

Institution: University of Warwick		
Unit of Assessment: A4 – Psychology, Psychiatry and Neuroscience		
Title of case study: Informing the Financial Conduct Authority's Measures to Help Consumers Take Better Control of Their Spending		
Period when the underpinning research was undertaken: April 2009 – 31 July 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Neil Stewart	Professor	2003 - present
Period when the claimed impact occurred: 2014 – 2020		
Is this case study continued from a case study submitted in 2014? N		
<p>1. Summary of the impact (indicative maximum 100 words)</p> <p>There is £17 billion of credit card lending in the UK and around 1.6 million people who only make minimum repayments. Professor Stewart's research into consumer decision making has revealed that presenting minimum required payment information to consumers has a negative impact on repayment behaviour—it acts as an anchor that reduces the amount people repay—and the provision of additional information such as future interest cost and time needed to repay the loan has no substantial positive effect on repayments. Drawing on the research, banking regulator the Financial Conduct Authority introduced new rules in 2018 which mean card providers must now encourage consumers to repay more, with nudges at 18 and 27 months, and stronger action to clear the debt in three to four years. The total cost savings to customers is estimated to be between £310 million (GBP310,000,000) and £1.3 billion (GBP1,300,000,000) per year, impacting consumers, card firms, trade bodies and consumer groups. In addition, the FCA provided guidance for consumers outlining the real cost of making minimum repayments.</p>		
<p>2. Underpinning research (indicative maximum 500 words)</p> <p>Professor Neil Stewart is a leading international expert in behavioural and economic science. He served as a Professor of Behavioural Science in the Psychology Department from 1997-2017, then transferring to Warwick Business School in 2017 where he continues to work. Stewart draws on a mixture of methodologies, including laboratory experiments, field experiments, and econometric and data science techniques applied to large data sets, to understand decision making and behaviour in the real world. His work on consumer decision making has challenged prevailing theoretical accounts and shaped understanding of consumers' attitudes towards debt repayment, financial products, and social media financial advertising compliance. Stewart's research has been conducted in collaboration with key industry partners and policy makers, including UK Finance (the UK credit card industry body, formerly UK Cards), Argus (a data aggregation company), and the Financial Conduct Authority (hereafter the <i>FCA</i>, the UK body regulating the industry).</p> <p>From 2009-2010, Stewart led an ESRC-funded project titled "The psychology of credit card repayments" which explored the effect of removing the minimum payment information from credit card statements in a hypothetical repayment task. Consistent with the robust psychological phenomenon of "anchoring"—whereby arbitrary and irrelevant numbers bias people's judgements toward those numbers—Stewart's research revealed that removing the minimum payment substantially increases the amount people choose to repay by approximately 20% [3.1]. Follow-up research also replicated these results in larger and more representative samples, and demonstrated that presenting minimum required payment information has a negative impact on repayment behaviour. Finally, the provision of additional information such as future interest cost</p>		

and time needed to repay the loan has no substantial positive effect on repayments and does not reduce the detrimental effects of minimum payment information [3.2].

In related research, Stewart, along with Dr Hiroaki Sakaguchi (Department of Psychology, University of Warwick 2014-17), Professor John Gathergood (School of Economics, University of Nottingham) and Dr Joerg Weber (School of Economics, University of Nottingham 2015-2019, University of Exeter Business School 2019-), examined the determinants of actual consumer credit behaviour using a unique panel dataset where cards from different providers belonging to the same individual are linked. This work investigated how consumers avoided charges due to late payment, the most common type of credit card penalty fee. The results showed that penalty fees have no effect at all in helping people to remember to pay their credit card bills. Also, approximately 10% of consumers adopt direct debits to avoid forgetting minimum payments, and whilst this works, the reduction in fees is offset by the interest charged due to people neglecting to make larger manual repayments over and above the direct debit [3.3]. This single mechanism is important as it accounts for approximately 10% of the interest ever paid on credit cards. An important policy finding is that repayment delinquency is mostly caused by neglect or forgetting, and is only an indicator of financial distress when it is repeated over several months.

