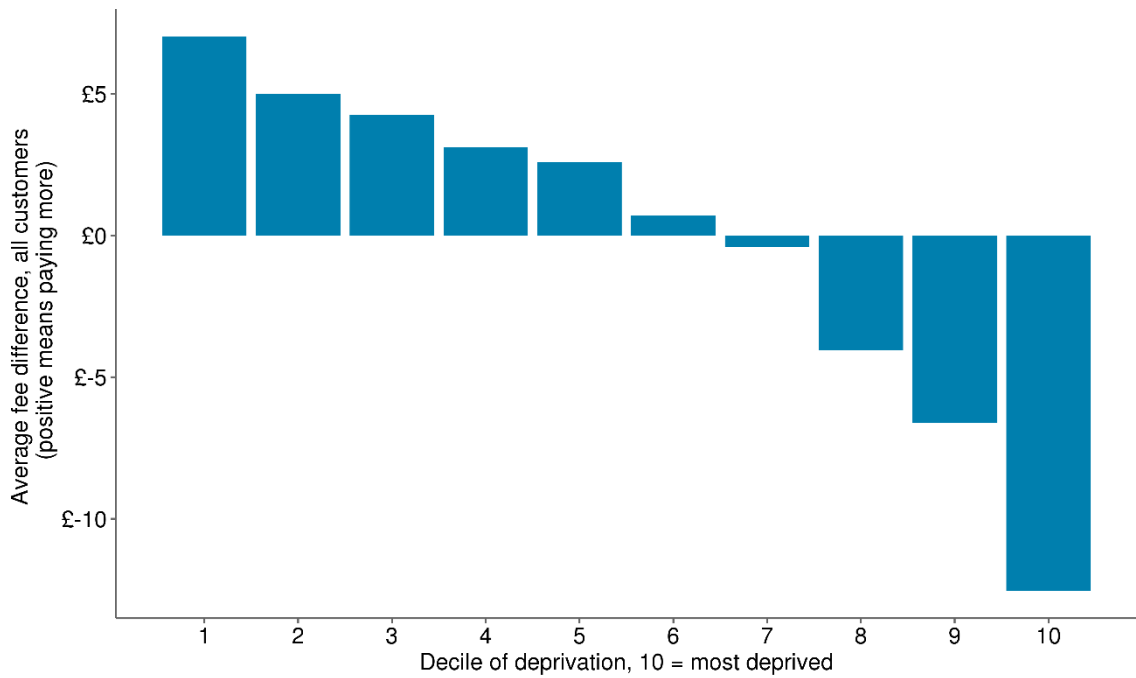


37. Each bar of the figures represents 10% of the population. The “No difference” group of consumers includes those consumers whose total charges would not change by more than £10 - including all those consumers who did not use an overdraft in 2016.
38. As can be seen from all the scenarios, the consumers who would benefit from the proposals are skewed toward more deprived areas. Across the scenarios 10-15% of consumers in the least deprived decile would benefit from the proposals, whereas

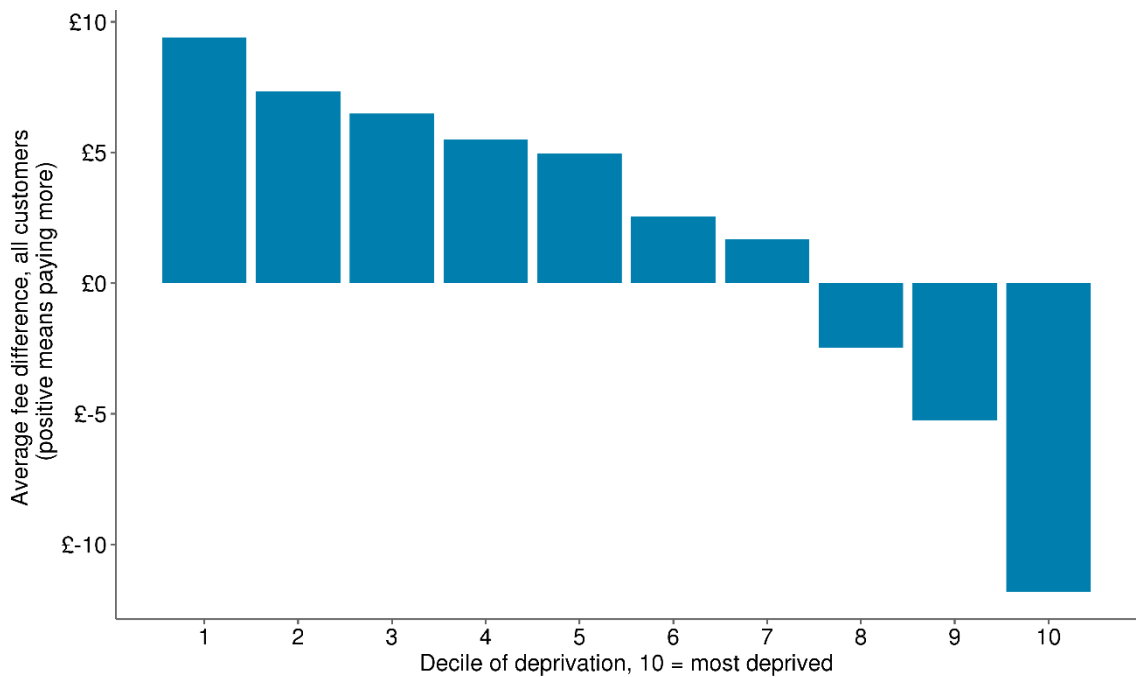
25-30% of consumers in the most deprived decile would benefit. In contrast, those who would be worse off under the proposals are evenly distributed across areas.

39. This pattern is reflected in the average change in charges per consumer by decile of deprivation—in all scenarios consumers in more deprived areas are on average better off, and consumers in less deprived areas are on average worse off (in scenario 1 and 2), or not better off by as much as those in deprived areas in scenario 3.

Scenario 1

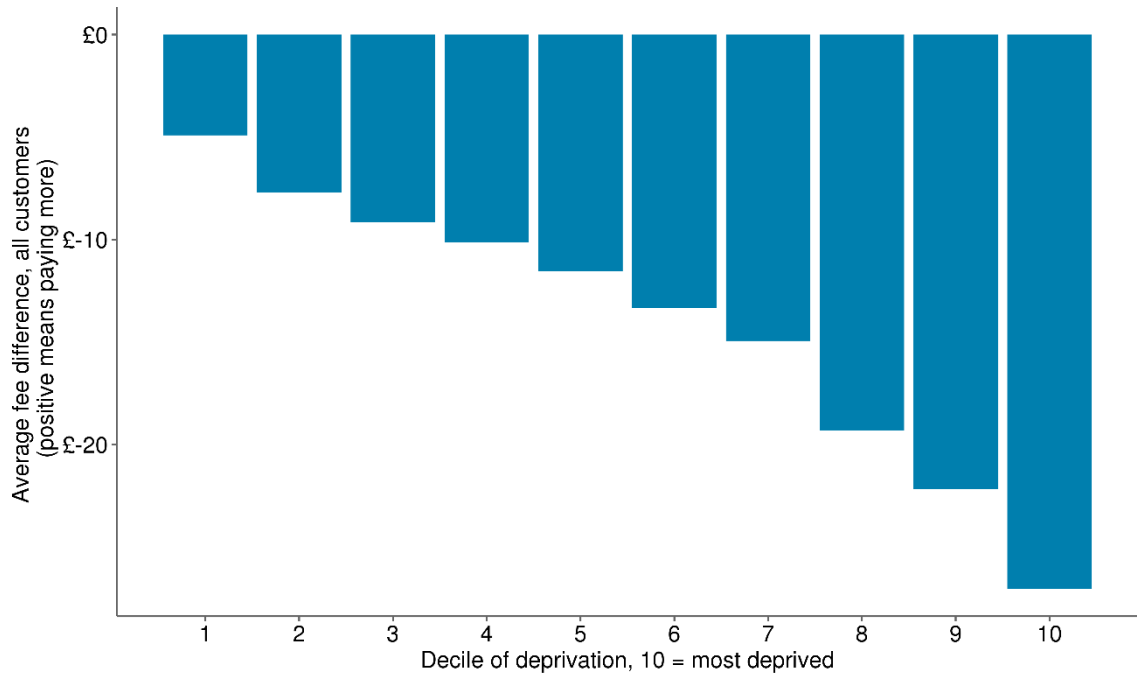


Scenario 2





### Scenario 3



# Chapter 7-Consumer Research

## CONTENTS

SECTION A: FRAMING THE OVERDRAFT CONSUMER RESEARCH	3
Introduction	3
Objectives of the research	3
Survey Coverage	4
Qualitative research that informed the illustrations tested in the omnibus research	5
SECTION B: Summary of findings from the quantitative research	7
Choosing the cheapest deal	7
Understanding overdraft prices	7
Using representative APR	8
SECTION C: MAIN REPORT OF QUANTITATIVE RESEARCH	9
Holding Personal Current Accounts	9
Does their PCA include an arranged overdraft?	9
Use of arranged overdraft	9
Use of an unarranged overdraft	9
Ease of understanding of overdraft illustrations	10
Choosing the cheapest deal	12
Relative ease or difficulty in making comparisons	16
Overdrafts compared with other forms of credit	16
Use of APR	17

# SECTION A: FRAMING THE OVERDRAFT CONSUMER RESEARCH

## Introduction

1. This Annex details the findings of consumer research undertaken as part of the FCA's High Cost Credit review, looking at overdrafts, and consumer views regarding the presentation of charge-related information and representative APR.
2. This quantitative survey was undertaken during September 2018 on behalf of the FCA by Kantar TNS, using two consecutive repeat Omnibus studies of a representative sample of consumers in Great Britain, undertaken by face-to-face computer-assisted personal interviewing. The technical report for this research including the questionnaire are published alongside this CP.
3. This report was prepared by Leslie Sopp, FMRS, Chief of Market Research at the FCA, with contributions from Kantar TNS.

## Objectives of the research

4. The purpose of the research is to inform the FCA's work on overdraft pricing. This survey was designed to further explore hypotheses developed from our qualitative consumer research to better understand and build evidence as to:
  - which charging structures, of fixed fee, interest rates and pence per £x borrowed, consumers perceive as making it easy to calculate overdraft costs
  - whether consumers can accurately rank the cost of borrowing different charging models against each other
  - whether consumers find it easier with an interest rate to compare different overdrafts or to compare overdrafts with other credit products, compared to status quo (mixed charging models)
  - whether providing a representative APR makes it easier to compare overdrafts where interest rate and interest rate like structures are allowed, where only interest rates are allowed, and where a variety of charging models are allowed (the status quo)
  - whether placing a calculator or pounds and pence examples alongside a representative APR improves customers' ability to compare overdrafts
  - whether improving prominence of the representative APR and explaining what it is for might improve customers' ability to compare overdrafts
  - do customers say they use representative APR to compare now
  - do customers say they would use representative APR to compare overdrafts if available, with other overdrafts, and with credit products like credit cards
  - do customers recognise that a representative APR of 50% is expensive

## Survey Coverage

5. The table below (1) shows the number of consumers interviewed during the two weeks of fieldwork, and how the sample coverage reduces with key check questions, namely:
- if people had a personal current account
  - if that personal current account includes an arranged overdraft
  - how many had used an arranged and / or an unarranged overdraft during the 12 months prior to the survey

**Table 1: Key survey numbers**

	<b>Total unweighted</b>	<b>Incidence weighted</b>
<b>All interviews</b>	4,056	
<b>Those with personal current accounts</b>	3,681	
<b>Personal Current Account includes an arranged overdraft</b>	1,520	
<b>Used an arranged overdraft in last 12 months</b>		29% (of those with PCAs)
<b>Used an unarranged overdraft in in last 12 months</b>		2% (of those with PCAs)
<b>Those who have used an arranged and / or an unarranged overdraft in the last 12 months</b>	454	

This table shows the unweighted numbers and the weighted incidence data for the key elements in this survey

6. The 454 people who had used an arranged and / or an unarranged overdraft during the previous 12 months were then asked a series of questions relating to how overdrafts and other charging illustrations are perceived by affected consumers.

## Qualitative research that informed the illustrations tested in the omnibus research

7. The illustrations of pricing used in our quantitative research were informed by prior qualitative research conducted by Atticus Research to explore consumer use, experience and understanding of overdrafts. This included research conducted in early 2018 and further qualitative research commissioned specifically to evaluate and explore pricing. This further qualitative research looked to probe:

- consumer understanding of the different presentations of overdraft price
- reactions to current models, and understanding of the role and value of potential alternatives - including possible presentations discussed in CP18/13
- what helps consumers to make a more informed decision regarding the cost of overdrafts compared to other forms of credit.

### **Further qualitative research methodology**

8. The research comprised of two, 90-minute focus groups with overdraft users, who were drawn from variable backgrounds but were persistent overdraft users, both those regularly using small amounts and those regularly using large amounts. Participants were mainly presented with different cost structures and a scenario, and asked to identify which they felt would be the most or least expensive.

### **Key findings that influenced our omnibus survey:**

9. The following themes emerged from our qualitative research:

- overdrafts were not seen as an expensive credit function or debt
- consumers were not fully aware of the charges they currently pay for their overdraft and wanted to see pounds and pence examples to support their understanding of costs and charges
- interest rate and representative APR were found to provide some clarity for consumers to be able to judge the expense of overdrafts versus other credit products
- consumers struggled to understand how small daily charges could create a high APR, some challenged the numbers in shock
- while there was some confusion on the meaning of APR and how it was worked out, consumers did have a strong understanding on what was a "higher" rate versus a "lower" rate, largely influenced by credit cards as a benchmark when probed
- of the approaches tested, consumers were most motivated by a pounds and pence example which illustrated the cost over different periods of time
- illustrative examples were seen to work best when they had a customer friendly approach, both in terms of visual appeal and language

### **Examples tested in quantitative research**

10. Influenced by our qualitative research, in the omnibus survey we sought consumers views of how easy it was to understand 3 presentations of overdraft charges currently in the market:
  - daily fees based on a penny per pounds borrowed model
  - daily pounds per day fee

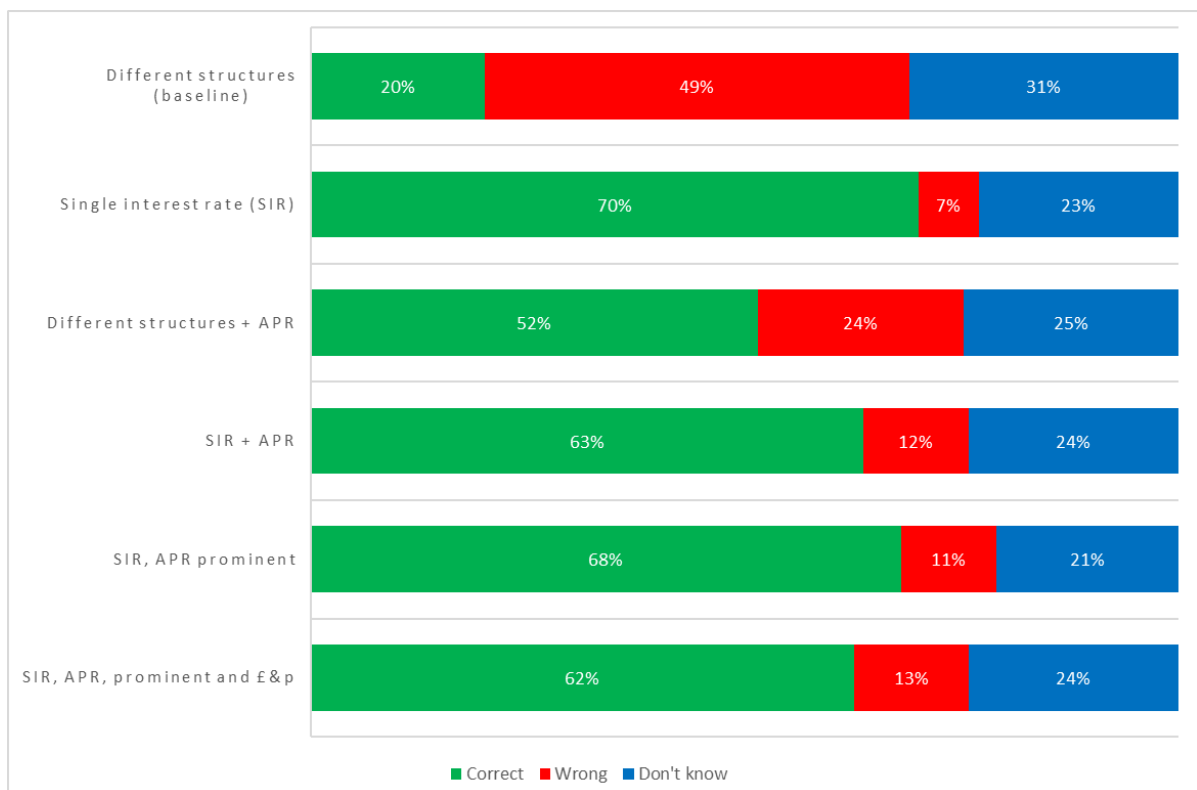
- an interest rate
11. Our qualitative research had indicated consumers would struggle to understand what an interest rate would mean to them in pounds and pence. We therefore also tested whether provision of an overdraft calculator or pounds and pence examples would assist understanding. We tested:
- an interest rate displayed alongside an overdraft calculator to show how much the overdraft costs in pounds and pence
  - an interest rate displayed alongside various pounds and pence examples showing the cost of borrowing for one day, one month, one year
12. In addition to understanding, we wanted to consider the impact of price presentation on comparability. As a baseline, we asked customers to compare examples like those currently found in the market (mixed pricing structures) as well as variations of the proposals discussed in [CP 18/13](#).
- comparison of different structures including pence per pound, daily fee, interest rate
  - comparison where all examples were charged by an interest rate
  - comparison of different structures where a representative APR is provided
  - comparison where all examples are charged by an interest rate where a representative APR is provided
  - comparison where all examples are charged by an interest rate where a more prominent representative APR and an explanation are provided
  - comparisons where all examples are charged by an interest rate where a more prominent representative APR and an explanation are provided as well as examples showing what the overdraft would cost in pounds and pence

## SECTION B: Summary of findings from the quantitative research

### Choosing the cheapest deal

13. Consumers were significantly more likely to choose the best deal where all were priced with an interest rate than where different structures were presented.
14. Adding a representative APR to different structures improved consumers' ability to compare different structures but to a lesser extent. However, when compared to the baseline it is a significant improvement.
15. The graph below shows consumers appeared to find it slightly easier to choose the cheapest interest rate where representative APR was not displayed. However, the difference is not considered statistically significant. Our earlier qualitative research identified there may be confusion where both the EAR and the APR are shown.
16. While consumers were not significantly more likely to choose the cheaper deal where prices were displayed in pounds and pence, this research finds that consumers say they find prices displayed in pounds and pence easier to understand.

