Financial Conduct Authority

Credit Card Market Study

Annex 2: Further analysis

July 2016

Annex 2: Further analysis

Introduction

This annex accompanies Chapter 5 of the final report and sets out in more detail the further analysis we have undertaken on potentially problem credit card debt since the publication of the interim report.

This analysis covers three areas:

- Indicators of potential problem credit card debt over time
- Multiple cards
- Sensitivity analysis of the indicators of potential problem credit card debt

Key findings

Problem credit card debt over time

Our analysis highlighted that there is a significant group of consumers who carry potentially problematic debt for a number of years. We found that a significant proportion of those captured by our indicators in 2014 were experiencing long-running debt issues rather than temporary difficulties - almost a third of those categorised as being in persistent debt in 2014, and almost a half of those categorised as making systematic minimum repayments, were also in those states in 2012 and 2013. This means around 650,000 cardholders have been in persistent debt for at least three consecutive years and a further 750,000 cardholders have been making systematic minimum repayments for at least three consecutive years.

The analysis also highlighted the rapid descent into debt difficulties for some new consumers, particularly higher credit risk consumers. We found over a fifth of those in severe arrears in 2014 did not have an active card in 2012; furthermore a quarter of credit cards in the higher risk segment opened in 2013 were in severe or serious arrears in 2014.

Multiple cards

We found consumers holding multiple cards right across the credit risk spectrum. Three-quarters of people with multiple credit cards are not in potentially problem credit card debt and may be benefitting from holding multiple cards, for example using different features of different cards. However, consumer groups that offer debt advice cited multiple cards as a common factor in problem debt cases. While the evidence does not point to widespread high credit limit utilisation across multiple cards (consumers 'maxed out'), it does show that those consumers with multiple cards have higher total credit limits and outstanding balances.

Overall we found that, of those consumers holding multiple cards, 13% (approximately 1.9 million consumers) are in potentially problematic debt on one of their credit cards, and a further 11% (around 1.6 million consumers) are in potentially problematic debt on more than one card.

Sensitivity analysis

The analysis did not suggest that our findings were particularly sensitive to the specification of our indicators. While the number of consumers captured by the indicators varies as the thresholds adjust, the overall number of consumers identified as being in potentially problem credit card debt does not shift to an extent that would significantly alter our concern regarding potential problem credit card debt.

We therefore continue to regard the indicators of potentially problem credit card debt used in the interim report as appropriate for the further analysis that we are undertaking for this final report.

Indicators of potential problem credit card debt

1. In the interim report we set out quantitative indicators to provide an indication of the likely scale and nature of problem credit card debt. They were each based on data over a 12 month period[1] to December 2014, and were defined as follows:
   - **Severe arrears**: consumers that have been charged-off[2] or have been at least six months in arrears.[3]
   - **Serious arrears**: consumers who have missed three or more repayments, and are either in or have been in arrears.[4]
   - **Persistent debt**: consumers that have an average credit limit utilisation of 90% or more while also incurring interest charges.[5]
   - **Systematic minimum repayments**: consumers that have made nine or more minimum repayments, while also incurring interest charges.

2. We chose these indicators based on a review of the academic literature, existing research and consumer surveys, and our own analysis and understanding of the market.

3. For each consumer, we checked which indicators applied to the accounts they held. In some cases, more than one indicator applied to a single account or to multiple accounts held by the same consumer. We assigned each consumer a single indicator by selecting the 'worst' problem credit card debt state across all of their accounts, with severe arrears being the most severe and systematic minimum repayments being the least severe. This means, for example, that some consumers in the persistent debt category were also making systematic minimum repayments.

[1] The indicator variables were constructed annually over the 12 months of data. However, accounts which were opened or closed part way through the year – and where cycles were not reported for the full 12 months – were still included in the analysis.

[2] Charged-off refers to debt that issuers have deemed unlikely to be collected and that they have written off on their balance sheet. Consumers whose accounts have been charged-off have not been relieved of their repayment requirement, and charged-off accounts are often pursued via collection processes.

[3] We noted that the distinction between this category and the serious arrears category is partially driven by firm practices and their decision of when to charge-off a consumer. Some firms will do this sooner than others. This will mean that there is a degree of overlap between these two categories that the data does not reflect.

[4] We chose three repayments as the threshold rather than one or two repayments as we considered that the latter two thresholds may capture a number of consumers that simply missed repayments due to inattention.

[5] This was calculated by finding the credit limit utilisation each month and then taking a simple average across months. We also considered an alternative measure of persistent debt which was based on the actual value of debt over time rather than credit limit utilisation. In particular, we were interested to see how sustained levels of credit card debt are, and whether there was issue with consumers being unable pay-down their outstanding balance once it had reached a particular level.

4. The choice of thresholds necessarily involved subjective judgement, particularly for the persistent debt and systematic minimum repayment indicators. We also noted in the interim report that there were a number of limitations to each indicator - that in some cases they will capture some consumers that do not have problem credit card debt issues and in other cases, individual indicators will neglect aspects of unaffordable credit card debt.[6]

5. Based on the sensitivity analysis undertaken for the interim report, the further sensitivity analysis presented in this annex, along with the feedback received on the indicators, we continue to regard these indicators as fit for the purpose of assessing the scale and nature of potentially problem credit card debt. Therefore, we have continued to use these quantitative indicators as the basis for the analysis for this final report.

6. In developing any remedies we will give full consideration to the thresholds for applying any remedy to assess its appropriateness, taking into account consumers who would be covered by the remedy.

Data

7. The data used in this annex are primarily the account level data submissions from firms. These encompass submissions from nine firms, which represent the breadth of business models in the market (e.g. monoline providers to large banks, operating in various market segments). The data cover the period January 2010 to January 2015 and contain monthly information on balances, repayments, and product information (e.g. interest rates and fees). After cleaning and matching, the data contained information on 26 million consumers (compared to 38 million in the whole market) and 47 million active accounts (compared to 95 million in the whole market).[7] This is the same dataset that was used for the interim report.

8. For each of the years where data are presented, the potential problem credit card debt indicators are each based on data over a 12 month period to December of that year.

Terminology

9. We refer to the four indicators – severe arrears, serious arrears, persistent debt, and systematic minimum repayment – as the potential problem credit card debt indicators. We use the term ‘potential’ to acknowledge that not all consumers in the last two categories are presently in financial difficulties – our indicators are likely to capture some consumers whose pattern of credit card use may be storing up problems for the future, who may be exposed to significant problems in case of a life event such as illness or unemployment, or who may be spending significant amounts on debt service over a long period of time.

10. In this annex, we use the terminology of a consumer’s ‘problem credit card debt state’. By this we mean the indicator of potential problem credit card debt to which the consumer has been classified in a given year. This has been done to improve the readability of this annex.

[6] See interim report, paragraph 6.52.

[7] Each account was open for some or all of the five year period that the data spans.

Indicators of potential problem credit card debt over time

Summary

Following the feedback on the interim findings, we have undertaken further analysis into the potential problem credit card debt indicators over time. This afforded us insight into:

- how consumers categorised as being in potential problem credit card debt got into problem debt
- what happened to consumers categorised as being in potential problematic credit card debt in subsequent years
- the extent to which persistent debt and systematic minimum repayment behaviour persists over several years.

Our analysis suggests two concerns around patterns of credit card debt over time: firstly, that there is a significant group of consumers who carry potentially problematic debt for a number of years; and secondly, that there is a separate group who move rapidly from acquiring a credit card into potentially problematic debt.

We find that:

- Two-thirds of consumers who ended up in severe arrears in 2014 were categorised as in some form of potential problem credit card debt in 2013. A quarter of those who ended up in severe arrears in 2014 were categorised as not in potential problem credit card debt in 2013 – this could reflect life-event shocks as well as those struggling but not captured by our indicators.

- 7% of consumers in severe arrears in 2014 did not have an active credit card in 2013, while over 20% did not have an active credit card in 2012. These numbers suggest a rapid descent into arrears following the opening of a credit card for significant minority.

- For many consumers, persistent debt or systematic minimum repayment behaviour persists over several years. Almost a third of those categorised as in persistent debt and almost half those categorised as making systematic minimum repayments in 2014 were also in those states in 2012 and 2013. This means around 650,000 cardholders have been in persistent debt for at least three consecutive years and a further 750,000 cardholders have been making systematic minimum repayments for at least three consecutive years.

- We find that approximately 1.4 million consumers were in some form of potential problem credit card debt in 2013 but had shifted to being not in potential problem credit card debt in 2014.

Introduction

11. In the interim report we estimated the scale and nature of potentially problem credit card debt based on data for 2014. Industry respondents to the interim findings noted that consumers change behaviour over time, and that we should avoid inferring too much about consumer behaviour based on snapshots or over small time horizons. Consumer bodies suggested in their responses that we should look at potentially

problem credit card debt over time in order to understand the consumer journey into financial difficulty.

12. We agree that it is important both to understand how consumers end up in potentially problem credit card debt, and to understand how consumer behaviour changes over time. In light of the feedback received we have now undertaken further analysis to look at these problem credit card debt indicators over time:
    - **Backward-looking analysis** – this analysis provides insight into how those consumers categorised by the indicators as being in potentially problem credit card debt in 2014 got there, by looking at their categorisation in previous years.
    - **Forward-looking analysis** – this analysis provides insight into what happened to consumers categorised by the indicators as in potentially problem credit card debt in 2010, by looking at their categorisation in subsequent years.

Backward-looking analysis

13. The backward-looking analysis is based on a random sample of approximately five million consumers from the account level data who had at least one credit card in 2014.[8] These are the same data that were used for estimating the scale and extent of potentially problem credit card debt in the interim report.

14. As set out in the interim report, when looking at the indicators of potentially problem credit card debt for 2014 based on this sample, we estimated that:
    - Approximately 1.9% of consumers (600,000 consumers) were in severe arrears. These consumers were either charged-off or were (or had been) at least six months in arrears. In addition, approximately 4.9% of consumers (1.5 million consumers) were in serious arrears. These consumers missed three or more repayments and were in arrears at some point.
    - Approximately 6.6% of consumers (2.1 million consumers) were in persistent debt. These consumers were maintaining a credit limit utilisation of 90% or more over the year while incurring interest.
    - Approximately 5.2% of consumers (1.6 million consumers) made systematic minimum repayments. These consumers were repeatedly making minimum payments while incurring interest.

15. To provide insight into how those in potentially problem credit card debt got there, we have looked in turn at those consumers in each of the problem credit card debt states in 2014 to see what proportion were in each of the problem credit card debt states in the preceding years. For example, this analysis shows what proportion of those consumers who ended up in severe arrears in 2014 were classified as being in each problem credit card debt state in 2010, 2011, 2012 and 2013.

16. This analysis does not show how consumers move between the problem credit card debt states between years, but only the proportion of consumers in a given problem debt state in 2014 that were in a given problem credit card debt state in an earlier year.

17. To address this, we have carried out a second piece of analysis which looks at the proportion of consumers who were in a given problem credit card debt state in 2014,

[8] After cleaning and matching the account level data it contained information on 24 million consumers (compared to 31 million in the whole market) and 41 million accounts (compared to 64 million in the whole market) in 2014. We took a random sample of approximately five million consumers for the analysis in the interim report. This was done so that we could gather credit risk data on these consumers.

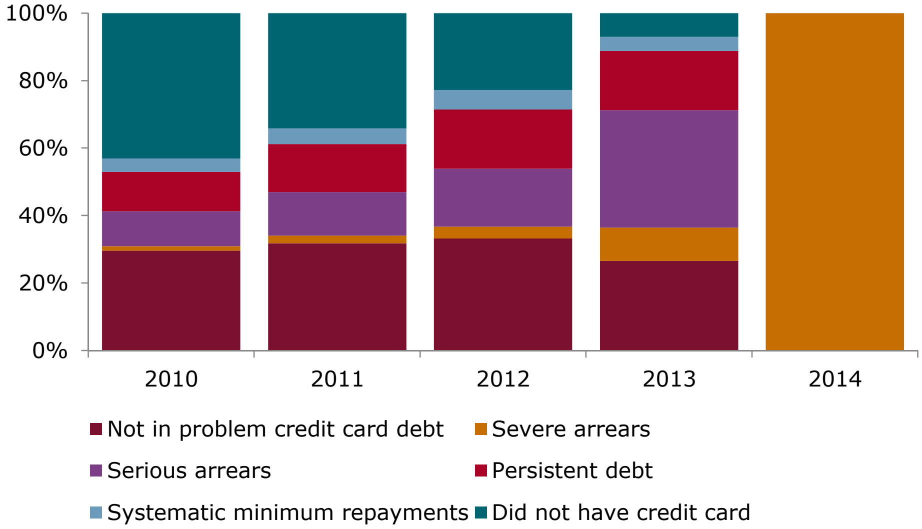
that had been in that state or another problem credit card debt state in each of the preceding years.

18. The results of both these pieces of analysis are presented below for each problem credit card debt state.

Severe arrears

19. Figure 1 shows for the approximately 600,000 consumers in severe arrears in 2014, what proportion were in each category of problem credit card debt in the preceding years.

Figure 1: Indicators of potential problem credit card debt over time for consumers categorised as being in severe arrears in 2014



Source: FCA analysis of a sample of account-level data

Note: This analysis is based on consumers categorised by our indicators of potential problem credit card debt as being in severe arrears in 2014 (hence the column for 2014 being 100% severe arrears). The columns for 2010 to 2013 show what proportion of those consumers were categorised by our indicators of potentially problem credit card debt as being in each state in each of those years.

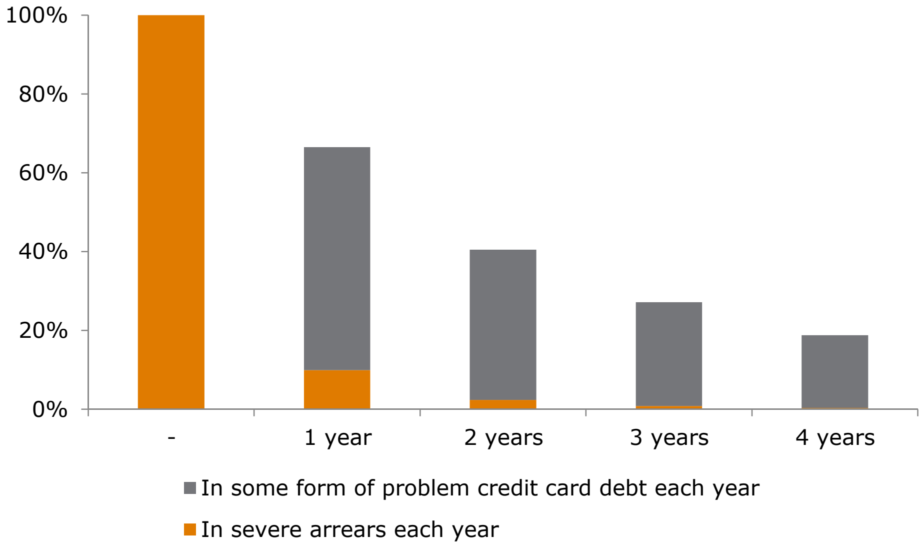
20. We find that:

- Of the approximately 600,000 consumers who ended up in severe arrears in 2014, most had been in some form of potentially problem credit card debt for some time - two-thirds were categorised as in some form of potentially problem credit card debt in 2013 (with almost 35% being in serious arrears).
- Over 20% of consumers who were in severe arrears in 2014 did not have an active credit card in 2012, while 7% did not have an active credit card in 2013. These figures suggest a rapid descent into arrears following the opening of the credit card. This raises concerns about the suitability of these credit cards for these consumers.[9]
- Over 25% of consumers who were in severe arrears in 2014 were categorised as not in potential problem credit card debt in 2013 – this could reflect negative life-event shocks as well as those who were struggling but not captured by our indicators.

[9] In some cases the rapid descent into arrears following the opening of the credit card could be due to fraud on the part of the consumer.

21. Figure 2, below, shows the proportion of consumers who were in severe arrears in 2014, that had been in severe arrears or another problem credit card debt state in each of the preceding years. It shows that around 40% of consumers who ended up in severe arrears had been in some problem credit card debt state for the previous two years, while 26% had been in some problem credit card debt state for the previous three years. The proportion of consumers who were in severe arrears for a number of years is small.

Figure 2: Proportion of those consumers categorised as being in severe arrears in 2014 who were categorised as being in potential problem credit card debt in the preceding years



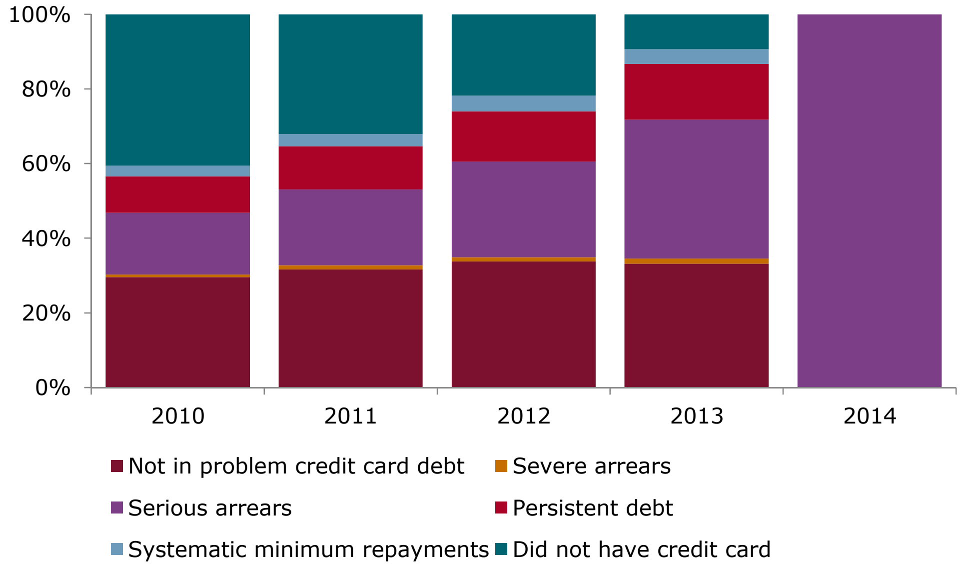
Source: FCA analysis of a sample of account-level data

Note: This analysis is based on those consumers categorised as being in severe arrears in 2014 (hence the 100% in the first column). The subsequent years look at the proportion of those consumers who were also in severe arrears or other potentially problem credit card debt in each of the preceding years. So for those in the four years column this means that those represented by the orange column had been in severe arrears in 2014 and *each* of the four preceding years. Those represented by the grey column were in severe arrears in 2014 and some form of potentially problem credit card debt in *each* of the four preceding years.

Serious arrears

22. Figure 3 shows for the approximately 1.5 million consumers in serious arrears in 2014, what proportion were in each category of problem credit card debt in the preceding years.