With Gathergood, Weber, and Professor Neale Mahoney (Chicago Booth School of Business), Stewart demonstrated that individuals share repayments across two cards in proportion to how much they owe on each card—a phenomenon called “balance matching”—which inevitably costs the consumer more money as they fail to pay down high interest debt first [3.4]. Further research, in collaboration with Gathergood and Professor George Loewenstein (Social and Decision Sciences, Carnegie Mellon University), analysed data from 1.8 million credit card accounts from industry aggregator Argus and revealed that consumers were much more happy to carry debt on durable items (e.g., a sofa, which yields utility over time), than debt on non-durable goods and services (e.g., a holiday), which were more often paid off in full [3.5]. The implication is that money is not treated as fungible, but instead that people engage a series of heuristics to take debt repayment decisions. These novel and important findings were used to inform the FCA’s Credit card market study via a report submitted to the FCA [3.6].

3. References to the research (indicative maximum of six references)

All research papers [3.1-3.5] were published in peer-reviewed journals

[3.1] **Stewart, Neil** (2009) *The cost of anchoring on credit-card minimum repayments*. Psychological Science, 20(1). pp. 39-41. doi:[10.1111/j.1467-9280.2008.02255.x](https://doi.org/10.1111/j.1467-9280.2008.02255.x)

[3.2] **Navarro, Daniel J.**, Salisbury, Linda Court, Lemon, Katherine N., **Stewart, Neil**, Matthews, William J. and Harris, Adam J. L. (2011) *Minimum required payment and supplemental information disclosure effects on consumer debt repayment decisions*. Journal of Marketing Research, 48 (Special Issue). S60-S77. doi:[10.1509/jmkr.48.SPL.S60](https://doi.org/10.1509/jmkr.48.SPL.S60)

[3.3] Gathergood, John, Sakaguchi, Hiroaki, **Stewart, Neil** and Weber, Jörg (2020) *How do consumers avoid penalty fees? Evidence from credit cards*. Management Science. doi:[10.1287/mnsc.2019.3568](https://doi.org/10.1287/mnsc.2019.3568) (In Press)

[3.4] Gathergood, John, Mahoney, Neale, **Stewart, Neil** and Weber, Jörg (2019) *How do individuals repay their debt? The balance-matching heuristic*. American Economic Review, 109 (3). pp. 844-875. doi:[10.1257/aer.20180288](https://doi.org/10.1257/aer.20180288)

[3.5] **Quispe-Torreblanca, Edika G.**, **Stewart, Neil**, Gathergood, John and Loewenstein, George (2019) *The red, the black, and the plastic: paying down credit card debt for hotels not sofas*. Management Science, 65(11). pp. 4951-5448. doi:[10.1287/mnsc.2018.3195](https://doi.org/10.1287/mnsc.2018.3195)

[3.6] Gathergood, J., **Sakaguchi, H.**, **Stewart, N.**, & Weber, J (2016) *Consumer Behaviour in the UK Credit Card Market*. FCA Report. (submitted to FCA, can be supplied upon request)

Funding

[G1] *The psychology of credit card repayments*. ESRC; ES/G031142/1; GBP74,937; April 2009-August 2010. PI: **N Stewart**; Co-I: W Matthews.

[G2] *Network for Integrated Behavioural Sciences*. ESRC; ES/K002201/1; GBP3,054,753; December 2012-September 2017. PI: C Starmer (Nottingham); Co-Is: S Gaechter, A Barr, J Gathergood, M Sefton, R Cubitt, U Aickelin, T Turocy, E Fatas, D.J. Zizzio, S Hargreaves-Heap, R Sugden, A Poulsen, G.D.A Brown, **N Stewart**, R Mackay, N Chater, D Read, & G Loomes.

[G3] *The Network for Integrated Behavioural Science: The Science of Consumer Behaviour*. ESRC, ES/P008976/1; GBP2,038,443; October 2017 - September 2021. PI: C Starmer; Co-Is: N Chater, D Read, G Brown, A Isoni, T Turocy, A Fletcher, G Loomes, **N Stewart**, B Lyons, R Cubitt, J Gathergood, & R Sugden.

[G4] *Risk, time and society: The behavioural economics of value*. Leverhulme Trust; RP2012-V-022; GBP902,875; January 2013-September 2018. PI: G Loomes. Co-Is: N Chater, **N Stewart**, D Read, & G.D.A Brown.