**Chart 1 – consumers ability to choose the best deal when asked to compare**



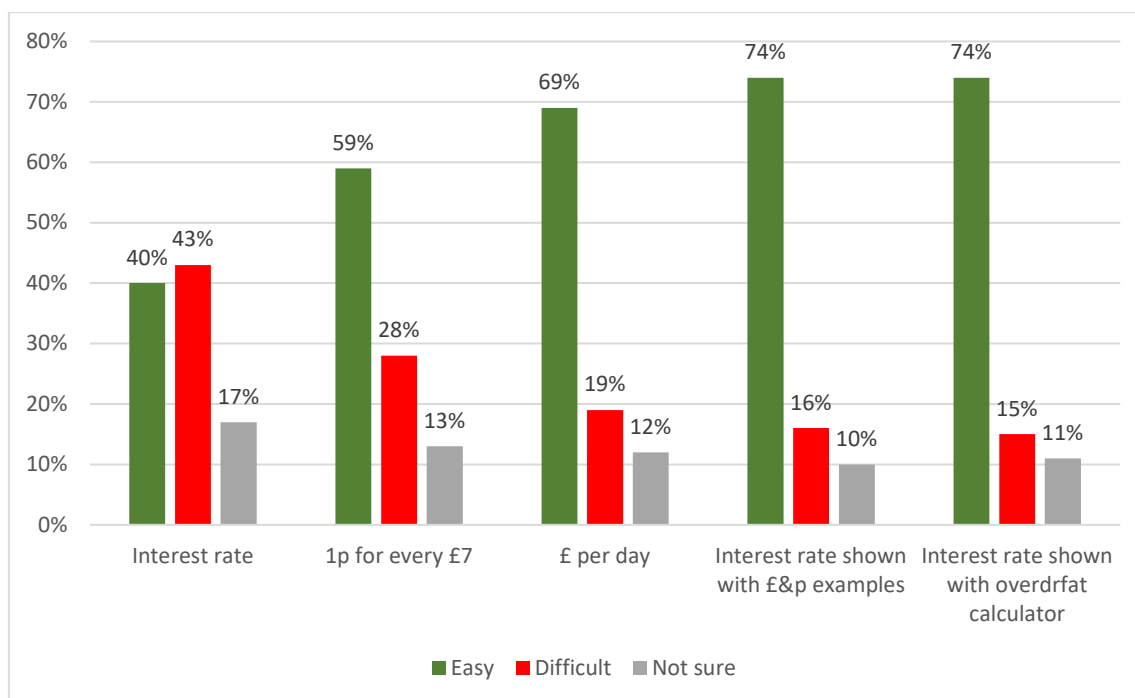
Base = those who have used an arranged and / or an unarranged overdraft in the previous 12 months. N=454 overall, but each item was answered by between 213 and 2138 respondents



## Understanding overdraft prices

17. Consumers say they find pounds and pence examples easier to understand. This is consistent with the evidence base, which indicates consumers find percentages hard to calculate. Examples in pounds and pence shown alongside interest rates and the overdraft calculator were considered easiest to understand by consumers. Interest rates on their own were considered hardest to understand.

**Chart 2 – how easy or difficult is it to understand pricing (eg to work out how much the overdraft would cost if you borrowed £500 for one week)**



Base = all those who had used an arranged and / or an unarranged overdraft. N=454

## Using representative APR

18. Evidence on comparison suggests consumers can use representative APR to compare even if they do not fully understand what it means. Many, 64%, can judge that an overdraft at 50% representative APR is more expensive than a credit card or loan. One in three, would use representative APR to compare overdrafts if it were available, although a further one in three might use the representative APR to do this.

## SECTION C: MAIN REPORT OF QUANTITATIVE RESEARCH

### Holding Personal Current Accounts

19. Nearly all (92%) of those interviewed – among 18+ adults in Great Britain – had a personal current account, either of their own or jointly with someone else. This is lower than other studies have suggested (97% estimated by the FCA's [Financial Lives survey](#)).
20. This is lower among 18-24 year olds (89%); those who are not working (not working / not looking; not working but looking; retired – 85%, 85% and 91% respectively) and those without internet access (84%). It is also lower among BAME respondents (89%) and social housing renters (85%).

### Does their PCA include an arranged overdraft?

21. Yes, but not for the majority. 44% said that their PCA did include this; whereas 53% said it didn't, and 3% didn't know. Having an agreed overdraft limit was highest among those who were aged 45-64 (52%); and social grade AB (57%), and also higher among those who were married than single. These are likely, in the main, to represent higher income and more financially stable and secure households, with accounts largely if not continuously in credit.
22. It was lowest among the non-working groups; social and private renters, BAME groups, and those without access to the Internet (between 26-38%), along with 18-24 year olds, and those in social grade DE. These groups might represent higher credit risks, with less stable employment circumstances and incomes.
23. We know from our qualitative research with overdraft customers and research conducted by the CMA as part of its Retail Banking Investigation, that many consumers are unaware whether they have an arranged or unarranged overdraft and many have used these facilities without being aware of it. Because of this, we find self-reported overdraft use to be lower than actual use.

### Use of arranged overdraft

24. Of those with a PCA who had an arranged overdraft (1,520 people) over one in four (29%) reported having used it in the last 12 months. This was higher among: those aged 18-54, especially 18-24 year olds (44%) and therefore singles; those working full-time (36%); not working but looking (41%) or not working and not looking (38%). It was also higher among those on a mortgage (36%), or renting (43% among social renters, and 40% among private renters).

### Use of an unarranged overdraft

25. Just 2% of those with a PCA said they had used an unarranged overdraft (or emergency borrowing) in the previous 12 months. This was higher among:
  - 18-24 year olds (5%)
  - those working part-time (4%)
  - those not working but looking for work (4%)
  - renters (3-4%)

- BAME (3%)

Those who said they had used an unarranged overdraft were twice as likely to be people who were not financially confident.

## Ease of understanding of overdraft illustrations

26. Respondents were shown, at random, the following five unbranded examples of how overdraft charges might be presented to consumers.

### 1. Daily fee of pence per pound borrowed

Personal Business Private Banking International Banking

**Your Bank**

Home > Current Accounts > Personal Overdrafts > Personal overdraft rates

**Overdraft fees**

Everything you need to know about the fees you'll pay on the balance of your overdraft.

**Overdraft fees for current accounts**

These fees apply to Planned Overdrafts. The daily overdraft fee is correct from 02/11/2017 and apply to any amount beyond the fee-free amount on your Planned Overdraft.

Daily overdraft fee: 1p for every £7 borrowed

Representative Example

If you use a Planned Overdraft of £1,200 on your Classic Account, then we'll charge you a daily overdraft fee of £1.71.

### 2. Pounds per day fee

Personal Business Private Banking International Banking

**Your Bank**

Home > Current Accounts > Personal Overdrafts > Personal overdraft rates

**Overdraft fees**

We will charge just one daily fee and give you a £15 fee free amount to help avoid fees

Up to £15	Up to £1,000	Up to £2,000	Over £2,000
Fee free amount	75p a day	£1.50 a day	£3 a day

If your overdraft has a fee free amount and you go over that amount, daily fees will be charged on the whole balance of your overdraft.

Overdraft representative example. Up to £5,000 (subject to application and status). If you use an overdraft of £1,200 you'll be charged £1.50 per day when you use it.

### 3. Interest rate

Personal Business Private Banking International Banking

**Your Bank**

Home > Current Accounts > Personal Overdrafts > Personal overdraft rates

**Overdraft fees**

If your request for an overdraft is approved, you'll know that when you keep within your limit all your payments will be made and your only cost will be the interest you pay. No other overdraft fees will apply.

Representative Example: 19.9% EAR variable (assumed overdraft £1,200).

### 4. Interest rate with a pounds and pence example

Personal Business Private Banking International Banking

**Your Bank**

Home > Current Accounts > Personal Overdrafts > Personal overdraft rates

**How much will the overdraft cost?**

If your request for an overdraft is approved, you'll know that when you keep within your limit all your payments will be made and your only cost will be the interest you pay. No other overdraft fees will apply.

Representative Example: 19.9% EAR variable (assumed overdraft £1,200).

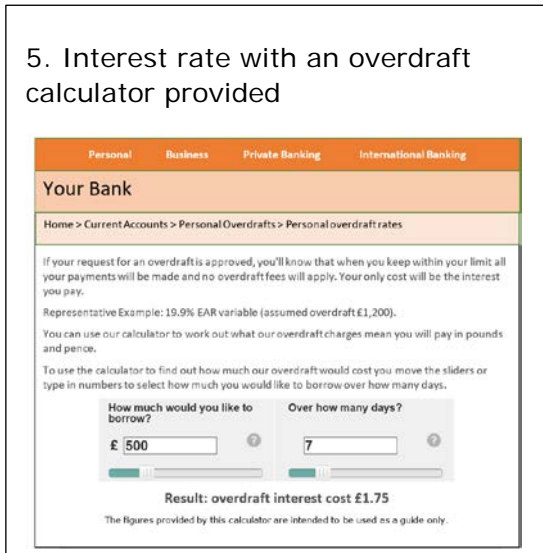
**Can you give me an example in pounds and pence?**

You can use our calculator to work out what our overdraft charges mean you will pay in pounds and pence for other levels of borrowing or periods of time.

As an example if you borrow £500 it will cost you:

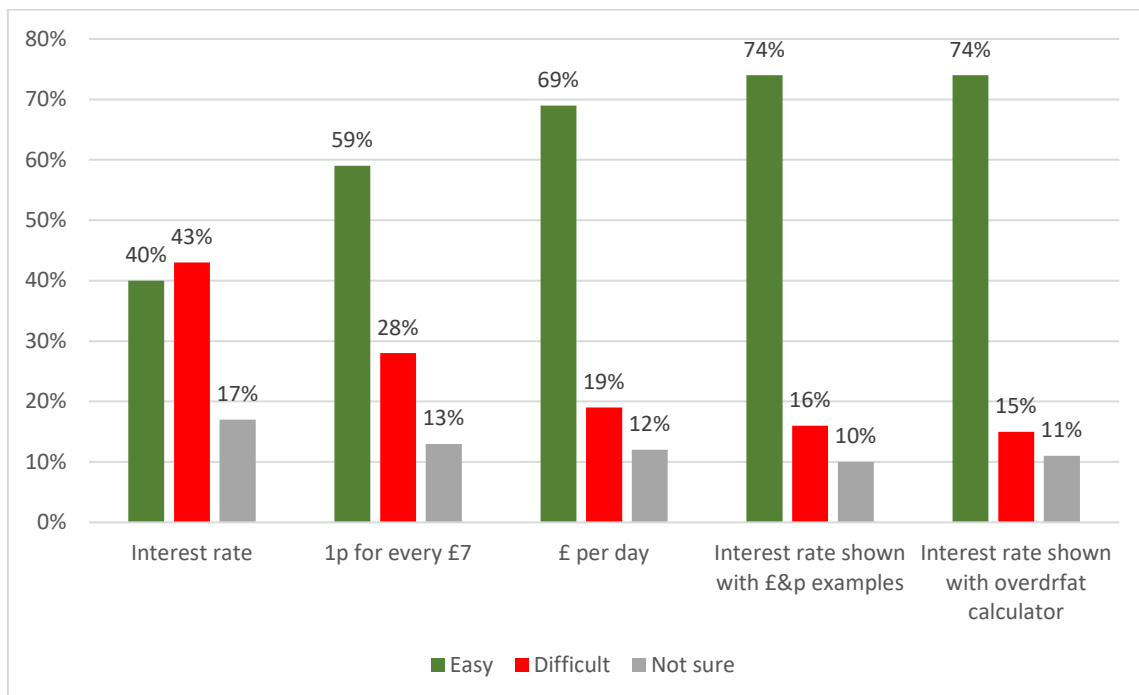
£0.25 for 1 day  
 £1.75 for 1 week  
 £7.77 for one month  
 £93.24 for one year

## 5. Interest rate with an overdraft calculator provided



27. Consumers were asked to consider how easy or difficult they found it to understand the examples of price presentation. They were asked to think about working out what it would cost if they borrowed £500 or one week. This is shown in Chart 3.

**Chart 3 – (chart 2 repeated)**



Base = all those who had used an arranged and / or an unarranged overdraft. N=454

28. 'Interest rate shown with £&p examples' and 'Interest rate shown with overdraft calculator' were thought relatively easier to understand by nearly five times as many consumers as thought difficult. The patterns shown in the previous graph are generally replicated across all demographic sub-groups. There were a few points of difference as shown in table 2.

**Table 2 – analysis of differences in understanding between demographic sub-groups**

	<b>Interest rate</b>	<b>1p for every £7</b>	<b>£ per day</b>	<b>£ &amp; p example</b>	<b>Calculator</b>
<b>Found easier</b>	35+	Completely financially confident	18-54	18-34	18-54
	Financially confident		Singles		males
					Full time workers
					Mortgagees
					Completely financially confident
<b>Found harder</b>		55+	Retired	W/D/S	
		Retired			

## Choosing the cheapest deal

29. Each respondent who had used an arranged or unarranged overdraft in the last 12 months was shown 3 out of 6 scenarios (selected at random by the programming of the survey), and asked:

*I am now going to show you 3 more examples of overdraft charges and for each example we would like you to compare banks A, B and C's charges and tell us which one you think might be the most expensive and which one you think might be the cheapest. Don't worry. We do not expect you to try and work out the numbers exactly. Just base your response on your first impression.*

30. These were shown to the respondent in paper copy, to ensure consistent legibility across different interview situations:
- 1: CARD 1 = Different structures (baseline)
  - 2: CARD 2 = Interest rate
  - 3: CARD 3 = Different structures with representative APR
  - 4: CARD 4 = Interest rate with representative APR
  - 5: CARD 5 = Interest rate with more prominent representative APR and explanation
  - 6: CARD 6 = Interest rate with more prominent representative APR and explanation and a pounds and pence per day example

These cards are shown on the following pages.

## Q6 – CARD 1 Different Structures

Personal	Business	Private Banking	International Banking								
<b>Bank A</b>											
Home > Current Accounts > Personal Overdrafts > Personal overdraft rates											
<p><b>Overdraft fees</b></p> <p>Everything you need to know about the fees you'll pay on the balance of your overdraft.</p> <p><b>Overdraft fees for current accounts</b></p> <p>These fees apply to Planned Overdrafts. The daily overdraft fee is <u>correct</u> from 02/11/2017 and apply to any amount beyond the fee-free amount on your Planned Overdraft.</p> <p>Daily overdraft fee: 1p for every £7 borrowed</p> <p style="text-align: right;">Representative Example</p> <p>If you use a Planned Overdraft of £1,200 on your Classic Account, then we'll charge you a daily overdraft fee of £1.71.</p>											
Personal	Business	Private Banking	International Banking								
<b>Bank B</b>											
Home > Current Accounts > Personal Overdrafts > Personal overdraft rates											
<p><b>Overdraft fees</b></p> <p>We will charge just one daily fee and give you a £15 fee free amount to help avoid fees</p> <table border="1"> <thead> <tr> <th>Up to £15</th> <th>Up to £1,000</th> <th>Up to £2,000</th> <th>Over £2,000</th> </tr> </thead> <tbody> <tr> <td>Fee free amount</td> <td>75p a day</td> <td>£1.50 a day</td> <td>£3 a day</td> </tr> </tbody> </table> <p>If your overdraft has a fee free amount and you go over that amount, daily fees will be charged on the whole balance of your overdraft.</p> <p>Overdraft representative example. Up to £5,000 (subject to application and status). If you use an overdraft of £1,200 you'll be charged £1.50 per day when you use it.</p>				Up to £15	Up to £1,000	Up to £2,000	Over £2,000	Fee free amount	75p a day	£1.50 a day	£3 a day
Up to £15	Up to £1,000	Up to £2,000	Over £2,000								
Fee free amount	75p a day	£1.50 a day	£3 a day								
Personal	Business	Private Banking	International Banking								
<b>Bank C</b>											
Home > Current Accounts > Personal Overdrafts > Personal overdraft rates											
<p><b>Overdraft fees</b></p> <p>If your request for an overdraft is approved, you'll know that when you keep within your limit all your payments will be made and your only cost will be the interest you pay. No other overdraft fees will apply.</p> <p>Representative Example: 19.9% EAR variable (assumed overdraft £1,200).</p>											

## Q6 – CARD 2 Single Interest rate

Personal	Business	Private Banking	International Banking
<b>Your Bank A</b>			
Home > Current Accounts > Personal Overdrafts > Personal overdraft rates			
<p><b>Overdraft fees</b></p> <p>If your request for an overdraft is approved, you'll know that when you keep within your limit all your payments will be made and your only cost will be the interest you pay. No other overdraft fees will apply.</p> <p>Representative Example: 15% EAR variable (assumed overdraft £1,200).</p>			
Personal	Business	Private Banking	International Banking
<b>Your Bank B</b>			
Home > Current Accounts > Personal Overdrafts > Personal overdraft rates			
<p><b>Overdraft fees</b></p> <p>If your request for an overdraft is approved, you'll know that when you keep within your limit all your payments will be made and your only cost will be the interest you pay. No other overdraft fees will apply.</p> <p>Representative Example: 21% EAR variable (assumed overdraft £1,200).</p>			
Personal	Business	Private Banking	International Banking
<b>Your Bank C</b>			
Home > Current Accounts > Personal Overdrafts > Personal overdraft rates			
<p><b>Overdraft fees</b></p> <p>If your request for an overdraft is approved, you'll know that when you keep within your limit all your payments will be made and your only cost will be the interest you pay. No other overdraft fees will apply.</p> <p>Representative Example: 45% EAR variable (assumed overdraft £1,200).</p>			

## Q6 – CARD 3 Different Structures with APR

Personal Business Private Banking International Banking

**Your Bank A**

Home > Current Accounts > Personal Overdrafts > Personal overdraft rates

**Overdraft fees**

Everything you need to know about the fees you'll pay on the balance of your overdraft.

