

Can nudges be used for improved financial wellbeing?

Prepared for the Initiative for Financial Wellbeing

by Katarzyna Werner-Masters

Manchester Metropolitan University

February 2021

Executive summary

- While behavioural biases, heuristics, and rules of thumb facilitate the decision-making process, they often lead to suboptimal choices.
- Policy makers exert significant efforts to help individuals make better financial decisions, thus aiming to improve their financial wellbeing
- Over the past two decades behaviourally informed policy instruments known as nudges have been increasingly used to steer individuals to make decisions in their own best interest
- One of the most prominent and popular nudges is a default rule
- The design of default rules often embeds the influence of behavioural biases particularly the status quo bias, loss aversion and regret aversion in order to conquer people's tendency to procrastinate
- Empirical evidence shows that default rules have been successful in increasing the participation and contribution rate in pension schemes, safeguarding consumers in the credit markets, and expanding health insurance policies to a larger proportion of population
- Indeed, default rules and nudges more generally, are characterised by high effectiveness, low cost and wide public support

- However, nudges' transparency and manipulative nature are subject to disagreement among researchers
- In addition, alternative policy tools can lead to similar outcomes to those achieved by nudging
- In some cases, when people hold antecedent preferences and counter-nudges are at work, default rules may fail
- It is important to use nudges in combination with other policy tools and sludge to enhance people's financial wellbeing
- Overall, nudges can be an effective policy tool when deployed appropriately
- Finally, there is a significant scope for employing nudges in financial advice services

Introduction

There is a plethora of studies from psychology and behavioural economics documenting that individuals are systematically prone to various kinds of cognitive biases. In fact, even when these biases are not at work people's decision-making process is still subjected to various constraints, including feelings and emotions as well as limited time, attention and cognitive capabilities. This implies that people's choices are often suboptimal. This outcome is particularly pronounced for financial choices leading to considerable reduction in decision makers' welfare.

While policy makers tried to direct individuals away from sub-optimal financial decisions by means of various standard economic incentives, their moderate success in doing so led the key stakeholders to seek alternative solutions. One of them became behaviourally informed policies known as nudges. Indeed, over the past two decades nudges have attracted considerable interest of policy makers and researchers, who continue their examination of the impact that nudging has in the financial arena, with the focus on the welfare effects. The influence that nudges have on financial wellbeing of individuals has received somewhat less attention.

Hence, there is a large scope for research studies focusing on the significance of nudges in reducing the negative influence of biases and associated factors on the individual decision-making process. Therefore, this report aims to address this research gap by providing a comprehensive literature review on the topic by focusing on financial wellbeing of decision-makers. Specifically, this report concentrates on how nudges have been embedded into the repertoire of policy tools employed by government and institutions to facilitate better financial choices of individuals.

Due to the extensive amount of literature on the topic of nudges, this report focuses specifically on default rules that have received considerable attention on part of researchers and policy makers. Understanding how default rules work, what their strengths and weaknesses are, as well as which biases they are challenging helps identify whether their use as a leading policy approach is justified and whether governments should continue embracing them as part of their policies and regulations. These fundamental aspects are not only relevant for public policy decisions, but for anyone interested in helping agents make positive behaviour changes, such as financial planners. Therefore, this report also aims to provide some recommendations regarding how the present findings can inform practices of financial advisory services directed at enhancing financial wellbeing of clients.

Drawing on large literature on the impact of nudging on financial behaviour, this report argues that the nudge mechanisms constitute a powerful tool of policy-making. However, their ultimate effect is variable and it depends on numerous factors. Thus, this report argues that in order to achieve a significant improvement in financial wellbeing of individuals, nudges should be carefully deployed and supplemented by other policy tools.

Nudges

Recent decades have seen keen interest in developing and testing approaches that steer people in particular directions, while simultaneously allowing them to make their own choices. These approaches have been labelled as *nudges* (Thaler and Sunstein, 2008) and are an example of libertarian paternalism (Sunstein, 2016). This is because they preserve people's freedom of choice, while at the same time they invoke a policy makers' judgment about what would promote the welfare of the people at which the nudges are targeted (Sunstein, 2019). Consequently, an economic incentive that takes a form of criminal or civil penalty, mandate, tax or subsidy does not count as a nudge.

Nudges informed by findings from behavioural sciences have become important policy tools across the world, particularly in developed countries, such as the United States and the United Kingdom. In fact, the special Behavioural Insights Team has been created in the UK during the rule of Prime Minister Cameron, the so called 'Nudge Unit' (UK Cabinet Office, n.d.), successfully pursuing the incorporation of behavioural findings into numerous policy initiatives. Since then, similar units have been established in many other countries including Australia, Canada, Germany, Japan, Lebanon, Qatar, Saudi Arabia, Singapore and the Netherlands. Mrkva et al. (2021) report that over 200 different nudge units currently exist around the world across private and public sectors (Afif et al., 2019; Whitehead et al., 2014).

Indeed, there is significant research support in favour of using nudges to direct people towards making better choices. Kahneman (2011) shows that individuals employ different ways of thinking in different contexts, which lead to very different results. These are the famous System 1 and System 2, which coincide with fast and slow thinking processes, respectively. While the first one relies on rapid, automatic, emotional and intuitive judgement which makes it prone to the influence of biases, System 2 covers the more deliberate and calculative process. Although the latter process delivers superior decision-making outcomes, it requires more cognitive effort, which is not always available or willingly exerted. While nudges help

encourage people to use thinking processes consistent with System 2, they facilitate choice processes for both modes of thinking.

