

BANKING ON BEHAVIOURAL SCIENCE

EMPOWERING AND INFLUENCING
CONSUMER FINANCIAL DECISIONS

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1. EMPOWERING CONSUMERS THROUGH BEHAVIOURAL SCIENCE

The consumer banking market in the UK has changed radically in recent decades, prompting similarly dramatic changes in the decision making of consumers making financial decisions: ‘Should I get an interest-only mortgage?’ ‘How much is too-much debt?’, ‘How can I know if I’m with the right bank given the complexity of the deals offered?’ There have been unprecedented increases in the range and complexity of choices facing consumers. In enabling consumers to navigate this complex environment it is important to understand how real people decide, and design products and policies accordingly. Insights from behavioural science can help consumers manage more efficiently their short- and long-term financial decisions. Behavioural science is a powerful tool combining the analytical rigour of traditional economic approaches with the intuitive appeal of psychology and related disciplines.

In standard economic theory, agents make optimal decisions and have access to all information, which they can assess freely and completely. In contrast, research from behavioural science demonstrates that standard economic models of rational behaviour do not accurately explain observed consumer behaviour; often people are prone to systematic behavioural biases.¹

2. BEHAVIOURAL SCIENCE: AN INTRODUCTION

Standard economic models offer a parsimonious framework representing how financial decisions are made. These models are grounded on a number of simplifying assumptions including strict mathematically determined rationality, maximizing choices and self-interest. In contrast behavioural scientists analyse decision-making as the outcome of a wider range of influences. The pioneers in this field were Amos Tversky and Daniel Kahneman who identified the limits to strictly rational behaviour by focussing on a range of heuristics – quick decision-making devices that enable people to make decisions without large cognitive demands on their time and energy. Using heuristics is not necessarily irrational; it is often sensible to use them - for example only a rational fool would spend days exploring all the different contracts available for a credit card before deciding to switch banks, particularly if their financial gains were measly compared to the cost of their time. Therefore, humans often do not, cannot and probably should not deliberate all possible options when making decisions. So

heuristics are often sensible but are sometimes (not always) associated with systematic biases.

This body of work has identified many important principles for understanding how humans make decisions. One of the most significant for financial decision-making is present bias: people are disproportionately impatient in the short-term which leads them into decisions that they may regret in the long-term. The analysis of household financial decisions can be understood in terms of these heuristics and biases.

Since Kahneman and Tversky's pioneering work on heuristics and biases, a larger number of heuristics have been identified and these can be grouped in a wide number of ways. The table below describes some of the principal heuristics and biases, alongside clarifying examples:

Heuristics/Bias	Status quo bias and default options
Description	The tendency for humans to be biased towards doing nothing or maintaining their current or previous decisions – even if such a course of action may not be in their long-term best interest.
Example	Magazine companies offer trials of their magazines for free; after the trial has ended, they continue to send magazines and charge the customer until he or she actively ends the subscription. This leads to many people receiving and paying for magazines they do not read because they have procrastinated about cancelling their subscription.
Heuristics/Bias	Overconfidence
Description	Individuals' own confidence in their judgments is often greater than their objective accuracy.
Example	If you ask people if they are safer than the average driver, 90% will say 'yes'. If you ask college teachers if they are better than the average college teacher 94% will say 'yes'. Few people will admit that they are close to or below average even though 50% of people statistically <i>must</i> be at or below average.
Heuristics/Bias	Anchoring and adjustment
Description	The tendency for people to anchor their decisions around a reference point – often social determined. Adjustments are then made with reference to this “anchor”. Once the anchor is set, there is a bias toward that value.

Example	For example, the initial price offered for a second hand car often anchors the rest of the negotiations, so that prices lower than the initial price seem more reasonable even if they are still higher than what the car is really worth. Studies of energy consumption show that people are often swayed by decisions of their neighbours; in this case there is a social reference point.
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Heuristic/Bias	Loss aversion and endowment effects
Description	Loss aversion is a fundamental insight from prospect theory, confirmed by experimental evidence, which shows that people suffer a disproportionate dissatisfaction when they lose something relative to the satisfaction they accrue when they gain an equivalent amount. Framing information in terms of a loss rather than a gain can have a bigger impact on decision-making. This also links to the endowment effect: people value something more highly if they own it and are trying to sell it than they are trying to buy it.
Example	Loss aversion has been widely applied in financial markets and can explain why people are reluctant to sell assets (e.g. houses) in a falling market – they don't want to realize the losses.