**Overdraft fees for current accounts**

These fees apply to Planned Overdrafts. The daily overdraft fee is correct from 02/11/2017 and apply to any amount beyond the fee-free amount on your Planned Overdraft.

Daily overdraft fee: 1p for every £7 borrowed

**Representative Example**

If you use a Planned Overdraft of £1,200 on your Classic Account, then we'll charge you a daily overdraft fee of £1.71. 65% APR.

Personal Business Private Banking International Banking

**Your Bank B**

Home > Current Accounts > Personal Overdrafts > Personal overdraft rates

**Overdraft fees**

If your request for an overdraft is approved, you'll know that when you keep within your limit all your payments will be made and your only cost will be the interest you pay. No other overdraft fees will apply.

**Representative Example:** 19.9% EAR variable (assumed overdraft £1,200). 19.9% APR.

Personal Business Private Banking International Banking

**Your Bank C**

Home > Current Accounts > Personal Overdrafts > Personal overdraft rates

**Overdraft fees**

We will charge just one daily fee and give you a £15 fee free amount to help avoid fees

Up to £15	Up to £1,000	Up to £2,000	Over £2,000
Fee free amount	75p a day	£1.50 a day	£3 a day

If your overdraft has a fee free amount and you go over that amount, daily fees will be charged on the whole balance of your overdraft.

**Overdraft representative example.** Up to £5,000 (subject to application and status). If you use an overdraft of £1,200 you'll be charged £1.50 per day when you use it. 54% APR.

## Q6 – CARD 5 SIR, Prominent APR with explanation

Personal Business Private Banking International Banking

**Your Bank A**

Home > Current Accounts > Personal Overdrafts > Personal overdraft rates

**How much will my overdraft cost?**

APR shows how much it costs you to borrow over a year you can use it to compare the cost of our overdraft with other providers or with other types of borrowing.

**Our APR for comparison (assumed overdraft £1,200) is 31%.**

**Representative Example:** 31% EAR variable (assumed overdraft £1,200). 31% APR.

Personal Business Private Banking International Banking

**Your Bank B**

Home > Current Accounts > Personal Overdrafts > Personal overdraft rates

**How much will my overdraft cost?**

APR shows how much it costs you to borrow over a year you can use it to compare the cost of our overdraft with other providers or with other types of borrowing.

**Our APR for comparison (assumed overdraft £1,200) is 36%.**

**Representative Example:** 36% EAR variable (assumed overdraft £1,200). 36% APR.

Personal Business Private Banking International Banking

**Your Bank C**

Home > Current Accounts > Personal Overdrafts > Personal overdraft rates

**How much will my overdraft cost?**

APR shows how much it costs you to borrow over a year you can use it to compare the cost of our overdraft with other providers or with other types of borrowing.

**Our APR for comparison (assumed overdraft £1,200) is 20%.**

**Representative Example:** 20% EAR variable (assumed overdraft £1,200). 20% APR.

## Q6 – CARD 4 Single interest rate with APR

Personal Business Private Banking International Banking

**Your Bank A**

Home > Current Accounts > Personal Overdrafts > Personal overdraft rates

**Overdraft fees**

If your request for an overdraft is approved, you'll know that when you keep within your limit all your payments will be made and your only cost will be the interest you pay. No other overdraft fees will apply.

**Representative Example:** 32% EAR variable (assumed overdraft £1,200). 32% APR.

Personal Business Private Banking International Banking

**Your Bank B**

Home > Current Accounts > Personal Overdrafts > Personal overdraft rates

**Overdraft fees**

If your request for an overdraft is approved, you'll know that when you keep within your limit all your payments will be made and your only cost will be the interest you pay. No other overdraft fees will apply.

**Representative Example:** 17% EAR variable (assumed overdraft £1,200). 17% APR.

Personal Business Private Banking International Banking

**Your Bank C**

Home > Current Accounts > Personal Overdrafts > Personal overdraft rates

**Overdraft fees**

If your request for an overdraft is approved, you'll know that when you keep within your limit all your payments will be made and your only cost will be the interest you pay. No other overdraft fees will apply.

**Representative Example:** 24% EAR variable (assumed overdraft £1,200). 24% APR.

## Q6 – CARD 6 SIR, Prominent APR with explanation, £&p

Personal Business Private Banking International Banking

**Your Bank A**

Home > Current Accounts > Personal Overdrafts > Personal overdraft rates

**How much will my overdraft cost?**

APR shows how much it costs you to borrow over a year you can use it to compare the cost of our overdraft with other providers or with other types of borrowing.

**Our APR for comparison (assumed overdraft £1,200) is 15%.**

**Can you give me an example in pounds and pence?** You can use our calculator ([click here](#)) to work out what our overdraft charges mean you will pay in pounds and pence. As an example if you borrow £500 it will cost you:

£0.19 for 1 day	£1.35 for 1 week	£5.82 for one month	£69.84 for one year
-----------------	------------------	---------------------	---------------------

**Representative Example:** 15% EAR variable (assumed overdraft £1,200). 15% APR.

Personal Business Private Banking International Banking

**Your Bank B**

Home > Current Accounts > Personal Overdrafts > Personal overdraft rates

**How much will my overdraft cost?**

APR shows how much it costs you to borrow over a year you can use it to compare the cost of our overdraft with other providers or with other types of borrowing.

**Our APR for comparison (assumed overdraft £1,200) is 19.9%.**

**Can you give me an example in pounds and pence?** You can use our calculator ([click here](#)) to work out what our overdraft charges mean you will pay in pounds and pence. As an example if you borrow £500 it will cost you:

£0.25 for 1 day	£1.75 for 1 week	£7.77 for one month	£93.24 for one year
-----------------	------------------	---------------------	---------------------

**Representative Example:** 19.9% EAR variable (assumed overdraft £1,200). 19.9% APR.

Personal Business Private Banking International Banking

**Your Bank C**

Home > Current Accounts > Personal Overdrafts > Personal overdraft rates

**How much will my overdraft cost?**

APR shows how much it costs you to borrow over a year you can use it to compare the cost of our overdraft with other providers or with other types of borrowing.

**Our APR for comparison (assumed overdraft £1,200) is 18.9%.**

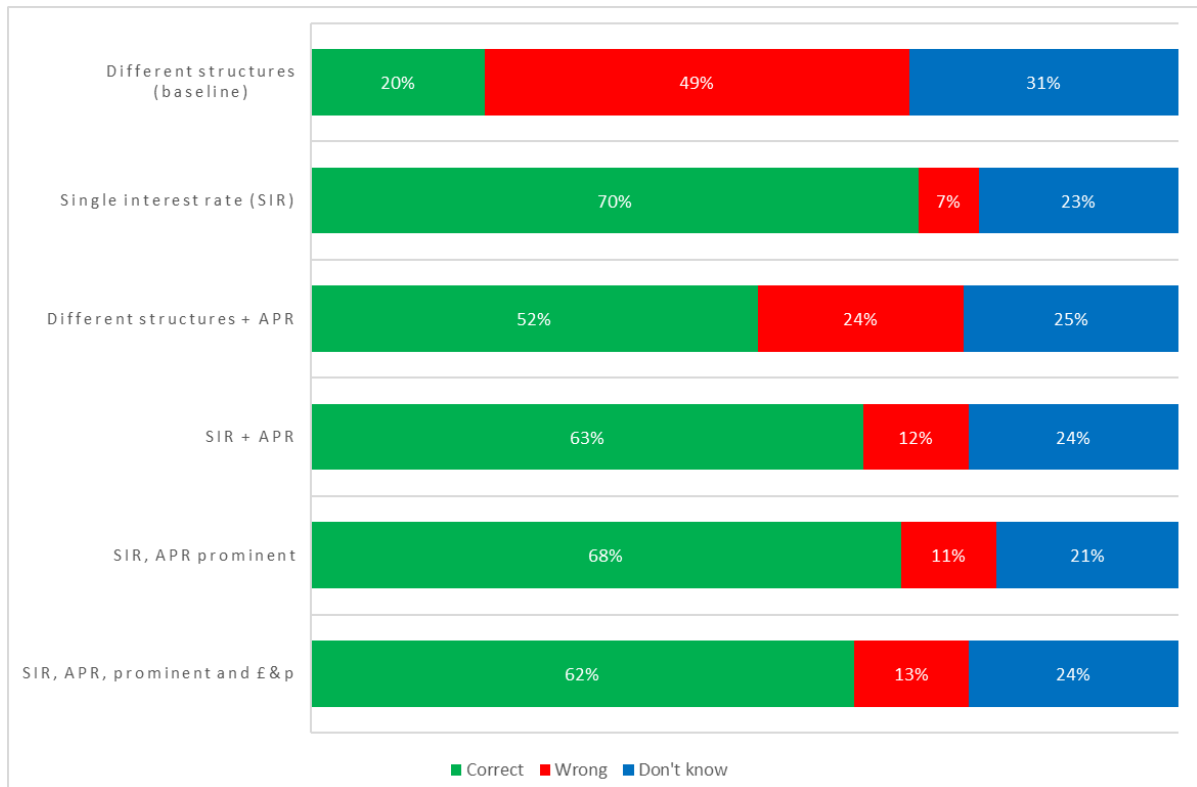
**Can you give me an example in pounds and pence?** You can use our calculator ([click here](#)) to work out what our overdraft charges mean you will pay in pounds and pence. As an example if you borrow £500 it will cost you:

£0.24 for 1 day	£1.67 for 1 week	£7.40 for one month	£88.80 for one year
-----------------	------------------	---------------------	---------------------

**Representative Example:** 18.9% EAR variable (assumed overdraft £1,200). 18.9% APR.

31. The number of people answering this section was a smaller sub-set of the total population (those who had used an arranged or unarranged overdraft in the last 12 months; n=454). Each person was shown 3 variants, not all 6. This means that each variant was seen by between 213 and 238 people.
32. The sample sizes for each variant when looked at by demographic and other characteristics is much reduced, and the likelihood of statistical differences is further reduced. There are a scattering of differences, but none of any consistent material impact.

**Chart 4 (Chart 1 repeated)**



Base = those who have used an arranged and / or an unarranged overdraft in the previous 12 months. N=454 overall, but each item was answered by between 213 and 2138 respondents

33. More people failed to correctly identify the cheapest or most expensive bank from the baseline (current options- card# 1) – over a third didn't know, and only one in five got it right. Option 3 (different structures + APR) was correctly identified by around one in two respondents (but nearly as many didn't know or incorrectly guessed).
34. All other options were correctly identified by around three in five people, but with two in five failing or not knowing.
35. Given the sample sizes, there is no statistical difference\* between the 70% (Bank A card #2) and the 63% (Bank B card #4) correctly identifying the cheapest option, but the difference between the 70% Bank A and 52% Bank B (card #3) is statistically significant.



**Table 3 - consumers ability to choose the best deal when asked to compare. Data informs chart 1 and 4.**

Option Card No.	Type	Consumer view				FCA view based on APR	Consumer view				FCA view based on APR
		Cheapest		Most expensive			Most expensive		Don't know		
		A	B	C	Don't know		A	B	C	Don't know	
1	Different structures (baseline)	20%	29%	20%	31%	Bank C	22%	17%	27%	34%	Bank A
2	Single interest rate (SIR)	70%	3%	4%	23%	Bank A	2%	8%	66%	23%	Bank C
3	Different structures + APR	12%	52%	12%	25%	Bank B	54%	13%	10%	23%	Bank A
4	SIR + APR	7%	63%	5%	24%	Bank B	65%	7%	6%	22%	Bank A
5	SIR, APR prominent with explanation	6%	5%	68%	21%	Bank C	6%	69%	3%	22%	Bank B
6	SIR, APR, prominent with explanation and pounds per day	62%	7%	6%	24%	Bank A	7%	60%	9%	24%	Bank B

*\*at the 95% CI. Green shading denotes the cheapest option, red shading denotes the most expensive option.*

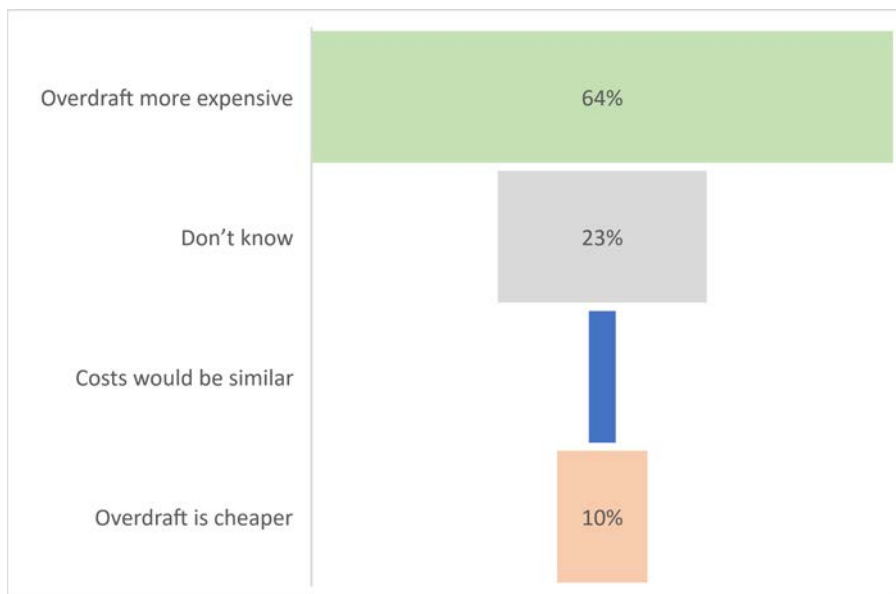
## Relative ease or difficulty in making comparisons

36. Across all of the examples, when asked why it was easy to make the comparisons, more people specifically mentioned the APR (29%) than any other factor and many reported looking at the general '% / figures'. Those reporting relative difficulty mentioned different examples being shown, and therefore not easy to make comparisons; being too hard to understand; not having sufficient time or not being good at maths.

## Overdrafts compared with other forms of credit

37. Consumers were asked 'If you saw an overdraft had an APR of 50%, how would you think that compares to borrowing money using other forms of lending, such as using a credit card to borrow money or a loan facility?' This is shown in chart 5.

**Chart 5 – how does an APR of 50% compare to other forms of lending**



Base = those who have used arranged and / or an unarranged overdraft in the previous 12 months. N=454

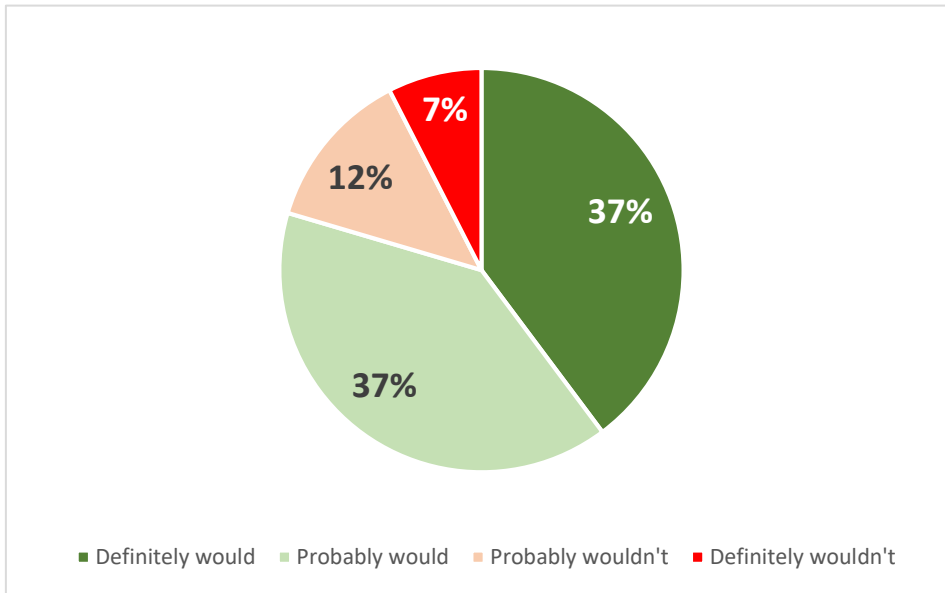
38. Nearly two in three people interviewed thought that an overdraft with an APR of 50% would cost more than other forms of lending. This was higher among men, social class AB, and those working. However, one in ten thought it would be cheaper. This was nearly double among those with no level of educational attainment. Those not knowing were twice as likely to be those with no educational attainment (33%) compared to those with degrees (15% of whom didn't know either).

## Use of APR

39. Over half (54%) of those surveyed reported that they **do use the APR** to compare the cost of borrowing, for example, using credit cards or loans. This was higher for graduates, owner-occupiers and full-time workers), along with social grade AB, and those who were married.
40. One in three (35%) said they do **not**. This was higher for younger people – aged 18-24 and those in social class DE, renters, BAME respondents, and those without formal educational qualifications.
41. One in ten reported that they **did not know what APR is** (C2/DE's more so; along with social housing renters, and BAME).