There is a large debate regarding whether nudges are effective and whether they should be used as part of policy tools, particularly in the context of financial decision-making. This present report addresses this important question referring to examples illustrating the impact that nudges, and in particular, default rules have on choices regarding pension savings, the use of credit and selection of health insurance. However, prior to the discussion, this report introduces the default rules and outlines relevant empirical evidence concerning their use as policy-making tools in the financial arena.

Default rules

The application of nudges, in particular defaults, in public policy has enjoyed significant successes. In fact, many consider defaults to be the most effective nudges (Loewenstein and O'Donoghue, 2010; and Sunstein, 2019). This explains why policy-makers and organisations regard defaults as a viable tool to guide individuals' behaviours (Kahneman, 2011; Johnson et al., 2012; Beshears et al., 2015; Steffel et al., 2016; Benartzi et al., 2017). Default rules can take different forms depending on the area of applications and are often complemented by other nudges, including framing, ordering and simplification. Some of the most successfully applied default rules in finance involve automatic enrolment in programmes and savings (Cronquist et al., 2018).

The underlying rationale or choice architecture behind the defaults rules is the awareness of people's tendency to procrastinate, the phenomenon first indicated by Strotz (1956). Procrastination is captured by people's tendency to have high short-term discount rates but lower long-term discount rates (a notion referred to in economics as hyperbolic discounting and proposed by Phelps and Pollak in 1986). This implies that people procrastinate by delaying an action (often cost) in spite of being aware that the action would be better now and it would lead to higher future benefits. Procrastination may lead to many undesirable financial outcomes, including credit card overspending and borrowing at high interest rates and unwillingness to engage in painful activities such as saving money, contributing to a pension scheme or financial planning.

The impact that procrastination has on the inability to engage in financial planning has been documented by O'Donoghue and Rabin (1999), who demonstrate that procrastination is responsible for severe problems in personal investment decisions. Moreover, Huffman and

Barenstein (2004) show that the pattern of expenditures recorded for UK households with consumption and spending declining between paydays, supports the notion of hyperbolic discounting, providing further evidence for procrastination. In conjunction with this result, the Office for National Statistics in the UK reports that the ratio of investments, savings and pensions to income was only 2.9 per cent in 2007, with this ratio being negative without employer contributions to pension funds (<http://www.telegraph.co.uk/money/main.jhtml?view=DETAILS&grid=&xml=/money/2007/06/30/cnsave130.xml>). Most importantly, those who paid into a pension in 2005 tended to have higher non-pension wealth than those who did not pay into a pension (Crossley and O’Dea, 2010). In addition, while the average credit card debt per household has fallen from £4,000 in 2007 to £2,592 at the beginning of 2020, the average credit card debt per household has risen 8.8 per cent over the past decade (<https://www.fool.co.uk/mywallethero/research/the-credit-card-debt-in-the-uk-statistics-for-2020/>).

Similar outcomes rooted in a tendency to procrastination have been observed in the US, where approximately 60 per cent of active credit card accounts are not paid off monthly (Bannister, 2004). Since, little improvement has been documented with 47% of Americans still carrying credit card debt in 2020 (<https://www.cnbc.com/2020/05/04/almost-half-of-america-now-carrying-credit-card-debt-and-more-of-it.html>). The growth of credit card offerings and borrowing opportunities that have significantly contributed to the increase in debt was driven considerably by the preference for immediate gratification, exposing the magnitude that procrastination can have among consumers.

In the following, the implementation of the default rule in areas concerned with retirement savings, credit markets and health care will be reviewed, and some recommendations for financial planners will be derived.

- **Pension and retirement savings**

The way nudges are used to reduce negative financial outcomes is by incorporating procrastination in the design of these policies. Specifically, a default rule that corresponds to an optimal (welfare-improving) financial choice is selected by the policy maker. By doing so, it has been recognised that in order to change the effect of the default rule, individuals will be required to make an active choice to reject the default set. Given the overwhelming evidence of the status quo bias in the process of selection of financial products, which depicts people's tendency to stick with their initial choice (Samuelson and Zeckhauser, 1988), individuals do not alter the existing default rule. This leads to better financial outcomes for individuals, which demonstrates the significant impact that a correct choice of a default may have on an individual behaviour.

An example of the powerful influence of defaults has been documented in the US, where employees have been enrolled in their defined-contribution pension scheme, the so called 401(k) plan, by default. Prior to nudging, the evidence had consistently pointed to a significant shortfall in household retirement savings (Rhee, 2013), which was also identified in the UK ('The Future of Retirement', 2015). In addition, most employees were enrolled with an opt-out design rather than an opt-in, implying that in order to contribute to their retirement scheme the employees must have initially signed up for it (Gale et al., 2009). Unsurprisingly, many employees did nothing, even when the enrolment process was straightforward. In addition, Choi et al. (2002, 2003) show that less than 50% of the US employees in their first year of employment chose to contribute to the scheme by actively opting in. These worrying facts have motivated the implementation of three successful initiatives involving the use of defaults in encouraging greater retirement savings. The first initiative entailed increasing enrolment in defined contribution retirement savings plans (Madrian and Shea, 2001); while the second initiative promoted the use of automatic escalation to encourage higher savings rates (Thaler and Benartzi, 2004). Moreover, Carroll et al. (2009) applied smart defaults to increase the likelihood of investing funds sensibly. These three applications of default rules are discussed next.

