Whose rationality? Muddling through the messy emotional reality of financial decision-making

Dibb, S, Merendino, A, Aslam, H, Appleyard, L & Brambley, W

Original citation & hyperlink:
Dibb, S, Merendino, A, Aslam, H, Appleyard, L & Brambley, W 2021, 'Whose rationality? Muddling through the messy emotional reality of financial decision-making', Journal of Business Research, vol. 131, pp. 826-838.
https://dx.doi.org/10.1016/j.jbusres.2020.10.041

DOI 10.1016/j.jbusres.2020.10.041
ISSN 0148-2963

Publisher: Elsevier

Whose rationality? Muddling through the messy emotional reality of financial decision-making.

Prof Sally Dibb [corresponding author]
Centre for Business in Society
Faculty of Business and Law
Coventry University, UK
Priory Street CV1 5FB Coventry, United Kingdom
+44 (0)24 7765 4820
sally.dibb@coventry.ac.uk

Dr Alessandro Merendino
Centre for Business in Society
Faculty of Business and Law
Coventry University, UK
alessandro.merendino@coventry.ac.uk

Dr Hussan Aslam
Centre for Business in Society
Faculty of Business and Law
Coventry University, UK
hussan.aslam@coventry.ac.uk

Dr Lindsey Appleyard
Centre for Business in Society
Faculty of Business and Law
Coventry University, UK
lindsey.appleyard@coventry.ac.uk

Dr William Brambley
Open University Business School, The Open University, Milton Keynes, UK
William.Brambley@open.ac.uk

Acknowledgements:

Our grateful thanks to Michael Polonsky, Alfred Deakin Professor, Deakin University, Australia, for providing constructive comments on an earlier version of this manuscript.

Funding was received from the Money Advice Service's What Works Fund for a project entitled 'Managing My Money for the Just About Managing', a research project conducted by the True Potential Centre for the Public Understanding of Finance at the Open University and the Centre for Business in Society at Coventry University.

Whose rationality? Muddling through the messy emotional reality of financial decision-making.

Abstract

The public's financial security is vital to economic stability, with policy and practice efforts focused on developing financial literacy to reduce financial vulnerability. However, this approach fails to fully consider the emotional factors that influence the financial decision-making process. This study examines how emotions shape these decisions, drawing on the concept of 'muddling through' to understand the complex process to be navigated. Data are drawn from 78 in-depth interviews with consumers who were financially 'struggling and squeezed'. 'Integral' and 'incidental' emotions were influential both in assisting the decision-making process and in introducing biases that could lead to harm. Consumers were able to rationalize their decisions, even though they might not be economically optimal in the longer term. Muddling through theory is extended by explaining the role of emotions within it. New insights into the interaction between emotions that are 'integral' or 'incidental' to decision-making lead to policy and practice recommendations.

Keywords:

emotions, financial vulnerability, financial literacy, muddling through, rational decision-making.

1. Introduction

The financial security of the public is viewed as vital to economic stability, particularly amongst advanced economies (OECD INFE, 2009). Considerable effort has therefore focused on developing consumers' financial literacy (Farías, 2019) to ensure they have the necessary financial capability to make 'good' financial decisions (Cook & Sadeghein, 2018; Erta, Hunt, Iscenko & Brambley, 2013). According to this approach, consumers are assumed to adopt rational decision-making rules and, if given the right information, to make economically rational decisions. Global policy has, therefore, focused on the provision of financial education (Brüggen et al., 2017) to give the public the skills and knowledge needed to make sound financial decisions (Lusardi & Mitchell, 2014; Pappalardo, 2012). However, this approach has met with limited success, suggesting that the assumed financial literacy and financial capability link may be flawed (Klapper, Lusardi & van Oudheusden, 2015; OECD INFE, 2009). Through an in-depth consumer study, we provide rich empirical insights into the emotional factors that shape financial decisions, revealing a much messier process than a rational decision-making approach implies.

There is growing evidence that the public face difficulties in making financial decisions, in evaluating complex financial products (Campbell et al., 2011; Farías, 2019; Salisbury, 2013), and in dealing with the financial consequences (Hansen, 2012). The scale of the problem is alarming. The UK financial regulator, the Financial Conduct Authority (Financial Conduct Authority, 2017a, 2018), estimates that around half of all UK adults are financially vulnerable (FinCap, 2017; Money Advice Service, 2018a), with one in six being over-indebted, and many having only minimal savings (Money Advice Service, 2017). Evidence from Europe (Valant, 2015), the US (Smith et al., 2015) and Australia (Marston et al., 2018) paints a similar picture, with consumers often becoming trapped in a vicious financial cycle.

Understanding why the financial education outcomes are disappointing is important in addressing this challenge. Experts suggest that an over-reliance on 'one-size-fits-all' provision is problematic (Pappalardo, 2012), with the most financially vulnerable often unable to access appropriate financial education (De Meza et al., 2008; Financial Conduct Authority, 2018; Rowe et al., 2015). The suggested link between financial literacy and financial capability has also been criticized because it assumes a rational decision-making process, in which consumers systematically evaluate information to make economically rational choices that fit their financial constraints. In practice, the sheer complexity of meeting long-term financial goals and the powerful role of emotions and other behavioral factors (Dean & Croft, 2009; Frederiks et al., 2015), can result in a much messier decision-making process. Multiple and conflicting decisions often need to be navigated, as complex information is reconciled, in a process that involves consumers in 'muddling through' their financial decisions (Hausman, 2012).

Reflecting that financial vulnerability and behaviors are intertwined (Brüggen et al., 2017; Farías, 2019; O'Connor et al., 2019), there are calls for studies that deepen knowledge about the decisions and behaviors which have a 'direct impact on financial well-being' (Brüggen et al., 2017 p. 231; OECD, 2017). Specifically, a more detailed and holistic understanding of the influential knowledge, attitudes, emotions and motivations, is needed (De Meza et al., 2008). We focus specifically on emotional factors because they play a powerful role in both facilitating and introducing bias into the decision-making process (Volz & Hertwig, 2016). Despite this influence, a detailed understanding of the interplay of emotional factors within the financial decision-making process remains limited. Our study is guided by the following underpinning research questions: *(i) in what ways do emotional factors shape the financial decisions that consumers make and how do they view the rationality of those decisions?* and *(ii) what implications do these factors have for approaches that aim to reduce financial vulnerability*? We sample UK consumers who are financially ‘squeezed and struggling’[1], a vulnerable group that is especially susceptible to financial harm (Cartwright, 2015; Financial Conduct Authority, 2015). We argue that initiatives to improve these individuals’ financial capability are more likely to succeed if based on a rich understanding of the emotions that shape their financial choices.

We make several contributions to knowledge. First, we explain the role of emotional factors in the financial decision-making process, extending muddling through by explaining the role of emotional factors within it. Second, we develop new insights into the interaction between two types of emotions – those that are ‘integral’ or ‘incidental’ to the decision-making process – reflecting the need for greater clarity in their combined effects (Brüggen et al., 2017; Bryant & Zick, 2006). Third, we explain why rational decision-making assumptions may be flawed in relation to financial choices, helping to explain why financial education may not on its own be sufficient to reduce financial vulnerability (Klapper et al., 2015; OECD INFE, 2009). Finally, we recommend approaches to reduce financial vulnerability that align with this messy reality and recognize the influential role of emotional factors. Given concerns about financial capability are echoed in other advanced economies (Klapper et al., 2015), we expect our findings to resonate beyond the UK.

Next, we explain the conceptual framing, beginning by discussing financial capability and rationality in relation to financial choices, before focusing specifically on emotional factors and then introducing the concept of muddling through. We then explain the study’s context and methodology, before presenting the findings and discussion. We conclude with theoretical contributions and implications for policy and practice.

2. Literature Review

2.1 Financial Capability and Rationality

Poor financial decisions can lead to short-term cash flow problems and long-term debt (Hansen, 2017), and can increase financial vulnerability (Mortimer & Pressey, 2013; Smith et al., 2015). UK financial capability policy and practice have focused on developing financial literacy as the means to improve financial capability and reduce poor decision-making (Atkinson et al., 2007; Financial Conduct Authority, 2017b; Johnson & Sherraden, 2007). Financial capability refers to the ability to manage money well, such that the costs of every-day living and significant or unexpected life events can be met (Lusardi & Mitchell, 2014). This approach assumes that poor decision making is due to a shortfall in the information needed to make good choices (Pappalardo, 2012) and to a lack of financial literacy, which reflects the degree to which individuals are knowledgeable about financial matters (Lusardi & Mitchell, 2014). However, financial education has failed to generate the expected improvements in financial decision-making (Ellen, Wiener, & Fitzgerald, 2011; Fernandes, Lynch, & Netemeyer, 2014; Kaiser & Menkhoff, 2017), suggesting that consumers “do not conform to policy makers’ expectations of calculative and rational financial subjectivities” (Hall, 2016, p. 327). This raises questions about whether financial education alone can support good financial decision-making (Barr, Mullainathan & Shafir, 2008).

Behavioral economists suggest that limits in financial capability are due to behavioral biases (e.g. Campbell et al., 2011), rather than to a lack of financial literacy (Erta et al., 2013). The need for a more comprehensive understanding of the attitudes, emotions and behaviors that shape financial capability has been discussed (Brüggen et al., 2017; Foxall, 2001, 2017; Lowe, 2017; OECD, 2017; Willis, 2011). However, despite these complex personal, social and external factors that shape financial decision-making being recognized (Calvet, Campbell, & Sodini, 2007; DellaVigna, 2009), many policy and practice levers still operate on the basis that consumers will select the economically optimal option when making financial choices (Hastings, Madrian, & Skimmyhorn, 2013). This thinking aligns with a traditional economic view of rational decision-making, which suggests that people will make decisions that yield the optimal result, given their budget constraints (Blume & Easley, 2006; Coleman & Fararo, 1992). Under this view, consumers seek to maximize their utility – although not necessarily their wealth or money – based on their preferences, time and other resources (Bryant & Zick, 2006; Pappalardo, 2012). Accordingly, behavioral choices ought to be improved by providing better information (greater knowledge/awareness) and/or more options (more choice) (Goode, 1997; Weintraub, 1993). A consumer is, therefore, likely to invest in increasing knowledge until the expected marginal benefits of gaining additional knowledge equal the expected marginal costs (Pappalardo, 2012).