*'If all different banks showed the APR of their overdraft everywhere they talked about overdraft charges, for example on their website, in leaflets, in branch etc. would you use the APR to compare the costs of overdrafts with different banks?' This is shown in chart 6.*

**Chart 6 – would you use APR to compare costs of overdrafts with different banks?**

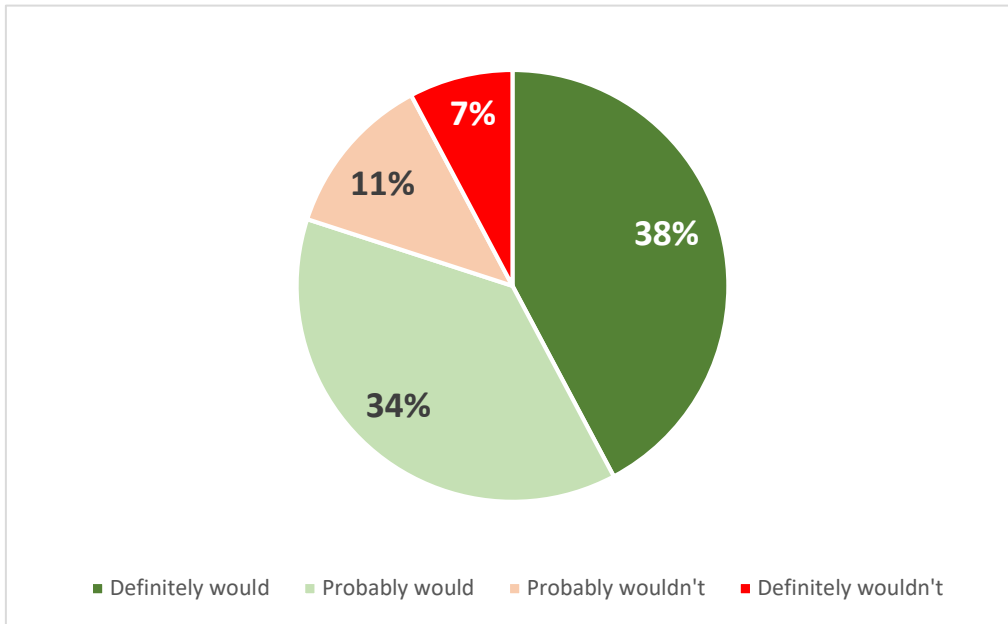


Base = those who have used an arranged and / or an unarranged overdraft in the previous 12 months. N=454

42. **Many say they would or might, but not all. One in three would**, and a further one in three might. However one in five might not or would not (especially those who were single, aged 65+; social housing renters, BAME and those with low levels of educational attainment).

*'If all different banks showed the APR of their overdraft everywhere they talked about overdraft charges, for example on their website, in leaflets, in branch etc. would you use the APR to compare costs of overdrafts with other types of borrowing such as credit cards or loans? This is shown in chart 7.*

**Chart 7 – would you use APR to compare costs of overdrafts with other types of borrowing?**



Base = those who have used an arranged and / or an unarranged overdraft in the previous 12 months. N=454

43. As before, many say they would or might, but not all. Over one in three would, and a further one in **three** might. However, one in five might not or would not, especially 18-24 year olds; BAME, and those with low levels of educational attainment.
44. Of those who **would use the APR** (343 respondents): Just under one in three (29%) said, in response to an open question that they would use the APR to check for the cheapest offers or best rates or to compare, and check the cost of borrowing; 18% said they would as it was calculated on a consistent or standard basis, and 16% because it would make things easier and that they would understand it.
45. Of those who **would not use the APR** (102 respondents): 15% said, again in response to an open question, that they wouldn't as they didn't borrow; 14% simply said they wouldn't use it; and 7% because they did not understand it.

# Chapter 8-Profitability

1	Introduction	5
2	Profitability of overdrafts for major banks	8
3	Comparing overdraft profitability with other forms of credit	18
4	Difference in profitability between arranged and unarranged overdrafts	21
5	Costs of refused payment fees	26
6	Insights from the financial analysis for understanding waterbed effects	28

# Executive summary

- 1.1 Profitability is a useful indicator to assess the outcome of the competitive process. A high level of return over a prolonged period for a large section of the market could point towards a lack of competitive constraints.
- 1.2 This Annex focuses on the profitability of the provision of an overdraft facility on personal current accounts (PCAs). It feeds into our work on the proposals on overdrafts as part of the High-cost Credit Review, and the role of overdrafts in overall retail bank profitability as part of our Strategic Review of Retail Banking Business Models.
- 1.3 We focused on the 6 major providers of PCAs <sup>1</sup>, collecting and analysing financial data from the past 5 years (2013-17). These firms together provide close to 90% of PCAs <sup>2</sup>. We also considered how ongoing and planned changes in overdraft pricing structure would impact our profitability assessment by 2020.
- 1.4 We estimated the return on equity and the economic profit of overdrafts as a standalone product. One key feature of overdrafts is their link with PCAs, from a marketing and operational perspective. In this respect, overdrafts are a constituent of a wider group of products attached to PCAs. This has 2 major implications:
  - First, quantifying the costs attached to overdrafts is complex. We used a range of relevant cost allocation approaches in our profitability analysis (namely Long-Run Incremental Costs (LRIC) and Fully Allocated Costs (FAC)), accepting that there is more than one way to assess costs.
  - Second, it creates conceptual challenges when analysing overdrafts as a stand-alone credit product. While PCAs are used for transactional banking purposes, an overdraft is a credit facility. We consider that credit cards and unsecured personal loans serve as appropriate comparator products because, from a functionality perspective, overdrafts share many similarities with other unsecured credit products.

## Our findings

- 1.5 We found that the weighted average overdraft return on equity (ROE) under the LRIC approach was 56% in 2017, and estimated a range between 19% and 61% for the FAC ROE approach with a mid-point at 40% (see Figure 1) <sup>3</sup>. Under both methods, ROE is well in excess of banks' cost of capital, estimated to range between 9% and 11%. We also found that the inclusion of refused payment fees in overdraft revenues would increase the LRIC and FAC ROE by 10 percentage points. <sup>4</sup>
- 1.6 We determined that ongoing and planned changes in overdraft pricing structures in the next couple of years should not alter the conclusion that ROE exceeds banks' cost of capital. This is based on assuming a change in overdraft pricing of between -11% and +9% compared to a 2017 base. This would imply a ROE of 46% to 64% under the LRIC approach and 30% to 48% under the FAC approach by 2020, still in excess of banks' cost of capital. <sup>5</sup>

---

<sup>1</sup> The Royal Bank of Scotland, Lloyds Banking Group, HSBC, Barclays, Nationwide and Santander UK

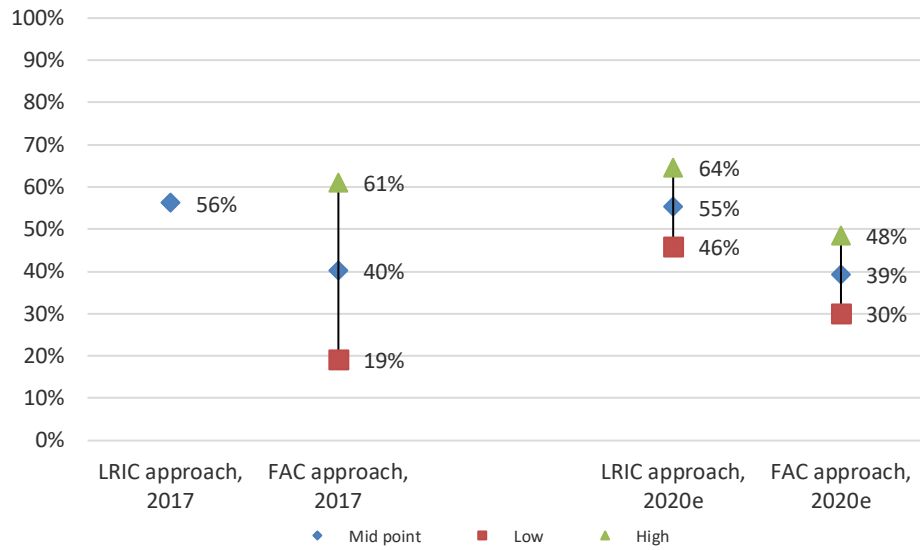
<sup>2</sup> Strategic Review of Retail Banking Business Model Progress Report (2018): <https://www.fca.org.uk/publication/multi-firm-reviews/strategic-review-retail-banking-business-models-progress-report.pdf>

<sup>3</sup> The data points presented do not represent individual firm outcomes.

<sup>4</sup> The LRIC approach does not necessarily capture the costs of refusing a payment. The increase in LRIC ROE resulting from the addition of refused payment fee revenue may be overestimated as a result. See Section 5 for further details.

<sup>5</sup> The data points presented do not represent individual firm outcomes.

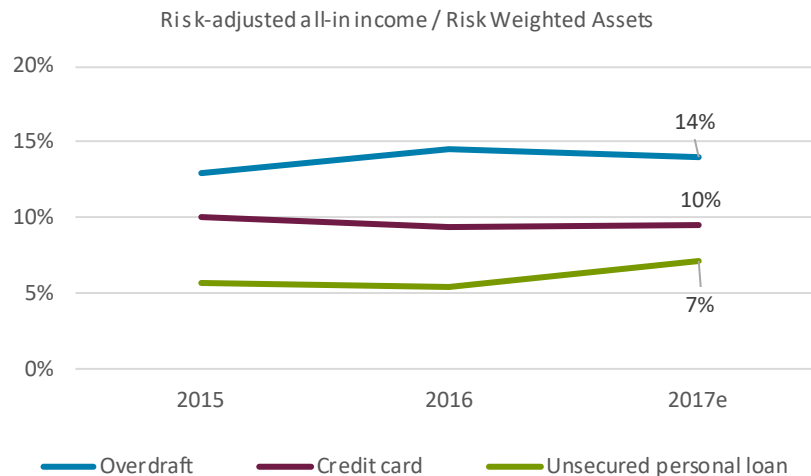
**Figure 1: Return on equity for overdrafts using a range of relevant cost allocation approaches**



FCA Analysis. Note: the LRIC approach is based on an industry-wide assessment of costs. Under the FAC approach, our profitability model relies on cost inputs provided by only 2 banks. We consequently present a range for ROE under the FAC approach to account for the range of potential overdraft returns across the market. The data points presented do not represent individual firm outcomes.

1.7 We found that overdraft contribution to profitability is between 40% and 100% higher than that from unsecured personal loans. This is based on capturing differences in pricing and adjusting for cost of risk and capital costs, through the ratio of Risk-Adjusted All-in Income / Credit Risk-Weighted Assets. Pricing, cost of risk and capital costs are the key drivers of overdraft return.

**Figure 2: Contribution to profitability for overdrafts, credit cards and unsecured personal loans over 2015-17**



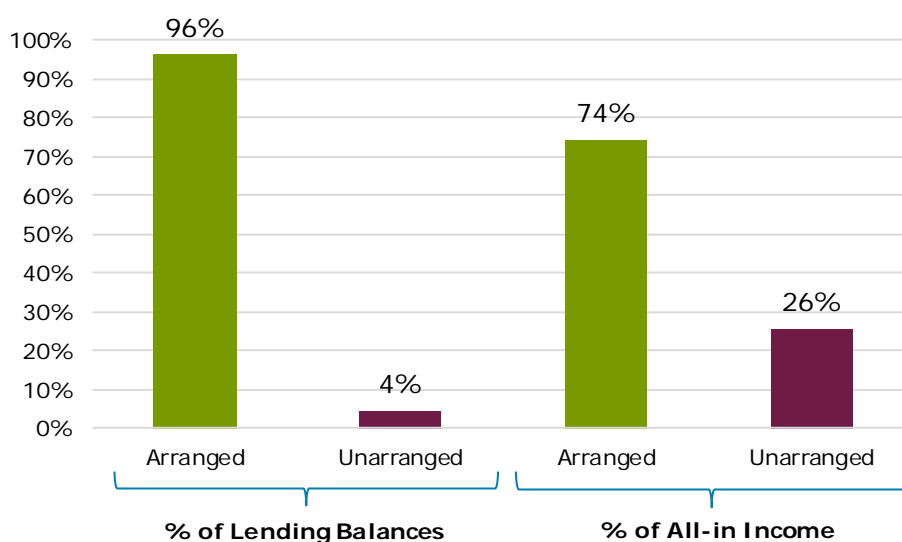
FCA Data.

1.8 We concluded that these 2 pieces of evidence point towards a lack of competitive pressure in overdraft pricing. Over a meaningful period of time, banks are able to

sustain a return from overdrafts well in excess of their cost of capital, and above other unsecured credit products.

- 1.9 We have also examined the differences between the contributions generated by arranged and unarranged overdraft. Arranged overdrafts account for nearly all the overdraft revenues generated by banks, when expressed as a percentage of lending balances (see Figure 3). Yet, unarranged overdrafts are more profitable than arranged overdrafts, even adjusting for the higher cost of risk and higher capital costs. The contribution to profitability of unarranged overdrafts was 83% in 2017, based on the ratio of Risk-Adjusted All-in Income / Credit Risk-Weighted Assets, 66 percentage points higher than for arranged overdraft.<sup>6</sup>

**Figure 3: 2017 split of lending balances and revenues between arranged and unarranged overdrafts**



FCA Data. All-in income refers to overdraft interest income, non-interest income and paid transaction fee revenues. The unarranged all-in income revenue includes paid transaction fee revenues but excludes refused payment fees. The data presented here is based on averages weighted by lending balances. These figures are based on approximately 90% of the market.

- 1.10 We examined the costs of refused payment fees. Firms provided some insight to the actual costs of refusing a payment in response to CP18/13 and a cost survey. We would need to see further evidence to enable us to conclude that refused payment fees reasonably correspond to firms' actual costs.
- 1.11 We used our financial analysis to generate insights on the potential waterbed effects of our proposed remedies on overdrafts. "Waterbed effects" may occur following any regulatory intervention. We refer to waterbed effects here as the potential increase in the pricing of arranged overdrafts, personal current accounts or other retail banking products to offset a regulatory intervention on the pricing of overdrafts. We expect that there will be a rebalancing of pricing in the short-run between arranged and unarranged overdrafts. We also conducted a sensitivity analysis on the impact on profitability of a decrease in overdraft revenues. Our work suggests that less favourable scenarios would result in a moderate decrease in ROE at the retail bank level.

<sup>6</sup> These figures represent over half of the market.



# 1 Introduction

## Why we are doing this analysis

- 1.1 The level of profitability is one outcome of the competitive process, alongside prices, innovation, product range and quality. Evaluating this outcome allows us to determine whether the observed profitability outcome is consistent with effective competition and, if not, the potential extent of customer harm.
- 1.2 Widespread and persistently high levels of profitability across an industry is generally an indicator that prices are not competitive. A situation where the profitability of firms that are representing a substantial part of the market has exceeded the cost of capital over a sustained period could indicate limitations in the competitive process.
- 1.3 This analysis of overdraft profitability is part of a multi-faceted evidence base collected during the High-cost Credit Review and the Strategic Review of Retail Banking Business Models.

## The data used in our analysis

- 1.4 We conducted our analysis using detailed data collected from the 6 major providers of personal current accounts (PCAs): the Royal Bank of Scotland, Lloyds Banking Group, HSBC, Barclays, Santander UK and Nationwide. These firms hold close to 90% of PCAs<sup>7</sup>. They are also representative of the various business models offering overdrafts, with 5 traditional banks and 1 building society, together including a variety of pricing models. We decided not to include smaller market participants in our information request to be proportionate in the burden we imposed on firms.
- 1.5 We collected annual financial data over a 5-year time horizon, from 2013 to 2017. Changes in reporting systems and in pricing strategies meant it was not practical for firms to collect data over a longer period. This duration gives us a reasonable basis to reach robust conclusions.
- 1.6 We focused our information request on the revenues, costs and lending assets that arise from the provision of overdraft lending. We also asked firms to split their data between arranged and unarranged overdrafts. However, firms do not routinely gather some of this information. In presenting our results below, we have acknowledged where these data limitations have constrained the depth of analysis and the conclusions we were able to reach.

## How we have approached the analysis

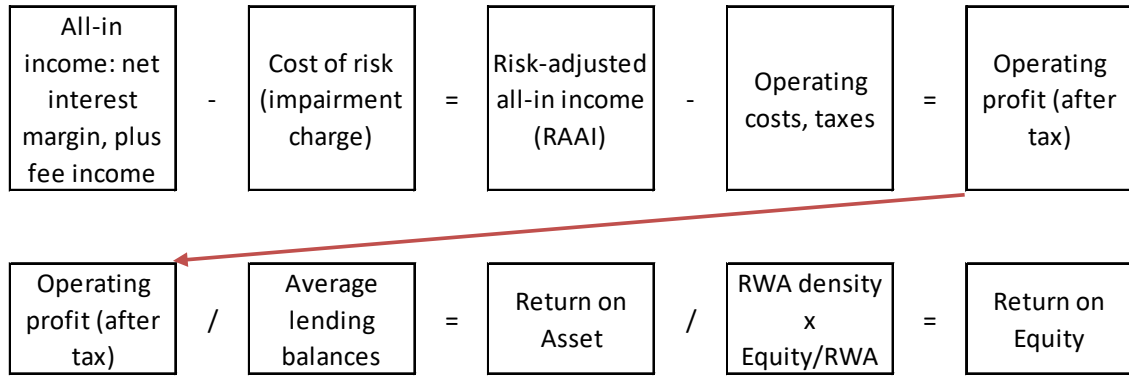
- 1.7 Our approach to assessing the profitability of overdrafts is based on determining the return on equity and the economic profit derived from overdrafts. This is different to pure accounting profit. We looked at revenues and costs, including an appropriate value for capital and an allowance for the capital costs. Consistent with commercial and regulatory practice in the financial sector, we use the return on equity for overdrafts as a primary measure of profitability, as opposed to alternative metrics such as return on capital employed, which are more suitable in other sectors.<sup>8</sup>

---

<sup>7</sup> Strategic Review of Retail Banking Business Model Progress Report (2018): <https://www.fca.org.uk/publication/multi-firm-reviews/strategic-review-retail-banking-business-models-progress-report.pdf>

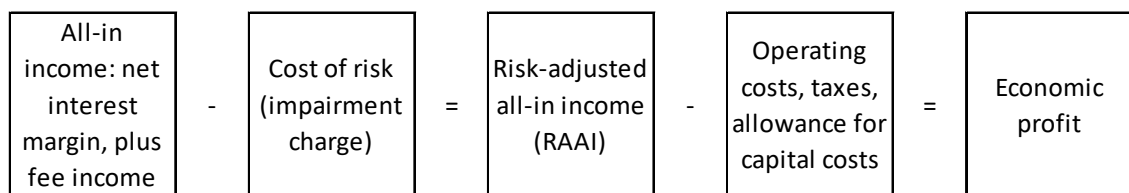
<sup>8</sup> Financial services firms use debt as a raw material to mould it into other profitable financial products. They tend to have very small capital expenditures and depreciation. For these reasons, we avoid using metrics involving capital-based measures of profitability, and focus instead on equity metrics such as ROE.

**Figure 4: Our approach to calculating Return on Equity**



FCA Data.

**Figure 5: Our approach to calculating Economic Profit**



FCA Data.