When the default rule for pension savings was changed from the opt-out to automatic enrolment, Madrian and Shea (2001) found that only a very small proportion of employees have taken an active choice to opt out. This result provides evidence that people procrastinate when they have to make complex decisions since dealing with complexity and ambiguity is unpleasant and time consuming. In such situations, individuals prefer to continue with the status quo. Therefore, limiting choice can reduce procrastination leading to better financial

outcomes. This is also because attention needed to evaluate alternative options is a scarce resource that is effortful to engage in (Sunstein, 2016). This information is highly relevant for financial planners, who can apply a similar strategy in swaying their clients towards better financial choices. Indeed, O'Donoghue and Rabin (2001) demonstrate that even when a minimal effort is required to choose an option that leads to an improved financial situation, consumers are unlikely to exert that effort. This explains why simple default rules might stick.

Similar underlying principles applied in the famous work of Thaler and Benartzi (2004). To increase people's savings, the two economists designed a default rule in the form of the Save More Tomorrow scheme, which enables employees to pre-authorise an automatic escalation of their savings contribution rate into employer-sponsored retirement saving plans, wherein the escalation of the contribution rate typically occurs with the receipt of pay raises (Cottle Hunt and Findley, 2020). The aim of this default rule is to delay the salient immediate cost of foregoing current consumption. While people are aware of their need to save more money and borrow less, yet they rarely do so due to limited self-control, procrastinations and other psychological factors (Benton et al., 2007). Thus, the default rule that automatically takes care of these issues and does not impose any cost is favourably perceived.

Financial planners could use the idea encapsulated in the Save More Tomorrow scheme to nudge their customers to commit to raising their spending by less than their income increases (Kitces, 2013), which somehow deviates from the idea proposed by Thaler and Benartzi (2004). Framing the default rule in this manner can help individuals maintain their current lifestyle, while enabling them to accumulate a significant amount of retirement wealth. Thus, the scenario is presented in a way that makes individuals believe that they do not need to forego their current consumption for the sake of the future, keeping them happy. Kitces (2013) points to the fact that in a long run the amount accrued in this manner could be larger than the amount gained by saving a percentage of income every year, as originally proposed by Thaler and Benartzi (2004). Importantly, this approach does not trigger unpleasant feelings as it does frame pension contributions as losses.

Loss aversion, which refers to the tendency of individuals to weigh losses about twice as much as gains of the same magnitude (Kahneman and Tversky, 1979; Tversky and Kahneman, 1992), provides the foundation for the Save More Tomorrow scheme's effectiveness. Specifically, Thaler and Benartzi (2004) directly build agents' tendency to dislike losses into the design of the default so that participants commit to increase their savings rate whenever their income increases so that they never see their take-home pay go down.

Therefore, as mentioned earlier, the employees do not perceive their increased 401(k) contribution as a loss. Benartzi and Thaler (2013) demonstrate that this nudge has considerably boosted people's retirement savings rates in the US (Benartzi and Thaler 2013) - after two years, participants of this scheme had nearly quadrupled their savings rate. Furthermore, Cottle Hunt and Findley (2020) theoretically prove that this solution is effective even for short planning horizons of 5 years.

Further research into the effects of default rules in the US context has revealed that automatic enrolment has significant benefits for all demographic groups, with increased anticipated savings for Hispanics, African Americans, and women in particular (Orszag and Rodriguez 2009; Papke et al., 2009; Chiteji and Walker 2009). In light of these findings the US government has launched The Pension Protection Act of 2006 (PPA) (Pension Protection Act, 2006) and other initiatives (e.g., Obama 2009; Internal Revenue Service 2009), which encourage employers to replicate the strategy of automatic enrolment for the benefit of their employees.

Default rules have also been successfully applied in the UK context, with pension auto-enrolment introduction in 2012 (Morrison, 2013). The research shows that among the largest employers who enrolled their workers first, overall pension enrolment rates increased from 61 to 83 per cent in 2013 (Campbell, 2013). Cribb and Emmerson (2016) point to other desired outcomes of automatic enrolment of employees into a workplace pension scheme including an estimated 37 percentage point increase in the participation in workplace pensions among eligible private sector workers by April 2015, and a considerable increase of the average contribution rate too.

The effectiveness of the default rule has also been evidenced in the Swedish context, where this nudge was applied as part of the Premium Pension Plan – a defined component contribution launched by the Swedish government in 2000, where a designated fund was selected as a default for those who did not make their own choice (Cronquist et al., 2018). It has shown that the proportion of retirement savers who chose their own portfolios increased significantly leading to larger savings. It has also been shown that the default rule is more effective in increasing pension contributions than other instruments. For instance, financial benefits of automatic enrolment in retirement plans in Denmark exceeded those associated with significant tax incentives (Chetty et al., 2014).

Interestingly, the impact of defaults in the context of pension savings goes beyond the findings discussed above, particularly when people's specific manner to evaluate and keep

track of their financial outcomes is acknowledged. This manner is also known as *mental accounting* and has been defined by Kahneman and Tversky (1984) and Thaler (1985), who brought this notion to prominence and provided relevant evidence of its wide-spread use (Thaler, 1990). For instance, Cagan (1965) shows that an increase in pension savings is positively correlated with other types of savings, contrary to predictions of standard economic theory. Hence, defaults encourage all types of savings, not only pension savings. This is relevant for other stakeholders interested in improving the financial wellbeing of individuals, including financial advisers. Furthermore, Benartzi and Thaler (2007) demonstrate that individuals keep different mental accounts for money already accumulated in the plan and other that they have not yet transferred to their pension pot. Finally, the default regarding the choice of assets available to employees contributing to their pension also plays an important role. Thaler (1999) observes that the company's stock is treated by employees as a separate mental account, and its absence in 401(k) plan leads to a very different choice of asset allocation as compared with the situation when the company's stock is one of the available assets. These examples show that defaults in combination with other psychological factors, such as mental accounting, may lead to substantial improvement in the broader category of financial outcomes of individuals as well as their welfare.