Heuristic/Bias	Herding and conformity
Description	This may relate to the anchoring and adjustment heuristic if reference points are determined by group behaviour and peer influences. Herding is observed across a very wide range of behaviours but is not necessarily irrational if herding reflects social learning from the actions of others.
Example	Panics in financial markets may reflect conformity and peer influence but may also reflect social learning from the action of others.

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Heuristic/Bias	Present bias and self-control problems
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Description	People are disproportionately impatient in the short-run
Example	Analysis of gym subscription patterns show that people will pay a lot more for annual gym subscriptions even though they rarely go to the gym – even when they are offered an alternative pay-as-you-go option which would be much cheaper (because they rarely go to the gym). This may be a pre-commitment device – people know that they lack self-control but hope that paying a large gym subscription upfront will help them overcome this.

3. APPLYING BEHAVIOURAL SCIENCE TO RETAIL BANKING

There are a number of strategies via which insights from behavioural science can be used to improve consumer's financial decisions. These insights can also be used to increase the effectiveness of traditional customer interactions from banks. Here is just a selection of examples:

3.1 STATUS QUO BIAS: ENCOURAGING ACCOUNT SWITCHING

Research suggests people have a natural propensity towards the status quo. For example, in countries where organ donation is conducted under presumed consent, participation rates are 25%-30% higher than in countries where donation is conducted under informed consent (Abadie and Gay 2006). This is also related to the endowment effect; individuals value products and services they already own more than if they didn't own them. For example, Heberlein and Bishop (1986) found that hunters were willing to pay \$31 for a particular hunting permit but were not willing to let go of the same permit for less than \$143.

When applied to a market such as financial products, this helps explain why there is such a low switching rate among current accounts and credit cards. Given this status quo bias, it is therefore important both to understand the key factors leading consumers to (not) make a decision to switch suppliers, and to understand what sort of default options or framing devices can be implemented by banks and regulators to encourage switching thereby increasing market competition and thereby improving consumer outcomes.

3.2 BOUNDED RATIONALITY: SIMPLIFY AND STANDARDIZE

Bounded rationality is the term used to describe the mental limits humans have when dealing with information in order to make a decision – often leading to irrational outcomes. The average person has constraints on the time and energy they are willing and able to devote to making a financial decision. These limits on rationality generate susceptibility to choice overload: individuals find it difficult to choose when they are offered too many options.

Shopping experiments conducted by Iyengar and Lepper (2000) found that limiting the number of choices makes more people more likely to make a purchase: shoppers were studied as they shopped at two types of stalls: one with lots of options for different jams or types of chocolate; the other with a very limited number of options. This evidence showed that shoppers were less likely to buy any jam or chocolate at all if they were shopping at a stall with an abundance of choices. Similarly Iyengar and Lepper's experimental evidence showed that when students were offered too many choices with essay questions, their performance deteriorates. Students also felt happier with their choices when these were limited. This evidence overturns the standard implication from traditional economics that more choice is better.

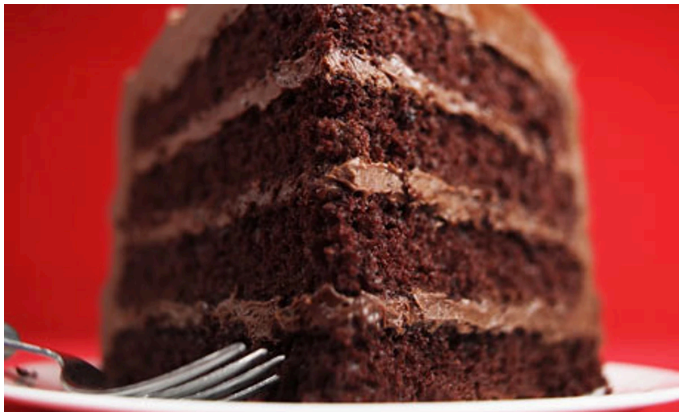
The UK financial accounts market is characterized by a vast number of tariffs, fees and offers, many of which have complex structures and discount arrangements. This makes the prospect of engaging with this overwhelming number of choices unattractive for many consumers; limiting their ability to choose the best deal given their circumstances. To reduce the complexity and number of choices, it may be useful to simplify and standardize information presented to individuals. If all banks had to report a standardised set of information about each product, direct comparisons could be made by consumers (facilitated by new technology such as comparison sites) enabling the variety of choices to be reduced into a handful of best options.