## Characteristics of overdrafts and impacts on our analysis

- 1.8 The link between PCAs and overdrafts is a key feature in this market. Currently, banks market their overdraft offering as part of a current account <sup>9</sup>. They also tend to operate combined systems to support both overdrafts and current accounts (eg payment or IT systems). It means that banks do not sell overdraft services as a stand-alone product, but as a constituent of a wider group of products and services attached to transactional banking<sup>10</sup>, including access to payment systems, facilities for cash distribution, provision of statements and foreign currency. This has two important implications for our work, on cost allocation and on the comparison with other forms of credit.
- 1.9 First, the link between overdrafts and PCAs meant it was challenging for some firms to distinguish the stream of profits specifically attached to overdrafts. Firms tend to routinely monitor additional income and underlying lending balances. But it was more difficult for them to quantify the costs of providing overdrafts separately from those incurred to operate PCAs. In other words, they tend to manage overdrafts as a revenue line but not as a profit centre. We asked firms to focus on both direct costs, defined as clearly and directly attributable to overdrafts, and on semi-direct costs, defined as partly attributable to overdrafts and which would be avoided if the firm stopped providing overdrafts. We also based our profitability assessment on a range of different costing methodologies to address this specific challenge. Instead of relying on a single cost measure, we looked at short-run, long-run incremental costs and fully allocated costs. We accept that there is more than one way to assess such costs, as any methodology is subject to multiple assumptions and judgements. But this comprehensive approach allowed us to derive a fair assessment of overdraft

<sup>9</sup> In other words, a customer can open a PCA with an overdraft facility, but the reverse is not possible. The introduction of Open Banking could affect this feature of the market. It could lead to an increase in revolving credit products that are marketed independently from PCAs.

<sup>10</sup> One firm described overdrafts “as an additional service to the current account” within its submission.

profitability. This was particularly critical given the high level of fixed costs attached to PCAs and retail banking in general.

1.10 Second, there are conceptual challenges when analysing overdrafts as a stand-alone credit product. While overdrafts and PCAs are primarily sold together, they serve different functions as the former is a credit facility. We therefore compared overdrafts with other forms of unsecured credit as they share many similarities. They represented our best alternatives to compare profitability. However, we recognise that some caution must be exercised when comparing overdrafts with different products, due to the relationship of overdrafts with PCAs.

### **What is covered in this financial analysis**

1.11 The present financial analysis covers the following points:

- Section 2 describes our findings on the profitability of overdrafts for major banks. The assessment is based on estimating a return on equity, based on different cost allocation methodologies, namely long-run incremental costs and fully allocated costs. We also conducted a forward-looking analysis to assess the impact of ongoing changes in overdraft pricing structures.
- Section 3 covers the comparison of overdrafts with other forms of unsecured credit, ie credit cards and personal loans.
- Section 4 focuses on how profitability might differ between arranged and unarranged overdrafts, and whether current differences in pricing are justified by costs.
- Section 5 considers the costs of refused payment fees.
- Section 6 looks at potential waterbed effects from remedies. It covers the likely approaches that could be considered by banks to recoup a potential decline in overdraft revenue, as well as the impact on banks' profitability.

## 2 Profitability of overdrafts for major banks

We assessed the profitability of overdrafts by calculating the return on equity under different cost allocation methods.

The short-run incremental cost approach captures the most significant cost categories. Cost of risk, direct operating costs and semi-direct costs stood at 5%, 3% and 4% of overdraft lending balances, respectively in 2017. Capital costs are significant as well, with a ratio of attributable Equity/Overdraft lending assets at 27%.

The long-run incremental cost (LRIC) approach implies an average return on equity of 56%. Under the fully allocated cost (FAC) approach, we estimated a 2017 return on equity ranging between 19% and 61%, with an implied mid-point return on equity at 40%. The inclusion of refused payment fee revenues adds 10 percentage points to each return measure: the LRIC average return becomes 66% and the FAC mid-point 50%.

Ongoing changes in overdraft pricing are likely to reduce overdraft profitability but would not alter our directional findings. Accounting for these changes, overdraft ROE under the fully allocated cost approach would remain in a range of 46% to 64% under the LRIC approach and 30% to 48% under the FAC approach by 2020. Both approaches produce estimates in excess of banks' cost of capital.

- 2.1 Our objective is to assess the profitability of overdrafts by determining their return on equity. In this section, we discuss overdraft revenues and the different cost allocation methodologies: LRIC and FAC. We also present our findings on overdraft profitability, and our assessment of the impact of ongoing changes in pricing strategies.

### **Our approach to the profitability analysis: conceptual framework**

- 2.2 In competitive markets, competition amongst firms will constrain the prices which can be charged by suppliers. However, in markets which are not effectively competitive, this may not be the case. When regulators assess this, they focus on the relationship between prices and costs to evaluate the extent to which prices are at a competitive level.
- 2.3 In theory, economic efficiency is supported by prices that reflect the additional resources used to provide the service in question. It ensures that the value to consumers of the services they buy must be at least as great as the cost of producing them. Prices should also be set at a level which is sustainable over time, allowing for necessary investment. This means that a long-run view of costs will usually be appropriate when setting prices. For this reason, long run incremental cost (LRIC) is usually used to measure the additional resources used to provide that service. LRIC includes the service-specific fixed costs needed to produce a service which, in retail banking, can be significant.

2.4 We have primarily focused on the LRIC methodology because it provides an insightful framework to carry out a profitability analysis that is consistent with market pricing providing appropriate incentives for firms to be efficient. However, we have also considered alternative costing methodologies, namely fully allocated costs. This creates an alternative measure to overcome the difficulty highlighted by banks of distinguishing the stream of profits specific to overdrafts, given the link with PCAs. We explain these approaches further in paragraph 2.11.

## Revenues

2.5 Overdraft revenues are generated from customers through various fees and charges, including:

- interest charges on overdrawn balances
- daily or monthly usage charges
- a transaction fee for accepting (paid transaction fee) or denying (refused payment fee) a payment that would take a customer beyond a pre-agreed or internally determined maximum borrowing limit.

2.6 These types of charges may be combined, and may differ according to whether the overdraft facility is pre-arranged.

2.7 We focused on 'all-in income', combining net interest and fee income (including paid transaction fees and excluding refused payment fees)<sup>11</sup>. This helps to overcome the impact of different charging approaches taken by banks. The balance between interest and charges varies significantly among banks, and is a function of the pricing structure retained by each institution as well as internal accounting assumptions such as the fund transfer pricing. Furthermore, some banks do not split their revenues between interest and non-interest income in a similar manner to how they present charges to customers. As a result, we cannot derive the proportion of overdraft income levied through fees using this data set.

2.8 Overdrafts are high margin: overdraft all-in income stood on average at 30%<sup>12</sup> (when expressed as a ratio over average overdraft lending balances (2017) for major banks). All-in income declined over 2013-17 with a compound annual growth rate (CAGR) of -1.5%. Lending balances declined over the period as well (-4.9% CAGR over 2013-17<sup>13</sup>). We note that the ratio of all-in income over lending balances increased, from 25% in 2013 to 30% in 2017 as a result of the decline in lending balances. We attribute this reduction in lending to underlying long term trends - recovering economic conditions since the 2008 crisis, combined with larger cash balances attached to personal current accounts as customers moved balances away from interest bearing deposits in the low interest rate environment.<sup>14</sup>

---

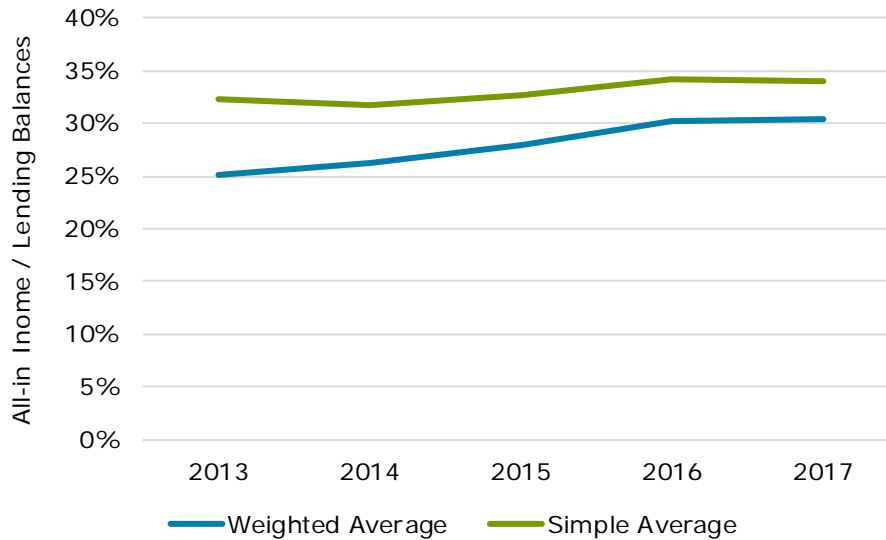
<sup>11</sup> We decided to exclude refused payment fees from all-in income because it is not a fee related to lending. This exclusion also has the effect of making our profitability figures more conservative.

<sup>12</sup> This is an average weighted by average lending balances in each major bank.

<sup>13</sup> This figure encompasses 90% of the market.

<sup>14</sup> Data from the Bank of England show that non-interest-bearing deposits as a percentage of total sight deposits have increased from around 5% before the financial crisis to over 20% in more recent years.

**Figure 6: All-in income, expressed as a percentage of overdraft lending balances for major banks (2013-17)**



FCA Data. Weighted average based on the weight of lending balances across the sample. 91% of the market is represented for the years 2013-4 and 100% for the years 2015-17.

## Costs: terminology and approach

2.9 We distinguished 3 main types of costs:

- **Direct costs** are clearly attributable to overdrafts and tend to vary with the volume of lending balances.
- **Semi-direct costs** are defined as partly attributable to overdrafts. They would be avoided if a bank did not offer overdrafts to its customers. This primarily corresponds to staff costs attached to branches and customer contact centres.
- **Common or joint costs** consist of shared costs with the administration of PCAs. Such costs tend to be primarily fixed.

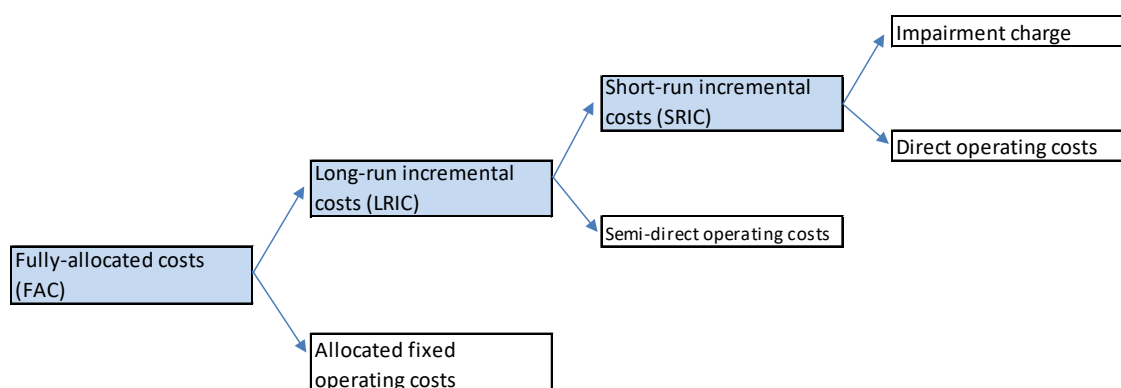
2.10 Given the intrinsic link between overdrafts and PCAs, it was challenging for some firms to distinguish costs specifically attached to overdrafts. As a result, we asked firms to focus on both direct and semi-direct costs for our information request. We accept that there is a degree of assumption and judgement embedded in this quantification of costs. However, we addressed these by checking for consistency in our sample and by looking at trends over 2013-17.

2.11 Furthermore, we based our profitability assessment on a range of different costing methodologies. We differentiated between 3 main approaches:

- costs that vary in the short term with the volume of lending balances, also known as **short-run incremental costs (SRIC)**, mainly representing cost of risk, capital costs and direct costs.
- cost that vary with the volume of lending balances in the long term, also known as **long-run incremental costs (LRIC)**. That includes semi-direct costs on top of SRIC.

- total costs attributable to overdrafts, including a portion of fixed costs embedded with the provision of PCAs, known as **fully allocated costs (FAC)**.

**Figure 7: Multiple approaches to look at costs attached to overdrafts**



FCA Data.

2.12 Our estimates of profitability metrics are likely to be an under-estimation of actual profitability for two key reasons. Firstly, we decided not to include refused payment fee revenues in the overdraft revenues: these fees do not necessarily relate to overdraft lending. Secondly, firms reported lending balances that were in aggregate higher than the data collected at customer level and used for the demand-side analysis. We attribute the difference to some methodological choices they made when they collected average lending balances. This has the effect of depressing our profitability metrics because the denominator is larger than it would otherwise have been.

## Profitability assessment focusing on incremental costs

2.13 **Short-run incremental costs** are the most significant costs:

- Cost of risk were 5%<sup>15</sup> of overdraft lending balances (weighted average for 2017),
- Other direct operating costs were 3% of overdraft lending balances (weighted average for 2017). Other direct operating costs correspond to acquiring and servicing overdrafts as distinct from PCAs. They could include a range of various functions. These range from affordability checks when overdraft facilities are awarded or extended, to dealing with overdraft inquiries, customer operations, and services involved in collection and recovery of accounts in default. Based on firms' submissions, the most significant buckets of costs are attached to collection/recovery costs, complaints/litigations and communication with customers.
- Capital costs are significant as well, with a ratio of attributable Equity/Overdraft lending balances at 27% (weighted average for 2017). We have apportioned equity to overdrafts based on credit risk-weighted assets (RWAs)<sup>16</sup>. A risk-based approach to allocate equity is the most common methodology used by banks<sup>17</sup>.

<sup>15</sup> Impairment rates are based on recurring charges excluding exceptional items as well as fraud, primarily attributed to PCAs.

<sup>16</sup> Please note that we refer to credit risk-weighted assets only throughout this annex.

<sup>17</sup> In general, banks allocate capital to their business lines based on their RWAs. Some banks go further, employing more complex methodologies with a blend of different regulatory capital metrics. An example of this is the inclusion of the leverage ratio requirement — a non-risk adjusted metric — in the allocation process. See the publication by the Bank

Bank-wide equity capital which is used to finance banks' activities is, with some adjustments, often referred to as common equity Tier 1 (CET1) capital. Overall, we observe a significant variation between major banks in the level of RWA apportioned to overdrafts. The credit RWA density, which is the ratio of credit RWA to overdraft lending balance, stands between 130% and 200% for the banks that rely on the Internal Rating Based<sup>18</sup> methodology to determine capital requirements<sup>19</sup>.

- 2.14 **Long-run incremental costs** were derived by including other operating costs that vary with the volume of lending balances in the long term. That primarily includes semi-direct costs, ie staff costs attached to branches and customer contact centres. Four firms provided us with a quantification. Expressed as a proportion of lending balances in 2017, semi-direct costs stood at 4% (weighted average for 2017).
- 2.15 Combining income and costs based on a LRIC approach, we derived an assessment of overdraft profitability. Post-tax Return on Assets was 15% and the Return on Equity was 56% for 2017, as shown on Figure 8. The inclusion of refused payment fees as part of overdraft all-in income would increase the LRIC Return on Equity by approximately 10 percentage points to 66%<sup>20</sup>.

**Figure 8: Return on Equity of overdrafts, based on the LRIC approach for 2015-17**

	2015 <u>weighted</u> <u>average</u>	2017 <u>weighted</u> <u>average</u>	Comments
All-in income	28%	30%	
- Cost of risk	-5%	-5%	
= <b>Risk adjusted all-in income</b>	<b>23%</b>	<b>25%</b>	Ratio over average Lending Balances
- Direct costs	-2%	-3%	
- Semi-direct costs	-3%	-4%	
= <b>Operating profit</b>	<b>18%</b>	<b>18%</b>	Ratio over average Lending Balances
- Tax	-4%	-3%	
= <b>Return on Assets</b>	<b>14%</b>	<b>15%</b>	Ratio over average Lending Balances
/			
RWA density	180%	182%	RWA over average Lending Balances
x CET 1 ratio	13%	15%	Equity over RWA
= <b>Attributable equity</b>	<b>24%</b>	<b>27%</b>	Equity over average Lending Balances
= <b>Return on Equity</b>	<b>60%</b>	<b>56%</b>	

FCA Analysis. Due to data availability, the semi-direct costs are based on submission from 87% of the sample. These figures are averages weighted by lending balances. Using a simple average for these metrics would return a similar level of return on assets and return on equity. We presented our analysis using the latest actual available data (2015-17).

- 2.16 Figure 9 shows the 2017 estimated economic profit, covering overdrafts, for the 6 major banks. Working from right to left in the diagram, we derived economic profit in the following way:

- All-in income, shown before and after cost of risk, is expressed as a proportion of lending balances. Total overdraft lending balances for the market stood at £6.5bn in aggregate for 2017<sup>21</sup>.

of England for more details: <https://www.bankofengland.co.uk/-/media/boe/files/quarterly-bulletin/2018/banks-internal-capital-markets-how-do-banks-allocate-capital-internally.pdf?la=en>

<sup>18</sup> The Internal Ratings Based (IRB) approach allows banks to determine capital requirements based on their own risk models, whilst the Standardised Approach (SA) prescribes set requirements for specified asset classes.

<sup>19</sup> This excludes one bank which has a higher RWA density due to historical reasons.