The third prominent application of defaults has been distinguished by Carroll et al. (2005), who examined the impact that defaults have on people's pension plans when their time to make a decision is limited by an imposed deadline. Specifying deadlines aims to reduce or eliminate the impact of the status quo bias in the decision-making process. In an experiment by Choi et al. (2006) participants were clearly informed that being passive is not an option and within 30 days of being hired they must choose to either contribute to a pension scheme or not – hence, the applied default consisted of these two options. The results indicate that this active strategy raised the average contributions by 50 per cent. This shows that a combination of deadlines and the requirement of active decision-making can effectively reduce the negative impact of inappropriate status quo (the non-enrolment default) and procrastination, similarly to a change in default (Madrian and Shea, 2001).

Indeed, the attractiveness of the various types of default options discussed above stems either from eliminating the status quo (smart defaults demonstrated by Carroll et al., 2005) or from the awareness of this bias, namely, the fact that maintaining the status quo requires minimal cognitive effort. Indeed, a change away from the status quo imposes physical, cognitive, and in some cases emotional costs on those who choose to alter their position. This encourages sticking to the proposed option in line with procrastination. In addition, loss

aversion and regret aversion (the dislike of situations that may lead to the wrong decision, as defined by Loomes and Sugden (1982) and Bell (1982)) may strengthen the influence of the status quo bias. In particular, maintaining the status quo protects individuals from a regret they would have experienced if a new choice had led to an inferior outcome. Loss aversion is manifested by agents' greater dislike of negative consequence of a potential change as compared with the pleasure associated with the possible positive consequences of that change. This interaction between different biases invoked in the design of default rules is important and must be taken into consideration when selecting the default value.

The evidence supporting the interplay between the status quo bias and regret aversion has also been provided by Benartzi and Thaler (2007), who found that very few individuals are willing to reallocate money that they already accumulated in a 401(k) plan. The authors point to the individuals' fear of regret associated with a chance of the new allocation underperforming the existing one. This highlights how important an initial choice of a specific financial plan is.

In the context of regret aversion and procrastination, Loewenstein et al. (1999) show that many pensioners regret not planning well for retirement and feel they should be saving more with this purpose (Farkas and Johnson, 1997). The former Pensions Commission in the UK identified in 2006 that the working population consisting of people aged 25 and over are not saving enough for retirement (https://www.instituteforgovernment.org.uk/sites/default/files/pension_reform.pdf). In a 2020 survey of 2,000 non-retired UK adults aged 55 and over, 17 per cent admitted not to have pension savings other than the State Pension (<https://www.unbiased.co.uk/news/financial-adviser/one-in-six-over-55s-have-no-pension-savings-yet>). Hancock et al. (2006) forecast that 25 per cent of elderly citizens (age 85 and over) in the UK will have zero or very low value financial assets in the period leading to 2022. These statistics show that financial planning for retirement is considerably affected by individuals' tendency to procrastinate and provides further scope for the implementation of relevant policies.

The good news, however, is that the majority of these individuals could increase their pension contributions if appropriate mechanisms, such as the use of default rules in financial advice, are in place. Most importantly, defaults such as automatic enrolment in retirement plans can easily be adjusted to decision-making involving other types of savings.

- **Credit markets**

Default rules have also been applied in the credits markets in order to facilitate an improvement in the outcomes of consumers' decision-making process (Agarwal et al. 2013). In contrast to the retirement savings, one of the most common default rules introduced in the US credit market aimed at protecting consumers from high bank overdraft fees through the automatic non-enrolment in overdraft 'protection' programmes (see Requirements for Overdraft Services, 12 C.F.R. § 205.17, 2010). Specifically, in 2009 the Federal Reserve Board's switch to the non-enrolment default rule, and in that way banned banks from charging a fee for overdrafts from checking accounts unless the accountholder has explicitly enrolled in the bank's overdraft program. Sunstein (2016) reports that the fees were as high as 7000 per cent. With the government's intervention in place, banks could no longer automatically enrol people in the overdraft "protection" programs exploiting consumers' inability to meet their checking limits (Willis, 2012). Rather, customers were expected to sign up if they wished to participate in such programmes. Thus, the essence of the new government regulation was to employ the consumers' tendency to remain at the status quo to protect them from banks.

While the number of consumers who signed up indeed dropped, the decrease was considerably lower than anticipated. This resulted from the influence of people's aversion to losses, which banks skilfully took advantage of when originally promoting the undesired 'protection' programmes. Nonetheless, a large proportion of consumers who signed up to the exploitative programmes offered by the banks were actually those with significant overdrafts (Zywicki, 2013).

Defaults and other nudges have also been implemented in the Credit Card legislation enacted in 2010 in the US, also known as the Credit Card Accountability Responsibility and Disclosure Act (Credit CARD Act, 2009). This legislation sought to protect consumers from misleading and unfair techniques such as high interest rates, improvident extensions of credit, exorbitant fees, and techniques increasing the likelihood of late payment, among other things (Matthews, 2010). It is estimated that this initiative embedding nudges leads to more than \$10 billion of savings annually, thus providing an effective financial guidance to American consumers (Agarwal et al. 2013).