A growing literature on ‘bounded rationality’ (Bramley & Collard, 2015; Dean & Croft, 2009; Wedgwood, 1999), suggests that consumers make rational decisions that are coherent with their beliefs and intentions (DellaVigna, 2009; Frank, 2011; Kahneman, 2003; Thaler & Sustein, 2008). Under this approach, individuals deviate from the rational choice model, in which the costs and benefits of a decision are weighed before choosing the optimal solution (Frederiks, Stenner, & Hobman, 2015). Rational thoughts are considered consistent if, when faced with the same circumstances, a consumer would follow the same pattern and reach the same decision

(Dean & Croft, 2009; Thaler & Sustein, 2008). Wedgewood (1999) defines such rationality as a matter of internal justification or coherence.

However, consumers can risk becoming financially vulnerable when they fail to act in an economically rational manner. Even those with good financial literacy sometimes behave in ways which are not consistent with their beliefs (Boulstridge & Carrigan, 2000). This situation may arise due to a discrepancy between what people say they will do and how they behave in practice – the so-called 'attitude-behavior gap' (Frederiks et al., 2015). The individual circumstances facing consumers may also prevent them from making choices that are optimal in the long term (Madrian, 2014). For example, a payday lender may be used to pay an unexpected bill if an individual's choices are constrained by an immediate lack of financial means (Hyun, Post & Ray, 2018). Because these circumstances render an economical optimal decision infeasible, they arguably are behaving in a rational way, given the context.

2.2 Emotional Factors

Although consistency in decision-making is the central tenant of rationality, emotions are also influential, reinforcing the need for studies which consider their role (Brüggen et al., 2017; Gaur, Herjanto & Makkar, 2014). Emotional factors can introduce bias into the process and can result in coherent, yet sub-optimal decisions (Tversky & Kanheman, 1986). Thus, Volz and Hertwig (2016) suggest that emotions are incompatible with financial decisions. For example, an individual who decides on a whim to spend their house deposit money on a luxury holiday, may have to live in rented accommodation for many more years before realizing their home ownership dream. Hedonic or emotional reasons help explain why this individual is behaving in an apparently inconsistent way, despite the negative financial consequences. Such factors sometimes influence individuals to choose short-term consumption over longer term preferences;

the total costs of which they may naively underestimate (Campbell et al., 2010; Heidhues & Koszegi, 2010), and which may lead to feelings of regret (Cook & Sadeghein, 2018).

The literature makes an important distinction between integral and incidental emotions, both of which are relevant to financial decisions (Lerner et al., 2015). Integral emotions can both influence and be influenced by the decision-making process, and are endogenous to it (Volz & Hertwig, 2016). As Loewenstein and Lerner (2002) explain, because these integral emotions arise from consideration of the decision or judgmental target, they routinely and strongly shape decisions (Lerner et al., 2015; Västfjäll et al., 2016). Although they can sometimes introduce bias into the process, integral emotions also play a productive role in helping consumers choose between alternatives (Lerner et al., 2015). For instance, an individual who is risk averse, may favor a safe option, even though it is potentially less lucrative than riskier alternatives. Therefore, integral emotions are triggered by the process of making a decision, such as evaluating the best alternative among conflicting choices or goals (Volz & Hertwig, 2016). In contrast, incidental emotions are exogenous to the target behavior; they occur without awareness and tend to be associated with mood (Lerner et al., 2015). Their influence is carried over from one situation to another, affecting the way alternatives are judged and choices made (Lerner, Small & Loewenstein, 2004). Thus, fearful people tend to be more pessimistic, whereas angry and happy people are more likely to be optimistic (Brüggen et al., 2017).

Although both integral and incidental emotions are central to the decision-making process and regularly occur simultaneously (Rick & Loewenstein, 2008), previous research has tended to consider them separately (Schmeichel & Inzlicht, 1999; Västfjäll et al., 2016). Thus, integral emotion research has overlooked incidental emotions and vice versa (Ou & Verhoef, 2017). This is an important gap in knowledge, given that consumers who face uncertainty due to opposing goals rely on both integral and incidental emotions to resolve these conflicts and make decisions (Schmeichel & Inzlicht, 1999). In this vein, Lerner et al., (2015) found that integral emotions (e.g. sadness) and incidental emotions (e.g. anxiety) can both influence consumers to make suboptimal or risky financial decisions. Västfjäll et al. (2016) suggest that both integral and incidental emotions should be regarded as part of the same phenomenon, while Brüggen et al., (2017) call for emotions to be analyzed broadly, rather than focusing on each separately.

2.3 Muddling Through

An approach that takes the limitations of the rational decision-making model into account and acknowledges the emotional factors that can get in the way, is muddling through (Lindblom, 1959). This approach recognizes the messy nature of complex decision-making and acknowledges the difficulties that consumers face in simultaneously optimizing multiple goals (Kopecka, Santema & Buijs, 2012). The importance of subjective judgement in negotiating, trading-off and prioritizing between goals, whilst making comparisons based on limited and conflicting information, is also a feature of this approach. As Hausman (2012: 796) explains, "The colloquial image of a devil on one shoulder and an angel on the other demonstrates what consumers experience as they constantly resolve the inherent conflict between incompatible goals when reaching decisions". Although her research focused on food consumption, Hausman (2012) specifically identified financial behavior as an area in which the rules of rational decision making may not apply and where muddling through is relevant.

A shortfall of the necessary information to make decisions, or the presence of conflicting information, are major elements of the muddling through decision-making process (Lindblom, 1959). This is significant in the context of financial decisions, as consumers may experience confusion in deciding which course of action to take, or which goals to prioritize. Additionally, those with limited financial literacy (Lusardi & Mitchell, 2014), may lack the information needed to make good choices (Pappalardo, 2012). The complexity of financial products, in which multiple alternatives need to be weighed when making choices, compounds this problem for consumers and can lead to unwise financial decisions (Financial Conduct Authority, 2015; IOSCO-OECD, 2018; Martin & Hill, 2015). Even those with the capacity to appraise alternatives and make rational choices (Milner & Rosenstreich, 2013) can find that the credence quality of financial products makes them difficult to evaluate (Chung-Herrera, 2007; Ennew, 1992; Harrison, Waite & White, 2006).

Although emotions were not directly considered in Lindblom's (1959) model of muddling through, these factors help to explain why consumers struggle to compare and choose the best options (Erta et al., 2013). For example, the desire for instant gratification to satisfy hedonic goals can obstruct the disciplined approach needed to meet long-term spending goals and the multiple decisions required to choose between alternatives (Hausman, 2012). The discord consumers feel when navigating these complex decisions with incompatible goals, is often affected by emotional aspects (Brüggen et al., 2017; Volz & Hertwig, 2016). Consequently, individuals must accept trade-offs and deal with conflict, using their subjective judgement to negotiate and prioritize certain goals. Extending the muddling through approach to highlight these emotional factors could, therefore, help explain why rational decision-making rules are not necessarily followed.

As individuals negotiate their way through these different options and multiple goals, emotional factors can add further complexity to the process (Lerner et al., 2015). Referring back to the example of the individual who decides on a whim to spend their house deposit money on a luxury holiday, emotions are seen in this case to introduce bias into the decision-making, leading to a short-term goal that offers immediate gratification being prioritized over the future (Ellen et al., 2011).

Although emotions, rationality and muddling through are well established concepts, very little research has examined the role of emotions in financial decision-making or the implications for financial vulnerability. The literature on muddling through, which provides an appropriate lens through which to consider financial decision-making, remains silent on the role of emotions when consumers make decisions. Through an in-depth consumer study, we use the muddling through approach to frame the complex role of emotional factors in navigating these financial choices. We show how the decisions consumers make to maximize their utility, which they regard as rational, may not always be economically optimal.

3. Methodology

3.1 The Context

In 2006, the Financial Services Authority (FSA, 2006)[2] undertook the first UK baseline survey of the public's financial capability, which identified the need for greater financial capability in four key domains: 'managing money', 'planning ahead', 'choosing products' and 'staying informed' (Atkinson et al., 2007). This study influenced policy delivery in the UK (Financial Conduct Authority, 2018) and has shaped financial capability policy and practice more widely (World Bank, 2013). In 2012, the UK Government set up the Money Advice Service (MAS)[3], with a strategy to '*use evidence to understand who across the UK most needs help*' and to '*improve the ability of people to manage their money'* (MAS 2018a, p.1).

The UK financial capability strategy aimed to ensure that consumers could manage their own financial wellbeing, such as by building a savings safety net, to be less reliant on the State in times of need. The public was segmented into three financial capability groups based loosely on their level of income and wealth. These segments enable financial capability programs to be targeted at audiences according to whether they are financially struggling, financially squeezed, or financially cushioned (FinCap, 2018), addressing criticisms that financial capability programs were too generic (Cartwright, 2015). Our research focuses on the financially squeezed segment, a group which is often financially vulnerable, due to the risk that they may not be able to maintain their living standards if they suffer a financial shock (O'Connor et al., 2019). 24.9 percent of the UK population (11.6 million consumers) are considered financially squeezed (MAS, 2016), having an average income of £32k, with the highest ratio of debt to income compared to other groups (MAS, 2016).

3.2 Data Collection

We had good access to primary interview data and to other sources of data that allowed us to triangulate our findings (Giudici et al., 2018; Fiorentino et al., 2020) (Table 2). Primary data were collected during fieldwork in the West Midlands area of England that took place between October 2017 and May 2018. All data gathering was led by researchers experienced in gathering data involving sensitive issues. All participants received a research information sheet explaining their rights and informed consent was obtained. Those interviewed in the main fieldwork were offered an incentive in the form of shopping vouchers. Pseudonyms have been used throughout to ensure participant confidentiality.

The data gathering took place alongside a behavior change intervention focusing on using financial literacy to improve financial capability (Darnton, 2008). Semi-structured in-depth interviews were undertaken with 40 participants from low to moderate income households who identified themselves as 'financially squeezed'. A sample that was mixed in age, gender, family type and employment was recruited from members of a local credit union and a higher education college with a significant mature student population (see Table 1). Despite the difficulties in getting people to talk openly about their finances (Cohen, 2019), each participant was interviewed twice, immediately before and several weeks after the intervention took place. Reporting on the intervention outcomes is beyond the scope of this paper (see official report, Brambley et al., 2019). Instead, we used the intervention as an opportunity to gather rich insights into the emotional and other factors which shape attitudes and underlie financial behavior, and the day-to-day issues people face in managing their finances (Berg, 2004; Kaczynski et al., 2014).

A semi-structured interview format was used, enabling some issues to be probed in greater depth. The interview checklist included the following topics: participants' confidence in managing their money; their role in managing their household finances; financial behaviors, including budgeting, saving and financial resilience; attitudes towards money; and financial priorities. In total, 78 semi-structured interviews were conducted with 40 participants, with two participants not attending the second interview. Interviews lasted between 20 minutes and one hour and were conducted by pairs of researchers to ensure research quality.