4. Details of the impact (indicative maximum 750 words)

There are over 30 million credit cards in the UK. Card providers require consumers to make at least the minimum payment on their credit cards, typically 1% of the balance plus fees. The minimum payment is intended to protect the small group of consumers, who would otherwise make no repayment, from the effects of compounding interest. Stewart's research, however, has provided compelling evidence that minimum payment information has unintended and negative consequences on consumers' repayment behaviour, that fees have no effect at all in helping people to remember to pay their credit card debt, and that many consumers adopt 'auto-paying' the minimum payment by direct debit which is not always a sign of financial distress. One in four credit card payments are only at or just above the minimum amount, leading to further interest payments and potential future risk of financial difficulty. Stewart's research into consumer decision making has fundamentally shaped the UK's policies on credit card repayment in a number of ways. Dr Stefan Hunt, the Head of Behavioural Economics and Data Science at the FCA, states that Stewart's work has "*directly and substantially impacted a number of very important parts of the FCA's policy formation*".

Shifting the FCA's understanding of consumer behaviour

In April 2014, the FCA became responsible for regulating consumer credit. The FCA raised the concern that some consumers repeatedly make minimum payments, which over a long time may have wider harmful implications, and at this time they considered minimum repayments a weak indicator of problem credit card debt. The FCA launched a Credit Card Market Study in November 2014 **[5.1]** to assess whether the credit card market for retail consumers was working in the interests of consumers, in particular, to understand why consumers repay only the minimum, acknowledging as motivation Stewart's published research on anchoring **[3.1]**.

Published in November 2015, the FCA's Credit card market study interim report cited Stewart's anchoring effect of minimum repayments. The FCA expressed concern that consumers with systematic minimum payment behaviour (nine or more minimum repayments, while also incurring interest charges) or consumers using a large fraction of their credit limit are profitable to card providers and that firms "*have fewer incentives to address this*" **[5.2]**. The interim report found that **5.2% (1.6 million people) are repeatedly making minimum payments while incurring interest across all credit risk groups and demographic segments. The FCA was concerned that there is "some risk that this debt becomes problematic in the future"**. The interim findings proposed, as directly suggested by Stewart, removal of the minimum repayment amount. In early 2016, the FCA consulted with industry and consumer group stakeholders and carried out behavioural trials to ensure that the proposed changes were effective.

Following the interim report, Stewart and collaborators presented their research findings to the FCA in December 2015 and submitted the report 'Consumer behaviour in the UK Credit Card Market - Insights from Consumer Credit Data Provided by Argus' in January 2016 [3.6]. This report provided the FCA with crucial independent evidence on consumer switching, delinquency from initial missed payments, minimum repayment, and multi-card behaviours and was key to informing their understanding of consumer behaviour, particularly that systemic minimum repayment behaviour does not always indicate that consumers are in financial distress and is often a result of passive 'auto-pay' behaviour. Stewart's research contributed to a significant shift in FCA thinking, from understanding systematic minimum payment as a symptom of, for the majority of people, inattention rather than financial difficulty.

Influencing the FCA's guidance to the UK banking industry and consumers

The FCA's credit card market study final findings report (MS 14/6.3) was published in July 2016. Further analysis by the FCA had found that persistent debt or systematic minimum repayment behaviour persists over several years, increasing their concern about potentially problematic credit card debt and passive behaviour using minimum repayments [5.3]. The FCA stated that they "*believe there is already considerable academic evidence to suggest that changes to disclosures and repayment options, in particular removing references to the minimum repayment amount, could have a significant impact on consumers' decisions when repaying their credit cards,*" as proposed by Stewart.

In 2017, the FCA consulted with the credit card industry on new rules to address persistent credit card debt and earlier intervention remedies. The consultation included a remedy to enable consumers to repay more quickly by changing the repayment options. The FCA introduced the new rules on persistent credit card debt and earlier intervention remedies in February 2018. To address the problem of inattention as identified by Stewart, card providers must now encourage consumers to repay more with nudges at 18 and 27 months. They must also encourage consumers to take stronger action to clear the debt in 3-4 years including converting the debt to a personal loan and, if consumers cannot afford to repay, forbearance. The total cost savings to customers is estimated to be between £310 million (GBP310,000,000) and £1.3 billion (GBP1,300,000,000) per year, impacting consumers, card firms, trade bodies and consumer groups [5.4]. The FCA reminded card firms in February 2020 of their responsibilities to consumers in persistent credit card debt. In addition, the FCA provided guidance for consumers outlining the real cost of making minimum repayments [5.5].