Other default rules have been suggested for instance in credit card payments, where, it has been argued that deducting the credit card payments from the balance on the current account could be automatic (de Meza et al., 2008). This idea has been further supported by Kitces (2013), who sees a great role of financial planners in promoting beneficial defaults to clients. Specifically, he calls for advising customers to take advantage of the sticky and

effortless defaults by setting automated debit on their bank accounts for regular outgoings, including bills. In this way, he wants to minimise the chance of drawing from the overdraft facilities by bank clients.

In addition, it has been debated whether self-imposed defaults on spending limit could reduce credit card holders' temptation to spend their money (de Meza et al., 2008). For instance, when the limit is exceeded, the card is refused, perhaps for a pre-specified period or until the balance is below the limit. The chance of such a default being effective would be higher if the credit card suppliers offered this facility. While no attempts to apply either of the two default rules so far, it is evident that these arrangements would benefit customers in avoiding overspending, and should be promoted by people providing financial advice.

Another default rule proposed in the credit markets setting calls financial institutions to uniformly report costs and fees related to their mortgage offerings in a simple and accessible way, in order to enable customers to learn which mortgages best serve their interests (Kumar, 2016). As argued by Thaler and Sunstein (2008), a default rule in form of a specific amount of information from all institutions would facilitate people's choices of mortgages, an area of the market in which consumers are regularly offered predatory loans. While the rule has positively impacted banks' transparency, there is no empirical evidence supporting it.

The use of defaults in credit markets is deeply motivated by loss aversion, which drives behaviours of many individuals. Specifically, as people dislike losses more than they like gains of the same magnitude (Zamir, 2014), they prefer to integrate all losses, as this leads to a smaller reduction in their utility compared to experiencing each loss separately. This could explain the popularity of credit cards (many small losses are pooled into a larger loss) as well as a tendency to purchase add-ons in insurance (Thaler, 1985). Additionally, loss aversion may explain why so many individuals consolidate their debt, e.g., by re-mortgaging or taking personal loans, often resulting in an even higher amount of debt. This is evident based on the recent statistics which show that despite lower interest rates the amount of credit card and loan debt in the UK has been at its record high in 2020 (<https://www.independent.co.uk/news/business/news/credit-card-loan-debts-paid-coronavirus-lockdown-a9544241.html>).

It is also important to recognise that defaults can also be used to nudge consumers to make inferior choices, thus negatively affecting their financial wellbeing. One example of such use can be found in the context of 'payday loans', which refer to cash advances on salary paid back on the day the salary arrives into the bank account. Payday loans are very popular in the US and payday loan firms are increasingly active in the UK. These arrangements enable

consumers to easily borrow money at extortionate rates and rely on people's lack of willpower to consider alternative financing options. The problem with payday loans is that many lenders offer payday loan rollovers, which make it very easy to extend the term of the loan. In this context, the default rule only exacerbated this problem, as it automatically renews the loan, increasing the consumers' indebtedness with the payday loan provider. Some US States, e.g., New Mexico, have banned payday loans as a consequence (<https://paydayloaninfo.org/state-information>). Thus, it is important for financial planners to educate their customers about the appropriateness and effects of different default rules.

- **Health and life insurance**

It is known that amongst other factors, access to health insurance increases longevity by governing whether the consumer will have access to potentially lifesaving health care (Woolhandler and Himmelstein 2017). While this outcome is crucial, choosing health insurance also has important financial consequences influencing aspects such as insurance companies' costs and social justice more generally (Dellaert et al., 2019).

Yet, evidence suggests people are not good at making decisions regarding health coverage and often do not understand even the basic terms involved in insurance transactions (Loewenstein et al., 2013; Ubel et al., 2015). As a result, they pay too high insurance premium (Johnson et al., 2013), wasting significant parts of their payments. Various nudges have been implemented to counteract these outcomes and to direct people towards better health insurance choices. Among those nudges, the default rule seems the most effective solution.

Sunstein (2019) provides an example of a default rule applied as part of the Affordable Care Act (ACA) in the US, which imposed on employers with over two hundred employees the requirement to automatically enrol employees in health care plans by 2015, while giving them the option to opt out (Affordable Care Act, 2010).

Similarly, the Community Living Assistance Services and Supports Act (CLASS Act, 2010) has been launched in the US to encourage citizens to join a national voluntary long-term insurance program. Like ACA, the CLASS Act invoked an automatic enrolment system, whereby employers enrol employees in the program unless they opt out (CLASS Act, 2010).

In the same year, US States were given the option to automatically enrol and renew children in Medicaid or Children's Health Insurance Program (CHIP), subject to their eligibility. This approach allowed states to initiate and determine eligibility for Medicaid or

CHIP without a signed Medicaid or CHIP program application, as long as the family or child consented to be enrolled in Medicaid or CHIP.

By default, these various insurance programmes provided health insurance coverage to millions of low-income adults in the US as well as an enhanced access to primary health care services, including cancer surgery (Eguia et al., 2018) and prescription medications (for a detailed and up to date review of the effects of the Acts see Antonisse et al., 2017).