[INSERT TABLE 1 ABOUT HERE]

Several sources of additional data were used to triangulate our findings and implications, and to ensure their broader applicability beyond the regional area in which the data were gathered (see Table 2). This included 15 informal consultations with policy makers and practitioners from across the UK, all of whom were financial capability experts. We also collected data from national and international policy makers' reports, as well as institutional websites, such as MAS, World Bank and FCA.

[INSERT TABLE 2 ABOUT HERE]

3.3 Data Analysis

The main fieldwork interviews were digitally recorded and transcribed, generating 26 hours of recording, supplemented with contemporaneous research notes taken by the researchers. We scrutinized the data using thematic ‘framework’ analysis (Ritchie et al., 2013) aided by NVivo 12 computer software. This approach enabled an accurate reflection of how participants managed their personal finances and the impact of the intervention. We used a systematic iterative approach to ensure the analysis was logical, organized, evidence driven, and accurately reflected the data.

We applied Gioia, Corley and Hamilton’s (2012) approach, in which 1st order concepts, 2nd order themes and aggregate dimensions were identified throughout the data analysis. In our first stage of data analysis, we used open coding by reading and re-reading the transcripts to identify the first order categories (Miles & Huberman, 1994; Gibbs, 2007). All research team members attended a coding workshop, where a cross-section of interview transcripts was analyzed and discussed, identifying key themes that emerged from the data. Following Bryman (2015), these themes were treated as core categories in the second stage of the data analysis, in which three researchers used NVivo to further stratify the data into sub-themes or axial codes (Strauss & Corbin, 1998). From this process, we identified the central core categories around which all other sub-categories were integrated, enabling us to draw and validate relationships between the sub-categories (Bryman, 2015).

During this second stage, the three researchers coded independently to ensure high levels of inter-coder reliability (Krippendorff, 2004), conferring regularly and checking each other’s coding to reduce discrepancies, so that inter-coder agreement was achieved (Campbell, Quincy, Osserman & Pedersen, 2013). Following the completion of the data analysis, all coding was combined and checked again for discrepancies. To reduce over-fragmentation of the data, redundant codes were deleted and over-lapping or similar codes were combined (Bryman & Bell, 2015).

The results of this data analysis are organized into three core categories (emotion's role in financial capability; focusing on the present; and rational muddling through) and eight sub-themes (losing sight of the bigger picture; frustration that knowledge is not enough; instant gratification; accepting the consequences; juggling family needs, desires and expectation; learning the hard way; and navigating complexity) [see Table 3]. Selected, illustrative, verbatim quotes from the interviews are used throughout this section.

[INSERT TABLE 3 ABOUT HERE]

4. Findings

4.1 Emotion's Role in Financial capability

The core category of *emotion's role in financial capability* reflects evidence that financial literacy alone does not guarantee that individuals will make economically rational financial decisions (Dean & Croft, 2009; Frederiks et al., 2015). Instead, our findings reveal the complex role that emotions play, on the one hand acting as a barrier to financial capability, while on the other helping participants to navigate the multi-faceted and complex financial decisions (Thaler & Sustein, 2008). The stressful circumstances in which emotions shape how participants manage their money are revealed in the first sub-theme of *losing sight of the bigger picture*. The second sub-theme, *frustration that knowledge is not enough,* explores the emotional issues participants can then face when trying to make good financial decisions.

4.1.1 Losing sight of the bigger picture

Most interviewees struggled to maintain a clear picture of their finances, with the result that they would often lose sight of their financial goals. They explained that problems maintaining an overall view of their financial situation meant they struggled to keep on track and it was easier to fall into behaviors that made them financially vulnerable: *"I didn't know how money left my account and the money wasn't there and I was struggling at the end of the month"* (Don).

Losing sight of the bigger picture and failing to maintain this financial clarity, often compounded concerns that they would lose control over their finances, as Bianca explained: *"I am in control…But I don't feel it…I'm waiting for the carpet to be just pulled from under my feet".* The financial peaks and troughs that participants faced, were a further challenge to maintaining control. For example, keeping track of the dates when different bills had to be paid needed to be squared with making sure their spending was spread between paydays. This could be a tricky balance between having enough to pay bills as they became due, while retaining enough to live on: *"I find it hard... When I get paid…if I get something coming out… I lose when the bill will go out when it's all different dates"* (Anita).

A lack of financial literacy was, for some participants, a root cause of these problems; sometimes leading to uncertainty about what actions to take and when. For others, mental health affected their inability to gain a clear view of their overall financial position and to remain focused on their goals, as Anita explains: *"Occasionally I'll take out the odd little payday loan if I've gone a bit mad. I get anxiety and depression, so sometimes I lose the plot a little bit and comfort spend".* Some interviewees explained how they had managed their stress and reconciled the challenges with their finances, by acknowledging to themselves that they were always likely to struggle financially. So they decided to accept the situation and not to let it worry them, as Jo explains: *"I felt massively stressed with it up till about two, two and half years ago".* When asked what had changed, she explained: *"…it was just a mental actualization of well, it doesn't t* *matter how much I worry about it I haven't got it. So why bother worrying. Money is money, It's not life"*. For others, the solution was to take a shorter-term financial perspective, so that *"instead of looking at that in the bigger picture"*, they would break it down to *"look at it in the smaller picture"* (Jesse). Focusing on achieving their shorter-term financial goals, rather than fretting over their longer-term goals, apparently made it easier to manage.

4.1.2 Frustration that knowledge is not enough

The data indicated that knowledge alone is not enough to ensure effective financial management, leading to participants feeling frustrated about the barriers they faced in achieving their goals. For the most part, they readily acknowledged the benefits of learning to manage their money better and saw improving their financial literacy as a good thing. Many had at least a rudimentary understanding of budgeting principles, an understanding which they implemented through keeping simple records of income and expenditure, perhaps on their smartphones or by jotting details down in an accessible place. Yet they also admitted finding it difficult to translate this understanding into good financial behavior and feeling "*frustrated that we're not saving*" (Miriam). In the words of one interviewee, "*…it's like knowing what to do and doing them are two different things*" (Jody).

Life events or unexpected problems often got in the way of their best-laid plans. Sometimes this was because of illness, mental health issues, or other personal problems; or because of an unexpected expense, such as the car breaking down. Participants openly reflected on their emotional responses to these issues. These included feelings of frustration when participants felt that they had planned and accounted for their spending but were still not seeing the desired result:

> *I was getting frustrated like I was planning everything out thinking we should have this much money leftover and we didn't. And it was frustrating constantly worrying about money.* (Miriam)

Megan shared how unexpected expenses meant she seemed to be moving backwards in relation to her hard fought for savings:

> *...every time I manage to squirrel away it gets swallowed by something, and I do feel like I am climbing a mountain and sliding back down. So, it is very frustrating and very soul destroying because you feel like you are fighting all the time and getting further behind.*

Like other participants, she also articulated a general sense of disempowerment; that despite being reasonably financially literate, she lacked the capability to manage her money for other reasons:

> *…the biggest problem I have with my situation [mental health problems] is that knowledge isn't enough. I can't make the phone calls; I can't write the letters … and that is very difficult and very frustrating.* (Megan)

4.2 Focusing on the present

The core theme of *focusing on the present* shows how individuals often did not make financial decisions that were optimal in the longer term. The reasons were linked to the circumstances that people face, which may not be fully represented in policy makers' considerations of financial capability (Financial Conduct Authority, 2017a). In some respects, these decisions suggest that financial capability was being limited by behavioral biases, with individuals preferring immediate gratification over longer-term benefits. However, contrary to some other studies (e.g. Heidhues & Koszegi, 2010), participants were not necessarily being naïve about the implications, but were making choices that seemed rational to them based on the utility they were seeking from the situation. *Focusing on the present* relates to participants choosing to disregard good financial planning in favor of spending money for immediate short-term gain. The two sub-themes of *instant gratification* and *accepting the consequences* illustrate the pursuit of instant material rewards from short-term spending, with limited consideration of the longer-term consequences for their financial vulnerability.

4.2.1 Instant gratification

Interviewees discussed how financial capability initiatives often *"miss out on the emotional aspect of spending*" and that knowing they did not need to buy a particular item was irrelevant because, *"you feel it will make you feel better"*. The psychological aspect of spending and the instant gratification attached to it, often overtook the need to budget and save. So even though these decisions might not be economically optimal in the longer-term, the interviewees were maximizing their utility as they saw it. Some participants felt very strongly about the emotions such spending elicited. One interviewee described an almost physical sensation, "*…it gives you that little warm fuzzy glow when you've been shopping"* (Jody).

For others, the emotional aspect of such spending involved much more than being frivolous or materialistic. It helped them deal with mental health issues and allowed them to feel good about themselves in the short-term, so they could escape their financial worries. This kind of spending seemed rational to them because they were seeking a non-economic type of utility. Unfortunately, such escapism was often short-lived, however, as the realities of their financial situation quickly followed:

> *It makes me feel better. I don't know how to say it. Euphoric, that massive feeling when you're spending money. Oh my god, I feel high, I feel amazing. Then the next day, you're like, okay, maybe I shouldn't have spent that.* (Anita)

Other interviewees explained the strategies they followed to actively choose material desires rather than paying bills and other necessities. These strategies could become self-perpetuating, when decisions to defer bill payments or roll-over debt payments to the following month were repeated to buy something else. Such decisions sometimes compounded their financial vulnerability:

> *I'm one of these people unfortunately, that if there is a major bill to be paid and I want something, I am more inclined to buy something that I like and, in my head, thinking oh well I can replace that money next week. And then it gets to a certain point where you can't afford to replace it and then you end up getting yourself into debt.* (Eliza)

4.2.2 Accepting the consequences

Through probing these emotional needs, two types of factors were found to be important in motivating interviewees to live in the moment. The first was an avoidance tendency by certain individuals, who openly spoke about their inclination to "*to bury my head in the sand*" or to "*just ignore it and it will go away*". Here we see evidence of present bias (Della Vigna & Malmendier, 2004) and of making decisions which could cause problems in the longer-term. Some of these individuals felt disempowered, with one reflecting, "*if I am going to be skint, I may as well have something to show for it; do you get what I mean*?" (Lewis). The second type of motivation was evident in those who were driven by more philosophical motives, suggesting a conscious decision to "*enjoy it while I have it*", being in "*the sort of mindset of, well, you know, I'm not always going to be here*" (Gerard). This latter group felt temporarily empowered by being able to spend now because they could not guarantee they would be able to do so in the future. For example, some younger participants were especially mindful of being at a life stage in which they were responsible only for themselves, but that they would become more financially constrained in the future.