Figure 3: Indicators of potential problem credit card debt over time for consumers categorised as being in serious arrears in 2014



Source: FCA analysis of a sample of account-level data

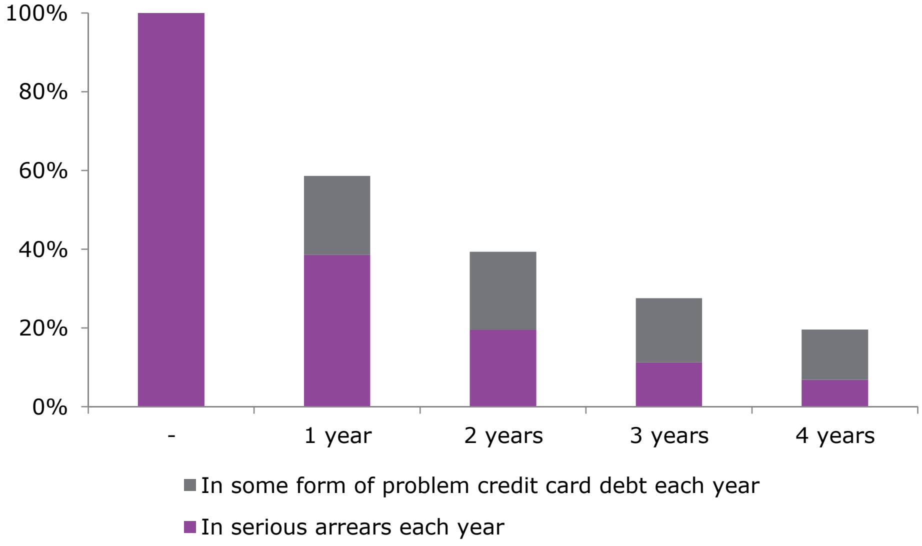
Note: This analysis is based on consumers categorised by our indicators of potential problem credit card debt as being in serious arrears in 2014 (hence the column for 2014 being 100% serious arrears). The columns for 2010 to 2013 show what proportion of those consumers were categorised by our indicators of potentially problem credit card debt as being in each state in each of those years.

23. We find that that the picture is in many ways similar to that for severe arrears in the previous section:

- Of those who ended up in serious arrears in 2014, most had been in some form of potentially problem credit card debt for some time - over 60% were categorised as being in some form of potentially problem credit card debt in 2013 (with almost 37% being in serious arrears). 20% were in serious arrears in 2011.
- Over 20% of consumers who were in serious arrears in 2014 did not have an active credit card in 2012.
- Around a third of consumers who were in serious arrears in 2014 were categorised as being not in problem credit card debt in 2013.

24. Figure 4, below, shows the proportion of consumers who were in serious arrears in 2014, that had been in serious arrears or another problem credit card debt state in each of the preceding years. It shows that around 20% of consumers who were in serious arrears in 2014 had also been in serious arrears in 2012 and 2013, while a further 20% had been in some form of problem credit card state in 2012 and 2013.

Figure 4: Proportion of those consumers categorised as being in serious arrears in 2014 who were categorised as being in potential problem credit card debt in the preceding years



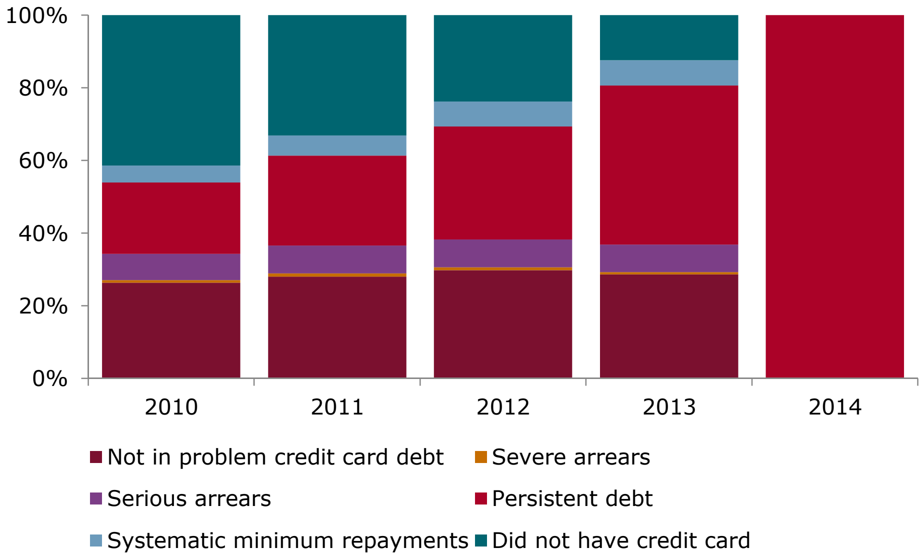
Source: FCA analysis of a sample of account-level data

Note: This analysis is based on those consumers categorised as being in serious arrears in 2014 (hence the 100% in the first column). The subsequent years look at the proportion of those consumers who were also in serious arrears or other potentially problem credit card debt in each of the preceding years. So for those in the four years column this means that those represented by the purple column had been in serious arrears in 2014 and *each* of the four preceding years. Those represented by the grey column were in serious arrears in 2014 and some form of potentially problem credit card debt in *each* of the four preceding years.

Persistent debt

25. Figure 5 shows for the approximately 2.1 million consumers in persistent debt in 2014, what proportion were in each category of potential problem credit card debt in the preceding years.

Figure 5: Indicators of potential problem credit card debt over time for consumers categorised as being in persistent debt in 2014



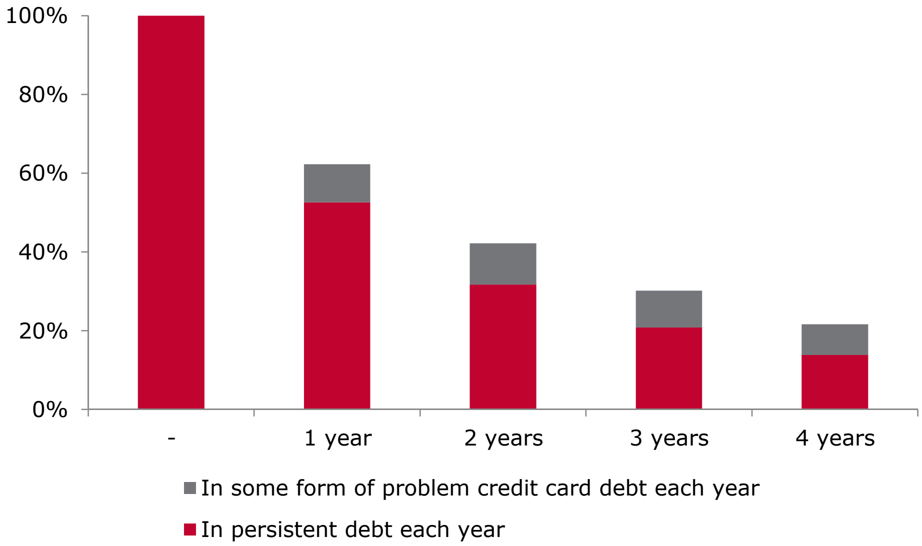
Source: FCA analysis of a sample of account-level data

Note: This analysis is based on consumers categorised by our indicators of potential problem credit card debt as being in persistent debt in 2014 (hence the column for 2014 being 100% persistent debt). The columns for 2010 to 2013 show what proportion of those consumers were categorised by our indicators of potentially problem credit card debt as being in each state in each of those years.

26. Figure 6, below, shows the long-term nature of some credit card debt. It shows, for consumers in persistent debt in 2014, how long they had been in persistent debt (or another potential problem credit card debt state) for.

27. This suggests, that of the approximately 2.1 million credit cardholders we estimated to be in persistent debt in 2014, around 650,000 were in persistent debt for at least three consecutive years.

Figure 6: Proportion of those consumers categorised as being in persistent debt in 2014 who were categorised as being in potential problem credit card debt in the preceding years



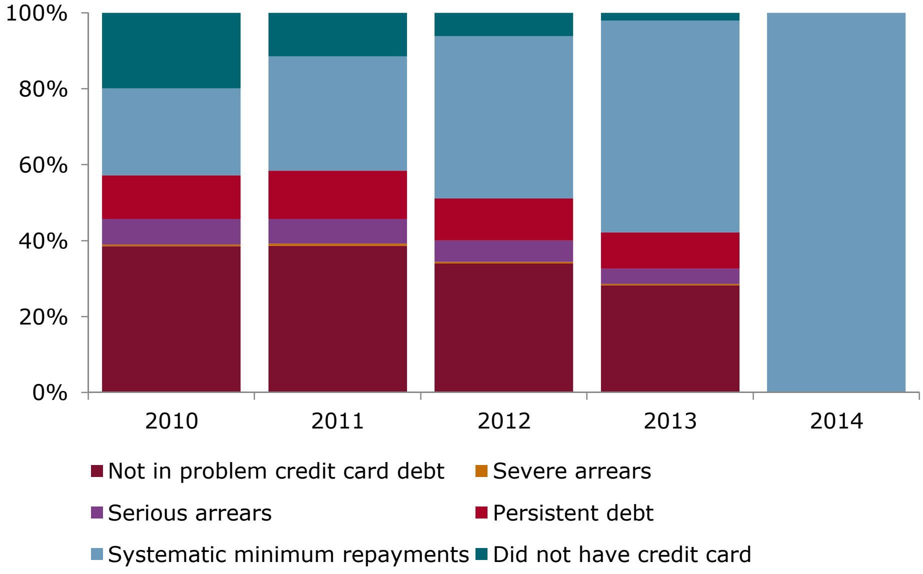
Source: FCA analysis of a sample of account-level data

Note: This analysis is based on those consumers categorised as being in persistent debt in 2014 (hence the 100% in the first column). The subsequent years look at the proportion of those consumers who were also in persistent debt or other potentially problem credit card debt in each of the preceding years. So for those in the four years column this means that the 13.8% represented by the red column had been in persistent debt in 2014 and each of the four preceding years. The further 7.8% represented by the grey column were in persistent debt in 2014 and some form of potentially problem credit card debt in each of the four preceding years.

Systematic minimum repayment

28. Figure 7 shows for the approximately 1.6 million consumers making systematic minimum repayments in 2014, what proportion were in each category of problem credit card debt in the preceding years.

Figure 7: Indicators of potential problem credit card debt over time for consumers categorised as making systematic minimum repayments in 2014



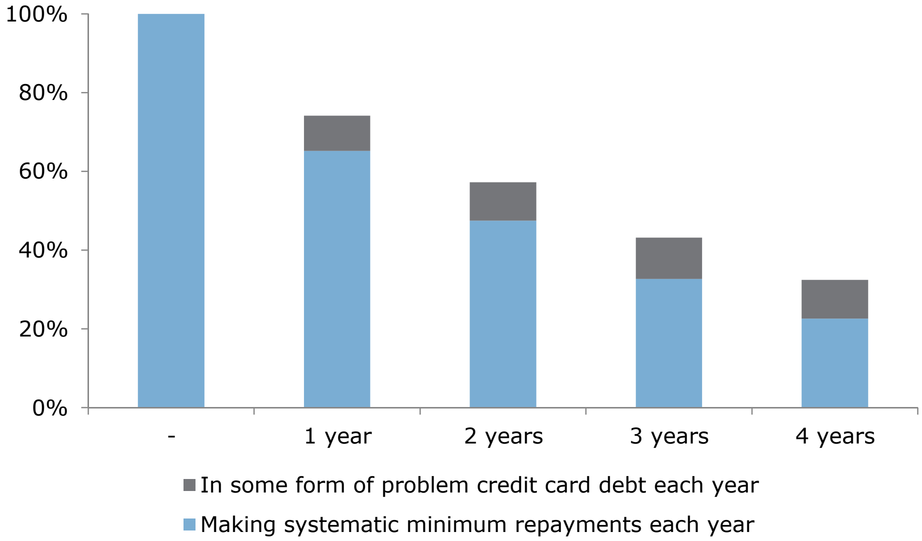
Source: FCA analysis of a sample of account-level data

Note: This analysis is based on consumers categorised by our indicators of potential problem credit card debt as making systematic minimum repayments in 2014 (hence the column for 2014 being 100% systematic minimum). The columns for 2010 to 2013 show what proportion of those consumers were categorised by our indicators of potentially problem credit card debt as being in each state in each of those years.

29. Figure 8, below, shows that minimum repayment behaviour is even more likely to persist for several years, with almost half of consumers making systematic minimum payments in 2014 also doing so in 2012 and 2013.

30. This suggests that of the approximately 1.6 million credit cardholders we estimated to be making systematic minimum repayments in 2014, around 750,000 were making systematic minimum repayments for at least three consecutive years.

Figure 8: Proportion of those consumers categorised as making systematic minimum repayments in 2014 who were categorised as being in potential problem credit card debt in the preceding years



Source: FCA analysis of a sample of account-level data

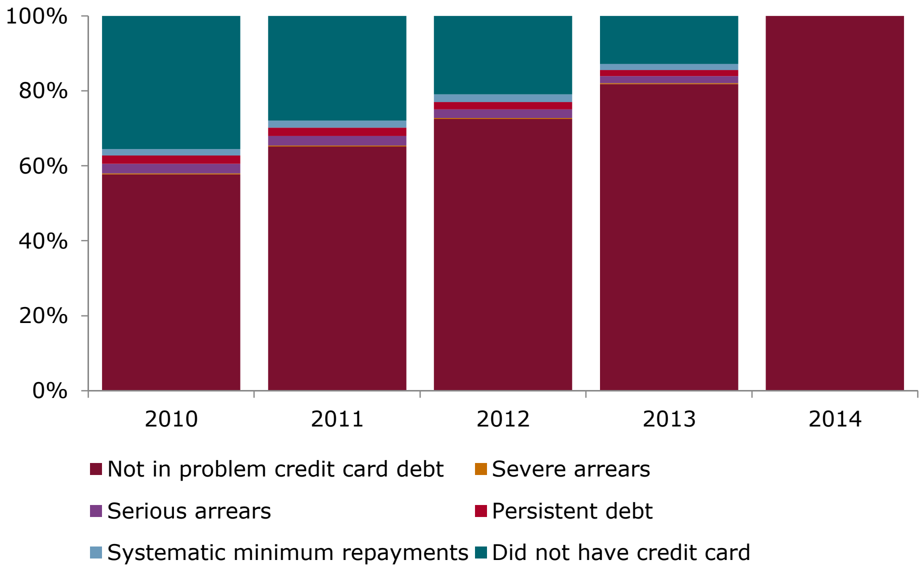
Note: This analysis is based on those consumers categorised as making systematic minimum repayments in 2014 (hence the 100% in the first column). The subsequent years look at the proportion of those consumers who were also making systematic minimum repayments or other potentially problem credit card debt in each of the preceding years. So for those in the four years column this means that the 22.6% represented by the blue column had been making systematic minimum repayments in 2014 and *each* of the four preceding years. The further 9.8% represented by the grey column were making systematic minimum repayments in 2014 and some form of potentially problem credit card debt in *each* of the four preceding years.

Not in potential problem credit card debt

31. We also considered those classified as not being in potential problem credit card debt in 2014.

32. Figure 9 shows for the approximately 25 million consumers not classified as being in problem credit card debt in 2014, what proportion were in each category of problem credit card debt in the preceding years. This shows that while the vast majority of consumers who were classified as not being in problem credit card debt in 2014 were classified as not in problem credit card debt in previous years, 5.4% (approximately 1.4 million consumers) were in some form of problem credit card debt in 2013 and 6.5% (approximately 1.6 million consumers) were in some form of problem credit card debt in 2012. This shows that some consumers do successfully move from being in some form of problem credit card debt to no longer being in a problem credit card debt state. The forward-looking analysis in the following section explores this further.

Figure 9: Indicators of potential problem credit card debt over time for consumers categorised as being not in problem credit card debt in 2014



Source: FCA analysis of a sample of account-level data

Note: This analysis is based on consumers categorised by our indicators of potential problem credit card debt as not being in potential problem credit card debt in 2014 (hence the column for 2014 being 100% no problem credit card debt). The columns for 2010 to 2013 show what proportion of those consumers were categorised by our indicators of potentially problem credit card debt as being in each state in each of those years.

Forward-looking analysis

33. The backward-looking analysis set out above provides insight into how those consumers categorised by the indicators as being in potentially problem credit card debt in 2014 got there.

34. Another issue we wanted to explore was what happens in subsequent years, to those already classified as being in some form of potentially problem credit card debt - so called forward-looking analysis.

35. For this forward-looking analysis we have had to use a different sample of the account level data to that used in the backward-looking analysis. This is because the sample used in the backward-looking analysis was based on consumers who had an active credit card in 2014 and therefore to use this sample for the forward-looking analysis would bias the results as any consumer who held a credit card in 2010 but did not hold one in 2014 could not be in the sample ('survivorship bias').

36. The forward-looking analysis is based on all those consumers in our account level data who had at least one credit card in 2010. This was approximately 18 million consumers holding 27 million accounts.

37. Based on this data, we estimate that in 2010:

- Approximately 3.2% of consumers were in severe arrears. These consumers were either charged-off or were at least six months in arrears. In addition, approximately 7.6% of consumers were in serious arrears. These consumers missed three or more repayments and were in arrears at some point.
- Approximately 6.9% of consumers were in persistent debt. These consumers were maintaining a credit limit utilisation of 90% or more over one year while incurring interest.
- Approximately 4.3% of consumers made systematic minimum repayments. These consumers were repeatedly making minimum payments while incurring interest.
- Approximately 78.1% of consumers were not in problem credit card debt.

38. This suggests that a greater proportion of consumers (21.9% compared to 18.7%) were in some form of potentially problem credit card debt, in particular in some form of arrears, in 2010 than in 2014. This would appear to be consistent with UK Cards data that shows a sustained decline in write-offs and delinquencies between 2010 and 2014.

39. Using this sample to estimate the indicators of potentially problem credit card debt for 2014, we find that slightly more consumers were classified as being not in problem credit card debt or making systematic minimum repayments than in the interim report and slightly fewer consumers were classified as being in severe or serious arrears or persistent debt.[10] This is again likely to be driven by the survivorship bias issue, and is consistent with the findings of the backward-looking analysis set out above that a higher proportion of those in arrears or persistent debt in 2014 did not have a credit card two or more years before (and therefore would not be in this sample).

40. To provide insight into what happened to consumers categorised by the indicators as being in potentially problem credit card debt in 2010, we have looked in turn at what state they were categorised in in subsequent years. For example, this analysis shows what proportion of those consumers who were in persistent debt in 2010 were classified as being in each problem credit card debt state in 2011, 2012, 2013 and 2014.

[10] Based on this sample, 83.2% of consumers were classified as being not in problem credit card debt (compared to 81.3% in the interim report); 1.7% of consumers were classified as being in severe arrears (compared to 1.9% in the interim report); 4.1% of consumers were classified as being in serious arrears (compared to 4.9% in the interim report); 5.4% of consumers were classified as being in persistent debt (compared to 6.6% in the interim report); and 5.6% of consumers were classified as making systematic minimum repayments (compared to 5.2% in the interim report).

41. Similar to the backward-looking analysis, this analysis does not show how consumers move between the problem credit card debt states between years, but only the proportion of consumers in a given problem credit card debt state in 2010 that were in a given problem credit card debt state in a subsequent year.

42. To address this, we have carried out a second piece of analysis that looks at the proportion of consumers who were in a given problem credit card debt state in 2010, that had been in that state or another problem credit card debt state in each of the subsequent years.