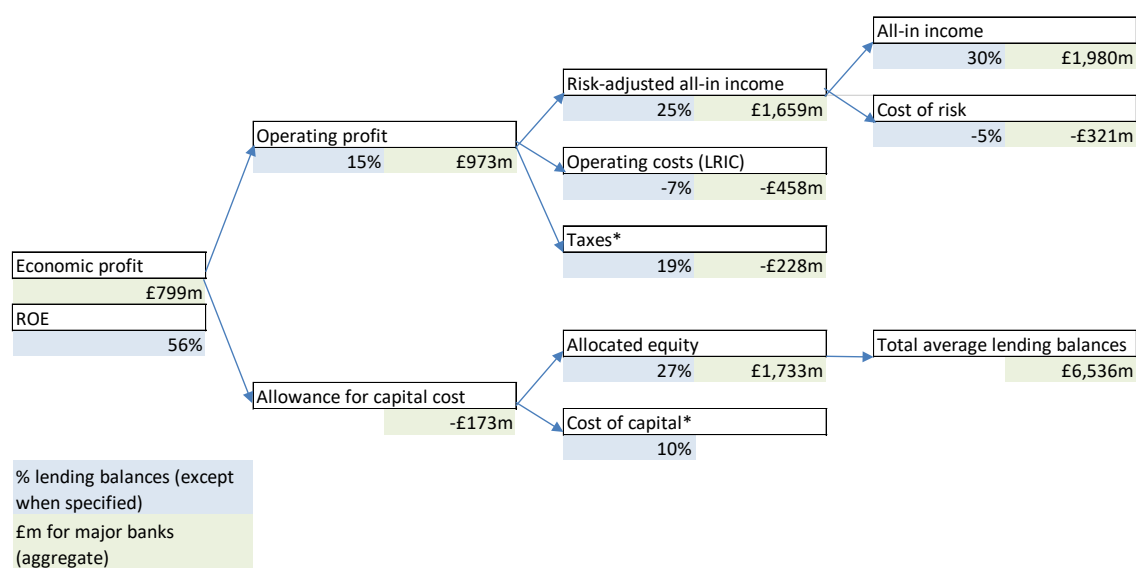
<sup>20</sup> The LRIC approach does not necessarily capture the costs of refusing a payment. The increase in LRIC ROE resulting from the addition of refused payment fee revenue may be overestimated as a result. See Section 5 for further details.

<sup>21</sup> Overdraft lending balances represent close to 4% of the total deposit balances for retail banks, and around 1% of the total retail lending balances.



- Costs are calculated using the LRIC approach. It covers direct and semi-direct costs, expressed as a proportion of lending balances. Their quantification is summarised in Figure 8.
- Costs, including taxes, are deducted from income to arrive at the operating profit, after tax, of £973m.
- Allocated equity, based on the level of RWA and CET1 ratio<sup>22 23</sup>, is estimated at 27% of overdraft lending balances, £1,733m, as detailed in Figure 8.
- Allocated equity is then multiplied by the cost of capital, set at 10%, to arrive at the allowance for capital cost, expressed in £ terms, £173m. We detail in paragraph 2.23 why we took such an estimate for the cost of capital.
- The allowance for capital cost is deducted from the operating profit to determine economic profit. It is estimated at £799m in aggregate for the 6 major banks, in 2017.
- The return on equity (ROE) is calculated by dividing the operating profit by the allocated equity. We derive a ROE of 56% in 2017, which can be compared with the estimate of the cost of capital of 10%. This ROE is also consistent with 2015 and 2016 figures.

**Figure 9: Economic profit attached to overdrafts for the 6 major banks in aggregate, based on the LRIC approach for 2017**



Note

19% tax rate applied for 2017

10% allowance for capital cost

\* Ratio not based on lending balances.

FCA Analysis. Note: based on a 19% normative tax rate applied for 2017, and a 10% allowance for capital cost. We presented our analysis using the latest actual available data (2017).

<sup>22</sup> CET1 ratio is defined at Common Equity Tier 1 (CET1) over RWAs.

<sup>23</sup> The equity capital that banks allocate to their business lines is generally CET1 capital, as noted by the Bank of England: <https://www.bankofengland.co.uk/-/media/boe/files/quarterly-bulletin/2018/banks-internal-capital-markets-how-do-banks-allocate-capital-internally.pdf>. This is a simplification, as CET1 capital and equity do not exactly equate.

## Profitability assessment focusing on fully-allocated costs

- 2.17 Finally, we also estimated a fully allocated cost of overdrafts. It includes the direct and semi-direct costs, as well as an allocation of common and joint costs that may not be directly attributable to overdrafts.
- 2.18 We accept that conceptually there may be no 'correct' allocation method for certain common costs. We therefore attempted to estimate an upper bound for a reasonable allocation of shared and joint costs shared with PCAs, based on the volume of transactions (see details in paragraph 2.20). If, on this basis, overdraft ROE still appears to exceed the cost of capital, we can have confidence that cost allocation is not over-influencing the findings. This is because this method for apportioning costs leads to the highest allocation of costs to overdrafts when compared to LRIC and SRIC.<sup>24</sup>
- 2.19 We have a thinner evidence base for this quantification. It is based on cost information elements provided by only 2 firms, as the other firms were not able to quantify such costs due to the overlap of operating expenses between overdrafts and PCAs<sup>25</sup>. Yet, the available data informs our analysis by providing an upper limit on the cost of providing overdrafts as per 2.18.
- 2.20 We obtained evidence on the total operating costs attached to their PCA operations of 2 firms. We used 2 different methodologies to allocate these costs, both derived from a volume-based allocation to reflect the link between business activity and cost driver.
- Using customer-level transaction data for major banks, we estimate that between 15% and 20% of all PCA transactions relate to a situation where the account is overdrawn. We use this as our allocation key.
  - Under method 1, we apportion PCA's **total** costs to overdrafts, using the 15%-20% allocation key. We have this quantification for 2 banks (referred as 'Firm A' and 'Firm B' in Figure 10). Total operating costs attributable to overdrafts, including both direct costs and a share of common costs, range between 10% and 14% for firm A and 14% and 18% for firm B.
  - Under method 2, we apportion PCA's **fixed** costs to overdrafts by using the 15%-20% allocation key. We have this quantification for firm B only. This comes on top of direct and semi-direct operating costs set at 12%, as detailed in paragraphs 2.13 and 2.14. Combined, total operating costs attributable to overdrafts range between 21% and 24% for firm B.
  - Overall, the maximum range for total operating costs attributable to overdrafts under the FAC approach stands at 10%-24%, incorporating results from methods 1 and 2 (as illustrated in Figure 10).

---

<sup>24</sup> The Stand-Alone Cost (SAC) basis is cost allocation method which would theoretically lead to a higher cost allocation than FAC. However, the current provision of overdraft lending via the personal current account business prohibits a useful application of SAC.

<sup>25</sup> We are unable to share the combined market share of these 2 firms due to data confidentiality reasons.

**Figure 10: Range of fully allocated operating costs attributable to overdrafts, for 2017**

	% PCA transactions relating to overdrafts	
	Low end	High end
<b>All major banks</b>	<b>15%</b>	<b>20%</b>
	Fully-allocated operating costs <sup>(1)</sup> over average lending balances	
	Low end	High end
Firm A (method 1)	-10%	-14%
Firm B (method 1)	-14%	-18%
Firm B (method 2)	-21%	-24%
<b>Range (Min/Max)</b>	<b>-10%</b>	<b>-24%</b>

FCA Analysis. (1) Excluding capital cost.

- 2.21 We did not use the proportion of overdraft revenues over total PCA-derived revenues as an allocation key. We considered this methodology less robust, as no relationship exists with the underlying cost, which would introduce an inherent flaw into an analysis of economic profit generated by overdrafts.
- 2.22 Using the FAC approach, we derived a Return on Assets attached to overdrafts ranging between 5% and 16%, and a Return on Equity ranging between 19% and 61% (Figure 11)<sup>26</sup>. The inclusion of refused payment fee revenues into overdraft all-in income would add 10 percentage points to this range, which would be 29-71%.

**Figure 11: Return on assets and return on equity of overdrafts, based on the FAC approach, for 2017**

	Low end	High end	Average
All-in income	30%	30%	30%
- Fully allocated operating costs	-24%	-10%	-17%
- Tax	-1%	-4%	-2%
<b>= Return on Assets</b>	<b>5%</b>	<b>16%</b>	<b>11%</b>
<b>= Attributable equity</b>	<b>27%</b>	<b>27%</b>	<b>27%</b>
<b>= Return on Equity</b>	<b>19%</b>	<b>61%</b>	<b>40%</b>

FCA Analysis. The data points presented do not represent individual firm outcomes.

- 2.23 Contrary to ROE under the LRIC approach (see paragraph 2.16), cost assessment under the FAC method rely on quantification provided by 2 banks only. We therefore present a range for ROE under the FAC approach, to highlight the range of implied returns.<sup>27</sup>
- 2.24 Return on equity can be compared with an estimate of the cost of equity for overdrafts. We have used an estimate for post-tax cost of equity ranging between 9% and 11%, with a mid-point at 10%. This is based on evidence from three different types of sources:
- In its 2017 report on stress testing<sup>28</sup>, the Bank of England notes that most banks' current return on equity targets are approximately at 10% and its own estimate

<sup>26</sup> The data points presented do not represent individual firm outcomes.

<sup>27</sup> Ibid.

<sup>28</sup> Bank of England report dated November 2017: <https://www.bankofengland.co.uk/-/media/boe/files/stress-testing/2017/stress-testing-the-uk-banking-system-2017-results>

stands at 11.5%, compared to an 11% estimate by the IMF<sup>29</sup> for global systemically important banks.

- In its submission to the High-cost Credit Review, one firm mentioned an overall cost of capital at 10%.
- This is consistent with cost of equity as estimated by research analysts covering major, listed UK banks. Based on reports by 4 investment banks<sup>30</sup>, we observed an estimated cost of equity ranging between 9% and 11%.

## Forward looking analysis

- 2.25 Several banks are changing their overdraft pricing structure, or are planning to do so. This is partly in response to the current regulatory scrutiny on overdrafts and recent interventions, for example the Maximum Monthly Charge (MMC) introduced in August 2017<sup>31</sup> as well as the implementation of new customer prompts and alerts.
- 2.26 Our analysis above does not capture the impact of changes implemented post 2017. As a result, we examined how these changes would impact banks' future income from overdrafts. This is based on reviewing firms' submissions to our questionnaire. It incorporates strategies already made public for a few banks, as well as some internal plans for other participants.
- 2.27 Overall, we should see the full impact of these revised pricing strategies by 2019-20. Some banks are planning for a decrease in overdraft income, driven by an alignment of pricing between arranged and unarranged overdrafts. Other banks are planning for neutral or revenue-enhancing pricing strategies, before accounting for variation in costs (eg cost of risk). Table 1 shows an extract from the submissions of 4 banks. Overall, banks highlighted in their submission that future revenues could range between -11% and +9% compared to a 2017 base. Before assuming any cost-savings or mitigating factors<sup>32</sup>, such a change in overdraft income would translate into a potential ROE ranging between 46% to 64% under the LRIC approach, compared to 56% for the 2017 ROE<sup>33</sup>. We estimated a 30% to 48% ROE under the FAC approach by 2020, compared to the 2017 average FAC ROE of 40%, based on the approach detailed in Figure 11.<sup>34</sup>

**Table 1: Extract from firm responses regarding ongoing changes in overdraft pricing structure<sup>35</sup>**

Firm	Extract
Firm A	'the proposed changes will give customers a clear choice between FIIC banking with unarranged fees or paid-for accounts with no unarranged fees'
Firm B	'revenues would be broadly flat.'

<sup>29</sup> IMF Global Financial Stability Report, October 2017

<sup>30</sup> Reports to derive this range are by Bank of America Merrill Lynch (23/08/2018), Barclays (14/03/2018), Morgan Stanley (various notes dated between 01/08/2018 and 24/09/2018) and UBS (12/09/2017), covering 4 out of the 6 firms included in our sample.

<sup>31</sup> The MMC was introduced as part of a package of remedies following the CMA's Market Investigation into Retail Banking. This requires banks to specify and clearly display the maximum amount that a consumer could incur in a given month for exceeding or attempting to exceed a pre-agreed credit limit.

<sup>32</sup> Cost-savings and mitigating factors could include reduced cost of risk or communication costs, or different customer behaviours implying a change in lending balances for overdrafts

<sup>33</sup> The data points presented do not represent individual firm outcomes.

<sup>34</sup> Ibid.

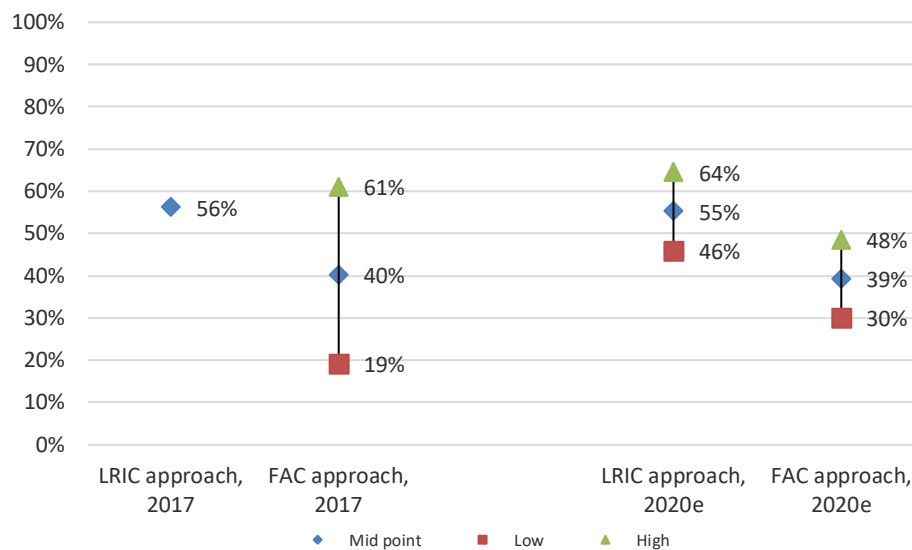
<sup>35</sup> Firm letter references are randomised across tables.

Firm	Extract
Firm C	'[...] this form of pricing is viable. [...] these pose challenges, but are not insurmountable obstacles to wider market reform that realigns pricing and competition in overdrafts.'
Firm D	'Across the full overdraft base, users will see manageable increases [of] £2 per month.'

FCA Data.

- 2.28 Very few banks provided a quantification on how such changes to revenues would impact either operating costs or capital attached to overdrafts. As a result, we have been unable to take these factors into account when assessing the economic impact on overdraft profitability. One bank highlighted it would increase their cost base primarily through higher cost of risk. Another bank argued that a portion of lost revenues can be offset by cost cutting measures, such as reducing communication costs. The reduced risk of lower lending balances was also highlighted as a cost-saving aspect.
- 2.29 Overall, ongoing changes in overdraft pricing are likely to reduce overdraft profitability. But the potential decrease in overdraft revenues would not alter our directional finding on profitability.

**Figure 12: Return on equity for overdrafts using a range of relevant costs standards**



FCA Analysis. Note: the LRIC approach is based on an industry-wide assessment of costs. Under the FAC approach, our profitability model relies on cost inputs provided by only 2 banks. We consequently present a range for ROE under the FAC approach to account for the range of potential overdraft returns across the market. The data points presented do not represent individual firm outcomes.

### 3 Comparing overdraft profitability with other forms of credit

While a PCA is used for transactional banking purposes, overdrafts share many similarities with other unsecured credit products. Credit cards and personal loans are reasonably close products from a functionality perspective.

Overdrafts are high margin compared to other forms of unsecured credit: they generate between 1.4 and 2 times as high a contribution to profitability than credit cards and unsecured loans respectively. This is based on capturing differences in pricing and adjusting for cost of risk and capital costs, through the ratio of Risk-Adjusted All-in Income / Risk-Weighted Assets. This ratio allows us to account for the key drivers of returns.

We cannot account for the observed differential in all-in income. We see no objectively justifiable reason for the contribution to profitability on overdrafts to be significantly higher than those on credit cards or personal loans. This evidence is consistent with a lack of competitive pressure on overdraft pricing.

- 3.1 We recognised in paragraph 1.8 that overdrafts are linked to PCAs both from a marketing and an operational perspective. Banks do not market overdrafts as a stand-alone product, but as a constituent of a wider group of products attached to PCAs. Overdrafts are almost always tied to the provision of PCAs.<sup>36</sup>
- 3.2 However, PCAs and overdrafts have distinct functionalities. A PCA allows a customer to store money, as well as to make and receive payments in the context of transactional banking. An overdraft, on the other hand, is a credit facility and has many similarities with other unsecured credit products. For instance, overdrafts and credit card loans are both running account credit<sup>37</sup>. On the other hand, unsecured personal loans are fixed sum credit. However, the fact that overdrafts charges often fall on consumers using overdrafts repeatedly over long periods<sup>38</sup> allowed us to draw comparison with unsecured personal loans.
- 3.3 As a result, a comparison of overdraft profitability with credit cards and personal loans brings useful insights. They are reasonably close products from a functionality perspective. A relative comparison of the profitability of each product helps inform us about the effectiveness of competitive constraints on overdraft pricing relative to those for the comparator products.

#### **Overdrafts are high margin compared to other credit products**

- 3.4 The following Figures (Figure 13, Figure 14 and Figure 15) compare different metrics for overdrafts, credit cards and unsecured personal loans for the six main PCA providers. As outlined in Section 2, we captured the most prominent cost categories in this analysis. We found that both cost of risk and capital costs are higher in proportional terms for overdrafts than for credit cards and personal loans. We

---

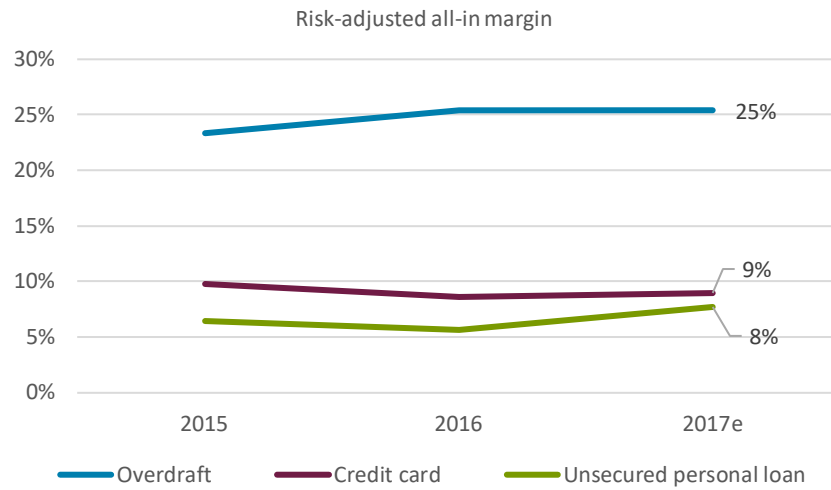
<sup>36</sup> A customer can open a PCA with an overdraft facility, but the reverse is not possible. The introduction of Open Banking could affect this feature of the market. It could lead to an increase in revolving credit products that are marketed independently from PCAs.