There was a sense that participants were focusing a great deal on the immediate positive outcomes, while not perhaps fully considering potentially negative outcomes. The tendency to behave in this way might be partly explained by behavioral biases relating to 'desirability' and 'illusion of control' (Budescu & Bruderman, 1995), resulting in over-optimism about the eventual outcomes. Even so, the data indicated that participants were aware of, and often took into consideration, these longer-term implications of their financial decisions, in favor of short-term pleasure:

> *I've tried to save in the past. I put money away monthly, but then when I see something, I just want to spend it. I'll just crack in and just spend it.* (Aiden)

> *I feel like I need to do something to lighten my mood and every time I try to save, I feel like there is something I need to get, so I end up doing something I need rather than saving.* (Kai)

4.3 Rational Muddling Through

The *rational muddling through* core theme reflects how money was managed on a day-to-day basis and how individuals tackled their financial challenges in ways that worked for them. As reflected in our three sub-themes, this could be a difficult journey of discovery, in which they were *juggling family needs, desires and expectations* and went on a journey of *learning the hard way*, so they were *navigating complexity.* Although these tactics appear misaligned with policy makers' views of economically rational behavior (e.g. FinCap, 2018), interviewees saw them as a logical way to survive, and to navigate the complex, contradictory issues they faced in managing their money day-to-day.

4.3.1 Juggling family needs, desires and expectations

Many interviewees discussed having to juggle the expectations of their family with their financial commitments in order to survive day-to-day. For the majority, these priorities centered on their children, sometimes at the expense of meeting other financial commitments. Interviewees spoke about how becoming an adult/parent introduced challenges to their financial management and ability to survive day-to-day. Needing to buy school uniforms and shoes for their children was one such burden. Where previously they did not have to worry about meeting certain expenses and commitments, this could all suddenly change: *"…before motherhood, you know, I never had to worry about what bill was coming out when, because it was always there. But kids don't half throw a spanner in your works"* (Aileen).

Many interviewees faced instances where they had to make financial sacrifices to purchase items for children that they did not consider essential, due to feeling guilty or being pestered. Such spending could damage their ability to save effectively, as this participant explained:

> *Yes, when it's pester power. Like yesterday my son wanted a game for his phone, a Minecraft one and that's seven quid for a game for a phone. That's a lot isn't it? To me that's a lot. Seven pound is. Well if I think about it now, seven pounds is a meal for the kids.* (Chantelle)

4.3.2 Learning the hard way

Some interviewees reported that their ability to manage their money had improved over time, as they became more familiar with managing their finances, trying things out, learning through experience and by making mistakes. When first faced with having to budget and pay bills, others experienced high levels of stress and anxiety, as they tried to work through and gain perspective on their financial problems. The learning process could be a bitter-sweet experience, in which new insights were gained into how to cope, while facing hard truths along the way. Sometimes interviewees' problems were associated with inexperience without realizing the consequences:

> *I would get my student loan and I was so ready to just spend money. I was 17 years old at uni, didn't really know what was going on and I would be just so quick and hasty to spend the money. Now, I'm definitely a bit more wise with it, I'd say.* (Ashley)

Over time, through a combination of developing more know-how about how financial products worked and getting smarter at navigating their own financial circumstances, interviewees appeared to become more accepting of their situations. Isla discussed how it was about "*just knowing how to handle it and to not stress about it*". Some participants found that using rational processes to make the most economically rational decisions did not work for them and in some cases had a detrimental impact on them and their loved ones. Lewis explained how he had tried to "*cut right back*" and follow mainstream money management advice; however, this had impacted both how he felt and how he behaved towards his partner:

> *I was a horrible person. I hated everybody…I was having more arguments with my partner, arguing over money because there was me doing my best not to spend anything and she'd spend you know a fiver or something. I didn't understand that before; what I was doing was potentially damaging her emotional wellbeing.* (Lewis)

4.3.3 Navigating complexity

Many of the interviewees spoke about needing to make difficult choices that involved weighing up multiple options to work out which financial commitments they could meet. This tactical process of exploring different alternatives was especially needed if they faced a shortfall in funds. Cancelling direct debits, moving payment dates, deferring payments or rolling over debts were some of the tactics that were employed. One interviewee explained this process allowed them to feel more in control over how their bills were paid and when:

> *I just juggle things around… I switch payments around all the time. So that if I see something's going to fall a bit short, I change the dates on the payments, so that I make that payment when I need to make it. It's like tactical chess playing with banking.* (Aileen)

The complexity involved in juggling these multiple options both impacted on and was impacted by the emotional considerations (Erta et al., 2013). Some interviewees made sense of these complex decisions and weighed up the available options, by making difficult decisions based on emotional responses and what mattered the most to them. Imogen discussed how she had made difficult decisions relating to her wedding day, to enable her to prioritize what she felt was important, *"I'm not spending more than five* *thousand pound on a wedding because, to me, it's a waste of money and … it's going to be cheap because I'd rather spend all my money on a honeymoon*" (Imogen).

5. Discussion

The findings provide a more nuanced understanding of the complex role that emotions play in financial decisions. They show that emotions can help individuals to navigate the complex process of making decisions, but also can act as a barrier to sound financial decisions. This latter influence usually occurs when emotions exacerbate the need for instant gratification, leading to individuals ignoring their financial commitments, with possible longer-term harm. Finally, emotions are shown as ingrained in how individuals muddle through alternatives, resulting in choices that are coherent and rational to them, even though they may increase their financial vulnerability.

Developing consumer financial capability has been prioritized as the means to ensure individuals make economically-rational financial decisions and avoid becoming financially vulnerable (Erta et al., 2013). However, using the concept of 'muddling through' to frame these choices, we gain deeper insights into the complex decisions with multiple goals, and of the role of emotional factors within them. We show three different ways in which emotions influence and are involved in the process. The first is 'integral emotions', which are directly involved in the decision; the second is 'incidental emotions', which sometimes introduce biases and typically are associated with mood; and, the third occurring as an outcome of the decision-making process (we use the term 'outcome emotions'), which exhibit characteristics of the other two types.

5.1 The Role of Emotions in Financial Decisions

Focusing on our first research question concerning the role of emotions, we found that making financial decisions involved a complex and often messy process of muddling through.

Emotional factors were deeply ingrained in how individuals navigated their way through these multiple goals and decisions. The important role of emotions, in how interviewees managed their money, might help explain why financial literacy-based approaches to reducing financial vulnerability have met with limited success (Financial Conduct Authority, 2017a, 2017b; Financial Inclusion Commission, 2015; Lin, et al., 2016), and why so many individuals – in the UK, the US and other developed economies – remain trapped in a financial vicious cycle (Adams & Smart, 2017; Financial Conduct Authority, 2017a, 2018; Michie et al., 2008; OECD, 2017; Smith et al., 2015).

In line with previous studies, we found that participants were able to rationalize their behavior in ways that suggested consistency between their choices and their preferences, beliefs and intentions (Cook & Sadeghein, 2018; Della Vigna & Malmendier, 2004; Marston et al., 2018). In this sense, participants were behaving in ways that might reasonably be deemed to be 'rational' (Kahneman, 2003; Thaler & Sustein, 2008). Nonetheless, although they sought to make choices that maximized their utility in a given situation, they did not necessarily seek the most economically optimal options and sometimes made short-term decisions that could cause future financial harm.

Turning to 'how' these choices were made, we reveal a process akin to the 'muddling through' reported in other contexts (e.g. Hausman, 2012), in which emotions supported a process of cognitive shortcuts and decisions were often made 'in the moment', as individuals sought to make the best of complex situations and conflicting goals. This approach did not necessarily involve the systematic approach, in which all relevant factors were scrutinized and weighed, that the notion of rational decision-making implies. The presence of complex or conflicting information also made it more difficult to assess the options. As Figure 1 shows, emotional factors influenced decision-making via muddling through in three different ways, both in assisting the process and by introducing biases. Firstly, ‘integral emotions’ (labelled E1 in Figure 1) were used by individuals to simplify complex choices and to navigate their way through multiple goals (Lerner et al., 2015). These emotions were ingrained into the process. They often helped individuals maximize their utility from the situation, by simplifying the process of weighing different options, so that those that were unappealing could be discarded (Rick & Loewenstein, 2008; Voltz & Hertwig, 2016). In some cases, this integration supported cognitive shortcutting, helping to simplify the comparison of alternatives, so that individuals could more easily muddle through complex decisions (Hausman, 2012). For example, families that were juggling children’s needs with other financial commitments, felt that worry and guilt often compelled them to weigh and eliminate different alternatives so that they could meet these needs.

Secondly, ‘incidental emotions’ (labelled E2 in Figure 1) linked to individuals’ moods and arising from circumstances unrelated to the financial decision, were often present in the background (Rick & Lowenstein, 2008). These emotions, such as low mood or frustration, acted as a barrier to financially sensible choices or resulted in poorly considered decisions likely to cause future harm. The desire for instant gratification, reported by some of those interviewed and which often led to frivolous purchases that had not been thought through, is one example.

[INSERT FIGURE 1 ABOUT HERE]

The third role involved ‘outcome emotions’ (labelled E3 in Figure 1) experienced as a direct result of the decision-making process, either during or subsequent to it. This finding aligns with studies indicating that incidental and integral emotions concurrently guide the decision-making process (Västfjäll et al., 2016). Typically, these emotions were feelings of disempowerment and low mood associated with participants struggling to move forward but being out of control of their personal finances. Among the reasons for these feelings were: low levels of financial literacy, such that participants lacked the knowledge to make informed decisions; the inability to access reasonably-priced credit; or because their options were constrained by limited financial means. These feelings exhibit a mix of the features of both 'integral' and 'incidental' emotions. They are 'integral', in that they arise during the decision-making process and are directly connected with it (Loewenstein & Lerner, 2002); while at the same time, they have the capacity to become 'incidental', such that they might influence future decisions through a lasting effect on participants' moods. In general, our findings point to this role involving negative emotions. For example, when individuals compare alternatives – such as saving versus spending – they may experience integral emotions, such as anxiety about the consequences of not being able to save, they may feel happy about the purchase outcomes. At the same time, these emotions can have an impact on their general mood, which might then play an incidental role in future decisions. Thus, someone who cannot afford to get their car fixed may feel depressed because they struggle to get their children to school or travel to work. Their low mood might make other financial decisions – whether travel-related or not – more challenging in the future. This miscellany of integral and incidental emotions can, therefore, work in different ways, either to drive rational decisions or to introduce biases that make individuals more vulnerable in the future.

Taking an overall view of the effects of emotions on muddling through, there were differences in the extent to which each of emotional factors (E1, E2 and E3) was present in relation to the data sub-themes, as Figure 1 shows. For example, in relation to sub-theme *losing sight of the bigger picture*, incidental and outcome variable (E2 and E2) were present; whereas for *navigating complexity*, there was evidence of integral emotions at work (E1). This is in line with previous research concerning the messy nature of decision-making (Kopecka et al., 2012) where emotions can impact on financial decisions simultaneously, or separately (Rick & Loewenstein, 2008: Västfjäll et al., 2016).