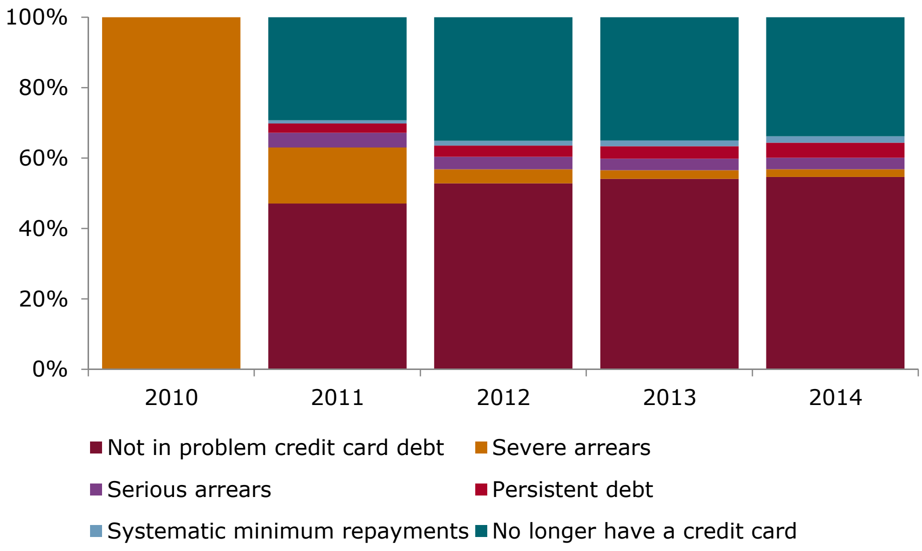
43. The results of both these pieces of analysis are presented below for each problem credit card debt state.

Severe arrears

44. Figure 10 shows for those consumers in severe arrears in 2010, what proportion were in each category of problem credit debt in the following years.

45. The forward-looking analysis is potentially less informative for those in severe arrears because these consumers are likely to be moving into some form of forbearance which may not be reflected by our indicators. This in part explains the drop off in those consumers classified as being in potential problem credit card debt between 2010 and 2011 in Figure 10.

Figure 10: Indicators of potential problem credit card debt over time for consumers categorised as being in severe arrears in 2010

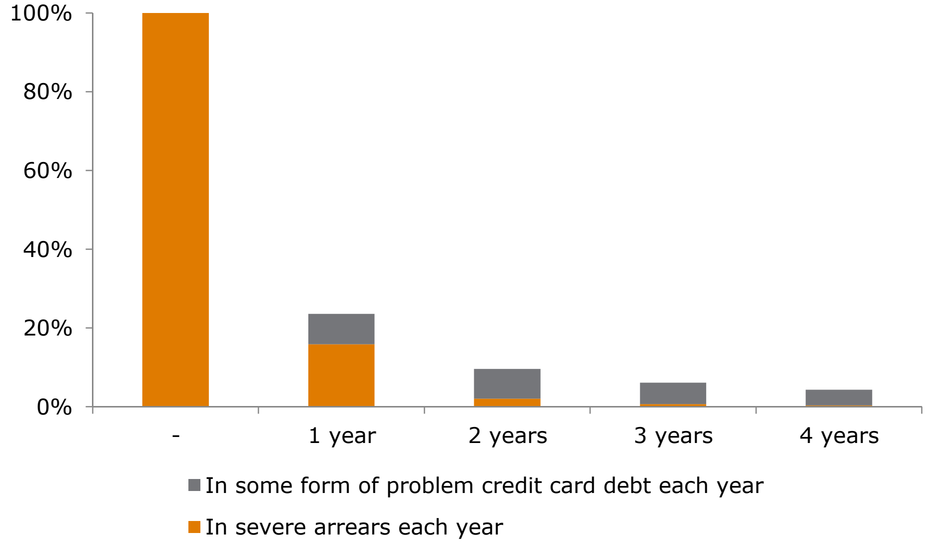


Source: FCA analysis of a sample of account-level data

Note: This analysis is based on consumers categorised by our indicators of potential problem credit card debt as being in severe arrears in 2010 (hence the column for 2010 being 100% severe arrears). The columns for 2011 to 2014 show what proportion of those consumers were categorised by our indicators of potentially problem credit card debt as being in each state in each of those years.

46. For completeness, we also show in Figure 11 the proportion of consumers who were in severe arrears in 2010, who remained in severe arrears or another problem credit card debt state in each of the following years. As above, it shows unsurprisingly that very few consumers were classified as being in severe arrears over a number of years.

Figure 11: Proportion of those consumers categorised as being in severe arrears in 2010 who were categorised as being in potential problem credit card debt in the following years



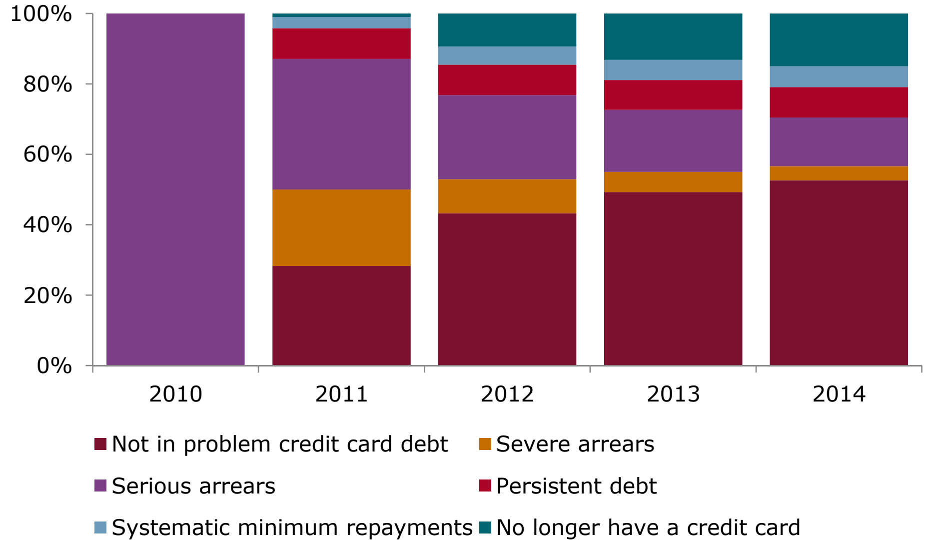
Source: FCA analysis of a sample of account-level data

Note: This analysis is based on those consumers categorised as being in severe arrears in 2010 (hence the 100% in the first column). The subsequent years look at the proportion of those consumers who were also in severe arrears or other potentially problem credit card debt in each of the following years. So for those in the four years column this means that those represented by the orange column had been in severe arrears in 2010 and *each* of the four following years. Those represented by the grey column were in severe arrears in 2010 and some form of potentially problem credit card debt in *each* of the four following years.

Serious arrears

47. Figure 12 shows for those consumers in serious arrears in 2010, what proportion were in each category of problem credit card debt in the following years. This shows that some consumers do recover from being in arrears, while others continue to struggle with potentially problem credit card debt for a number of years and in some cases end up in severe arrears.

Figure 12: Indicators of potential problem credit card debt over time for consumers categorised as being in serious arrears in 2010

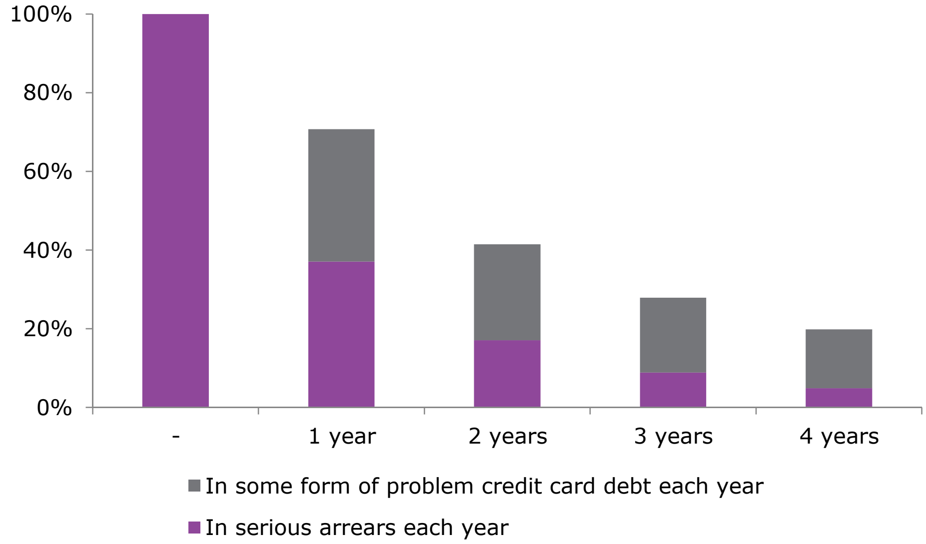


Source: FCA analysis of a sample of account-level data

Note: This analysis is based on consumers categorised by our indicators of potential problem credit card debt as being in serious arrears in 2010 (hence the column for 2010 being 100% serious arrears). The columns for 2011 to 2014 show what proportion of those consumers were categorised by our indicators of potentially problem credit card debt as being in each state in each of those years.

48. We also show in Figure 13 the proportion of consumers who were in serious arrears in 2010, who remained in serious arrears or another problem credit card debt state in each of the following years. This shows that almost a fifth of those in serious arrears in 2014 had also been in serious arrears in 2013 and 2012.

Figure 13: Proportion of those consumers categorised as being in serious arrears in 2010 who were categorised as being in potential problem credit card debt in the following years



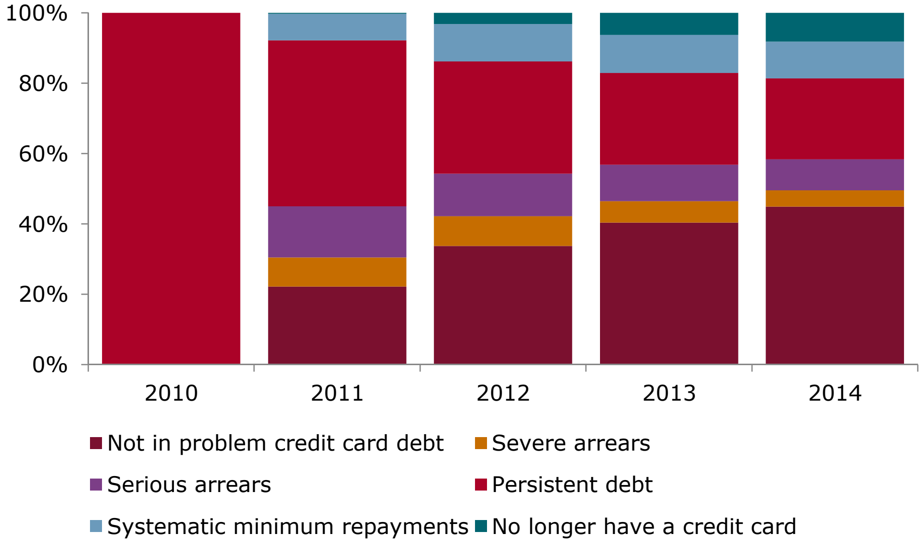
Source: FCA analysis of a sample of account-level data

Note: This analysis is based on those consumers categorised as being in serious arrears in 2010 (hence the 100% in the first column). The subsequent years look at the proportion of those consumers who were also in serious arrears or other potentially problem credit card debt in each of the following years. So for those in the four years column this means that those represented by the purple column had been in serious arrears in 2010 and *each* of the four following years. Those represented by the grey column were in serious arrears in 2010 and some form of potentially problem credit card debt in *each* of the four following years.

Persistent debt

49. Figure 14 shows for those consumers in persistent debt in 2010, what proportion were in each category of problem credit card debt in the following years. This shows that almost a quarter of those classified as being in persistent debt in 2010 ended up in serious or severe arrears the following year, while less than half were not in problem credit card debt in 2014.

Figure 14: Indicators of potential problem credit card debt over time for consumers categorised as being in persistent debt in 2010



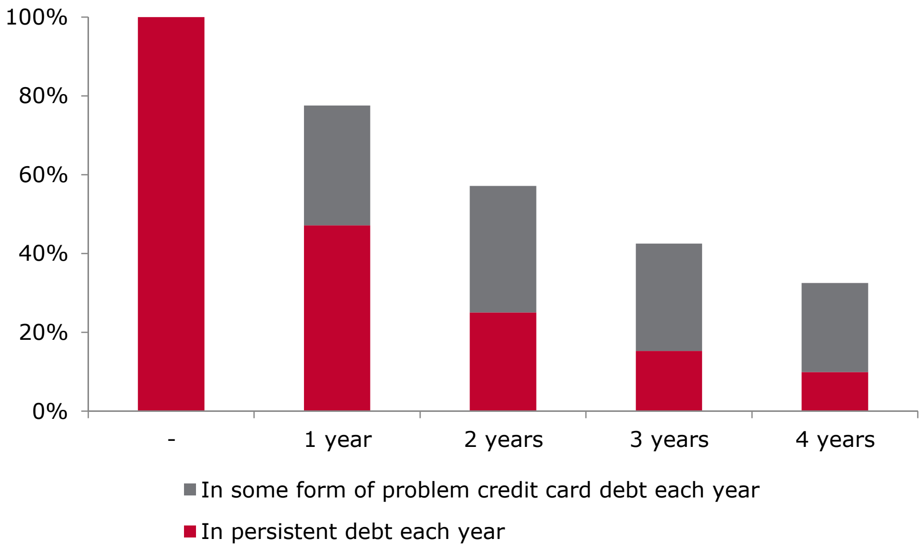
Source: FCA analysis of a sample of account-level data

Note: This analysis is based on consumers categorised by our indicators of potential problem credit card debt as being in persistent debt in 2010 (hence the column for 2010 being 100% persistent debt). The columns for 2011 to 2014 show what proportion of those consumers were categorised by our indicators of potentially problem credit card debt as being in each state in each of those years.

50. The backward-looking analysis set out in the previous section found that for many consumers persistent debt was a long-term issue with 53% of those in persistent debt in 2014 also in persistent debt in 2013, and 32% of those in persistent debt in 2014 also in persistent debt in 2012 and 2013.

51. As shown in Figure 15, the forward-looking analysis shows a similar picture with around a half of those in persistent debt in 2010 also in persistent debt in 2011, and a quarter in persistent debt in 2010, 2011 and 2012.

Figure 15: Proportion of those consumers categorised as being in persistent debt in 2010 who were categorised as being in potential problem credit card debt in the following years



Source: FCA analysis of a sample of account-level data

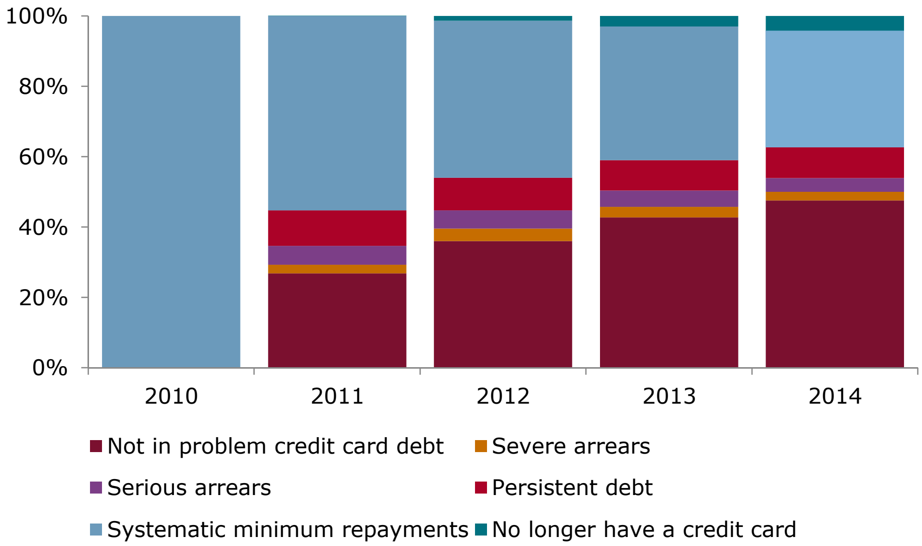
Note: This analysis is based on those consumers categorised as being in persistent debt in 2010 (hence the 100% in the first column). The subsequent years look at the proportion of those consumers who were also in persistent debt or other potentially problem credit card debt in each of the following years. So for those in the four years column this means that those represented by the red column had been in persistent debt in 2010 and *each* of the four following years. Those represented by the grey column were in persistent debt in 2010 and some form of potentially problem credit card debt in *each* of the four following years.

Systematic minimum repayments

52. Figure 16 shows for those consumers making systematic minimum repayments in 2010, what proportion were in each category of problem credit card debt in the following years.

53. This shows that a third of these consumers were making systematic minimum repayments in 2014, while just less than half were not in potential problem credit card debt in 2014. It also shows that only a small proportion of those classified as making systematic minimum repayments in 2010 ended up in serious or severe arrears the following year.

Figure 16: Indicators of potential problem credit card debt over time for consumers categorised as making systematic minimum repayments in 2010



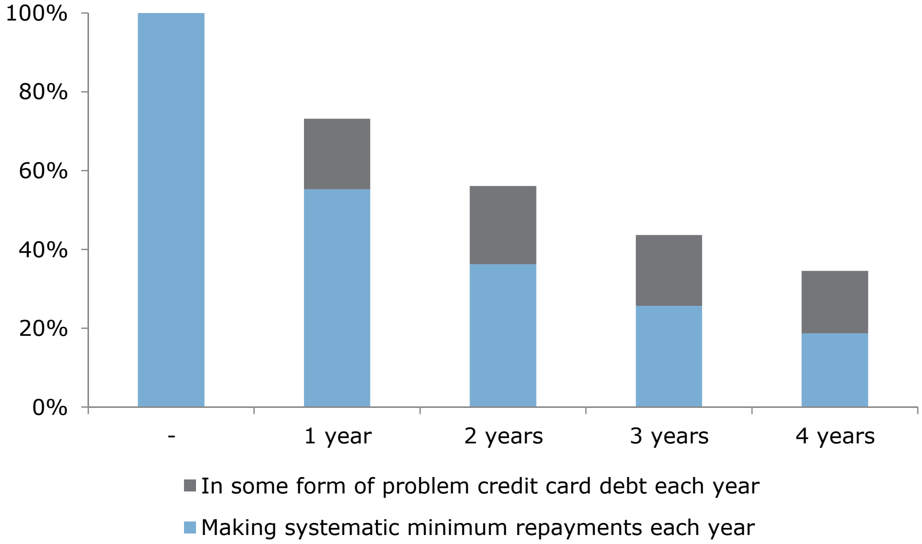
Source: FCA analysis of a sample of account-level data

Note: This analysis is based on consumers categorised by our indicators of potential problem credit card debt as making systematic minimum repayments in 2010 (hence the column for 2010 being 100% systematic minimum repayments). The columns for 2011 to 2014 show what proportion of those consumers were categorised by our indicators of potentially problem credit card debt as being in each state in each of those years.

54. The backward-looking analysis set out in the previous section found that for many consumers making systematic minimum repayments was a long-term issue with 65% of those making systematic minimum repayments in 2014 also making systematic minimum repayments in 2013. 48% of those making systematic minimum repayments in 2014 also making systematic minimum repayments in 2012 and 2013.