<sup>37</sup> See the FCA Handbook definition for further details: <https://www.handbook.fca.org.uk/handbook/glossary/G1329.html>

<sup>38</sup> See HCCR CP18/13 published in May 2018: <https://www.fca.org.uk/publication/consultation/cp18-13.pdf>

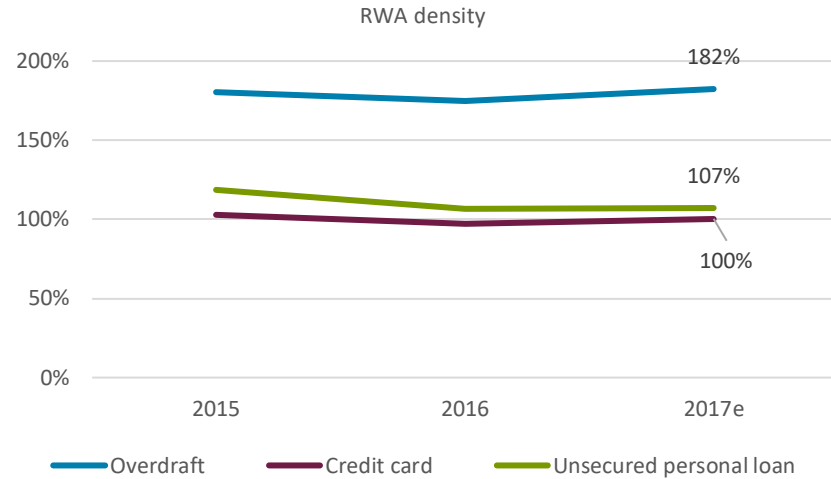
captured these costs by comparing the ratio of risk-adjusted all-in income<sup>39</sup> over credit RWA (Figure 15). This ratio was 14% for overdrafts in 2017, compared to 10% and 7% for credit cards and unsecured personal loans. It shows that overdrafts generate a higher contribution to profitability than other forms of credit, even accounting for the cost of risk and capital costs.

**Figure 13: Average risk-adjusted all-in margins for overdrafts, credit cards and unsecured personal loans over 2015-17**



FCA Data. Based on weighted average across the 6 major banks, using lending balances.

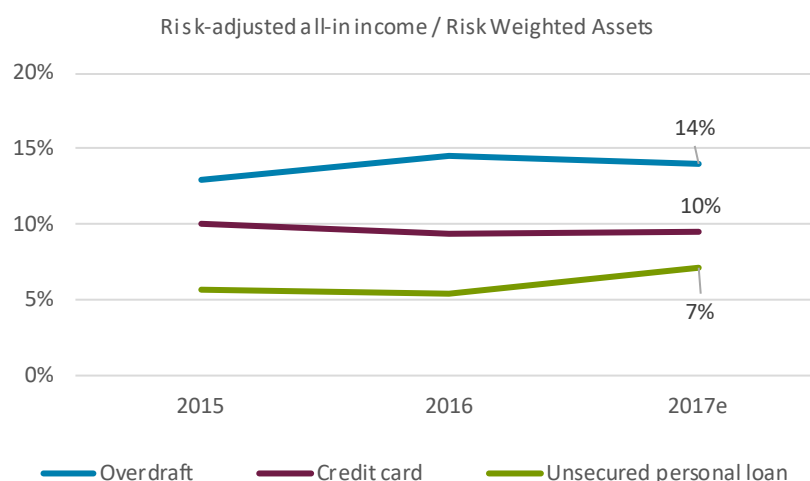
**Figure 14: Average credit RWA density for overdrafts, credit cards and unsecured personal loans over 2015-17**



FCA Data. RWA density defined as the ratio of RWA / average lending balances. Based on a weighted average across the 6 major banks, using lending balances.

<sup>39</sup> Defined as all-in income minus cost of risk.

**Figure 15: Contribution to profitability for overdrafts, credit cards and unsecured personal loans over 2015-17**



FCA Data. Based on weighted average across the 6 major banks, using lending balances.

- 3.5 This is not a full profitability assessment, as we are missing other operating costs that would allow us to quantify the return on equity attached to each product line. However, it is a useful metric to compare the relative return of each product.
- 3.6 We also attempted to compare other cost categories not accounted for in the ratio of risk-adjusted all-in income over RWA to allow for these missing cost aspects. Direct operating costs for overdrafts were slightly below 3%, expressed as a ratio of overdraft lending balances. This compares to approximately 3.5-4.6% for credit cards based on data collected during our Credit Card Market Study (average for the 6 major banks, collected over 2003-2014, and adjusted for inflation). Direct operating costs are consequently lower for overdrafts than credit cards. We were not able to perform a similar comparison for unsecured personal loans. Directionally, this finding is consistent with the concept of cost synergies between overdrafts and PCAs. Direct operating costs for overdrafts are likely to be lower than for other unsecured credit products because there are shared costs with PCAs.<sup>40</sup>
- 3.7 We also considered whether we should attempt to capture fixed costs attached to retail banking, and then apportion these to the different credit products. Whilst this approach could be used, this analysis would require consideration of the fixed costs attached to the entire retail bank instead of the ones attributable to PCAs. However, overdrafts, credit cards and unsecured personal loans are sold independently from each other: there is no logical bundling of fixed costs comparable to that of a personal current account and an overdraft as seen in Section 2. We have also no reason to believe that one form of lending would absorb more of the fixed costs than any other form of lending. We therefore decided not to pursue this cost allocation for the purposes of this analysis.

<sup>40</sup> For instance, there are cost synergies around account opening and communication to customers.



## 4 Difference in profitability between arranged and unarranged overdrafts

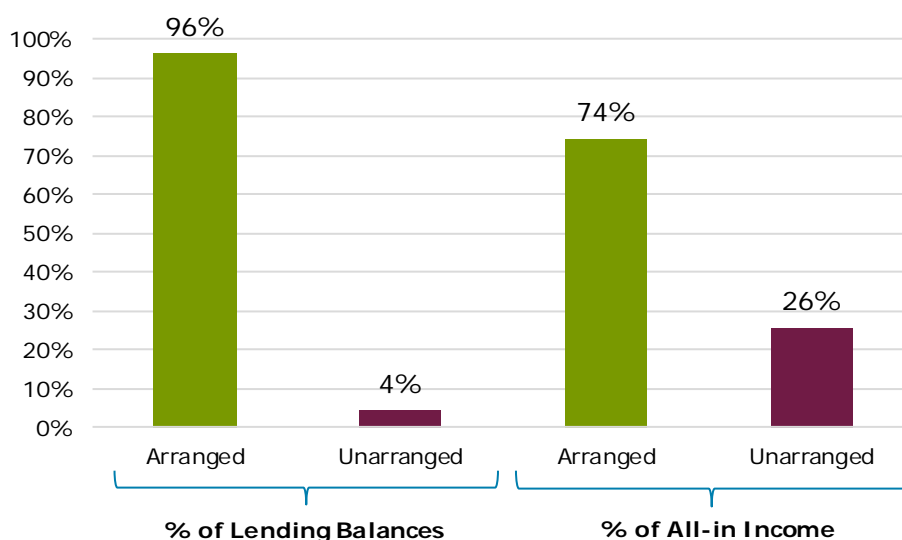
We set out to compare the profitability of arranged and unarranged overdrafts to inform our assessment of the proposed remedy on price alignment.

Unarranged overdrafts are more profitable than arranged overdrafts, even adjusting for the higher cost of risk and higher capital costs. The contribution to profitability of unarranged overdrafts was 83% in 2017, which is 66 percentage points higher than for arranged overdrafts, based on the ratio of Risk-Adjusted All-in Income / Risk-Weighted Assets.

The difference in relative profitability between arranged and unarranged overdrafts persists even if we allocate direct and semi-direct costs. We concluded that the difference in costs does not fully account for the difference in pricing between unarranged overdrafts and arranged overdrafts.

- 4.1 The difference in pricing between arranged and unarranged overdrafts is sizeable. The portion of all-in income attributable to unarranged overdrafts is substantially higher than the share of underlying balances. Unarranged overdrafts represented a quarter of total overdraft all-in income between 2014 and 2017, but only 4% of total overdraft lending assets (see Figure 16).<sup>41</sup>

**Figure 16: 2017 split of lending balances and revenues between arranged and unarranged overdrafts**



FCA Data. All-in income refers to overdraft interest income, non-interest income and paid transaction fee revenues. The unarranged all-in income revenue includes paid transaction fee revenues but excludes refused payment fees. The figures presented here are based on averages weighted by lending balances and represent 87% of the market.

- 4.2 A key distinction is the difference in lending balances between arranged overdrafts and unarranged overdrafts, which indicates a fundamental difference in the use of

<sup>41</sup> We asked firms to split overdraft balances as per the following: money that was originally lent on arranged terms (eg £1,000), but then became unarranged as limits were reached (e.g. increasing by an additional £200 to a total of £1,200), should be broken down between arranged (£1,000) and unarranged amount (£200).

each component. While arranged overdrafts operate as a distinct credit product, unarranged overdrafts can be considered a service feature provided by banks. Some banks highlighted the importance of such a feature to allow customers to meet key expenditures when their arranged overdraft is exhausted or if they ran out of funds in their personal current account.

## Impairments and capital costs are the key costs likely to materially differ between arranged and unarranged overdrafts

- 4.3 We asked firms about the differences in costs between arranged and unarranged overdrafts. One firm cited impairments and capital costs as being the key costs likely to materially differ between arranged and unarranged overdrafts. However, most firms were unable to comment as they do not track costs to this level of granularity. We shared in Table 2 extracts from the firm submissions concerning the differences in costs between arranged and unarranged overdrafts.

**Table 2: Extract from firms** <sup>42</sup>

Firm	Extracts
<b>Firm A</b>	<p>'We do not believe that there are significant incremental costs to the provision of [unarranged] overdrafts.' [...]</p> <p>'Among the costs lines the most material variation in cost between [arranged and unarranged] overdrafts are among the following:</p> <p>(a) debt write-offs: these are the largest direct cost attributable to providing overdrafts [...]</p> <p>(b) cost of funding [...]</p> <p>(c) cost of handling complaints and litigations [...]</p> <p>(d) cost of communicating with customers.'</p>
<b>Firm B</b>	'[the firm] allocates costs at a divisional level and not at the product level or per transaction basis.'
<b>Firm C</b>	'As costs of arranged and unarranged overdrafts are not routinely reported, a split between arranged and unarranged overdrafts has not been identified.'
<b>Firm D</b>	<p>'As we have indicated in our attached response, we do not have separate variables for [arranged or unarranged] overdraft balances, or track overdraft balances by type, which has prevented us from splitting the cost by overdraft type. [...]</p> <p>'The cost allocation methodology [is newly implemented and] does not currently further split overdraft costs by arranged and unarranged.'</p>
<b>Firm E</b>	'[we] do not currently split costs between arranged and unarranged overdrafts.'

FCA Data.

## Unarranged overdrafts have a higher cost of risk

- 4.4 We found that unarranged overdrafts have a higher cost of risk, as expressed by higher impairment rates<sup>43</sup>. The weighted average impairment rate for unarranged overdrafts was on average 53% in 2017 (Figure 17), with an approximate range

<sup>42</sup> Firm letter references are randomised across tables.

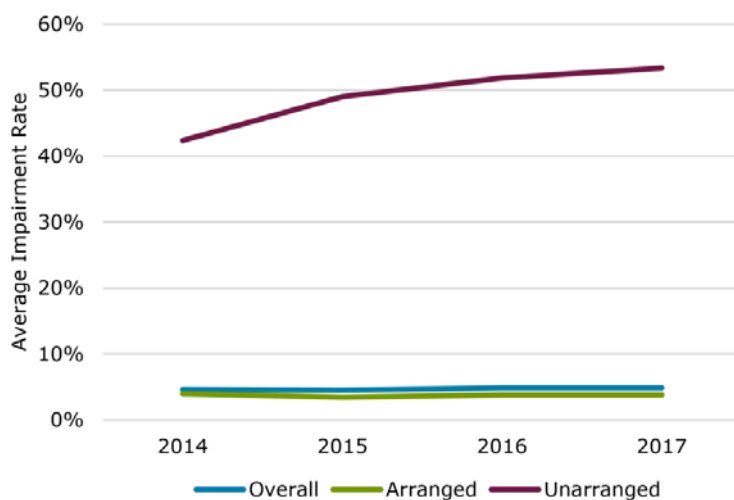
<sup>43</sup> The allocation of impairment expenses between arranged and unarranged overdrafts was carried out by individual banks at their own discretion. The split of arranged and unarranged lending balances, however, was prescribed as per footnote 38.

between 10% and 90%, against a weighted average of 4% for arranged overdrafts with a maximum of approximately 10%.

4.5 The higher cost of risk for unarranged overdrafts reflects both their specific accounting mechanisms and the higher credit risk of consumers. As a result, unarranged overdrafts inherently appear riskier:

- First, banks generally do not distinguish between arranged and unarranged overdrafts in their arrears policies. In this respect, unarranged balances are considered as arrears and the collection and recovery processes automatically start after a certain time, or if the unarranged balance is above a specific threshold. An impairment loss is then recorded based on the entire overdraft, which also includes any prior arranged balance<sup>44 45</sup>. In addition, some banks may remove the arranged aspect of the overdraft balance to address arrears issues. In trying to understand the relative risk of unarranged and arranged overdrafts, we therefore observed that a higher proportion of the unarranged balance appears impaired as a consequence of this mechanism, resulting in a higher cost of risk when compared to arranged overdraft (Figure 17).
- Second, users of unarranged overdrafts tend to be part of riskier and more vulnerable customer segments than arranged overdraft users<sup>46</sup>. Banks' internal credit risk models illustrate this higher risk: we observed an approximate 30-80% range for the estimated probability of default for unarranged overdrafts, considerably higher than the approximate 0-10% range for arranged overdrafts.

**Figure 17: Average Overdraft Impairment Rate, 2014-2017**



FCA Data. These figures are averages weighted by lending balances. Due to data availability, the arranged series represents 78% of the market in 2014 and 89% in 2015-2017. The unarranged series represents 68% of the market in 2013-14 and 77% of the market in 2015-17. The overall series represents 91% of the market in 2013-2014 and 100% in 2015-2017.

### Unarranged overdrafts demand a proportionally higher amount of underlying equity

4.6 Unarranged overdrafts demand a proportionally higher amount of regulatory capital, which is driven by credit risk-weighted assets (RWA). We observed in 2017 a higher

<sup>44</sup> An impairment loss can also be raised before arrears and as soon as a triggering event has occurred.

<sup>45</sup> The base calculation for an impairment loss is the difference between the asset's carrying amount and the present value of the estimated cash flows (IAS 39.63). The loss will consequently increase as it becomes less likely for the arrears to be repaid.

<sup>46</sup> The Technical Annex: Vulnerability discusses the use of unarranged overdraft in further details.

credit RWA density for unarranged overdrafts, on average 296%, compared to 189% for arranged overdrafts. <sup>47 48</sup>

- 4.7 The key driver for higher RWA is the variation in exposure at default <sup>49</sup>. In 2017, the ratio of lending assets to exposure at default was significantly higher for unarranged overdrafts. Similarly, the unarranged exposure at default corresponded on average to 3.8 times the amount of unarranged risk-weighted assets, compared to 2.3 times for arranged overdrafts.
- 4.8 Despite demanding a higher proportional amount of regulatory capital, the impact of the higher capital costs of unarranged overdrafts is small in monetary terms. This is because unarranged RWAs represent on average only 5% of the total overdraft RWAs, with arranged overdrafts accounting for the remaining 95%. This difference is driven by lending balances as unarranged overdrafts represent only 4% of lending balances, based on 2017 averages. The monetary impact in terms of required capital is consequently small, estimated at approximately £60m across the market in 2017 for unarranged overdrafts, compared to approximately £1,300m for arranged overdrafts (Figure 18). <sup>50</sup>
- 4.9 When expressed as a percentage of the lending balances for arranged and unarranged overdrafts, the demands on capital are more similar for unarranged overdrafts and arranged overdrafts, corresponding to about 24% of unarranged lending balances for unarranged overdrafts, against 21% of arranged balances for arranged overdrafts (Figure 18).

**Figure 18: 2017 estimate of overdraft-related regulatory capital**

	<b>Arranged Overdraft</b>	<b>Unarranged Overdraft</b>
Lending Balances	£6,300m	£250m
Credit Risk-Weighted Assets	£7,500m	£400m
Required Capital	£1,300m	£60m
Required Capital as % Of Balances	21%	24%

FCA Data. The required capital was estimated by multiplying the firms' arranged overdraft and unarranged overdraft risk-weighted assets by their respective CET1 ratios. Only credit RWAs are considered in this analysis.

## **Unarranged overdrafts are more profitable than arranged overdrafts, even accounting for differences in costs**

- 4.10 We found that unarranged overdrafts are significantly more profitable than arranged overdrafts even when adjusting for the difference in costs such as impairment charges and capital costs.
- 4.11 The ratio of all-in income attributable to unarranged overdrafts over unarranged lending balances is higher than the equivalent ratio for arranged overdrafts. We adjusted for the higher cost of risk and higher capital requirements attached to unarranged overdrafts (as detailed in paragraphs 4.4 to 4.6) in the ratio of risk-

<sup>47</sup> The RWA density is the ratio of credit RWA over the corresponding lending balances. The average values are weighted based on lending balances and represented 65% of the market for arranged overdrafts and 52% for unarranged.

<sup>48</sup> We note that the basis for the calculation of risk-weighted assets depends on a range of factors and the differences in credit risk models, which would both vary from one firm to the other. In this respect, all firms use Internal Ratings Based models for the vast majority of their overdraft book.

<sup>49</sup> The total value a bank is exposed to when a loan defaults.