5.2 Financial Vulnerability and Emotions

Turning to our second research question, before exploring the ramifications of these emotional factors for how financial vulnerability might be reduced, it is important to acknowledge that some participants were impeded by low levels of financial literacy. Furthermore, irrespective of financial literacy issues, some individuals simply lacked the financial means to meet regular outgoings or to save, leaving them exposed to sudden financial shocks (Financial Conduct Authority, 2015). These circumstances often contributed to feelings of frustration and disempowerment about not being able to control their finances. Therefore, although our primary focus is to show how understanding emotions can help reduce financial vulnerability, these approaches should sit alongside those designed to increase financial literacy or to provide guidance when financial problems arise. However, in line with studies that argue for a broader perspective on tackling financial vulnerability (Brüggen et al., 2017; FinCap, 2017; Willis, 2011), our findings suggest that more nuanced approaches to reducing financial vulnerability are needed that reflect the multifarious and complex influence of emotional factors. This need is reinforced by the fact that even those who were financially literate were not necessarily financially capable, as shown by having debts that were out of control (Financial Conduct Authority, 2017b; Money Advice Service, 2017).

Moving to consider these emotional factors, the extent and manner in which emotions are involved in financial choices need to be recognized. We suggest that approaches to reducing financial vulnerability should speak specifically to each of the three roles identified in Figure 1.

Beginning with integral emotions, our findings revealed many ways in which these emotional factors were deeply ingrained within the decision-making process. For example, participants would often deliberately prioritize non-essential spending on their children, sometimes carefully considering which regular bill payments to delay, to enable them to do so. In most cases, they were able to explain why these choices made sense to them (Wedgewood, 1999), even though they might become more financially squeezed as a result (Financial Conduct Authority, 2017a). Education, tools and support which recognize and legitimize, rather than prescribe against emotional factors, could help improve individuals' ability to make financial decisions in their personal best interest (Johnson & Sherraden, 2007; Valant, 2015). These approaches could enable individuals to frame financial rationality in their own terms and support them in muddling through their financial challenges.

Turning to the incidental emotions that shape spending, our findings show that participants sometimes took a short-term view of their finances, such as in response to low mood (Cook & Sadeghein, 2018; Huysentruyt & Read, 2010). Non-essential or luxury items might be purchased at these times to support their short-term emotional wellbeing and escape their financial worries. Examples included buying unneeded clothes and splashing out on a meal out or a trip away. These financial decisions were influenced by emotions, with costs often being underestimated due to time-inconsistent preferences (Campbell et al., 2010; Heidhues & Koszegi, 2010), such that the longer-term consequences were neither recognized nor considered. Thus, emotions exacerbated the quest for immediate gratification (Della Vigna & Malmendier, 2004, 2006), while reducing the ability to properly budget or save for the future. Although these individuals sometimes believed they were maximizing their utility from the situation and could rationalize their choices (Hausman, 2012), they often did not fully recognize these long-term effects.

Approaches are needed that acknowledge the pernicious influence of these incidental emotions. Recognizing and working in alignment with these biases could be achieved by emphasizing that making better financial decisions can be gratifying in its own right. For example, some participants said that being reminded of their financial aspirations, such as plans to move house, go on a long vacation, or pay off problematic debt, was useful in resisting the urge to spend for instant gratification. An analogy was drawn with dieters who position a photo of their overweight selves on their refrigerator door.

Finally, feelings of frustration and disempowerment that arise during, or subsequent to, the decision process are problematic when individuals consider their efforts to control their finances to be futile. These emotions tend to become cyclical and pervasive, such that they continue to impact future decisions. For example, some individuals constantly worried about their finances, feeling that whatever action they took, they would be unable to improve their situation. Reducing vulnerability, in this case, would require approaches that can break this emotional cycle; perhaps through establishing short-term goals that are rewarding in their own right. Some participants, had benefitted from doing so; for example, by making their own drinks at work rather than buying expensive coffee shop drinks; simple decisions that helped reduce their spending and enabled them to regularly save small amounts that quickly added up.

6. Conclusion and Implications

This paper has considered the role of emotions in influencing financial decision-making, how consumers view these decisions, and the implications for reducing financial vulnerability.

6.1 Contributions to Theory

Two theoretical contributions have been made. First, we extend the muddling through decision-making process, by explaining the role of emotional factors within it. We show how the complexity of these factors adds to the process of simultaneously meeting conflicting goals and making financially optimal decisions. Consequently, we find that emotions can influence consumers to buy unnecessary items that suit their lifestyles and preferences, but which increase their financial vulnerability. Although the muddling through approach has acknowledged the difficulties consumers face in optimizing their goals (Hausman, 2012), it has not previously been applied to financial decision-making, nor has the specific role of emotional factors been considered within it.

Second, we develop a new understanding of the three ways in which integral and incidental emotions interact when making financial decisions, responding to calls for greater clarity on this issue (Brüggen et al., 2017; Bryant & Zick, 2006). These theoretical contributions shed further light on why those who are financially literate may still become financially vulnerable (Klapper et al., 2015; OECD INFE, 2009). This third contribution uses a more nuanced understanding of the emotional factors that influence financial decisions (Brüggen et al., 2017; Bryant & Zick, 2006), to show why assumptions about the rational nature of financial decision-making and the factors that can contribute to financial vulnerability may be flawed (O'Connor et al., 2019). Drawing on these insights, in the next section we recommend approaches to address financial vulnerability that reflect the role of emotions.

6.2 Implications for Practice

Our findings have implications for how financially vulnerable and squeezed consumers can be supported to make better financial decisions. Financial policy needs to be emotionally palatable and accessible for consumers who are struggling to cope day-to-day and who may not be well-positioned to make economically optimal financial decisions. Guidance that speaks to emotional need and helps consumers balance short and long-term needs, by being based on ideal but realistic outcomes, is more likely to be followed. For example, encouraging consumers to envision their ideal retirement and to consider the actions needed to achieve it, is more likely to encourage long-term thinking than simple ‘to do’ and ‘not to do’ checklists of financial recommendations.

Although financial education is not on its own sufficient to lift consumers out of a vicious financial cycle, we acknowledge its role as a crucial empowerment tool (O’Connor, et al., 2019; Pappalardo, 2012; Valant, 2015). Educational programs that better reflect the socio-economic context in which decisions are made and the complex emotional factors driving them are more likely to be effective. As consumers learn through experience, rather than from directive financial guidance, better short-term decisions are likely to be supported through approaches that positively empower and promote longer-term gains. For example, individuals could be helped to identify unhealthy financial habits and to recognize the emotional triggers. Echoing the findings of Brüggen et al. (2017) and Farías (2019), we also suggest that the provision of financial education by outside bodies is not the only means by which consumers can improve their financial decision-making. Given the emotional nature of many of these decisions, providing opportunities to talk through their financial decisions in the presence of trusted intermediaries, such as in the community or workplace settings, could create a supportive ‘safe space’ for consumers to work through their financial management issues.

Finally, simple and flexible financial tools can be used to help consumers budget and save (Money Advice Service, 2018b). Our findings suggest these tools, including those that use built-in ‘nudges’ and reminders, have a useful role to play in reinforcing good financial habits. However, the design of these tools must align with the emotional influences and priorities of consumers, rather than assuming a rational decision-making approach in which the economically optimal option will always be chosen. For example, tools which help individuals to weigh up the short- and long-term trade-offs of their decisions are especially needed, given the propensity for emotional factors to get in the way of longer-term choices.

6.3 Limitations and Future Research

This study has several limitations which indicate the potential for future research. First, the sample was drawn from a specific geographic region of the UK, which could lead to concerns about the applicability of the findings beyond this setting. We mitigated against this issue by using secondary data sources and through informal consultations with policy and practitioner experts to triangulate our findings and check their broader relevance. However, future research could replicate this study in other geographic locations within and beyond the UK, especially in developed countries where efforts to develop financial literacy as the route to reducing financial vulnerability have not yielded the anticipated outcomes (Stewart, 2017).

Second, the focus has been on financially vulnerable and squeezed consumers because this group is seen as a priority by both scholars (Brüggen et al., 2017) and policy makers (Rowe et al., 2015). The research could be extended to consider other segments, including higher income consumer groups, who also can become financially vulnerable (O'Connor et al., 2019). Third, in line with previous studies (Brüggen et al., 2017), this study has not investigated specific integral or incidental emotions. Additionally, due to the nature of our sample, our findings have emphasized the negative role of emotions in decision-making, an issue that has dominated the current debate (Ou & Verhoef, 2017; Volz & Hertwig, 2016). In line with previous research suggesting that emotions can be beneficial to decision-making as well as acting as a bias (Lerner et al., 2015), future research could investigate the positive role of integral and incidental emotions in supporting consumers to make rational yet informed financial decisions.

References

Adams, P., & Smart, L. (2017). *From Advert to Action: Behavioural Insights into the Advertising of Financial Products* (Issue FCA-Ocasional Paper 26). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2958139

Appleyard, L., Rowlingson, K., & Gardner, J. (2016). The variegated financialization of sub-prime credit markets. *Competition and Change*, *20*(5), 297–313. https://doi.org/10.1177/1024529416657488

Atkinson, A., McKay, S., Collard, S., & Kempson, E. (2007). Levels of financial capability in the UK. *Public Money and Management*, *27*(1), 29–36. https://doi.org/10.1111/j.1467-9302.2007.00552.x

Barr, M. S., Mullainathan, S., & Shafir, E. (2008). Behaviorally informed financial services Regulation. In *New America Foundation White Paper*. http://www.newamerica.net/files/naf_behavioral_v5.pdf

Berg, B. L. (2004). *Qualitative Methods for the Social Sciences*. Pearson Education.

Blume, L. E., & Easley, D. (2006). *Rationality*. The New Pelgrave Dictionary of Economics.