Shaping the FCA's investigation into policy interventions

Stewart's research actively shaped the programme of field trials of policy interventions run by the FCA during 2017-18. The design of these trials was inspired by Stewart's hypothetical credit card repayment task and Stewart was involved at all stages of the work from design to publication. The programme of trials demonstrated that consumers do change their repayment behaviour when minimum payments are concealed, but also that observing large proximal changes in behaviour may overestimate the longer-term effect of policy interventions. For example, in collaboration with Professor David Laibson (Professor of Economics, Department of Economics, Harvard University), two retail banks, and the FCA team, Stewart ran a large field experiment testing the effect of shrouding the option to set up a direct debit at the level of the minimum payment. When the minimum payment option was shrouded, a large fraction of users instead set a fixed sum direct debit. But there was no distal effect on overall debt levels one year from the intervention—a vital discovery which ruled out the intervention as a policy remedy. Stewart co-authored four papers with the FCA team describing this work. In these papers the findings about shrouding the minimum on monthly bills were replicated and extended. The papers were published in 2018 in the FCA's Occasional Paper series [5.6-5.9]. The FCA Occasional Papers inform its views and also its stakeholders including the credit card industry, practitioners and policymakers, and academic communities.

Changing the FCA's guidance on providing minimum repayment information

As a consequence of the findings, the FCA are considering a consultation on changing the FCA's rules and guidance to mandate the removal of the minimum repayment anchor [5.10], though the possible announcement has been delayed by COVID-19.

In sum, Warwick research played a key role in providing independent evidence to inform the FCA's understanding on consumer behaviour, to test intervention strategies, and to identify potential consequences of any future policy action. Dr Stefan Hunt, Head of Behavioural Economics and Data Science at the FCA, stated Stewart's research "*has shaped the FCA's thinking on consumer detriment in the credit card market and design of potential remedies.*" [5.11].

5. Sources to corroborate the impact (indicative maximum of 10 references)

[5.1] Credit card market study terms of reference - <https://www.fca.org.uk/publication/market-studies/ms14-6-1.pdf> (Nov 2014, acknowledges anchoring and Warwick research)

[5.2] Credit card market study interim report <https://www.fca.org.uk/publication/market-studies/ms14-6-2-ccms-interim-report.pdf> (Nov 2015, acknowledges the anchoring effect of minimum repayments and expressed concern that consumers with systematic minimum payment behaviour or high levels of utilisation are profitable to card providers)

[5.3] Credit card final report and annex 4 <https://www.fca.org.uk/publications/market-studies/credit-card-market-study> (July 2016, states policy and further research intentions, underpinned by Warwick research)

[5.4] Credit card market study: Persistent debt and earlier intervention – feedback to CP17/43 and final rules Policy Statement PS18/4. New credit card rules

<https://www.fca.org.uk/news/press-releases/new-credit-card-rules-introduced-fca> (Feb 2018)

[5.5] FCA Feb 2020 guidance document on the real cost of making minimum repayments <https://www.fca.org.uk/publication/documents/helping-customers-in-persistent-debt.pdf>

[5.6] Adams, P., Guttman-Kenney, B., Hayes., Hunt, S., & Stewart, N. (2018). Increasing credit card payments using choice architecture: The case of anchors and prompts. Financial Conduct Authority Occasional Paper 42. Available online at:

<https://www.fca.org.uk/publication/occasional-papers/occasional-paper-42.pdf>

[5.7] Guttman-Kenney, B., Leary, J., & Stewart, N. (2018). Weighing anchor on credit card debt. Financial Conduct Authority Occasional Paper 43. Available online at:

<https://www.fca.org.uk/publication/occasional-papers/occasional-paper-43.pdf>

[5.8] Adams, P., Guttman-Kenney, B., Hayes., Hunt, S., Laibson, D., & Stewart, N. (2018). The Conflict between Consumers Intentions, Beliefs and Actions to Pay Down Credit Card Debt. Financial Conduct Authority Occasional Paper 44. Available online at:

<https://www.fca.org.uk/publication/occasional-papers/occasional-paper-44.pdf>

[5.9] Adams, P., Guttman-Kenney, B., Hayes., Hunt, S., Laibson, D., & Stewart, N (2018). The Semblance of success in nudging consumers to pay down credit card debt. Financial Conduct Authority Occasional Paper 45. Available online at:

<https://www.fca.org.uk/publication/occasional-papers/occasional-paper-45.pdf>

[5.10] FCA Behavioural trials press release and indication of future consultation on removing minimum payment anchor. <https://www.fca.org.uk/news/news-stories/fca-publishes-outcome-testing-behavioural-remedies-address-under-repayment-credit-card-debt> July 2018

[5.11] Statement from the FCA verifying Professor Stewart's contribution to the creation of FCA policy.