3.3 REDUCING PRESENT BIAS

People often make decisions between options, some of which have tangible short-term benefits, while others have intangible, longer-term benefits, that are potentially much larger. Think about the decision to save money instead of spending it in a given month: the temptation for immediate gratification (that new dress!) is front-of-mind, while the potentially much larger benefits of saving to provide a safety-net against financial shocks, reap the benefits of compound interest rates and providing for ourselves in old-age are more abstract and easier to ignore.

Present bias is distinct from short-termism, which just means that some people are more impatient than others and have a stable preference for more today than tomorrow. Present bias is a violation of the standard economic assumptions about people's attitudes towards time; it is not just about impatience. Present bias is about people being *disproportionately* impatient in the short-term.

This can be illustrated with an example of chocolate cake. Standard economics assumes that people have a stable preference for rewards offered over time. Imagine two sets of choices: Choice One is between having one slice of chocolate cake today or two slices of chocolate cake tomorrow. Choice Two is between one slice of chocolate cake in a year or two slices of chocolate cake in a year and a day.



If people have stable time preferences and choose one slice of chocolate cake today in Choice One, then they should also choose the one slice of chocolate cake in a year at Choice Two. Instead, evidence shows that they'll take the smaller, more immediate option (one slice) in Choice 1, but will be prepared to wait an extra day and get two slices of chocolate cake in a year and a day when offered Choice 2.

A wide range of experimental evidence (in animals as well as humans) shows people being impatient about rewards in the short-term but patient in the long-term. Research into the hyperbolic discounting models that generate the present bias result demonstrates that individuals will be farsighted when planning if both costs and benefits occur in the future. However, they will make short-sighted decisions if costs or benefits are immediate. This helps to explain the low take-up for products such as annuities which provide stable income over long period of time but which have disproportionate upfront costs with little reward. Therefore, when the gains are only available in the long term, consumers are swayed by the tangible costs in the short-term.

Prior research has shown that the simple act of setting a specific, challenging, yet attainable goal leads to better self-control (Latham & Locke, 1991) in the short term, particularly compared with setting a vague goal or not setting a goal at all. This may be due to the potential of achieving immediate gratification and positive confirmation, which can help in the achievement of goal performance. This idea has recently been implemented by RBS and NatWest in the field of financial savings¹, with very encouraging results.

3.4 DESIGNING MESSAGES

Behavioural science suggests that whilst providing consumers with information is important, the way in which that information is presented or framed is also important. If the communication of information takes into account the heuristics and biases then messages can be crafted to encourage a better response. Since individuals are affected as much by easily digestible, salient information as they are by lots of accurate information, then visual cues and vivid descriptions may play an important role. For example, communications via letters or emails that are short, simple and contain personally relevant information are significantly more effective than detailed, technical, and factual information.

How information is communicated and framed has significant impacts on consumer decision-making. For example, if the goal is to increase consumer savings behaviour, various cues and message-types have been suggested in the literature to support this. Example message principles include:

Principle	Loss Aversion
Message	By not taking advantage of your tax free savings allowance from the government (ISA), you could be losing up to £435 a year.
Principle	Accumulated Gains
Message	Saving just £10 a week will add up to £520 in a year. Go online and set up a direct debit today.
Principle	Social Norms
Message	8 in 10 people in your age-group have a total savings rate of over £5000. Come into store today and we'll help you set up a account.

¹ <http://personal.natwest.com/personal/savings/tools-for-savings/savings-goal-demo.html>

3. CONCLUSION

Insights from behavioural science can help consumers make better financial decisions. Policymakers and managers in financial institutions should look beyond the narrow view of consumers as rational agents and recognise the importance of behavioural principles in guiding consumer behaviour. An understanding of such principles can help develop products, interventions and communication strategies to fundamentally improve consumer welfare.