Boulstridge, E., & Carrigan, M. (2000). Do consumers really care about corporate responsibility? Highlighting the attitude—behaviour gap. *Journal of Communication Management*, *4*(4), 355–368. https://doi.org/10.1108/eb023532

Bramley, W., & Collard, S. (2015). Saving us from ourselves - how can we make the UK more financially resilient? *True Potential Centre for the Public Understanding of Finance, Open University, Milton Keynes.*, 1–13. http://www.open.ac.uk/business-school-research/pufin/sites/www.open.ac.uk.business-school-research.pufin/files/files/PUFin-Green-Paper-saving-us-from-ourselves-13July2015(2).pdf

Brambley, W., Akter, S., Appleyard, L., Aslam, H., Degli Esposti, S., Dibb, S., Monne, J., Morris, J., Nguyen, T., Oliver, M., Roby, H., Siemers, O., & Zaksaite, R. , (2019). *MAS Project Report - Managing My Money for the Just About Managing*. Open University and Coventry University. https://www.fincap.org.uk/en/evaluations/managing-my-money-for-the-just-about-managing

Brüggen, E. C., Hogreve, J., Holmlund, M., Kabadayi, S., & Löfgren, M. (2017). Financial well-being: A conceptualization and research agenda. *Journal of Business Research*, *79*, 228–237. https://doi.org/10.1016/j.jbusres.2017.03.013

Bryant, W. K., & Zick, C. D. (2006). The economic organization of the household, Second edition. In *The Economic Organization of the Household, Second Edition*. Cambridge University Press. https://doi.org/10.1017/CBO9780511754395

Bryman, A. (2015). *Social Research Methods*. New York: Oxford University Press.

Bryman, A., & Bell, E. (2015). *Business Research Methods*. Oxford, UK: Oxford University Press.

Budescu, D. V., & Bruderman, M. (1995). The relationship between the illusion of control and the desirability bias. *Journal of Behavioral Decision Making*, *8*(2), 109–125. https://doi.org/10.1002/bdm.3960080204

Campbell, J. L., Quincy, C., Osserman, J., & Pedersen, O. K. (2013). Coding in-depth semistructured interviews: Problems of unitization and intercoder reliability and agreement. *Sociological Methods and Research*, *42*(3), 294–320. https://doi.org/10.1177/0049124113500475

Calvet, L. E., Campbell, J. Y., & Sodini, P. (2007). Down or out: Assessing the welfare costs of household investment mistakes. *Journal of Political Economy*, *115*(5), 707–747. https://doi.org/10.2139/ssrn.881768

Campbell, J. Y., Jackson, H. E., Madiran, B. C., & Tufano, P. (2011). Consumer financial protection. *Journal of Economic Perspectives*, *25*(1), 91–114.

Campbell, J. Y., Jackson, H. E., Madrian, B. C., & Tufano, P. (2010). The regulation of consumer financial products: An introductory essay with four case studies. In *HKS Faculty Research Working Paper Series RWP10-040, John F. Kennedy School of Government, Harvard University*. https://doi.org/10.2139/ssrn.1649647

Cartwright, P. (2015). Understanding and protecting vulnerable financial consumers. *Journal of Consumer Policy*, *38*(2), 119–138. https://doi.org/10.1007/s10603-014-9278-9

Chung-Herrera, B. G. (2007). Customers' psychological needs in different service industries. *Journal of Services Marketing*, *21*(4), 263–269. https://doi.org/10.1108/08876040710758568

Cohen, D. (2019). The Money Saving Expert: How Martin Lewis became the bost trusted man in Britain. *The Guardian*. https://www.theguardian.com/money/2019/jan/31/money-saving-expert-how-martin-lewis-became-most-trusted-man-in-britain-consumer-finance-advice

Coleman, J. S., & Fararo, T. J. (1992). *Rational Choice Theory: Advocacy and Critique*. Newbury Park, CA: SAGE Publications.

Cook, L. A., & Sadeghein, R. (2018). Effects of perceived scarcity on financial decision making. *Journal of Public Policy & Marketing*, *37*(1), 68–87. https://doi.org/10.1509/jppm.16.157

Darnton, A. (2008). GSR Behaviour Change Knowledge Review - Reference Report: An Overvie of behaviour change models and their uses. In *Government Social Research*. Government Social Research. https://doi.org/https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/498065/Behaviour_change_reference_report_tcm6-9697.pdf

De Meza, D., Irlenbusch, B., & Reyniers, D. (2008). Financial capability: A behavioural economics perspective. *Financial Services Authority*, *July*, 5–108. https://www.fca.org.uk/publication/research/fsa-crpr69.pdf

Dean, D., & Croft, R. (2009). Reason and choice: A conceptual study of consumer decision making and electoral behavior. *Journal of Political Marketing*, *8*(2), 130–146. https://doi.org/10.1080/15377850902813386

Della Vigna, S., & Malmendier, U. (2004). Contract design and self-control: Theory and evidence. *The Quarterly Journal of Economics*, *CXVI*(2), 1149–1187. https://doi.org/10.1093/qje/qjt005.Advance

Della Vigna, S., & Malmendier, U. (2006). Not to go to the gym paying. *The American Economic Review*, *96*(3), 694–719. https://doi.org/10.1257/aer.96.3.694

DellaVigna, S. (2009). Psychology and economics: Evidence from the field. *Journal of Economic Literature*, *47*(2), 315–372.

Ellen, P. S., Wiener, J. L., & Fitzgerald, M. P. (2011). Encouraging people to save for their future: Augmenting current efforts with positive visions of the future. *Journal of Public Policy & Marketing*, *31*(1), 58–72. https://doi.org/10.1509/jppm.09.089

Ennew, C. T. (1992). Consumer attitudes to independent financial advice. *International Journal of Bank Marketing*, *10*(5), 4–12. https://doi.org/10.1108/02652329210016812

Erta, K., Hunt, S., Iscenko, Z., & Brambley, W. (2013). Applying behavioural economics at the Financial Conduct Authority. *FCA Occasional Papers in Financial Regulation*, *1*, 1–78.

http://www.t-cpeople.co.uk/occasional-paper-1.pdf
Farías, P. (2019). Determinants of knowledge of personal loans' total costs: How price consciousness, financial literacy, purchase recency and frequency work together. *Journal of Business Research*, *102*, 212–219. https://doi.org/10.1016/j.jbusres.2018.01.047
Fernandes, D., Lynch, J. G., & Netemeyer, R. G. (2014). Financial literacy, financial education, and downstream financial behaviors. *Management Science*, *60*(8), 1861–1883. https://doi.org/10.1287/mnsc.2013.1849
Financial Conduct Authority. (2015). *Consumer Vulnerability* (Issue Occasional Paper No. 8-February). https://www.fca.org.uk/publication/occasional-papers/occasional-paper-8-exec-summary.pdf
Financial Conduct Authority. (2017a). Understanding the financial lives of UK adults Findings from the FCA's Financial Lives Survey 2017. In *Financial Lives Survey* (Issue October). Financial Conduct Authority. (2017b). *FCA Mission: Our Future Approach to Consumers* (Issue December).
https://www.fca.org.uk/publication/research/financial-lives-survey-2017.pdf
Financial Conduct Authority. (2018). *The financial lives of consumers across the UK*. https://www.fca.org.uk/news/press-releases/fca-reveals-financial-experiences-people-scotland
Financial Inclusion Commission. (2015). *Financial Inclusion: Improving the Financial Health of the Nation*. http://www.financialinclusioncommission.org.uk/pdfs/fic_report_2015.pdf
FinCap. (2017). *Financial Capability Strategy for the UK: Two Years On...* https://www.fincap.org.uk/en/uk_strategies/uk-strategy
FinCap. (2018). *Financial Capability Strategy for the UK*. https://www.fincap.org.uk
Fiorentino, R., Grimaldi, F., Lamboglia, R., & Merendino, A. (2020). How smart technologies can support sustainable business models: insights from an air navigation service provider. *Management Decision*, (May 2019). https://doi.org/10.1108/MD-09-2019-1327
Foxall, G. R. (2001). Foundations of consumer behaviour analysis. *Marketing Theory*, *1*(2), 165–199. https://doi.org/10.1177/147059310100100202
Foxall, G. R. (2017). Behavioral economics in consumer behavior analysis. *Behavior Analyst*, *40*(2), 309–313. https://doi.org/10.1007/s40614-017-0127-4
Frank, J. M. (2011). Do credit card users systematically underestimate their interest rates? Evidence from the Survey of Consumer Finances. *Journal of Public Policy & Marketing*, *30*(1), 133–139. https://doi.org/10.1509/jppm.30.1.133
Frederiks, E. R., Stenner, K., & Hobman, E. V. (2015). Household energy use: Applying behavioural economics to understand consumer decision-making and behaviour. *Renewable and Sustainable Energy Reviews*, *41*, 1385–1394. https://doi.org/10.1016/j.rser.2014.09.026
FSA. (2006). Levels of Financial Capability in the UK: Results of a baseline survey. In *Financial Services Authority* (Issue March). http://www.fsa.gov.uk/pubs/other/fincap_baseline.pdf
Gaur, S. S., Herjanto, H., & Makkar, M. (2014). Review of emotions research in marketing, 2002-2013. *Journal of Retailing and Consumer Services*, *21*(6), 917–923. https://doi.org/10.1016/j.jretconser.2014.08.009
Gibbs, C. G. R. (2007). Analyzing Qualitative Data 4 Thematic coding and categorizing. In *Analzing Qualitative Data* (pp. 38–56). https://doi.org/10.4135/9781849208574
Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2012). Seeking qualitative rigor in inductive research: Notes on the Gioia Methodology. *Organizational Research Methods*, *16*(1), 15–31. https://doi.org/10.1177/1094428112452151

Giudici, A., Reinmoeller, P., & Ravasi, D. (2018). Open-system orchestration as a relational source of sensing capabilities: Evidence from a venture association. *Academy of Management Journal*, *61*(4), 1369–1402. https://doi.org/10.5465/amj.2015.0573

Goode, W. J. (1997). Rational choice theory. *The American Sociologist*, *28*(2), 22–41. https://doi.org/10.4324/9781315573946-13

Hall, S. M. (2016). Everyday family experiences of the financial crisis: Getting by in the recent economic recession. *Journal of Economic Geography*, *16*(2), 305–330. https://doi.org/10.1093/jeg/lbv007

Hansen, T. (2012). Understanding trust in financial services: The influence of financial healthiness, knowledge, and satisfaction. *Journal of Service Research*, *15*(3), 280–295. https://doi.org/10.1177/1094670512439105

Hansen, T. (2017). The moderating effects of financial broad-scope trust on consumer knowledge, cognitive effort, and financial healthiness. *Journal of Consumer Behaviour*, *16*(2), 161–175. https://doi.org/10.1002/cb.1621

Harrison, T., Waite, K., & White, P. (2006). Article information : *International Journal of Bank Marketing*, *24*(1), 5–23. https://doi.org/10.1108/09574090910954864

Hastings, J. S., Madrian, B. C., & Skimmyhorn, B. (2013). Financial literacy, financial education, and economic outcomes. *Annual Review of Economics*, *5*, 347–376. https://doi.org/10.1146/annurev-economics-082312-125807

Hausman, A. (2012). Hedonistic rationality: Healthy food consumption choice using muddling-through. *Journal of Business Research*, *65*(6), 794–801. https://doi.org/10.1016/j.jbusres.2010.12.018

Heidhues, P., & Koszegi, B. (2010). Exploiting naïvete about self-control in the credit market. *American Economic Review*, *100*(5), 2279–2303. https://doi.org/10.1257/aer.100.5.2279

Huysentruyt, M., & Read, D. (2010). How do people value extended warranties? Evidence from two field surveys. *Journal of Risk and Uncertainty*, *40*(3), 197–218. https://doi.org/10.1007/s11166-010-9094-9

Hyun, C., Post, A. E., & Ray, I. (2018). Frontline worker compliance with transparency reforms: Barriers posed by family and financial responsibilities. *Governance*, *31*(1), 65–83. https://doi.org/10.1111/gove.12268

IOSCO - OECD. (2018). *The Application of Behavioural Insights to Financial Literacy and Investor Education Programmes and Initiatives*.