55. As shown in Figure 17, the forward-looking analysis shows a similar picture.

Figure 17: Proportion of those consumers categorised as making systematic minimum repayments in 2010 who were categorised as being in potential problem credit card debt in the following years



Source: FCA analysis of a sample of account-level data

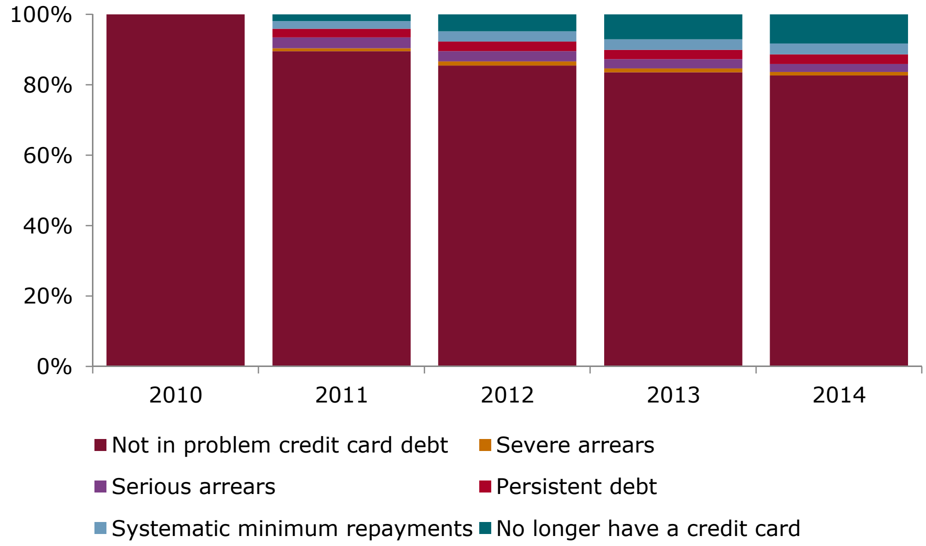
Note: This analysis is based on those consumers categorised as making systematic minimum repayments in 2010 (hence the 100% in the first column). The subsequent years look at the proportion of those consumers who were also making systematic minimum repayments or other potentially problem credit card debt in each of the following years. So for those in the four years column this means that those represented by the maroon column had been making systematic minimum repayments in 2010 and *each* of the four following years. Those represented by the gold column were making systematic minimum repayments in 2010 and some form of potentially problem credit card debt in *each* of the four following years.

Not in potential problem credit card debt

56. We also considered those classified as not being in potential problem credit card debt in 2010.

57. Figure 18 shows for those consumers not classified as being in problem credit card debt in 2010, what proportion were in each category of problem credit card debt in the following years. This shows that the vast majority of consumers who were not in problem credit card debt in 2010 remained out of problem credit card debt over the following four years.

Figure 18: Indicators of potential problem credit card debt over time for consumers categorised as being not in problem credit card debt in 2010



Source: FCA analysis of a sample of account-level data

Note: This analysis is based on consumers categorised by our indicators of potentially problem credit card debt as not being in problem credit card debt in 2010 (hence the column for 2010 being 100% not in problem credit card debt). The columns for 2011 to 2014 show what proportion of those consumers were categorised by our indicators of potentially problem credit card debt as being in each state in each of those years.

Higher risk segment

58. Following the responses received to the interim report, we have also carried out further analysis looking at the extent to which consumers in the higher risk segment who had taken out a new credit card ended up in potentially problem credit card debt.

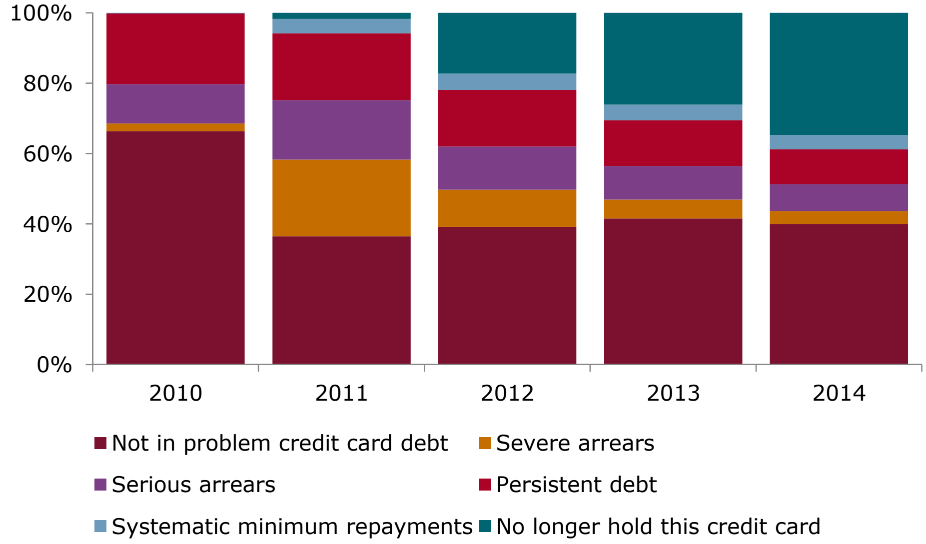
59. To do this we used the same account level data as was used in the forward-looking analysis outline above. From that dataset we identified consumers who had an opened a new credit card in 2010.

60. For the purposes of this analysis we categorise credit cards with an interest rate on purchases of over 30% as being credit cards in the higher risk segment – that equates to 11% of all new cards opened in 2010. Selecting this threshold required subjective judgement as there is no standard cut-off for what constitutes a credit card in the higher risk segment. Based on an analysis of the distribution of interest rates on purchases of cards opened in 2010, and our understanding of the market we considered that this was an appropriate threshold.

61. We then constructed two sets of forward-looking transition matrices for these consumers:

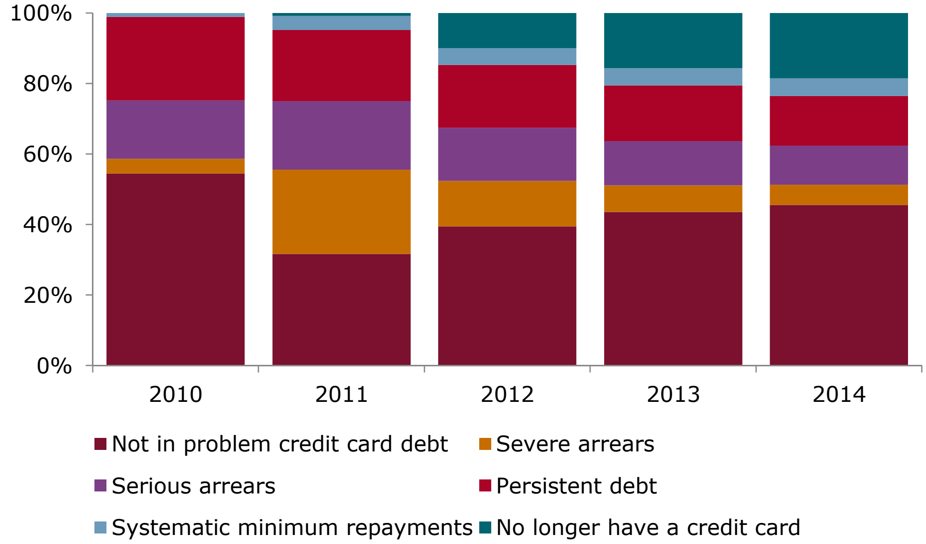
- Firstly, at the account level, to see what problem credit card debt state they ended up in on that new credit card over the following years (Figure 19 below); and
- Secondly, at the consumer level, to see what problem credit card debt state they ended up in across their credit cards over the following years (Figure 20 below).

Figure 19: Indicators of potential problem credit card debt over time for credit cards in the higher risk segment opened in 2010 (account level)



Source: FCA analysis of a sample of account level data

Figure 20: Indicators of potential problem credit card debt over time for consumers who opened a credit card in the higher risk segment in 2010 (consumer level)



Source: FCA analysis of a sample of account level data

62. By looking at these two figures together we can gain some insight into whether taking out these credit cards helped higher risk consumers build their credit score or whether they subsequently ended up in arrears.[11]

63. We find that for some consumers, having the product does not lead to potential problem credit card debt. From Figure 20, we see that around 45% of consumers who opened a credit card in the higher risk segment in 2010 were not in problem

[11] As well as the absolute levels of the different indicators, the relative levels between the account and consumer level are also informative. For example, in the later years the number of consumers who no longer have the higher risk card opened in 2010 increases. This could be due to them moving onto another (possibly lower risk) credit card or it could be because they have been defaulted and no longer have any credit cards. Looking at the consumer level, provides some indication of which of these scenarios has happened.

credit card debt on any of their credit cards in 2014. These consumers may have benefited from building or rebuilding credit history and having access to credit.

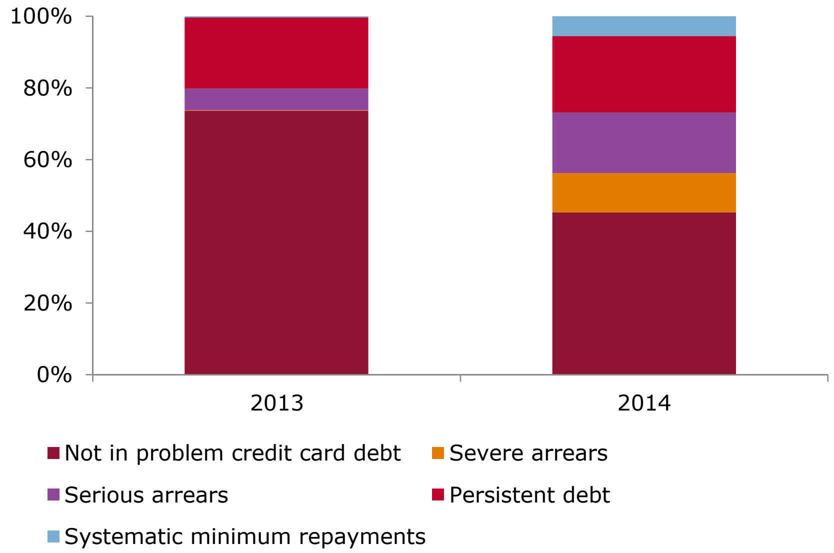
64. However, for other consumers, the product does not work well – as Figure 19 shows 38% of credit cards opened in the higher risk segment in 2010 were in severe or serious arrears in 2011, and 25% were in some form of potential problem credit card debt in 2014.

65. Given these figures show that a significant proportion of higher risk consumers had a rapid descent into arrears following the opening of their credit card in 2010, we decided to look at this issue using more up to date data to see if this continued to be an issue.

66. Using the random sample of approximately five million consumers from the account level data who had at least one credit card in 2014, we looked at those accounts that were opened in 2013 which had an interest rate on purchases of over 30%.

67. As Figure 21 shows, over a quarter of these accounts opened in 2013 were in severe or serious arrears in 2014. The high proportion of consumers in persistent debt is likely to reflect the 'low and grow' model of credit limits used in the higher risk segment.

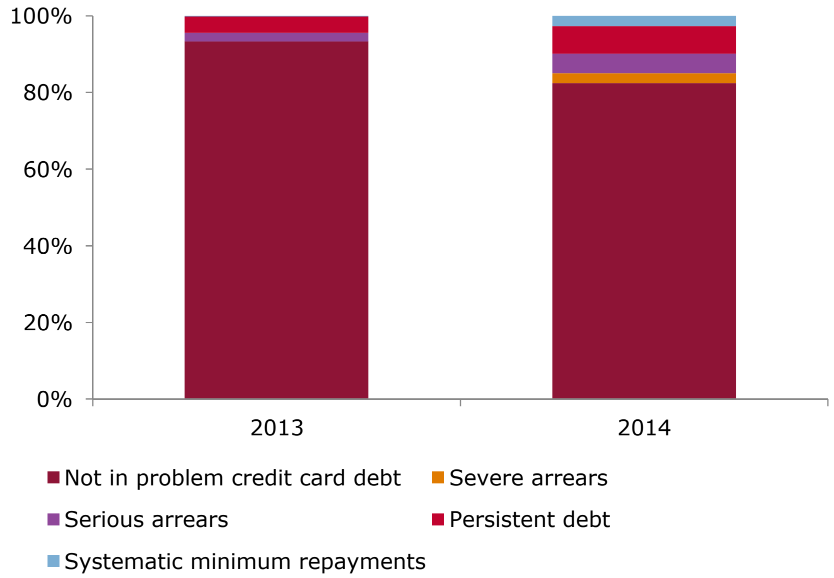
Figure 21: Indicators of potential problem credit card debt over time for consumers who opened a credit card in the higher risk segment in 2013 (account level)



Source: FCA analysis of a sample of account level data

68. We also repeated this analysis for all accounts opened in 2013, regardless of the interest rate on purchases, as a comparison. As shown in Figure 22, we find that 8% of these accounts were in severe or serious arrears in 2014. This means that accounts in the higher risk segment account for 14% of new accounts opened in 2013 but half of those that end up in arrears in 2014.

Figure 22: Indicators of potential problem credit card debt over time for consumers who opened a credit card in 2013 (account level)



Source: FCA analysis of a sample of account level data

69. While we would expect the rate of debt problems to be higher among higher risk customers, this analysis raises questions around the effectiveness of the affordability assessments carried out in this segment.

Multiple cards

Summary

We have undertaken further analysis on consumers holding multiple credit cards.

Our analysis paints a mixed picture of multiple card use. Most consumers with multiple credit cards are not struggling with problematic debt and there is not widespread high credit limit utilisation across multiple cards. However, our analysis shows that consumers with multiple cards tend to have higher overall credit limits, and that those in potentially problematic debt who hold multiple cards typically have higher outstanding balances.

We find that:

- Overall, 54% of consumers have just one credit card, with 23% having three or more credit cards. Lower risk consumers tend to hold more cards on average than higher risk groups.
- Most consumers with multiple cards are not caught by any of our indicators of potentially problematic credit card debt. The proportion that are caught is slightly higher than the proportion of all consumers (25% compared to 19%). Most of these consumers are only in potential problem credit card debt on one of their cards. However, we did find 7% (around one million consumers) in potential problem credit card debt on all their credit cards.
- We found that the more cards held, the higher the total credit limit and the

higher the levels of outstanding balance, although the average credit limit utilisation remains fairly constant and low across multiple cards at around 25%. In other words the evidence does not point to widespread high credit limit utilisation ('maxing out') across multiple credit cards. It does however suggest that those with multiple cards have a greater potential to rapidly amass greater credit card debt if they experience a negative life-event.

70. In their response to the interim report, a number of consumer bodies raised the issue of consumers holding multiple credit cards as an area for further investigation. They noted that many consumers, particularly those with problematic debt, will have more than one credit card and that those with multiple credit cards tend to have much larger credit card debt.

71. The indicators of potential problem credit card debt used in the interim report look across the various accounts held by a consumer, and the consumer is then assigned to the 'worst' problem credit card debt state across all their accounts, enabling us to have a consumer level view of problem credit card debt. However, for the interim report we did not explicitly look at consumers holding multiple credit cards.

72. We have now undertaken further analysis looking specifically at consumers' multiple card holdings, the relationship with problem credit card debt and credit limits and outstanding balances.

73. There were some areas of investigation on multiple cards that we have not been able to look at due to limitations in the account level data. For example, the account level data contain information on total spending on the credit card in a given month but do not have a breakdown of that spending. This means we were not able to determine from the account level data whether consumers were using one card to pay another card or other type of loan, or whether consumers were keeping up with their household bills by using credit cards to pay rent and mortgage payments and other essential expenditure.

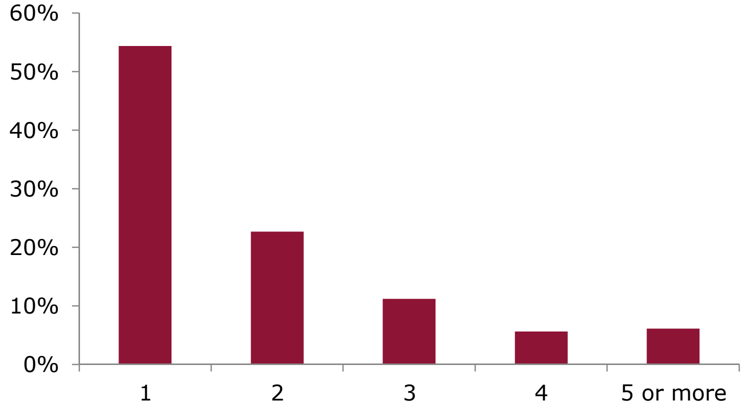
Consumers holding multiple credit cards

Overall, 54% of consumers have just one credit card, with 23% having three or more credit cards. Lower risk consumers tend to hold more cards on average than higher risk groups.

74. As set out in the interim report, we estimate that in January 2015[12], around 46% of credit cardholders held two or more cards, that is approximately 14 million cardholders. Figure 23 breaks these data down by number of cards held.

[12] This is a single point in time estimate, to ensure the cards were being held simultaneously.

Figure 23: Distribution of number of cards per cardholder, January 2015

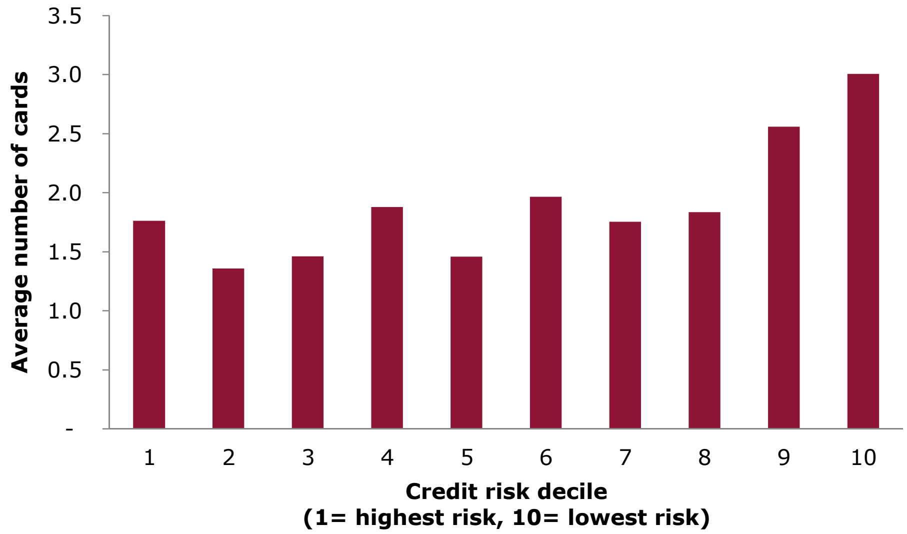


Source: FCA estimates based on data from a credit reference agency

75. This analysis is based on data obtained for the credit card market study from a credit reference agency. We requested a list of all UK customers who have held at least one personal – (i.e. non-business) - credit card account over the period 1 January 2010 to 31 January 2015. For the purposes of this analysis, we looked at the accounts held by consumers on 1 January 2015. This gave approximately 29 million consumers with approximately 56 million accounts.

76. When we further break this down into deciles based on the consumers' credit risk,[13] we find that the lowest risk 20% of consumers (deciles nine and ten) have significantly more cards on average than other cardholders, with an average of 2.7, as shown in Figure 24.

Figure 24: Average number of cards per cardholder, by credit risk, January 2015



Source: FCA estimates based on data from a credit reference agency

[13] These are based on the consumer's credit score in January 2015.

Multiple credit cards and potentially problem credit card debt

Most consumers with multiple cards are not caught by any of our indicators of potentially problematic credit card debt. The proportion that are caught is slightly higher than the proportion of all consumers (25% compared to 19%). Most of these consumers are only in potential problem credit card debt on one of their cards. However, we did find 7% (around one million consumers) in potential problem credit card debt on all their credit cards.

Those in persistent debt or making systematic minimum repayments have more cards on average than those classified as not being in problem credit card debt. However, many are in potentially problem credit card debt on only one of their credit cards – 46% of those in persistent debt and 73% of those making systematic minimum repayments.

77. To understand the extent to which consumers with multiple credit cards were struggling with potentially problem credit card debt we looked at the indicators of potentially problem credit card debt for each of their credit cards.