Similarly to health insurance, people are unwilling to insure against a loss of life or disability. A 2017 report by MoneySuperMarket provided statistics indicating that 60 per cent of UK adults do not have any form of life insurance (<https://harbourwealth.co.uk/60-of-uk-adults-dont-have-any-form-of-life-insurance/>) and only 50 per cent of households with mortgages have life insurance (Butler, 2020). Indeed, the study by Ciccotello and Yakoboski (2014) suggests that most people born after 1980 considers these forms of insurance unaffordable and unnecessary. Moreover, they believe that any employer-provided coverage is sufficient. These statistics are only slightly better for older generations, who might be in a position to offset life insurance needs through an accumulation of financial assets. This provides a great scope for the implementation of default nudges encouraging a take-up of supplemental life and long-term disability insurances. Financial planners could play an important role in promoting better life insurance choices through appropriate nudging.

The impact that default rules have on the choice of life insurance coverage has been investigated by Harris (2017), who studied how the default rule in a form of an increased life insurance coverage for employees with supplemental coverage affects their decision to hold life insurance. He finds that the nudge expanded employees' life insurance holdings one-for-one for those who could have undone it. Most importantly, his findings suggest that this nudge design reduced uninsured vulnerabilities for two-thirds of employees, providing further evidence of defaults' effectiveness.

While the discussion uncovered how defaults can be successfully utilised to improve financial wellbeing of individuals, some examples directly invoked an important role that financial planners play in swaying customers to act in their own best interest. It is important to recognise, however, that many customers have considerable difficulties in following beneficial recommendations of financial advisers, and, in fact, many individuals never seek any form of financial advice. The latter observation provides even a greater scope for the use of nudges in financial planning. Explicitly, Kitces (2013) suggests offering financial planning services as part of a single consolidated fee. This fee would represent a default rule that entails customers'

access to all services, thus encouraging the clients to take advantage of the offering. This contrast with the current establishment involving financial planning fees for separate services, which discourages clients from engaging with financial advice services.

Evaluation of default rules

The discussion ascertains that default rules have become the leading mechanism in directing individuals towards better choices, particularly in the financial context. Indeed, a large volume of literature explores what makes defaults so effective (Gale et al., 2009; Dinner et al., 2009; Carroll et al., 2009). In the following, we will bring arguments for and against the use of nudges, and default rules in particular, to see whether the policy-makers and organisations regard them as a viable tool to guide individuals' behaviour (Kahneman, 2011; Johnson et al., 2012; Beshears et al., 2015; Steffel et al., 2016; Benartzi et al., 2017) to determine if their use is justified and whether they can improve financial wellbeing of individuals.

The arguments pro nudging

There is a long list of theoretical and 'practical' reasons explaining the desirability of nudges, including defaults. Primary reason, however, is a comparatively low cost-benefit ratio. Indeed, compared with more traditional policy tools of economic incentives, such as bans and mandates, the low cost associated with the implementation of nudges, together with their high effectiveness, are the most attractive features of this behavioural approach (e.g., Thaler and Sunstein, 2008; Sibony and Alemanno, 2016). Financial advisors should be mindful of this advantage, as it explains the widespread use of nudges in different choice domains, including finance and consumption (Loewenstein and Chater, 2017).

One of the main premises behind Thaler and Sunstein's (2008) proposal was to achieve a significant behaviour change at a low cost (Benartzi et al., 2017). As shown in the discussion regarding the applications of defaults rules, people often fall victims of procrastination – the tendency that financial advisers are acutely aware of. In view of this powerful tendency, any attempts of taking an action on the decision-makers part are considered costly as they demand resources, including cognitive effort, attention and time. In addition, potential deviations from the status quo may lead to inferior outcomes, which, in accordance with loss aversion should be avoided. Since the default rules do not place the costs on individuals and protect them from possible losses, they are viewed favourably by the majority of agents (Sunstein, 2016).

In fact, Tor (2020) confirms that steering people towards better decisions by respecting their freedom of contrary choice entails minimal enforcement costs. In addition, people can always rebel and revert away from the choice towards which they are directed by a nudge, implying that the cost of introducing erroneous nudges is low (Tor, 2020). This is not the case with formal regulations, mandates, or taxes, where any mistakes are transferred directly onto individuals through taxes (Sunstein, 2014, 2017). Therefore, the flexibility and the non-intrusive nature of nudges provide a safeguarding mechanism, particularly when regulations are prone to lobbyism (Sunstein, 2015 DPLN). The flexibility that reflects the principle of free choice embedded in nudges, including defaults, is also more desired in light of heterogenic preferences and interests of individuals (Sunstein, 2019). These are important insights that financial advisors should be aware of when judging whether the use of nudges in financial planning is legitimate.

While low cost and choice flexibility are important characteristics of nudges, it is the effectiveness of nudges that makes them so popular (Bernartzi et al., 2017). Sunstein (2019 SG) points to the fact that many nudges have outperformed expensive economic incentives in providing the desired impact on individual choices. Defaults in the form of automatic enrolment provide an excellent example of the superior effectiveness of nudges, which has been evidenced in the previous discussion in the US and the UK contexts (e.g., Cribb and Emmerson, 2016). Johnson and Goldstein (2013) provide a further illustration of the positive default effects and explore the possible psychological mechanisms that underlie them.