Johnson, E., & Sherraden, M. S. (2007). From financial literacy to financial capability among youth. *Journal of Sociology & Social Welfare*, *34*(3), 119–147. https://doi.org/10.1111/j.1475-4932.1987.tb00650.x

Kaczynski, D., Salmona, M., & Smith, T. (2014). Qualitative research in finance. *Australian Journal of Management*, *39*(1), 127–135. https://doi.org/10.1177/0312896212469611

Kahneman, D. (2003). Maps of bounded rationality : Psychology for behavioral economics. *The American Economic Review*, *93*(December), 1449–1475.

Kaiser, T., & Menkhoff, L. (2017). Does financial education impact financial literacy and financial behavior, and if so, when? In *World Bank Economic Review: Vol. August* (Issue 8161). https://doi.org/10.1093/wber/lhx018

Klapper, L., Lusardi, A., & van Oudheusden, P. (2015). Financial literacy around the world: Insights from the Standard & Poor’s rating services global financial literacy survey. In *Standard & Poor’s*. https://doi.org/10.1017/S1474747211000448

Kopecka, J. A., Santema, S. C., & Buijs, J. A. (2012). Designerly ways of muddling through. *Journal of Business Research*, *65*(6), 729–739. https://doi.org/10.1016/j.jbusres.2010.12.009

Krippendorff, K. (2004). Reliability in content analysis. *Human Communication Research*, *30*(3), 411–433. https://doi.org/10.1111/j.1468-2958.2004.tb00738.x

Lerner, J. S., Li, Y., Valdesolo, P., & Kassam, K. (2015). Emotion and decision making. *Annual Review of Psychology*, *66*, 799–823. https://doi.org/10.1146/annurev-psych-010213-115043

Lerner, J. S., Small, D. A., & Loewenstein, G. (2004). Heart strings and purse strings: Carryover effects of emotions on economic decisions. *Psychological Science*, *15*(5), 337–341. https://doi.org/10.1111/j.0956-7976.2004.00679.x

Lin J., Bumcrot C., Ulicny T., Lusardi A., Mottola G., Kieffer C., & Walsh G. (2016). *Financial Capability in the United States 2016* (Issue July).

Lindblom, C. E. (1959). The science of "muddling through." *Public Administration Review*, *19*(2), 79–88. http://www.usfinancialcapability.org/downloads/NFCS_2015_Report_Natl_Findings.pdf

Loewenstein, G., & Lerner, J. S. (2002). The role of affect in decision making. In R. J. Davidson, H. H. Goldsmith, & K. R. Scherer (Eds.), *The Handbook of Affective Science* (pp. 619–642). Oxford University Press.

Lowe, J. (2017). *Consumers and competition: Delivering more effective consumer power in retail financial markets* (Issue March), Financial Services Consumer Panel, London, UK. https://www.fscp.org.uk/sites/default/files/fscp_consumers_and_competition_thinkpiece_finalpp_jtl_20170306.pdf

Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, *52*(1), 5–44. https://doi.org/10.1257/jel.52.1.5

Madrian, B. C. (2014). Applying insights from behavioral economics to policy design. *Annual Review of Economics*, *6*(1), 663–688. https://doi.org/10.1146/annurev-economics-080213-041033

Marston, G., Banks, M., & Zhang, J. (2018). The role of human emotion in decisions about credit: Policy and practice considerations. *Critical Policy Studies*, *12*(4), 428–447. https://doi.org/10.1080/19460171.2017.1323655

Martin, K. D., & Hill, R. P. (2015). Saving and well-being at the base of the pyramid: Implications for transformative financial services delivery. *Journal of Service Research*, *18*(3), 405–421. https://doi.org/10.1177/1094670514563496 https://www.sciencedirect.com/topics/social-sciences/market-segmentation

Michie, S., Johnston, M., Francis, J., Hardeman, W., & Eccles, M. (2008). From theory to intervention: Mapping theoretically derived behavioural determinants to behaviour change techniques. *Applied Psychology*, *57*(4), 660–680. https://doi.org/10.1111/j.1464-0597.2008.00341.x

Miles, M. B., & Huberman, M. a. (1994). Qualitative data analysis: An expanded sourcebook. *Evaluation and Program Planning*. https://doi.org/10.1016/0149-7189(96)88232-2

Milner, T., & Rosenstreich, D. (2013). A review of consumer decision-making models and development of a new model for financial services. *Journal of Financial Services Marketing*, *18*(2), 106–120. https://doi.org/10.1057/fsm.2013.7

Money Advice Service. (2016). *Market segmentation - an overview | ScienceDirect Topics* (Issue

March). Money Advice Service. (2017). *Over indebtedness in the UK - 2017 Statistics* (Issue July).

Money Advice Service. (2018a). *About us*. http://www.visitfinland.com/about-us/

Money Advice Service. (2018b). *What is financial capability?*

Mortimer, K., & Pressey, A. (2013). Consumer information search and credence services: Implications for service providers. *Journal of Services Marketing*, *27*(1), 49–58. https://doi.org/10.1108/08876041311296374

O'Connor, G. E., Newmeyer, C. E., Wong, N. Y. C., Bayuk, J. B., Cook, L. A., Komarova, Y., Loibl, C., Lin Ong, L., & Warmath, D. (2019). Conceptualizing the multiple dimensions of consumer financial vulnerability. *Journal of Business Research*, *100*, 421–430. https://doi.org/10.1016/j.jbusres.2018.12.033

OECD. (2017). Use of behavioural insights in consumer policy. In *OECD science, technology and innovation policy papers* (Vol. 36, Issue 36). https://doi.org/http://dx.doi.org/10.1787/c2203c35-en

OECD INFE. (2009). *Financial education and the crisis: Policy paper and guidance* (Issue June). https://www.oecd.org/finance/financial-education/50264221.pdf

Ou, Y. C., & Verhoef, P. C. (2017). The impact of positive and negative emotions on loyalty intentions and their interactions with customer equity drivers. *Journal of Business Research*, *80*(July), 106–115. https://doi.org/10.1016/j.jbusres.2017.07.011

Pappalardo, J. K. (2012). Product literacy and the economics of consumer protection policy. *Journal of Consumer Affairs*, *46*(2), 319–332. https://doi.org/10.1111/j.1745-6606.2012.01233.x

Rick, S., & Loewenstein, G. (2008). The role of emotion in economic behavior Consequentialist models of decision making. In M. Lewis, J. M. Haviland-Jones, & L. Feldman Barrett (Eds.), *Handbook of Emotions* (pp. 138–156). https://doi.org/10.2139/ssrn.954862

Ritchie, J., Lewis, J., Mcnaugton-Nichollos, C., & Ormston, R. (2013). *Qualitatitve Research practice: A Guide for Social Science Students and Researchers*. Los Angeles, CA: Sage.

Rowe, B., De Ionno, D., Dominique, P., & Wright, H. (2015). Mind the gap. Consumer research exploring experiences of financial exclusion across the UK. In *Financial Conduct Authority* (Issue November). https://www.fca.org.uk/publication/research/mind-the-gap.pdf

Salisbury, L. C. (2013). Minimum payment warnings and information disclosure effects on consumer debt repayment decisions. *Journal of Public Policy & Marketing*, *33*(1), 49–64. https://doi.org/10.1509/jppm.11.116

Schmeichel, B. J., & Inzlicht, M. (1999). Incidental and integral effects of emotions on self-control. In M. D. Robinson, E. R. Watkins, & E. Harmon-Jones (Eds.), *Handbook of Cognition and Emotion* (pp. 272–290). New York: The Guilford Press.

Smith, T. E., Richards, K. V, Shelton, V. M., & Malespin, T. S. (2015). Sirens' call: Understanding poor financial decision making and credit card misuse. *Journal of Human Behavior in the Social Environment*, *25*(8), 897–906. https://doi.org/10.1080/10911359.2015.1039156

Stewart, D. W. (2017). Introduction to policy watch: Note on the Consumer Financial Protection Bureau. *Journal of Public Policy & Marketing*, *36*(1), 169–169. https://doi.org/10.1509/jppm.36.150

Strauss, A., & Corbin, J. (1998). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. Thousand Oaks, CA: SAGE Publications Ltd. https://doi.org/10.4135/9781452230153

Tversky, A., & Kahneman, D. (1986). Rational choice and the framing of decisions. *The Journal of Business*, *59*(4), part 2, The Behavioral Foundations of Economic Theory. (Oct. 1986), pp. S251-S278. *Foundations*, *59*(4), 251–278.

Thaler, R., & Sustein, C. (2008). *Nudge: Improving Decisions about Health, Wealth and Happiness*. Yale University Press.

Valant, J. (2015). *Improving the financial literacy of European consumers*. Briefing May 2015. https://www.europarl.europa.eu/RegData/etudes/BRIE/2015/557020/EPRS_BRI(2015)557020_EN.pdf

Västfjäll, D., Slovic, P., Burns, W. J., Erlandsson, A., Koppel, L., Asutay, E., & Tinghög, G. (2016). The arithmetic of emotion: Integration of incidental and integral affect in judgments and decisions. *Frontiers in Psychology*, *7*, 1–10. https://doi.org/10.3389/fpsyg.2016.00325

Volz, K. G., & Hertwig, R. (2016). Emotions and decisions: Beyond conceptual vagueness and the rationality muddle. *Perspectives on Psychological Science*, *11*(1), 101–116. https://doi.org/10.1177/1745691615619608

Weaver, R. K. (2014). Compliance Regimes and Barriers to Behavioral Change. *Governance*, *27*(2), 243–265. https://doi.org/10.1111/gove.12032

Wedgwood, R. (1999). The a priori rules of rationality. *Philosophy and Phenomenological Research*, *59*(1), 113–131.