78. For this analysis we used the same random sample of approximately five million consumers from the account level data who had at least one credit card in 2014 that was used for estimating the scale and extent of potentially problem credit card debt in the interim report.

79. As the account level data do not cover all firms in the market, these data understate the number of consumers with multiple cards as there will be some consumers in the sample who have another credit card with a firm not in the sample. Table 1 provides a comparison of the number of cards held based on this sample, and the credit reference agency data used for Figure 23 above.

Table 1: How the sample understates number of consumers with multiple credit cards

No. of cards held	% of consumers – based on account level data sample	% of consumers – based on credit reference agency data
1	64%	54%
2	21%	23%
3	9%	11%
4	3%	6%
5 or more	2%	6%

Note: Numbers may not sum to 100% due to rounding.

80. We do not consider that this poses significant issues for the interpretation of the analysis we are undertaking given that the focus is primarily on understanding consumers with multiple credit cards and all those in the sample with two or more credit cards will have at least that number in reality. When we provide estimates of the number of consumers in a particular situation we have used the estimates of number of consumers with multiple credit cards from the credit reference agency data to avoid under-estimation.

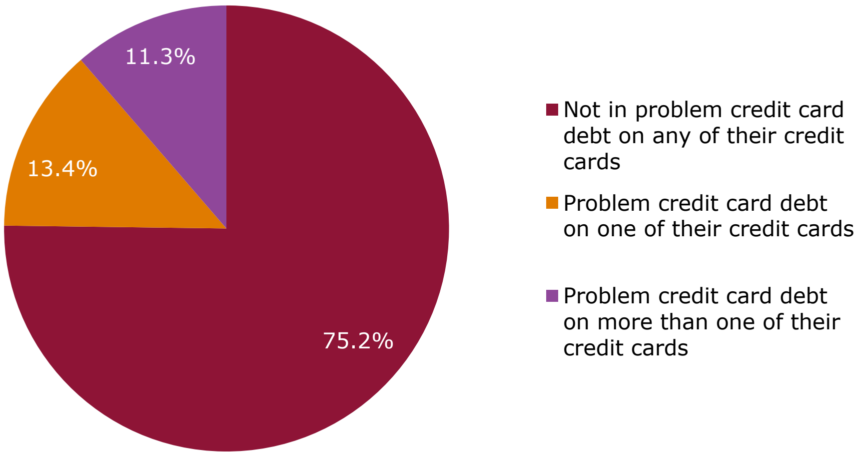
Problem credit card debt states across multiple cards

81. Using the account level data sample, we look at those consumers with two or more credit cards and consider their problem credit card debt state on each of their credit cards in 2014.

82. As shown in Figure 25, we find that for consumers with two or more credit cards, three-quarters (approximately 11 million consumers)[14] were not in potentially problem credit card debt on any of their credit cards. Of those that were, most were in potentially problem credit card debt on only one of their credit cards.

83. We estimate that approximately 7% of consumers with multiple credit cards were in potentially problem credit card debt on all their credit cards. This comprises of around 700,000 consumers with two credit cards and around 300,000 consumers with three or more credit cards.

Figure 25: Extent to which consumers with multiple credit cards were captured classified as being in potentially problem credit card debt, 2014



Source: FCA estimates based on a sample of account-level data

84. When we look at consumers with three or more credit cards, we find that:
- 71% (approximately 5.1 million consumers) were not in potentially problem credit card debt on any of their credit cards
- 13% (approximately 900,000 consumers) were in potentially problem credit card debt on only one of their credit cards
- 16% (approximately 1.1 million consumers) were in potentially problem credit card debt on more than one of their credit cards.
- 5% (approximately 300,000 consumers) were in potentially problem credit card debt on all their credit cards

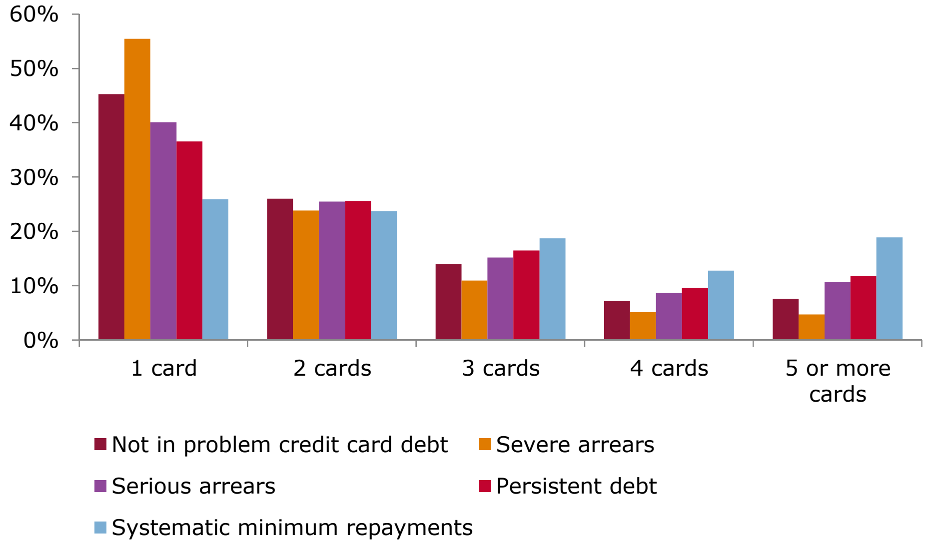
[14] This estimate for the number of consumers is calculated as follows: from the credit reference agency data we estimate that there were around 31 million consumers who held a credit card in 2014. The figures presented in Table 1 show that 46% of these consumers held multiple cards, that is, around 14 million consumers. Our analysis shows that 75% of consumers with two or more credit cards were not in potential problem credit card debt. 75% of 14 million gives us our estimate of 11 million consumers. The subsequent estimates for the number of consumers in a particular group were calculated in the same way.

85. This analysis shows that most consumers with multiple cards were not caught by any of our indicators of potentially problem credit card debt. The proportion that were caught is only slightly higher than the proportion of all consumers (25% compared to 19%).

Number of cards by potential problem credit card debt states

86. Another way of looking at this issue is to consider the number of cards held by those identified by our indicators as being in potentially problem credit card debt. Figure 26 shows for each potential problem credit card debt state the proportion of consumers with different numbers of credit cards.

Figure 26: Distribution of number of credit cards, by potential problem credit card debt indicator, January 2015



Source: FCA estimates based on a sample of account-level data

Note: For each of the problem credit card debt indicators the figures for 1 card, 2 cards, 3 cards, 4 cards and 5 or more cards will sum to 100%. This figure does not mean that 55% of consumers with one card were in severe arrears, but rather that 55% of consumers in severe arrears have one card. The absolute number of consumers in each problem credit card debt states varies. For example, overall there were around 25 million consumers not in problem credit card debt and around 600,000 consumers in severe arrears.

87. Alongside this, we also looked at the extent of consumers' problem credit card debt across their multiple cards by their overall problem credit card debt state. These results are set out in Table 2 below.

Table 2: Extent to which consumers with multiple credit cards were classified as being in potentially problem credit card debt across their credit cards, 2014

Overall problem credit card debt state	% in problem credit card debt on one card	% in problem credit card debt on more than one card	% in problem credit card debt on all their cards
Severe arrears			
with 2 or more cards	39.7%	60.3%	44.9%
with 3 or more cards	25.3%	74.7%	29.0%

Overall problem credit card debt state	% in problem credit card debt on one card	% in problem credit card debt on more than one card	% in problem credit card debt on all their cards
Serious arrears			
with 2 or more cards	43.4%	56.6%	38.6%
with 3 or more cards	33.1%	66.9%	22.8%
Persistent debt			
with 2 or more cards	45.5%	54.5%	36.7%
with 3 or more cards	33.0%	67.0%	24.1%
Systematic minimum repayment			
with 2 or more cards	72.2%	27.8%	13.3%
with 3 or more cards	65.7%	34.3%	5.3%

Source: FCA analysis of a sample of account level data

88. Table 3 shows for those consumers who have multiple cards, and overall were classified as being in severe or serious arrears, the extent to which they were in arrears across their cards.

Table 3: Extent to which consumers with multiple credit cards were classified as being in arrears across their credit cards, 2014

Overall problem credit card debt state	% in arrears on one card	% in arrears on more than one card	% in arrears on all their cards
Severe arrears			
with 2 or more cards	56.4%	43.6%	29.2%
With 3 or more cards	43.1%	56.9%	14.2%
Serious arrears			
with 2 or more cards	71.4%	28.6%	15.8%
with 3 or more cards	63.3%	36.7%	5.2%

Source: FCA analysis of a sample of account level data

89. Considering the results in Figure 26 and Tables 2 and 3, we find that consumers in severe arrears have fewer credit cards on average than those not in problem credit card debt (this is likely to be due in part to lower risk consumers being more likely to have multiple credit cards), with 55% of those in severe arrears having only one credit card. However, of those with multiple cards who were classified as being in severe arrears, 60% were in some form of problem credit card debt on more than one of their cards and over 40% were in arrears on more than one of their cards.

90. In contrast, consumers that our indicators of potential problem credit card debt classify as in persistent debt or making systematic minimum payments have more

cards on average than those not in potential problem credit card debt. However these consumers tend to be in potential problem credit card debt on only one of their credit cards - over 70% of consumers with multiple credit cards classified as making systematic minimum payments were only making systematic minimum payments on one of their cards. For those multiple cardholders classified as in persistent debt, 46% were only in potentially problem credit card debt on one of their cards.

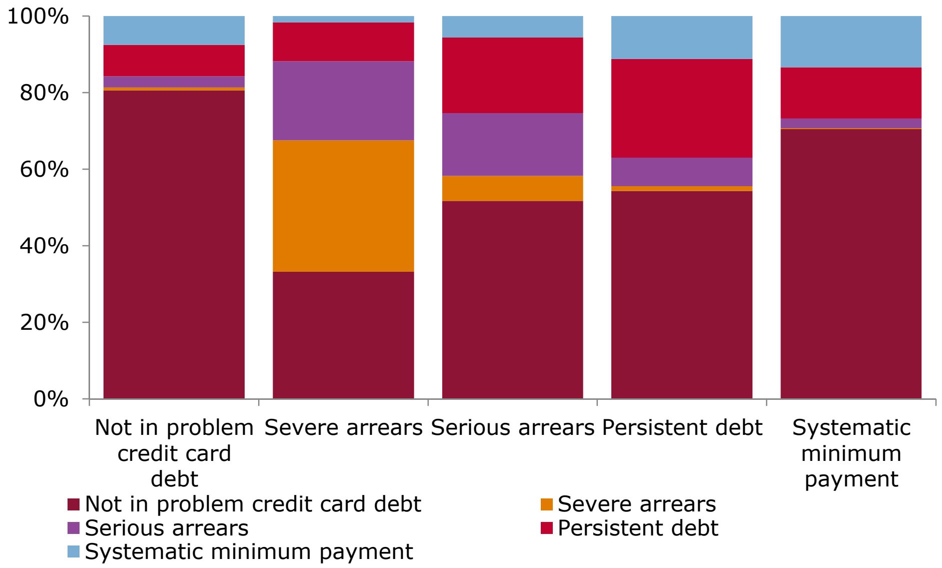
Relationship between problem credit card debt state on one card and problem credit card debt state on other cards

91. An alternative way of looking at this is to consider whether there is any 'correlation' in problem credit card debt state across accounts, where a consumer holds multiple cards.

92. We examined the case of consumers who have held multiple cards in 2014, and consider whether there is any relationship between the problem credit card debt state on one card, and whether the consumer experiences problem credit card debt on any of their other cards.

93. The analysis provides clear evidence that where consumers are not in problem credit card debt on one of their cards, there is a high probability of them being not in problem credit card debt on their other cards, as shown in Figure 27.

Figure 27: Distribution of potential problem credit card debt conditional on being a particular state on at least one account



Source: FCA analysis of a sample of account level data

94. Those making systematic minimum payments and, to a lesser extent those in persistent debt, on one card still have a high probability of being not in potential problem credit card debt on their other credit cards. By contrast, for those consumers in severe arrears on at least one of their cards there is a strong likelihood of arrears on one of their other cards.

Multiple credit cards, credit limits and outstanding balances

We found that the more cards held, the higher the total credit limit and the higher the levels of outstanding balance, although the average credit limit utilisation remains fairly constant and low across multiple cards at around 25%. In other words the evidence does not point to widespread high credit limit utilisation ('maxing out') across multiple credit cards. It does however suggest that those with multiple cards have a greater potential to rapidly amass greater credit card debt if they experience a negative life-event.

Consumers classifed as in potential problem credit card debt who hold multiple credit cards have on average higher outstanding balances than those consumers classifed as in potential problem credit card debt who hold only one credit card.

95. We also considered whether those with more credit cards have higher total credit limits and higher outstanding balances.

96. For this analysis we continue to use the same random sample of data used for the analysis of multiple credit cards and potential problem credit card debt above, and look at the total credit limit and outstanding balance across the consumers' cards.

97. We carried out this analysis in two different ways. Firstly, we looked at all accounts and then secondly we looked only at active accounts.

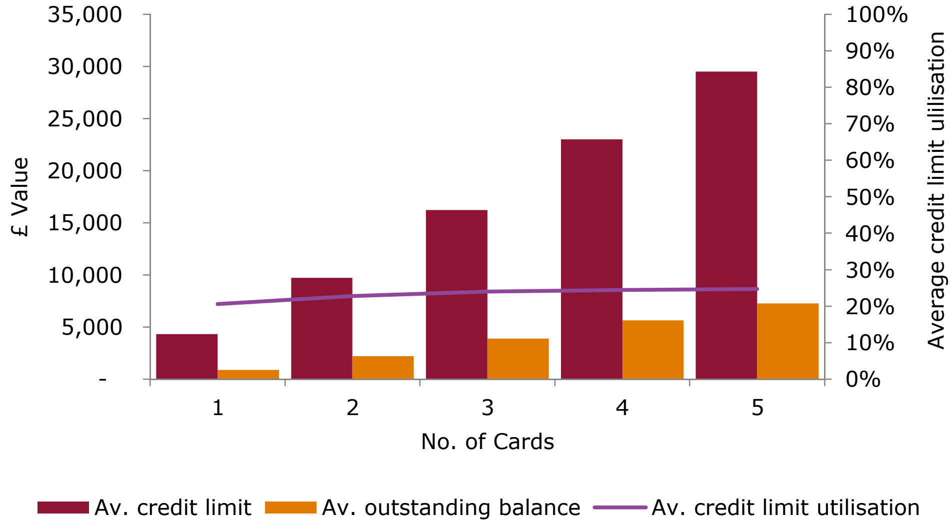
98. Account balances and credit limits were estimated as the monthly average over the year. Where a consumer held multiple credit cards, the total monthly outstanding balance and credit limit were calculated by summing across all accounts held in a particular month, and then averaged to produce an annual estimate. Inactive accounts were identified as those accounts for which no minimum payment was due on the account at any point in the year.

99. Account balances were calculated on the basis of the number of accounts a customer has open in a particular month. However, having opened or closed accounts during the year, the number of accounts held each month may vary over the year. Therefore, the number of accounts held is estimated as the average over the year.

All accounts

100. We find that the more cards held, the higher the total credit limit and the higher the levels of outstanding balance, although the average credit limit utilisation remains fairly constant and low at around 25% (see Figure 28 below). The average outstanding balance is estimated to be £1,133.

Figure 28: Average credit limit and outstanding balance, by number of cards, 2014



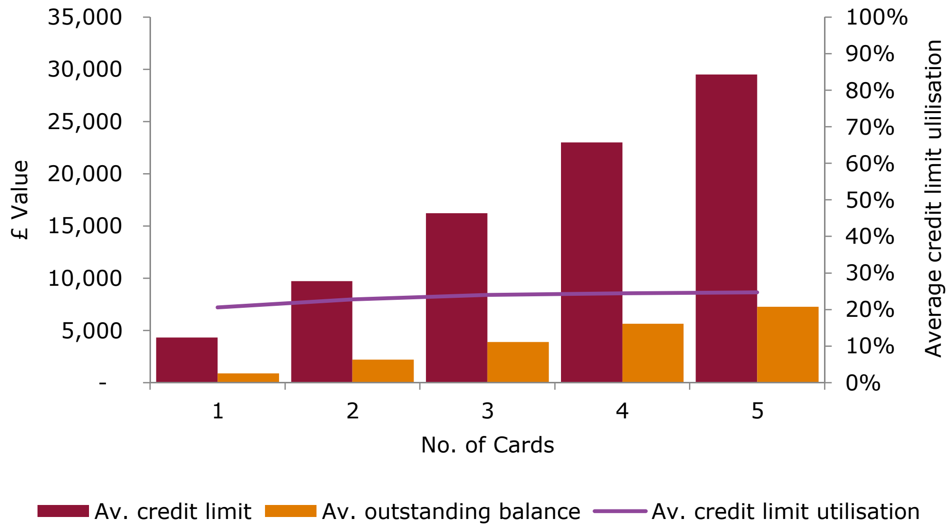
Source: FCA analysis based on a sample of account-level data

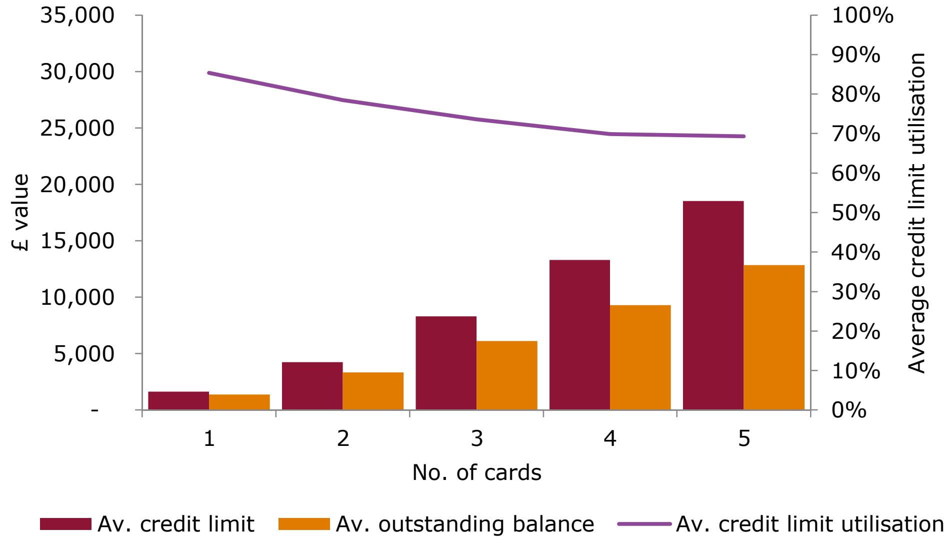
101. We then also analysed this broken down by the problem credit card debt indicators. Figures 29 to 33 below show the results for each of the problem credit card debt indicators. Overall, they show that:

- The pattern of the more credit cards held, the higher total credit limit and higher outstanding balance holds across the potentially problem credit card debt indicators.
- Credit limit utilisation is higher for those captured by the potentially problem credit card debt indicators although it decreases as the number of cards held increases.

102. As shown in Figure 29 those in severe arrears have lower average credit limits than other consumers, but noticeably higher credit limit utilisation than the overall average.