The effectiveness of nudges, among them defaults, has been particularly pronounced for individuals with lower socio-economic status, lower domain knowledge and lower numerical ability, leading to a reduction in choice disparities amongst decision-makers (Mrkva et al., 2021). Indeed, in the case of defaults, the choice of a good alternative is facilitated by invoking a minimal cognitive effort (Johnson and Goldstein, 2003). As a result, it has been suggested that nudges, including defaults could be a powerful tool in hands of policy makers pursuing the objective of reducing disparities, and, as such, should be primarily directed at the more disadvantaged individuals. This suggestion is further supported by Shah et al. (2012), who argue that the default rules should be particularly favoured by individuals facing poverty and lacking bandwidth or expertise in choice situations. Therefore, the individuals with these characteristics often consider the defaults rules a blessing (Sunstein, 2015). The challenge that this argument poses for financial advisers is how to attract clients with lower-socio economic status to undertake financial planning.

Nudges' effectiveness also encompasses the fact that they are able to fix problems quickly, without the need for costly and time-consuming interventions (see Loewenstein and Ubel, 2010; and Social and Behavioral Sciences Team 2016' Annual Report, for a wide range of nudges that have improved the implementation of government policy during Obama's administration).

While effectiveness of nudges drives the policy makers' decision to implement them, it is also important that these nudges are transparent (Sunstein et al., 2019 JEPP). For earning trust, nudges must provide members of the public with an opportunity to engage with them and endorse them. Jachimowicz et al. (2019) show that the defaults operating through endorsement (the defaults that are seen as conveying what the choice architect thinks the decision-maker should do) are more effective. Undeniably, a principal advantage of nudges, as opposed to mandates and bans, is that they do not include coercion (Sunstein, 2019 Short guide). Indeed, this insight is consistent with the code of practice to which financial advisers adhere, and could make nudges a powerful tool in their hands. This is the case as within financial advisory services the advisor-client relationship is built upon time and trust. Since most people value human interaction when receiving financial advice, signals sent through choosing a default for consumers are even stronger than in the case of policy makers.

In the context of trust, the use of nudges has been widely supported by the public in different countries. An excellent overview of this support and related empirical evidence can be found for instance in the studies by Sunstein et al. (2018), Sunstein (2016 ALR, 2016 DPLN), Jung and Mellers (2016) and Reisch and Sunstein (2016, JDM). These authors report that the default rules amongst other nudges are supported by Americans and Europeans so long as they are consistent with their values and interests. For instance, in a survey involving a nationally representative sample of US respondents, Sunstein (2016 DPLN) finds substantial support for an automatic enrolment in savings plans, subject to opt-out. Importantly, people approve of this nudge, regardless of whether the enrolment in a savings plan is encouraged or mandatory. This provides an even stronger rationale for the use of nudges by financial planners.

This is not necessarily the case with interventions such as mandates, to which people have strong objections. It is important to recognise that in an experimental test comparing the approval of nudges versus mandates by the Americans, Sunstein (2015 DPLN) found that while the majority of the US population has no general view about nudges and their ultimate assessment hinges on the assumptions underlying the use of nudges, they have an unfavourable view of mandates (Sunstein, 2015 DPLN). Public support for the use of nudges has been evidenced in the US and Sweden (Hagman et al., 2015), in Denmark, France, Germany,

Hungary, Italy, and the United Kingdom (Reisch and Sunstein, 2016, JDM), and in Belgium, Denmark, Germany, South Korea, and the US (Sunstein et al., 2019 JEPP).

Interestingly, the trust in and support for nudges also depend on people's beliefs regarding the identity of choice architects and the signal received. Specifically, individuals may perceive a nudge such as a default rule as an implicit recommendation, from which they should not depart as it must be 'good' for them (Sunstein, 2016). This fact has been highlighted earlier and could be utilised by financial planners. This is an aspect that makes default rules particularly effective. However, in an experimental study Osman et al. (2018) show that nudges proposed by scientists rather than policy makers are deemed to be more trustworthy. As argued by Tor (2020) this is the case since policy makers are suspected of manipulating individuals. Given the trust people deposit in financial advisers, their intermediating role in projecting nudging is crucial for clients' evaluation of nudging's appropriateness, hence, its success.

Indeed, there is evidence suggesting that nudges appealing to individuals' conscious and deliberative thinking find more support among members of the public (Sunstein, 2016 ALR). These nudges include reminders, warnings, educational campaigns as well as disclosure and providing additional information. The results of a survey of Canadian and UK citizens involving savings, investment, online purchasing and healthy eating decisions support this conjecture (Felsen et al., 2012). Jung and Mellers (2016) obtain similar results in the US highlighting that people feel more comfortable with nudges targeted at deliberate and reflective thinking, although this preference seldom translates into the effectiveness of such mechanisms. From the perspective of financial advisers it is important that people are moved toward greater acceptance of non-educative nudges (directed at automatic and non-deliberative decisions), such as defaults, if they are given information suggesting that those interventions are especially effective (Davidai and Shafir, 2018).

The arguments against nudging

One of the main arguments against nudges is that they are manipulative, a belief nested in the idea that nudges exploit behavioural biases (see Rebonato, 2012, who explicitly defines nudges as exploitation of behavioural biases). Wilkinson (2013) supports this criticism of nudges and equates them to commercial advertisement, stating that both tend to influence people's behaviour in ways that do not serve their legitimate interests but rather the corporate interests. He goes further by boldly accusing those implementing nudges of manipulating agents who are unaware of this manipulation. If financial advisers plan to use nudges to steer people into a direction of better financial choices, they must be able to understand this criticism, which is explained here in more detail.