Weintraub, R. E. (1993). *The concise encyclopedia of Economics: Neoclassical Economics*. Library of Economics and Liberty.

Willis, L. E. (2011). The financial literacy fallacy. *American Economic Review*, *101*(3), 429–434.

World Bank. (2013). Why financial capability is important and how surveys can help. In *Financial Capability Survey Around the World* (Issue August). http://responsiblefinance.worldbank.org/~/media/GIAWB/FL/Documents/Publications/Why-financial-capability-is-important.pdf

---

[1] Included within this group are those on low and insecure incomes, who typically rent their homes, are often supporting children, perhaps suffering from illness or a disability, or experiencing relationship breakdown (Appleyard et al., 2016).

[2] The FSA became two separate authorities; the Financial Conduct Authority (FCA) and the Prudential Regulation Authority.

[3] The Money Advice Pensions Service (MAPS) was launched in January 2019, bringing together the Money Advice Service (MAS) with the Pensions Advisory Service and Pension Wise.

Table 1: Main Fieldwork Participant Profiles

Participant	Age group	Gender	Housing situation		Level of Education	Pseudonym
1	18-24	F	Couple with children	Rent-privately	College	Miriam
2	18-24	M	Shared house	Rent-privately	Bachelor's Degree	Ashley
3	25-34	F	Single no children	Rent-privately	Higher National Diploma	Mia
4	18-24	M	Shared house	Rent-privately	Bachelor's Degree	Gerard
5	35-44	F	Couple with children	Own with mortgage	Secondary School	Jo
6	35-44	F	Single with children	Social housing	Secondary School	Aileen
7	25-34	M	Couple with children	Own with mortgage	Secondary School	Alex
8	25-34	F	Couple no children	Rent-privately	Vocational Qualification	Eliza
9	35-44	F	Single with children	Social housing	Vocational Qualification	Isla
10	18-24	M	Shared house	Rent-privately	Bachelor's Degree	Charlie
11	25-34	F	Single with children	Social housing	College	Lily
12	35-44	F	Single with children	Rent-privately	Higher National Diploma	Freya
13	25-34	M	Couple with children	Social housing	Secondary School	Lewis
14	45-54	F	Couple with children	Own with mortgage	Bachelor's Degree	Imogen
15	35-44	F	Single with children	Rent-privately	Bachelor's Degree	Megan
16	25-34	F	Single with children	Rent-privately	Secondary School	Anita
17	25-34	M	With parents	Own with mortgage	College	Kai
18	35-44	F	Couple with children	Own with mortgage	Bachelor's Degree	Jesse
19	25-34	F	Single with children	Social housing	Bachelor's Degree	Zoe
20	25-34	F	Couple with children	Rent-privately	PhD	Clara
21	65+	F	Single with children	Own-outright	Higher National Diploma	Lexi
22	35-44	F	Single with children	Social housing	Bachelor's Degree	Christine
23	65+	M	Single no children	Social housing	Vocational Qualification	Winston
24	25-34	F	Single no children	Social housing	Secondary School	Bianca
25	35-44	F	Single with children	Social housing	Secondary School	Chantelle

26	55-64	F	Single with children	Social housing	Secondary School	Zara
27	55-64	M	Couple no children	Social housing	Bachelor's Degree	Aiden
28	25-34	F	With parents	Rent-privately	Bachelor's Degree	Darcy
29	35-44	F	Couple with children	Own with mortgage	Bachelor's Degree	Jody
30	35-44	F	Couple with children	Own with mortgage	Bachelor's Degree	Harper
31	18-24	M	With parents	Own-outright	College	Isaac
32	18-24	F	Shared house	Rent-privately	College	Grace
33	18-24	F	Single with children	Rent-privately	Higher National Diploma	Daisy
34	18-24	M	With parents	Rent-privately	Secondary School	Zak
35	18-24	F	With parents	Own with mortgage	College	Sienna
36	35-44	F	Couple with children	Own with mortgage	Higher National Diploma	Florence
37	18-24	F	With parents	Own-outright	Secondary School	Esme
38	25-34	F	Single with children	Rent-privately	Higher National Diploma	Matilda
39	25-34	M	Shared house	Rent-privately	Bachelor's Degree	Don
40	18-24	M	With parents	Own-outright	College	Finn

Table 2: Data Sources

Data Sources	**Type of data**	**Use in the analysis (e.g. gathering, gaining, triangulating)**
Semi-structured interviews	**1^{st} Round (October – November 2017)** 40 interviews with individuals from low to moderate income households who are identified as 'financially squeezed'.	Data concerning how emotional factors influence consumers' financial decision-making. Insights into the attitudes which underlie financial behavior, the emotional factors shaping that behavior, and the day-to-day issues people face in managing their finances.
	2^{nd} Round (November– December 2018) 38 interviews with individuals from low to moderate income households who are identified as 'financially squeezed'.	Further reflections into how consumers managed their personal finances and how emotions contributed to financial decisions.
Triangulation data	**Policy maker documentation** 26 Reports from UK institutions (e.g. MAS, Collard et al. via FCA). 7 International Reports (e.g. OECD and EU). Total pages 1876.	Insights into policy approaches and the programs in place to support financially squeezed individuals. Triangulating findings from the individuals (1^{st} and 2^{nd} round interviews) to increase reliability and validity of the insights.
	Consultation (December 2019 – April 2020) 15 meetings with charities, advice organizations, policy organizations, university academics, financial services firms and Fintechs.	Triangulating findings from the 1^{st} and 2^{nd} round of interviews. To increase reliability and validity of the insights. Gaining a better understanding of the policy implications.
	Other material Institutional websites (e.g. UK MAS, US Consumer Financial Protection Bureau, Australia Moneysmart, World Bank and FCA).	Triangulating findings to increase validity and reliability; enriching the database with evidence from third-party data.

Table 3: Core Categories and Sub-Themes

Core Category	Sub-themes	No. of quotes	Example quotations
Emotion's role in financial capability	*Losing sight of the bigger picture*	32	*"I do tend to go on some crazy money spending binges. So sometimes, I'll spend months being really good and saving and then when I have a certain amount, I'll treat myself to something nice and expensive."* (Anita)
			"I think I would like a bit of a reality check really, every now and then I kind of need a kick up the bum when it comes to finances because if I am just let loose, I will just, I will do what I want, when I want…It isn't okay to be like that because I'm an adult and I am supposed to be planning for the future not spending money on things that I really don't need to be spending and I could be putting that money aside." (Eliza)
			"I should buy what I need and not what I want, because I realise that even after paying the bills, and you've still got lots of money in your account, but one way or another, it's all just goes out. You still don't really know what happens to it." (Clara)
	Frustration that knowledge is not enough	18	"*I think perhaps, it wasn't aimed at people like me who because of necessity, are so on the ball, I can tell you to the penny, what's in my account. I can tell you the price of beans at three different supermarkets. That's my life."* (Megan)
			"So, we'd always try [budget] like when we've got into difficulties, we list all the bills and we'll forget about it a week later and we'll just carry on living how we were." (Miriam)
			"I know that my washing machine is on its way out and I try and put £25 a week, which is a lot of money to me, away every week, but my car broke, and I've had to dip into it. My tumble dryer has gone as well and I'm like, when I've got that money back up, do I buy the washing machine or the tumble dryer?... I absolutely have always valued saving. I had two credit union accounts. It's just our reality. It hasn't increased it." (Megan)
Focusing on the present	*Instant gratification*	80	*"It's like you're almost hurting yourself, like. It's just something that is strict, and I think that disciplines hard to incorporate into your life when you feel like it mentally could have a negative effect on your wellbeing."* (Judith)
			"I think my mom was a bit barmy… she'd go on massive spending sprees, and she'd go into a clothes shop and she'd see a t-shirt in one colour; she wouldn't buy one colour, she would buy it in every single colour...she had never worn them or never took the labels off them. So that was the kind of role model I had. So, every so often I do have a bit of mad splurge." (Chantelle)
			"I don't want to spend any money on a weekend…[but] it's like you're almost hurting yourself, like… I think that discipline's hard to incorporate into your life when you feel like it mentally could have a negative effect on your wellbeing…" (Gerard)

	Accepting the consequences	63	*"I am never going to say, 'I can't', whatever 'I can't afford Christmas this year, I've got to save', or whatever. I'm not going to lower my standards." (Isla)*
			"I think even if I somehow woke up tomorrow, very affluent, I wouldn't be the biggest person in the world to think, oh I need to put ten percent away every week. Because I think life experience for me has decided me, I'm in the sort of mind set of, well, you know, I'm not always going to be here. I'll enjoy it while I have it. And if I do happen to find that little pool of money that helps me get that car at whatever point, great. But I'm not going to worry about saving for it, for the next four, five years. No. Not at all." (Aileen)
			"I'm lazy, that's why I wouldn't be interested to have a look through it [budgeting tools]. I come home from work and I make tea and I tidy around and then I sit down and watch Coronation Street, I'm lazy." (Imogen)
Rational muddling through	*Juggling family needs, desires and expectation*	186	*"Before I became like a mother and what not, I never had to really stop and think, oh, have I got enough money for x. I just used to go and pay for it, happily. I never had to worry about going into like the red." (Aileen)*
			"It's always my children. It's always your children and Christmas, I guess. Birthdays, Christmases, holidays; it's always to do with the children." (Clara)
			"My kids look up to me. They think mummy is doing something. Then the next target is to drive but I need that money to have a bit more so that I can… and the kids can do their activities and I can do a driving lesson once or twice a week and we can get somewhere where I want to be." (Daisy)
	Learning the hard way	74	*"I used to be so uptight, oh, I can't go into the red, but that's what it's there for. Money is money. Life is not dependent upon money." (Aileen)*
			"I've had to learn over the last five years to pace myself and wait for things. Whereas I haven't had to do that prior. So, I have to learn, I have to wait for the circumstances to be right for that to happen." (Florence)
			"I feel a lot happier that I was able to talk about it with other people, learn from other people. Some great, fantastic ideas." (Zoe)
	Navigating complexity	119	*"I always have to account for the money on my phone bill… the reason I pay for my phone bill is because my parents told me it's good for your credit rating…" (Ashley)*
			"So, anything that's a treat like going to the cinema, teach myself that sometimes that it's not always good to eat with a movie, which is a lie. But it's almost like stop looking at everything else and just be like you should be grateful just for the cinema. It's just living within my means. And being very basic I guess, first world basic, I will say." (Mia)
			"My child lives in Derby… so every time I go to Derby to bring her back to take her back to Derby, it takes me about 6 weeks to financially recover from that because to do that I have to not pay certain bills." (Lewis)

Figure 1: The Influence of Emotional Factors in Muddling Through