Figure 29: Average credit limit and outstanding balance, by number of cards, for those consumers classified as being in severe arrears, 2014

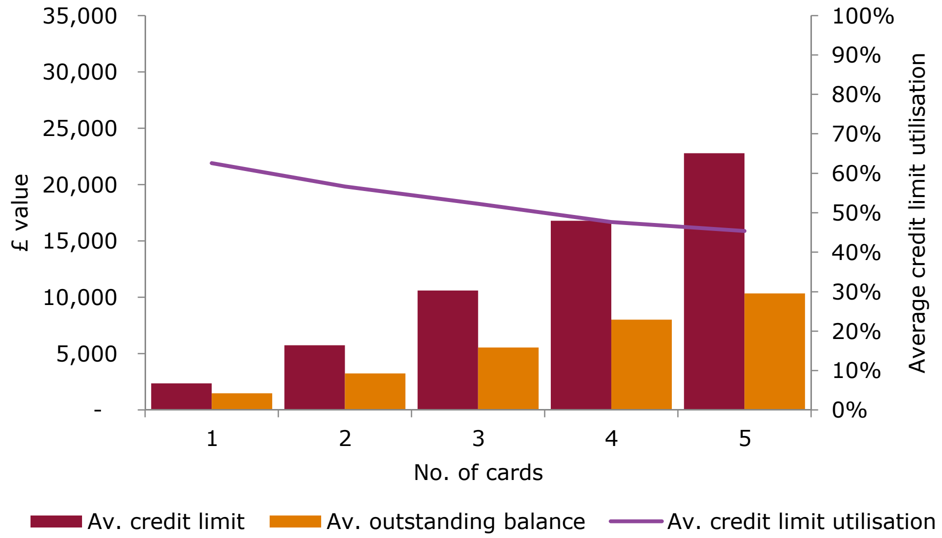




Source: FCA analysis based on a sample of account-level data

103. As shown in Figure 30 those in serious arrears have slightly lower average credit limits but slightly higher average outstanding balances than other consumers.

Figure 30: Average credit limit and outstanding balance, by number of cards, for those consumers classified as being in serious arrears, 2014

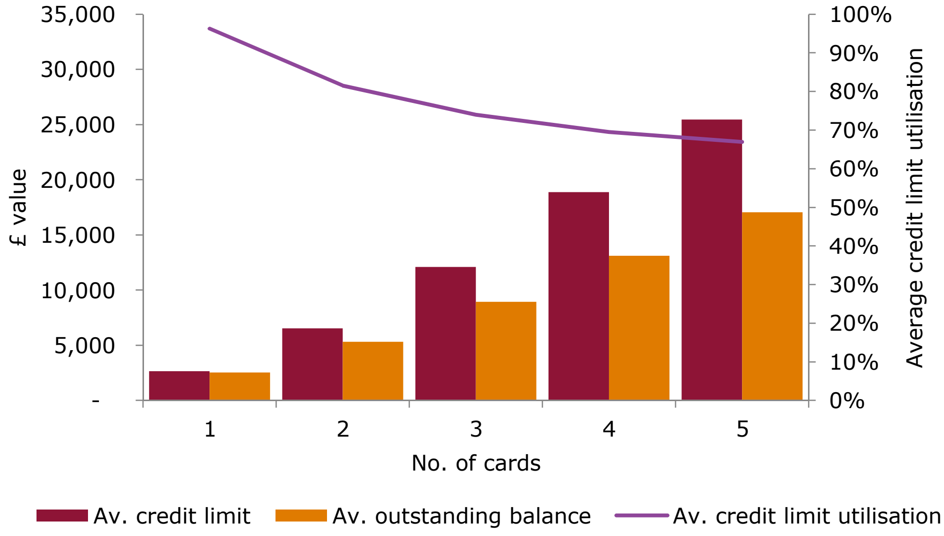


Source: FCA analysis based on a sample of account-level data

104. As shown in Figures 31 and 32, consumers classified as being in persistent debt or systematic minimum repayment have higher outstanding balances across their cards than other consumers.

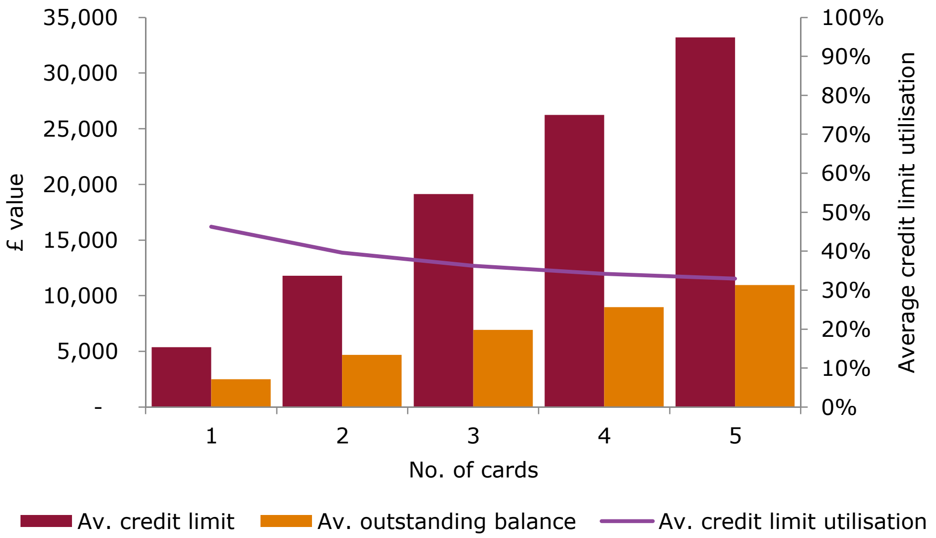
105. Those making systematic minimum repayment have lower average credit limit utilisation than consumers in other forms of potential problem credit card debt, although this in part reflects the higher average credit limits of these consumers.

Figure 31: Average credit limit and outstanding balance, by number of cards, for those consumers classified as being in persistent debt, 2014



Source: FCA analysis based on a sample of account-level data

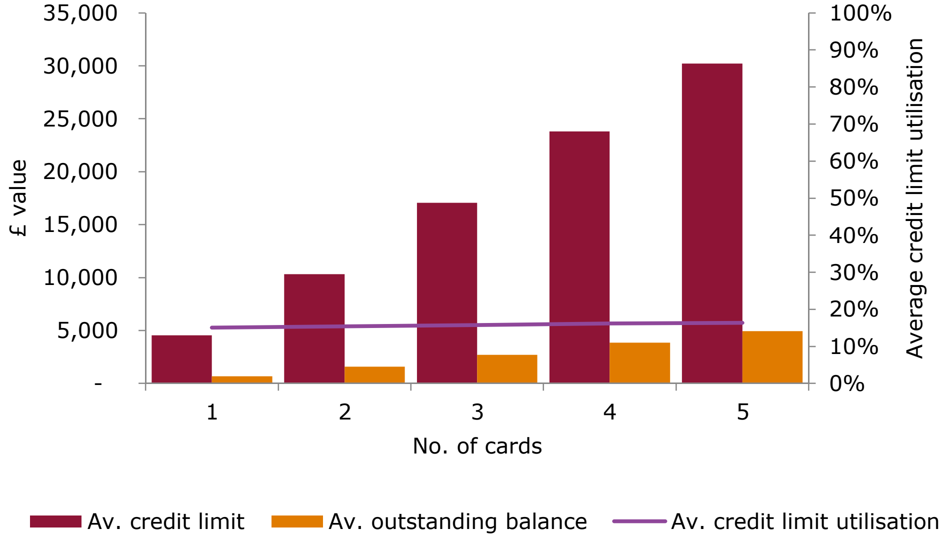
Figure 32: Average credit limit and outstanding balance, by number of cards, for those consumers classified as making systematic minimum repayments, 2014



Source: FCA analysis based on a sample of account-level data

106. As shown in Figure 33 those classified as being not in potential problem credit card debt have a lower average credit limit utilisation than those in potential problem credit card debt.

Figure 33: Average credit limit and outstanding balance, by number of cards, for those consumers classified as being not in problem credit card debt, 2014



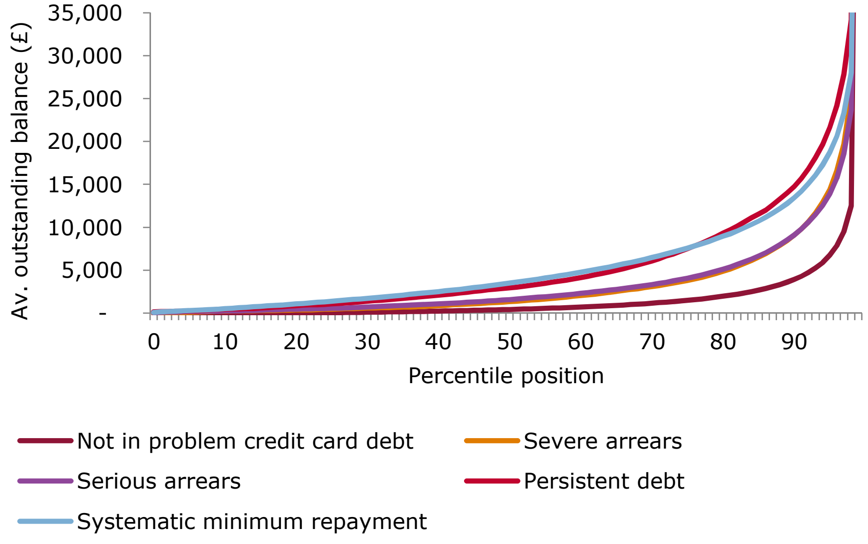
Source: FCA analysis based on a sample of account-level data

107. In recognition that these averages could be masking significant variation within these groups we looked at the distribution of total outstanding balance both by problem credit card debt indicator and by number of cards. We find that there is significant variation within these groups. For example:

- While the average outstanding balance for systematic minimum payers (regardless of the number of cards held) is £5,400, 15% have an average outstanding balance over £10,500 (see Figure 34).
- Consumers with one credit card have on average an outstanding balance of £890, but 10% of them have an outstanding balance of more than £2,500 which is greater than the average outstanding balance of those with two cards (see Figure 35).

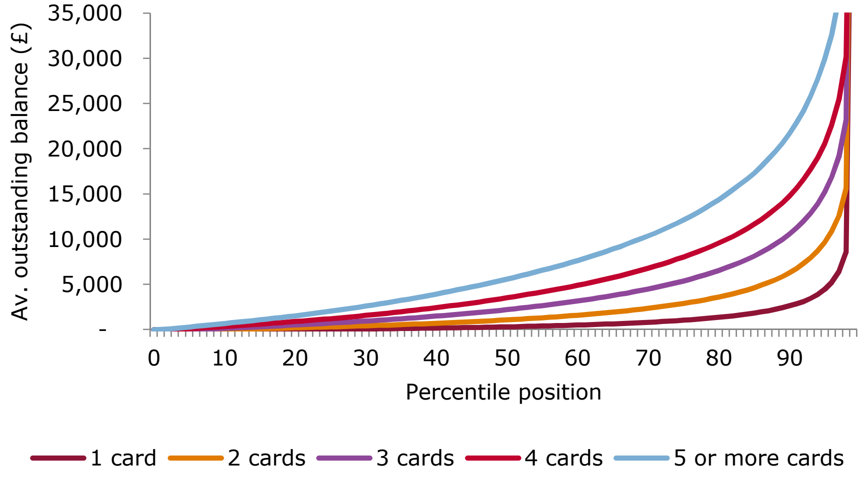
108. The following show the distribution of consumers' outstanding balance by problem credit card debt state. The lines show for a given value on the vertical axis the proportion of consumers (horizontal axis) that have an outstanding balance of equal to or less than that value. The flatter the lines the tighter the distribution. The closer the lines, the less variation between the problem credit card debt states.

Figure 34: Distribution of consumers' outstanding balance, by potential problem credit card debt indicator, 2014



Source: FCA analysis based on a sample of account-level data

Figure 35: Distribution of consumers' outstanding balance, by number of cards, 2014



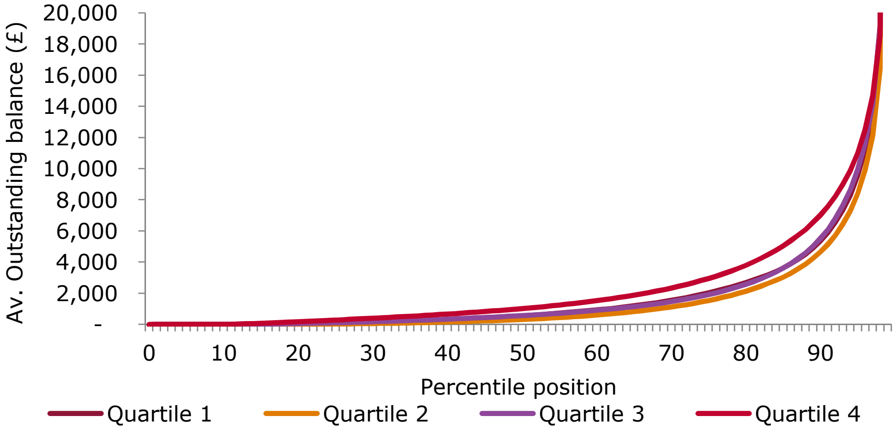
Source: FCA analysis based on a sample of account-level data

109. We have also segmented the data based on consumers' credit risk. It would be expected that consumers with a lower credit risk would have higher credit limits and outstanding balances.

110. To do this, we divide consumers into four equal groups (quartiles) based on their credit score in January 2015 with quartile 1 being the highest credit risk consumers and quartile 4 being the lowest risk consumers. The results need to be treated with some caution, as we are using an ex-post measure of credit risk this means that consumers who are in arrears will be in quartile 1, although they may not have been considered high risk before they ended up in arrears.

111. As Figure 36 shows, the lowest risk quartile has the highest average outstanding balances, although across all risk quartiles there were consumers with significantly higher than average outstanding balances.

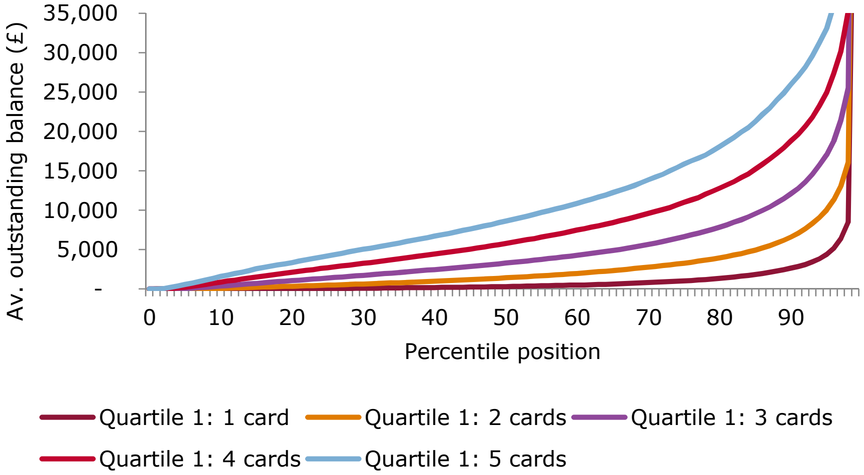
Figure 36: Distribution of consumers' outstanding balance, by credit risk quartile 2014



Source: FCA analysis based on a sample of account-level data

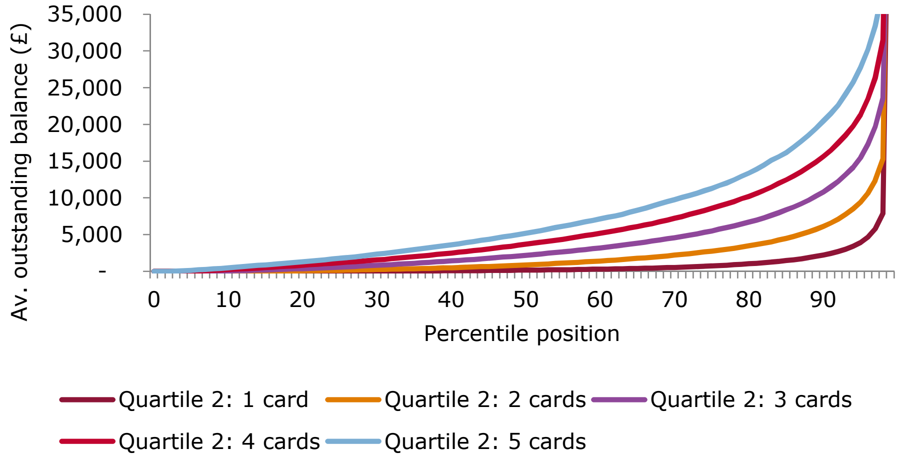
112. For each credit risk quartile, we then look at the average outstanding balance by number of cards held (see Figures 37 to 40 below). Consistent with the overall picture shown above, for each credit risk quartile the more cards held the higher the average outstanding balance although there remains significant variation with some consumers in a given credit risk quartile with one or two cards having a higher outstanding balance than some consumers with four or more cards in the same credit risk quartile.

Figure 37: Distribution of consumers' outstanding balance by number of cards held, for consumers in credit risk quartile 1, 2014



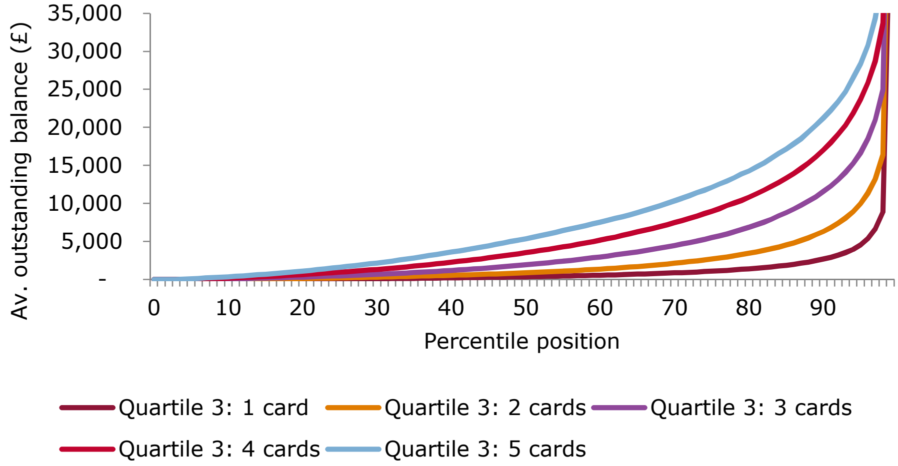
Source: FCA analysis based on a sample of account-level data

Figure 38: Distribution of consumers' outstanding balance by number of cards held, for consumers in credit risk quartile 2, 2014



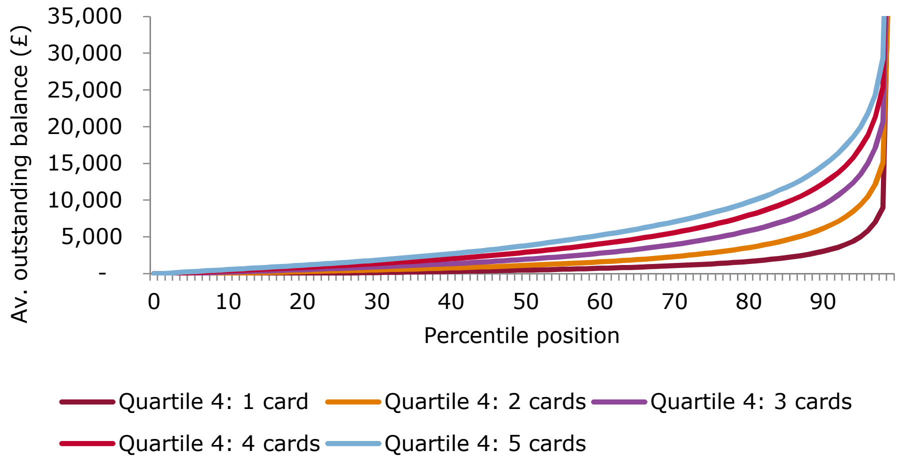
Source: FCA analysis based on a sample of account-level data

Figure 39: Distribution of consumers' outstanding balance by number of cards held, for consumers in credit risk quartile 3, 2014



Source: FCA analysis based on a sample of account-level data

Figure 40: Distribution of consumers' outstanding balance by number of cards held, for consumers in credit risk quartile 4, 2014



Source: FCA analysis based on a sample of account-level data

113. Overall, while the evidence does not point to widespread high credit limit utilisation across multiple credit cards it does show that:

- Consumers with multiple credit cards tend to have larger total credit limits compared with other consumers with a similar credit risk, although some consumers have large credit limits on a single card. These consumers therefore have a greater potential to amass large credit card debt in the event of a negative life-event.
- Consumers classified as in potential problem credit card debt who hold multiple credit cards have on average higher outstanding balances than those consumers likewise classified but who hold only one credit card.