<sup>50</sup> The required capital was estimated by multiplying the firms' arranged overdraft and unarranged overdraft credit risk-weighted assets by their respective CET1 ratios. The true level of regulatory capital is likely to be higher for both arranged and unarranged overdrafts due to continuous prudential supervision.

adjusted all-in income over RWA. We covered the most prominent cost categories by using this ratio, as outlined in Section 2. The corresponding 2017 value for risk-adjusted all-in income over RWA for unarranged overdrafts was 83%, which is 66 percentage points higher than the value for arranged overdrafts (16%).<sup>51</sup>

- 4.12 Incorporating direct and semi-direct costs still points towards a higher profitability for unarranged overdrafts compared to arranged. We estimated ROE under a LRIC approach, using the data from 2 firms. These firms were the only respondents of the data requests that apportioned direct and semi-direct costs between arranged and unarranged overdrafts. This estimate for ROE is higher for unarranged than for arranged overdrafts, consistent with the findings in paragraph 4.11. However, we have not presented these ROE quantifications as our data did not provide us with a suitable level of accuracy for this level of granularity.

---

<sup>51</sup> These figures represent over half of the market.

## 5 Costs of refused payment fees

We wanted to understand the operating costs of declining a transaction so that we could assess the financial contribution generated through refused payment fees. Firms provided some insight to the actual costs of refusing a payment in response to CP18/13 and a cost survey.

2 major banks provided marginal cost estimates ranging between approximately 30p and 40p per transaction while a third provided a £5 figure that included a contribution towards fixed costs. We would need to see further evidence to enable us to conclude that refused payment fees reasonably correspond to firms' actual costs.

We recognise that Regulation 66(1) of the Payment Services Regulations 2017 does not expressly prescribe how actual costs should be calculated. Banks argued that the costs of declining a transaction should at least include a proportion of technology and infrastructure costs.

- 5.1 Refused payment fees (RPFs) are related to the overdraft charging structure<sup>52</sup>. Banks have the discretion to provide credit to PCA customers making a payment that is either not covered by funds or goes beyond the limit of an arranged overdraft. If such credit is provided, the customers would end up in an unarranged overdraft. However, banks can also decide not to provide such credit and charge RPFs. Refused payments fees therefore represent a significant element of the revenues associated with overdrafts: total RPF revenue accounted for 10% of the total overdraft-related revenue in 2017<sup>53</sup>. For major banks, refused payment fees can range between £5 and £10 for each declined direct debit, standing orders and cheque transactions.<sup>54</sup>
- 5.2 We asked firms to quantify the costs specifically attached to declining a transaction. We wanted to understand the operating costs attached to declining a transaction so that we could assess the financial contribution generated through the charges applied. In this respect, Regulation 66(1) of the Payment Services Regulations 2017 (PSRs) stipulates that refused payment fees should be cost reflective.<sup>55</sup>
- 5.3 We received quantifications from 2 major firms on the marginal costs of declining a transaction. These mostly corresponded to the costs of notifying customers of a refused payment (sending a text or an email notification). These costs range between approximately 30p and 40p per transaction. A third major firm provided us with a cost figure of approximately £5, composed of variable costs plus a contribution towards recovering common costs. We would need to see further evidence to enable us to conclude that refused payment fees reasonably correspond to firms' actual costs.
- 5.4 As part of their submission, some banks (see Table 3) argued that the cost of a declined transaction should at least include a portion of the technology and infrastructure costs associated with the administration of a personal current account.

---

<sup>52</sup> We excluded the revenues from refused payment fees from our calculations in this Technical Annex unless specified otherwise.

<sup>53</sup> We defined 'overdraft-related revenue' as overdraft all-in income plus paid transaction fees plus refused payment fees.

<sup>54</sup> 5 out of 6 firms in our sample charged a fee for refusing a transaction between 2013 and 2017.

<sup>55</sup> The Payment Services Regulations 2017, Regulation 66: <http://www.legislation.gov.uk/uksi/2017/752/regulation/66> 66(1)(c) stipulates "where such charges reasonably correspond to the payment service provider's actual costs".

**Table 3: Extracts from firms' submissions to the High Cost Credit Review and the Strategic Review of Retail Banking information requests<sup>56</sup>**

Firm	Response Extract
<b>Firm A</b>	<p>[...] Marginal costs [...] are (1) sending a letter (2) sending a text, all of this at [*] per transaction.</p> <p>--</p> <p>[The costs linked to refused payments are:]</p> <ol style="list-style-type: none"> <li>1. The processes and infrastructure to support multiple payment processing runs each day;</li> <li>2. [*];</li> <li>3. The generation, production and distribution of a physical letter to customers sent each time an unpaid event is incurred;</li> <li>4. The automated system and transmission costs of issuing text notifications to customers each time an unpaid event is incurred;</li> <li>5. The time spent in branch, telephony and digital channels in servicing customer queries;</li> <li>6. The costs associated with collections and recoveries</li> </ol>
<b>Firm B</b>	<p>[...] the cost of one unpaid or declined transaction was [*]. This cost does not include costs relating to branch/telephony actions following the event. To provide context an average customer facing staff member's hourly cost is circa [*][...] but excludes overheads such as: property; technology and management. [...] A letter will be sent for every day that they attempt to make a payment that is then declined at a cost of [*] per letter. In addition, unpaid or declined transactions do not include the future costs of debt recovery and are often a lead indicator of future impairments.</p>
<b>Firm C</b>	<p>[...] There is no variance by payment type. Items include:</p> <ul style="list-style-type: none"> <li>• Text alerts</li> <li>• Unsecured risk strategies</li> <li>• Outbound contact by Collections &amp; Recoveries</li> <li>• Provisions / bad debt</li> <li>• Inbound query where an account is frozen / payment declined</li> <li>• Systems resilience for payments infrastructure</li> <li>• Policy rules and decisions</li> <li>• Share of Branch, call centre and central functions related to above</li> </ul>

\* Redacted due to commercial sensitivities

5.5 We recognise that Regulation 66(1) of the Payment Services Regulations 2017 does not expressly prescribe how actual costs should be calculated. We also accept that there is likely to be more than one permissible way in which a bank could approach the assessment of such costs. We are issuing new guidance to help firms in this respect.

<sup>56</sup> Firm letter references are randomised across tables.

## 6 Insights from the financial analysis for understanding waterbed effects

Our analysis suggests that firms would generally seek to recover as much revenue as possible from within their overdraft offering, rather than other components of the PCA or their wider retail banking business.

We conducted a sensitivity analysis to understand the impact of a decrease in overdraft revenues on the profitability of a stylised bank, in the absence of a rebalancing of arranged and unarranged overdraft pricing. Our results suggest that a 20% decrease in overdraft-related revenues would lead to a moderate decrease of the retail bank ROE.

- 6.1 We used our work on the financial analysis to generate insights on the possible impact of our remedy proposals on the profitability of retail banks. As our proposals would constrain prices for unarranged overdrafts, we expect that firms will seek to recover the lost revenue through price structure changes, for instance through arranged overdraft pricing.
- 6.2 We refer to these changes as ‘waterbed effects’, which can be further defined here as the potential increase in the pricing of arranged overdrafts, refused payment fees, personal current accounts charges or other retail banking products to offset the financial impact of a regulatory intervention affecting the pricing of unarranged overdrafts.<sup>57</sup>
- 6.3 In this Section, we first considered the likely approaches that banks could use to recoup a potential decline in overdraft revenue by looking at past pricing changes in the market. We then used our profitability work from Section 2 to model the impact of a short run decrease in overdraft revenues on retail bank profitability. This work should be read together with the complementary waterbed content available in the Consultation Paper, the Cost Benefit Analysis and the policy analysis technical annex.

### Insights from historical pricing patterns

- 6.4 We looked at historical trends in revenues to identify waterbed patterns that could be informative to understand the potential firm pricing response to our remedy proposals. However, we acknowledge that market dynamics may make these trends less relevant in the future.
- 6.5 We first looked at refused payment fees as a historical vector for waterbed effects. We reviewed the 2013-17 period and found no indication of adjustment of refused payment fees in response to changes in overdraft revenues. The all-in income attributable to overdrafts<sup>58</sup> declined over the period at an annualised rate of 1.5%, while total refused payment fee income decreased at a faster annualised rate of 12% (see Figure 19). The inclusion of the refused payment fees in the Competition and Market Authority’s Monthly Maximum Charge places limits on increases in refused payment fees due to price competition. Furthermore, the requirements from the

---

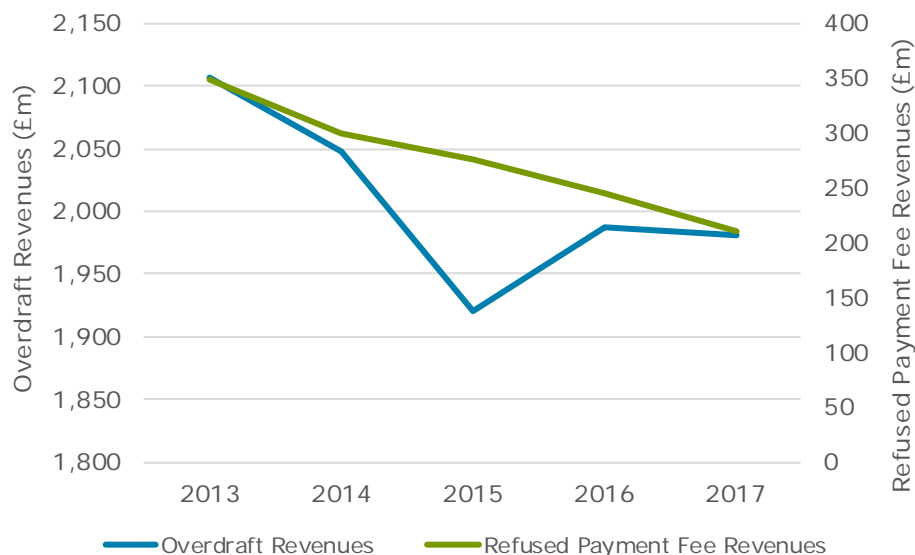
<sup>57</sup> Alternatively, a waterbed effect can be defined as a pattern of low pricing for primary products and high pricing for secondary products.

<sup>58</sup> Includes paid transaction fees but excludes refused payment fees.



Payment Services Regulations on cost-reflectivity would prevent refused payment fees from being increased as a result of waterbed effects. Consequently, we see a limited probability that refused payment fees will be used to offset a fall in overdraft revenue.

**Figure 19: Overdraft revenues and refused payment fee revenues over 2013-17**

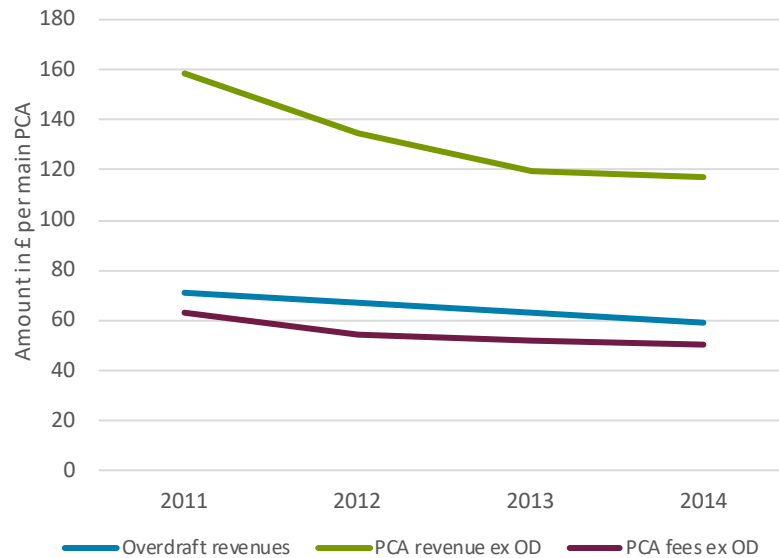


FCA Data. The 2 data series combine the contribution of the 6 major banks.

6.6 We then reviewed historical pricing trends of personal current account and overdraft revenues to detect any occurrence of a rebalancing in pricing at the personal current account level (Figure 20). We saw no such indication based on the revenues analysis conducted by the Competition and Market Authority in its Retail Banking Market Investigation (Final Report)<sup>59</sup>. Overall PCA revenues per main current account decreased at a faster rate (-10% annualised rate over 2011-14) than overdraft revenues per main current account (-6% annualised rate over 2011-14). The data collected as part of the Strategic Review of Retail Banking showed a fairly similar pattern over 2015-17. Based on approximately 90% of the market, net revenues from overdrafts remained flat over this period (0% annualised rate over 2015-17) when PCA fees excluding overdrafts decreased slightly (-2.8% annualised rate over 2015-17).

<sup>59</sup> The firm sample used by the Competition and Markets Authority is slightly different from the sample used throughout this Annex.

**Figure 20: Revenue per main PCA per year over 2011-14 (in 2014 prices)**



CMA data, part of Retail Banking Market Investigation (Final Report).

6.7 We also conducted a qualitative analysis to supplement our approach. We reviewed internal documents describing past and planned changes to overdraft pricing structures and had a series of discussions with banks to complement our understanding. We concluded that firms would generally seek to recover as much revenue as possible from within their overdraft offering, rather than other components of the PCA or their wider retail banking business.

### Potential impact on banks' profitability

6.8 We used our profitability work from Section 2 to understand the impact of a short run decrease in overdraft-related revenues on retail bank profitability in the absence of a rebalancing of arranged and unarranged overdraft pricing. Specifically, we modelled the changes of the firm-level return on equity of a typical or 'stylised' bank<sup>60 61</sup>. We applied a 20% decrease in overdraft-related revenues to our model<sup>62</sup>. This figure is approximately twice the maximum absolute overdraft revenue move anticipated by some firms in their internal pricing documents. This decrease would represent for instance the impact of direct regulatory intervention or an increase in competitive pressures.

6.9 We considered a range of waterbed scenarios in which the stylised bank responds differently to the decrease in overdraft-related revenues. These scenarios relied on a series of high level assumptions characterising major banks and assumed no change in customer behaviour<sup>63</sup>. Consequently, the estimates discussed below should be treated as illustrative rather than predictive.

<sup>60</sup> We refer to overdraft-related revenue as overdraft all-in income plus refused payment fees.

<sup>61</sup> The inputs were taken from our analysis in Section 2. As a starting point, we assumed a fully allocated cost based overdraft ROE of 50% using an overdraft post-tax return over assets of 13%, an equity/RWA ratio of 15% and lending assets of £1.5bn. Please note that revenues from refused payment fees are included in the return over assets input. The base retail bank ROE was set at 20%, assuming a post-tax ROE of 1%, equity/RWA ratio of 20% and assets of £175bn. These figures are simplified when compared to the Strategic Review of Retail Banking work. While these assumptions do change the ROE slightly, the impact does not have a material impact on our conclusions.

<sup>62</sup> Our model is linear: a 10% decrease in overdraft-related revenues can be calculated by halving our figures.

<sup>63</sup> We assumed the overdraft contribution at the retail bank level to have a post-tax return on assets of 1%, a RWA density of 25% and a capital ratio of 20%.

- 6.10 **In the first scenario**, the stylised bank is unable to react to the 20% drop in overdraft-related revenues: pricing changes or cost-mitigation measures are not implemented. Consequently, the firm bears the full brunt of this decrease. This situation leads to a decrease of 20 percentage points of the ROE for overdrafts. This translates to a 92 basis points decrease in the retail bank ROE, assuming normalised assumptions for the bank<sup>64</sup>. There is no waterbed effect.
- 6.11 From a customer perspective, a decrease in the bank's overdraft revenues translates to a decrease in overdraft fees when holding the number of active overdraft account constant. In this respect, a 20% decrease in total overdraft fees amounts to an annual saving estimated at £32 on average per active overdraft account<sup>65</sup>.
- 6.12 **In the second scenario**, the stylised bank implements effective cost-cutting measures perfectly matching the decrease in overdraft revenues. There is no change to the profitability of the bank. There is no waterbed effect and the impact is contained to the overdraft product.
- 6.13 From a customer perspective, this scenario still leads to an annual saving estimated at £32 on average per active overdraft account.<sup>66</sup>
- 6.14 **In the third and last scenario**, the stylised bank increases PCA fees in such a way that the decrease in overdraft-related revenues is perfectly offset. This is a waterbed effect and the impact goes beyond the overdraft product. The overdraft ROE decreases by 20 percentage points but the retail bank ROE remains unchanged.
- 6.15 On the customer side, an overdraft customer saves £32 on average per active overdraft account per year<sup>67</sup>. However, all active current account customers have to pay on average £8 more per year<sup>68</sup>. This leads to a net saving of £24 for active overdraft user, but represents a cost of £8 to every other PCA holder who do not use overdrafts.

---

<sup>64</sup> We assumed the overdraft contribution at the retail bank level to have a post-tax return on assets of 1%, a RWA density of 25% and a capital ratio of 20%.

<sup>65</sup> Estimate based on 2017 revenues data.

<sup>66</sup> Holding the number of active overdraft accounts constant.

<sup>67</sup> Ibid.

<sup>68</sup> This is based on the number of active personal active by bank, adjusting for basic bank account.

**Figure 21: Summary of the scenarios considered in the waterbed analysis**

<b>SCENARIOS</b>			
SUPPLY SIDE: Impact on profitability		DEMAND SIDE: Impact on fees paid by consumers	
<b>Rebalancing in revenues from unarranged towards arranged overdrafts</b>			
At overdrafts level	At retail bank level	Overdraft users	PCA users **
ROE unchanged	ROE unchanged	Change in distribution of fees amongst overdrafts consumers *	Fees unchanged
<b>Less favourable - sensitivity analysis on decrease in overdrafts income: -20% income</b>			
At overdrafts level	At retail bank level	Overdraft users	PCA users **
<b>#1 Short-run decrease in overdrafts income, before assuming any remedial action from banks</b>			
-20 percentage points on ROE	-92 bps on ROE	£32 annual saving on average per account	Fees unchanged
<b>#2 Short-run decrease in overdrafts income, combined with matching cost-cutting measures</b>			
ROE unchanged	ROE unchanged	£32 annual saving on average per account	Fees unchanged
<b>#3 Short-run decrease in overdrafts income, offset by an increase in other PCA fees</b>			
-20 percentage points on ROE	ROE unchanged	£24 annual saving on average per account	£8 annual fee rise on average per account

\* See the Policy Technical Appendix for the details of this rebalancing.

\*\* PCA users who do not use overdrafts

FCA Data.



© Financial Conduct Authority 2018  
12 Endeavour Square London E20 1JN  
Telephone: +44 (0)20 7066 1000  
Website: [www.fca.org.uk](http://www.fca.org.uk)  
All rights reserved