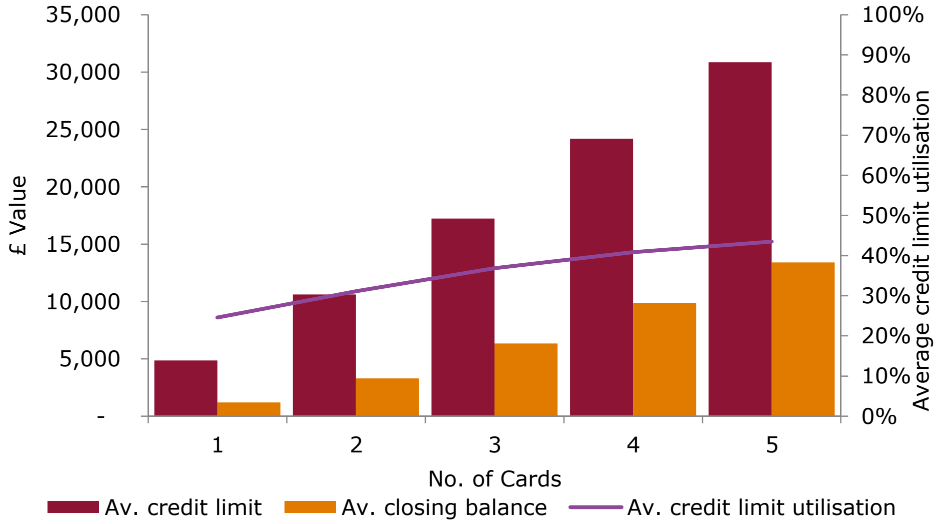
Active accounts

114. The analysis presented above looks at all credit cards held by consumers, including inactive accounts, that is, accounts where no payment was required in 2014. We consider that is the appropriate approach, because a consumer can use an inactive card at any time and that credit limit remains available to them, even if they have not used it recently.

115. However, the inclusion of inactive accounts reduces the average outstanding balance figures for each number of credit cards held – as set out above, we estimate the average outstanding balance on all accounts is £1,133 while if we remove inactive accounts this increases to £1,590.

116. We therefore also re-ran the analysis excluding inactive accounts.[15] We find that the more cards used by a consumer, not only is the total credit limit and the average levels of outstanding balance higher, but the average credit limit utilisation also increases (see Figure 41).

Figure 41: Average credit limit and outstanding balance, by number of active cards, 2014

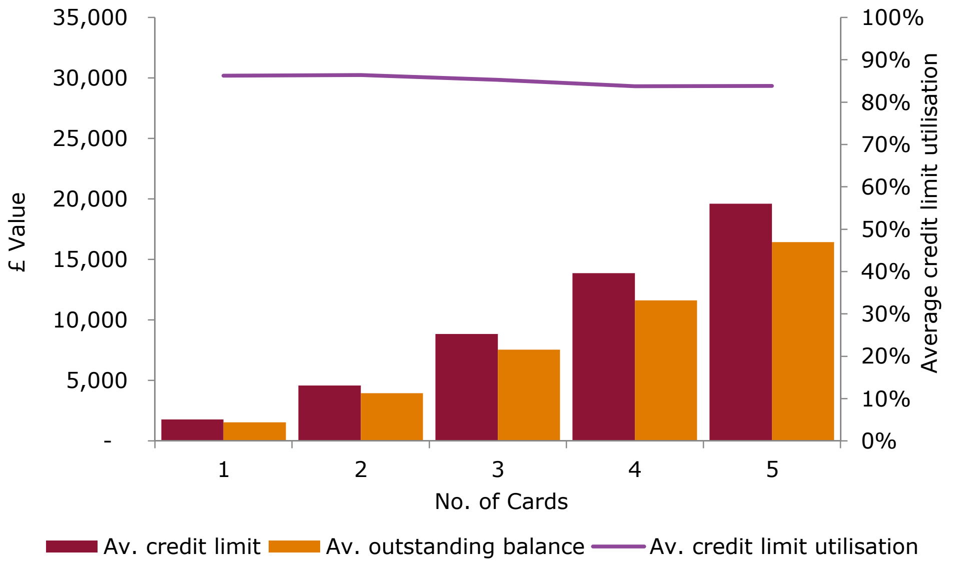


Source: FCA analysis based on a sample of account-level data

[15] In practice, this means that if a consumer has three credit cards but one of them is inactive, then we would classify them for the purposes of this 'active card' analysis has having only two credit cards. This results in there being fewer consumers being classified as having multiple credit cards.

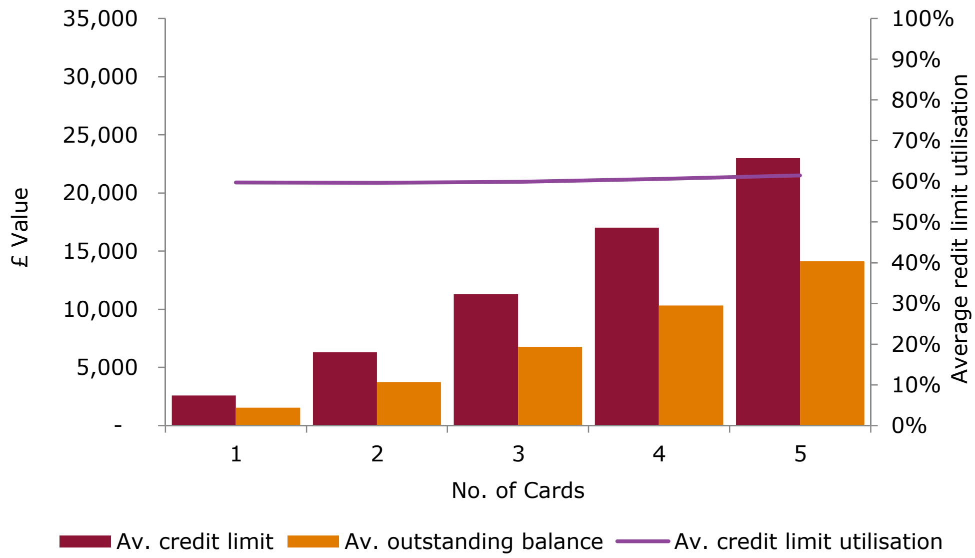
117. As before, we then broke this down by the indicators of potential problem credit card debt (see Figures 42 to 46 below). These show that most of the increase in outstanding balances and credit limit utilisation is driven by consumers classified as being not in problem credit card debt.

Figure 42: Average credit limit and outstanding balance, by number of active cards, for those consumers classified as being in severe arrears, 2014



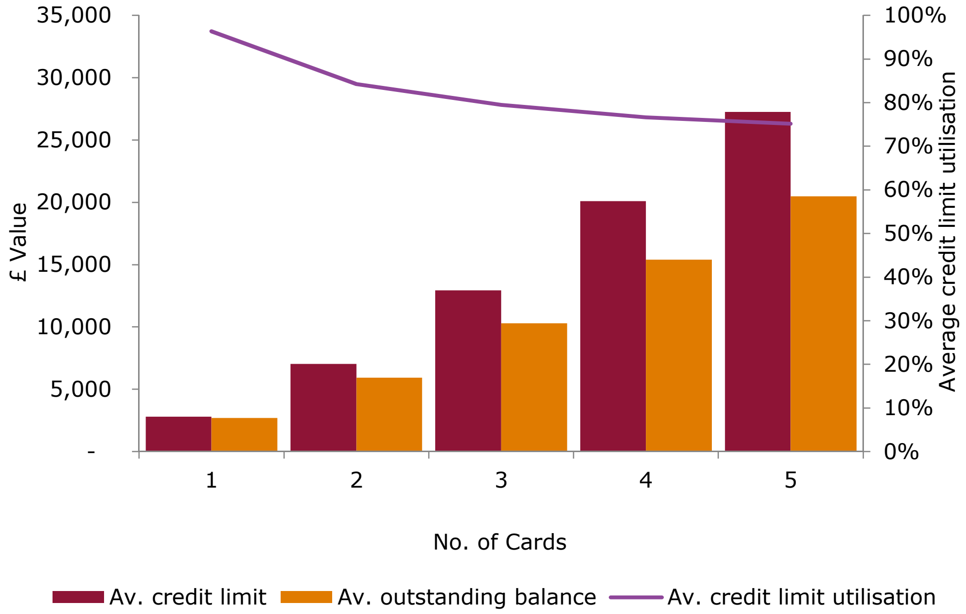
Source: FCA analysis based on a sample of account-level data

Figure 43: Average credit limit and outstanding balance, by number of active cards, for those consumers classified as being in serious arrears, 2014



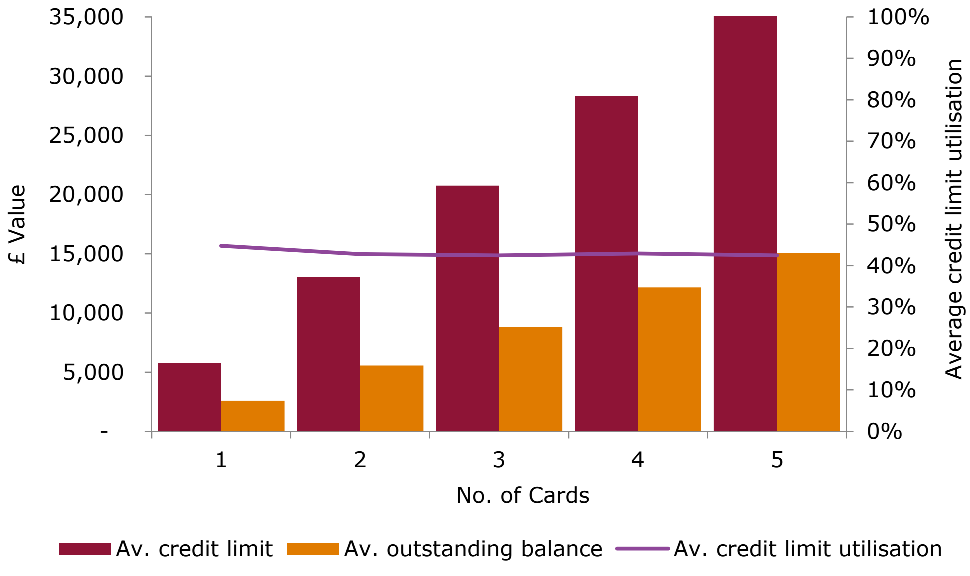
Source: FCA analysis based on a sample of account-level data

Figure 44: Average credit limit and outstanding balance, by number of active cards, for those consumers classified as being in persistent debt, 2014



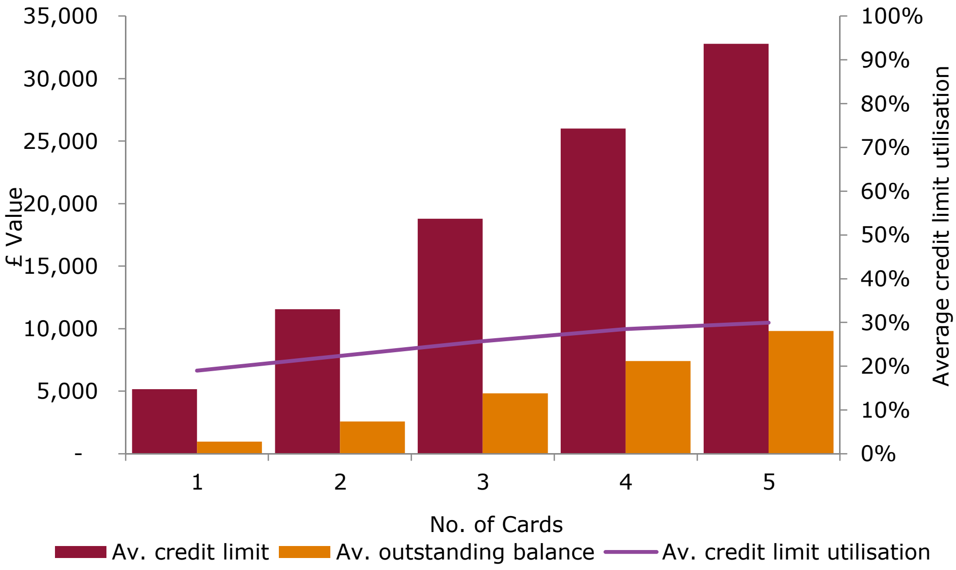
Source: FCA analysis based on a sample of account-level data

Figure 45: Average credit limit and outstanding balance, by number of active cards, for those consumers classified as making systematic minimum repayments, 2014



Source: FCA analysis based on a sample of account-level data

Figure 46: Average credit limit and outstanding balance, by number of active cards, for those consumers classified as being not in problem credit card debt, 2014



Source: FCA analysis based on a sample of account-level data

Sensitivity analysis of the indicators of potential problem credit card debt

The further sensitivity analysis we have carried out shows that while the number of consumers captured by the indicators varies as the thresholds adjust, the overall number of consumers identified as being in potentially problem credit card debt does not shift to an extent that would significantly alter our concern regarding potential problem credit card debt.

We therefore continue to regard the indicators of potentially problem credit card debt used in the interim report as appropriate for the further analysis that we are undertaking for this final report.

Introduction

118. As discussed above, in the interim report we set out a series of indicators to assess the scale and nature of potentially problem credit card debt. The choice of thresholds, particularly for the persistent debt and systematic minimum repayment indicators, involved subjective judgement. We chose these indicators based on a review of the academic literature, existing research and consumer surveys, and our own analysis and understanding of the market.

119. The indicators were each based on data over a 12 month period to December 2014, and were defined as follows:

- **Severe arrears**: consumers that have been charged-off[16] or have been at least six months in arrears.[17]

[16] Charged-off refers to debt that issuers have deemed unlikely to be collected and that they have written off on their balance sheet. Consumers whose accounts have been charged-off have not been relieved of their repayment requirement, and charged-off accounts are often pursued via collection processes.

- **Serious arrears**: consumers who have missed three or more repayments, and are either in or have been in arrears.[18]
- **Persistent debt**: consumers that have an average credit limit utilisation of 90% or more while also incurring interest charges.[19]
- **Systematic minimum repayments**: consumers that have made nine or more minimum repayments, while also incurring interest charges.

120. For the interim report, we conducted a number of sensitivity checks to assess the impact of our choices on the results. These were set out in Annex 6 (paragraphs 25 and 26) of the interim report:

- *The results were consistent when replicated for the 12 months to December 2013 (i.e. one year earlier). We found that 18.2% of consumers were identified by our indicators compared to 18.7% in the 12 months to December 2014. The proportion of consumers identified by each individual indicator was also broadly the same.*
- *The results were similar when using different thresholds for the persistent debt and systematic minimum repayment indicators. Decreasing the credit limit utilisation threshold from 90% to 75% and the threshold for systematic minimum payers from nine months to six, and increasing the definition of a 'minimum repayment' by 10%, increases the proportion of consumers identified by the persistent debt indicator from 6.6% to 12.0% and those identified by the systematic minimum repayment from 5.2% to 6.2%.*
- *We also considered an alternative definition of the persistent debt indicator. This alternative was based on the value of debt over time (i.e. in £) rather than credit limit utilisation (i.e. the 90% threshold described earlier) and time horizons over one year. In the absence of reliable income data, we considered a range of different thresholds and settled on a threshold of £500 as a base case.[20] Using this approach, we found that 11.7% of consumers maintained at least £500 of credit card debt for the majority of months (75%) during a two year period (8.9% of consumers over a three year period). Comparing these consumers to those identified by our four baseline indicators, 4.2 percentage points (3.1 percentage points over a three year period) of consumers are additionally identified by this alternative definition and were not identified when using our baseline indicators. As expected, using a lower threshold for the value of debt returns a higher proportion (and vice versa for higher thresholds).[21]*

121. Following the feedback received, we have included in this final report further sensitivity analysis of the persistent debt and systematic minimum repayment

[17] We noted that the distinction between this category and the serious arrears category is partially driven by firm practices and their decision of when to charge-off a consumer. Some firms will do this sooner than others. This will mean that there is a degree of overlap between these two categories that the data does not reflect.

[18] We chose three repayments as the threshold rather than one or two repayments as we considered that the latter two thresholds may capture a number of consumers that simply missed repayments due to inattention.

[19] This was calculated by finding the credit limit utilisation each month and then taking a simple average across months. We also considered an alternative measure of persistent debt which was based on the actual value of debt over time rather than credit limit utilisation. In particular, we were interested to see how sustained levels of credit card debt are, and whether there was issue with consumers being unable pay-down their outstanding balance once it had reached a particular level.

[20] Ideally the value of debt threshold would take into account the income of a consumer, reflecting that the burden of a particular level of debt will depend on your ability to repay and purchase other goods.

[21] The impact of using alternative thresholds is as follows. For a threshold of £250, the comparable results to earlier are: 13.4% had at least £250 of outstanding debt over two years of consumers (10.0% of consumers over three years), of which five percentage points (3.6 percentage points) were not identified by our baseline indicators. For a threshold of £1000, the comparable results to earlier are: 9.3% had at least £1,000 of outstanding debt over two years of consumers (7.1% of consumers over three years), of which 3.1 percentage points (2.3 percentage points) were not identified by our baseline indicators.

indicators of potential problem credit card debt. In each case we look at the 12 months of data to December 2014.

Changing the thresholds

122. Firstly, we have undertaken sensitivity analysis of the persistent debt and systematic minimum repayment indicators by considering the change in the number of consumers captured by the indicators when we change the thresholds for these indicators.

123. We have simulated three sets of sensitivities:

- Systematic minimum repayment: varying the numbers of minimum payments in the 12 month period from 12 to six times
- Persistent debt: varying the credit limit utilisation (CLU) threshold from 100% to 75%
- Adjusting both of these together.

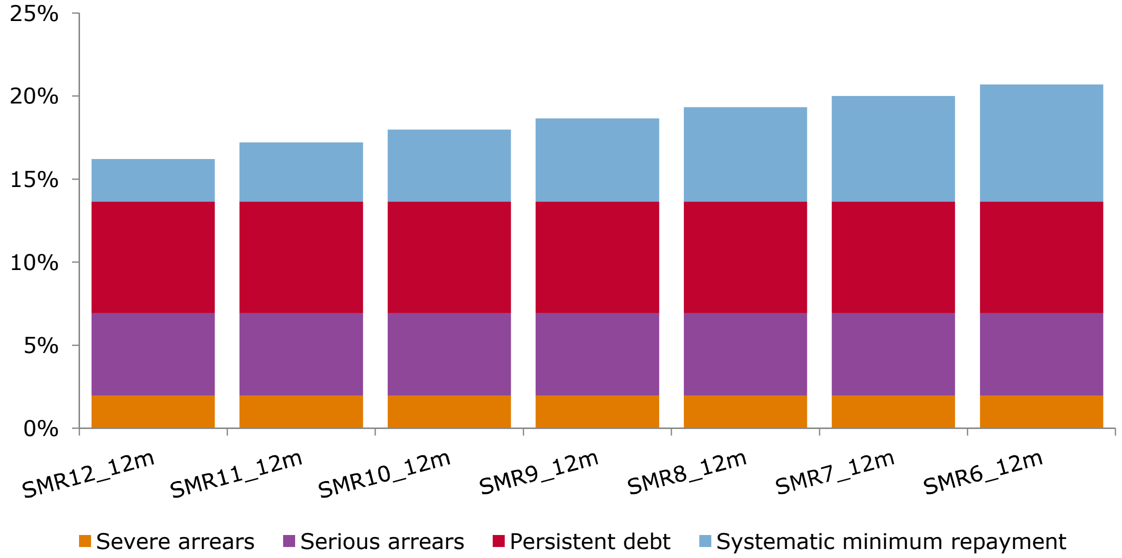
Systematic minimum repayment

124. When we adjust the threshold for the systematic minimum repayment indicator there is no change in the number of consumers being captured by the other three indicators because the systematic minimum repayment indicator is the lowest in the hierarchy of indicators.

125. As can be seen in Figure 47:

- reducing the number of minimum payments in the 12 month period required to trigger the indicator from nine to six, results in the percentage of consumers captured by the indicator rising from 5.2% to 7.1% (an increase of approximately 600,000 consumers to a total of approximately 2.2 million consumers)
- increasing the number of minimum of minimum payments in the 12 month period required to trigger the indicator from nine to twelve, results in the percentage of consumers captured by the indicator falling from 5.2% to 2.6% (an decrease of approximately 800,000 consumers to a total of approximately 800,000 consumers)

Figure 47: Sensitivity analysis of the systematic minimum repayment indicator



Source: FCA analysis of a sample of account level data

Note: The column titles are in the form SMRx_12m. This means the systematic minimum repayment indicator threshold has been set at consumers making x or more minimum repayments in the 12 month period, while also incurring interest charges. So SMR9_12m means the systematic minimum repayment indicator threshold has been set at consumers that have made nine or more minimum repayments, while also incurring interest charges.

Persistent debt

126. When we adjust the threshold for the persistent debt indicator there is no change in the number of consumers being captured by the severe or serious arrears indicators because they are above persistent debt in the hierarchy of indicators.

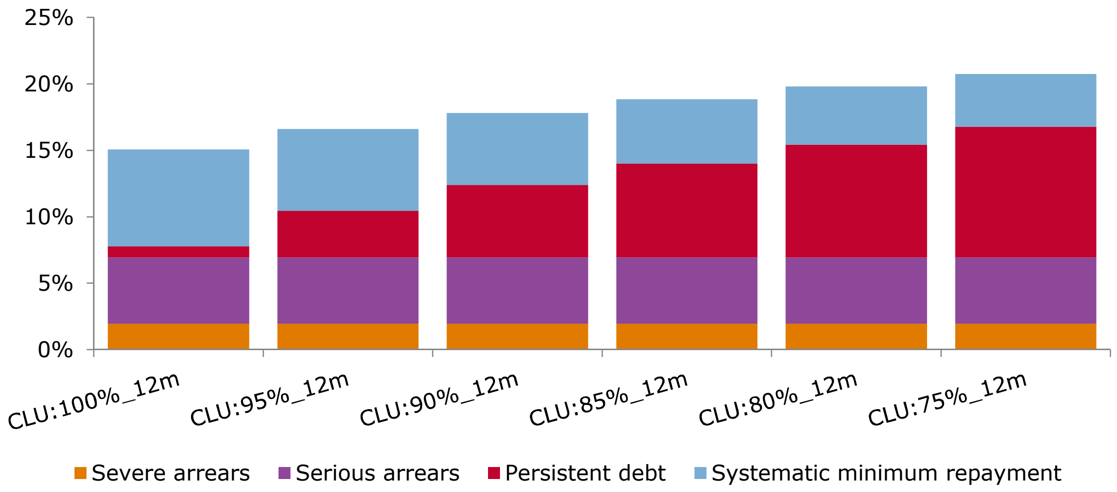
127. However, the number of consumers captured by the systematic minimum repayment indicator changes as the threshold for persistent debt changes. It will increase as the threshold for persistent debt rises because some of those no longer captured by the persistent debt indicator will be captured by the systematic minimum repayment indicator. Similarly, the number of consumers captured by the systematic minimum repayment indicator decreases as the threshold for persistent debt falls because some of those previously captured by the systematic minimum repayment indicator are now captured by the persistent debt indicator.

128. As can be seen in Figure 48 reducing the persistent debt threshold from an average credit limit utilisation of 90% to 75% increases the percentage of consumers captured by the indicator from 6.6% to 9.8% (an increase of approximately one million consumers to a total of approximately three million consumers). Overall, the percentage of consumers captured by the problem credit card indicators rises from 18.7% to 20.7% (an increase of approximately 600,000 consumers to a total of approximately 6.4 million consumers).

129. Figure 48 also shows that increasing the persistent debt threshold from an average credit limit utilisation of 90% to 95% decreases the percentage of consumers captured by the indicator from 6.6% to 3.5% (a decrease of approximately one million consumers to a total of approximately one million consumers). The reduction in the percentage of consumers captured by the problem credit card debt indicators is less dramatic, falling from 18.7% to 16.6% (a decrease of approximately 650,000 consumers to a total of approximately 5.2 million consumers) with many of the

consumers previously classified as being in persistent debt now being classified as being in systematic minimum repayment.

Figure 48: Sensitivity analysis of the persistent debt indicator



Source: FCA analysis of a sample of account level data

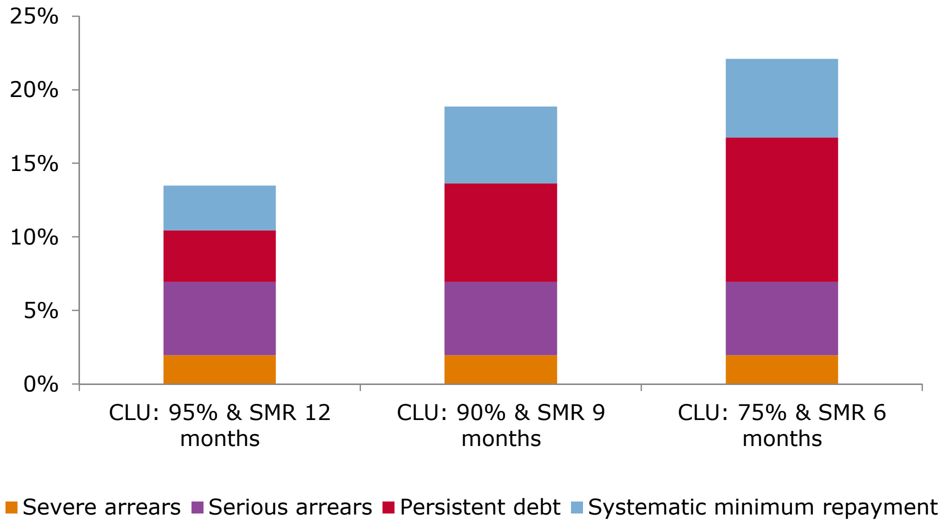
Note: The column titles are in the form CLUx%_12m. This means the persistent debt indicators threshold has been set at consumers than have an average credit limit utilisation of x% or more in the 12 month period, while also incurring interest charges. So CLU90%_12m means the persistent debt indicators threshold has been set at consumers than have an average credit limit utilisation of 90% or more in the 12 month period, while also incurring interest charges.

Adjusting persistent debt and systematic minimum repayment indicators simultaneously

130. We also adjusted both the persistent debt and systematic minimum repayment indicators simultaneously.

131. As shown in Figure 49 below, this leads to an upper-bound of 22.1% of consumers captured by these indicators and a lower-bound of 13.5% of consumers captured by these indicators.

Figure 49: Simultaneous sensitivity analysis of the persistent debt and systematic minimum repayment indicators



Source: FCA analysis of a sample of account level data

Alternative measures of potential problem credit card debt

132. We have considered two alternative measures of potential problem credit card debt, as further sensitivity tests. The first introduces a minimum interest threshold in addition to a threshold on credit limit utilisation and systematic minimum repayments. The second looks at consumers' repayments as a proportion of the minimum payment required.

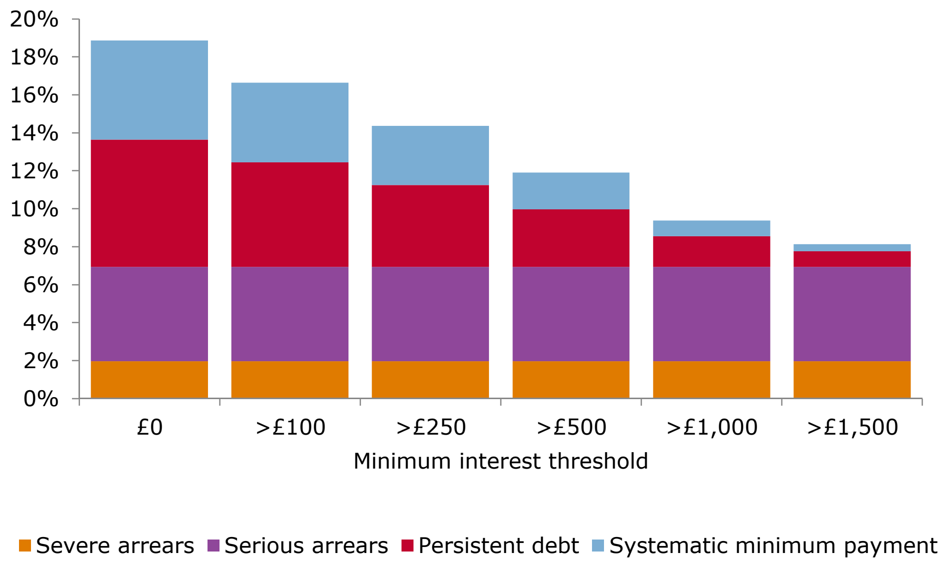
Minimum interest

133. The indicators for persistent debt and systematic minimum repayments used in the interim report are conditional on consumers incurring interest charges. This was to avoid capturing consumers who were making systematic minimum repayments or had a high credit limit utilisation but were not incurring any interest because they were on a 0% balance transfer or purchase rate.

134. However, this could mean that the indicators capture a number of consumers who were incurring only small amounts of interest. To explore this further we have modelled a series of alternative scenarios with the persistent debt and systematic minimum repayment indicators having an added minimum interest threshold.[22]

135. Figure 50 below shows the proportion of consumers categorised as being in potential problem credit card debt under these alternative scenarios. Even when there is a minimum interest threshold of £500 on the persistent debt and systematic minimum payment indicators,[23] there are still 12% of consumers that are categorised as being in potential problem credit card debt.

Figure 50: Proportion of consumers categorised as being in potential problem credit card debt under alternative scenarios



Source: FCA analysis of a sample of account level data

Note: The minimum interest threshold only applies to the persistent debt and systematic minimum payment indicators not the severe arrears and serious arrears threshold. The minimum interest threshold is applied at the account level and

[22] We have left the indicators of severe and serious arrears unchanged, that is, without a minimum interest charged threshold.

[23] The minimum interest threshold applies to the card. Therefore consumers may be incurring more interest across their various card holdings.

then the consumer is assigned to the 'worst' problem credit card debt state across their cards. This means that the total interest incurred by the consumer across their card holdings may be higher.

Repayment ratio

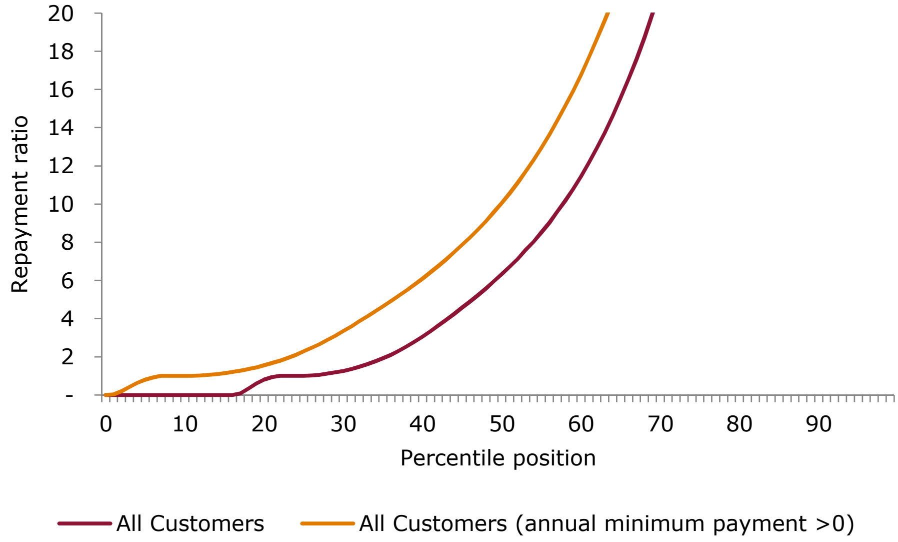
136. One industry respondent to the interim report suggested the 'repayment ratio' as an alternative measure of persistent debt and slow repayment. The repayment ratio is calculated as the total repayments made relative to the total minimum payments contractually required over a 12 month period, so a repayment ratio of one would mean that the consumer had paid exactly the minimum required over the 12 month period.[24]

$$Repayment\ Ratio = \frac{\sum_{t=1}^{n} Repayments\ paid_t}{\sum_{t=1}^{n} Minimumpayments\ required_t}$$

137. For this analysis we again use the random sample of approximately five million consumers used for the indicators of potential problem credit card debt in the interim report. Our analysis is based on data over 12 months to December 2014.

138. Figure 51 shows the distribution of repayment ratios for all consumers in our sample, alongside the distribution of repayment ratios for all consumers excluding those whose annual minimum payment was zero, that is effectively those who did not use their card. This suggests that around 16% of consumers did not use their credit card in 2014.

Figure 51: Distribution of repayment ratios at consumer level, 2014



Source: FCA analysis of a sample of account level data

139. Figure 52 shows the distribution of repayment ratios for consumers classified as by our indicators as being in persistent debt, systematic minimum repayment and not in problem credit card debt.

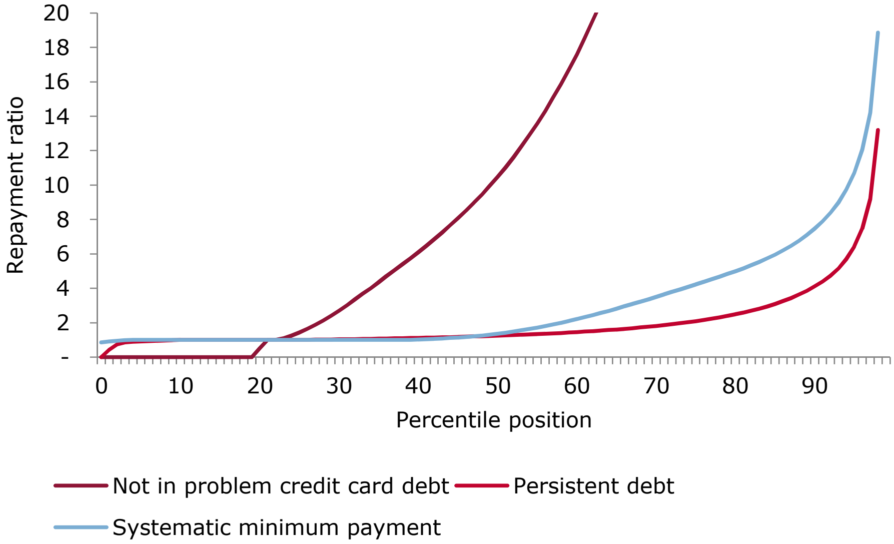
140. This shows that some consumers captured by our persistent debt and systematic minimum repayment have a large repayment ratio and therefore were probably not struggling with potentially problem credit card debt. For example, this may include consumers who make the minimum repayment in nine months in the year, but then pay significantly more than the minimum in the other three months.

[24] The maximum the repayment ratio can be will depend on a firms' minimum repayment policy. In the case where a consumer pays the balance in full every month, has incurred no interest, fees or charges and the minimum repayment is equal to one per cent of the amount outstanding then their repayment ratio would be 100.

141. We find that only 10% of those consumers classified as in persistent debt in 2014 (that is, around 200,000 consumers) and a quarter of those classified as making systematic minimum repayments (that is, around 400,000 consumers) had a repayment ratio over four. This compares to 50% of those not in problem credit card debt having a repayment ratio above 10.5. This indicates that very few of the consumers in persistent debt were spending and paying down significant sums.

142. We also find that some consumers not captured by our problem credit card debt indicators have a very low repayment ratio and therefore may be struggling with potentially problem credit card debt. For example, this may include consumers who pay just above the minimum repayment each month.

Figure 52: Distribution of repayment ratios for consumers classified by our indicators as being in persistent debt, making systematic minimum repayments or not being in problem credit card debt, 2014



Source: FCA analysis of a sample of account level data

143. Table 4 below considers for different repayment ratio thresholds, the number of consumers classified by our indicators as not being in problem credit card debt with a repayment ratio below that threshold[25], and the number of consumers with a repayment ratio above that threshold that were classified by our indicators as being in persistent debt or making systematic minimum repayments.

[25] Or more accurately between one and that repayment threshold.

Table 4: Repayment ratio and indicators of problem credit card debt

Repayment ratio threshold	No. of consumers classified as not in problem credit card debt with repayment ratio below threshold	No. of consumers classified as in persistent debt with repayment ratio above threshold	No. of consumers classified as making systematic minimum repayments with repayment ratio above threshold
1.25	820,000	1,000,000	820,000
1.5	1,200,000	770,000	750,000
2	1,700,000	530,000	660,000

Source: FCA analysis of a sample of account level data

Note: Figures rounded to two significant figures.

144. These figures show that based on a repayment ratio of 1.5 there were 1.2 million consumers that were not captured by our problem credit card debt indicators with a repayment ratio below 1.5 and 1.52 million consumers captured by our problem credit card debt indicators with a repayment ratio above 1.5.

145. This indicates that while our problem credit card debt indicators provide a reasonable estimate of the overall scale and extent of problem credit card debt, they may not always identify the consumers who are struggling most with problem credit card debt.

Conclusions

146. The further sensitivity analysis set out above shows that while the number of consumers captured by the indicators varies as the thresholds adjust, the overall number of consumers identified as being in potentially problem credit card debt does not shift to an extent that would significantly alter our concern regarding potential problem credit card debt.

147. We therefore continue to regard the indicators of potentially problem credit card debt used in the interim report as appropriate for the further analysis that we are undertaking for this final report. In developing any remedies we will give full consideration to the thresholds for applying any remedy to assess its appropriateness, taking into account consumers who would be covered by the remedy.

Financial Conduct Authority

25 The North Colonnade Canary Wharf
London E14 5HS
Telephone: +44 (0)20 7066 1000
Website: www.fca.org.uk