Undoubtedly, there is plenty of examples demonstrating the misuse of nudges by many companies or even entire sectors interested in increasing their revenues. One of the most prominent examples is the US mortgage market, in which banks encouraged borrowers to take out loans that they were not able to repay causing a crash of the real estate in the early 2000s (Thaler, 2015 NYT). Numerous scandals involving organisations providing financial advice have also been exposed showing how these institutions have strategically utilised nudges to meet their sales targets against their customers' best interest (Cheng, 2020). In fact, the wide repertoire of these exploitative practices labelled 'phishing' with the corresponding areas of their application has been outlined in the book titled "Phishing for Phools: The Economics of Manipulation and Deception" written by Shiller and Akerlof in 2015.

Thaler (2015, NYT) defends the US and the UK government teams incorporating nudges into their policies noting that they have done so by adhering to strict guidelines aiming to ensure that people are being swayed to better decisions that they will not regret. Similarly, Sunstein (2018) rejects Wilkinson's condemnation of nudges stating that their sole role is to help people regardless of whether this is through exploitation of behavioural biases or not. Lichtenberg (2016) backs this rationale indicating that overall nudges often are the best option.

The criticism of manipulation entailed in the use of nudges is further linked to the argument made by Bovens (2009) claiming that the underlying psychological mechanisms on which nudge are founded "*typically work better in the dark (...)*". This argument has been used by other researchers to undermine the ethics behind nudging (see e.g., Glaeser, 2006, referring to nudges as a form of trickery). Indeed, Sunstein (2016, DPLN, 2017) and Conly (2013) acknowledge that to some extent nudging relies on limited transparency, but argue that, in general, this does not affect nudges' effectiveness. This idea is supported by Loewenstein et al.

(2015) in the context of end-of-life care, where people do not revert from the nudged decision even when they know that they are being nudged.

While deceit may not play a role in determining nudges effectiveness, some object to use nudges because of the variability in their effectiveness. One of the reasons of this ineffectiveness may be a strong antecedent preferences (Sunstein, 2016), which entail a strong contrary preference on the part of the decision-maker. This effectively means that an individual has preferences that are unlikely to change. The findings of Beshears et al. (2015) are consistent with the notion of strong preferences showing that 25 per cent of employees in the UK stick to a higher default contribution rate after a year from its introduction. While this rate is not low, it shows that individuals have strong preference for lower contribution rates, implying that a lower default contribution rate would have been more effective as it fits more closely with employees' preferences. This is relevant to financial planners as it suggests that nudging people towards better choices by means of default rules can be successful only when agents have either not acquired specific preferences yet or their preferences are weak enough to enable a skilful advisor to change them. Most importantly, the discussion points to the conclusion that the effectiveness of defaults, and nudges in general, depends on when and how they are deployed.

The success of nudges including default rules is also determined by simultaneous influence of counter-nudges. These mechanisms can be imposed by other self-interested agents and institutions in a manner similar to the one used to steer people's decisions through 'good' nudges. In the words of Akerlof and Shiller (2015), these institutions might "phish" people, whom they consider "phools", rendering the 'good nudges' ineffective. The illustration of this counter-nudging strategy is provided by Willis (2013), who shows that individuals opt out of default arrangements made in 2010 by the Federal Reserve Board in the US established in effort to protect consumers from high bank overdraft fees. This occurred since banks used a number of behaviourally informed strategies to facilitate opt-in enabling them to change overdraft fees for consumers, thus counter-acting the impact of the new regulation. Furthermore, the impact of experiences, particularly the negative ones, heuristics and biases as well as social norms may lead individuals to reject default rules (Sunstein, 2016). Hence, effective nudging requires an awareness and understanding of other factors influencing individuals' decisions simultaneously.

Both, strong antecedent preferences and counter-nudging may lead to the so call 'reactance' (Sunstein, 2016 ARL), namely, the possibility of rebelling against nudges if an individual feels that he is led to conform to others' behaviour. This may lead to the short longevity of the positive consequences associated with nudging or their ineffectiveness. This

is particularly pronounced for nudges appealing to conscious and deliberative thinking, usually involving elementary type choices, and less so for defaults (Kumar, 2016). Indeed, Cronqvist et al. (2018) investigate the use of defaults to encourage increased pension savings in Sweden and show that their effect was actually more persistent compared to the ‘do it yourself’ type nudge, particularly when the public campaign in favour of the latter initiative has been terminated. In addition, Bruns et al. (2018) find that default rules are less subject to psychological reactance when they are accompanied by disclosure. Nonetheless, the tendency of individuals to move away from choices impregnated by nudges is real and that must be taken into account when weighting the cost and benefits related to the use of nudges in financial planning.

Another relevant argument in the context of nudges’ effectiveness is the risk associated with their design. It is fair to say that until tested, the impact of nudging is difficult to determine, and that some nudges may fail (Tor, 2020). For instance, Gneezy and Potters (1997) show in an experiment that frequency of feedback regarding one’s investment performance matters. Moreover, Fellner and Sutter (2008) provide evidence demonstrating that longer horizons and less frequent feedback lead to higher investment, making this default a powerful tool in inducing a higher investment with a higher expected return. This shows that investment decisions are likely to be affected by how risk and return data are presented, implying that financial advisers should draw investors’ attention to long term distributions of outcomes. In general, however, it might be problematic to decide what the ‘right’ default is (see e.g. Camerer et al, 2003). Sunstein (2018) provides a detailed discussion in the context of potential reasons for the failure of nudges.

Dellaert et al. (2019) suggests that the outcome of nudging further depends on the quality of the recipient model that is employed to predict people’s choices as well as the interactions with other psychological and demographical factors influencing individual decisions (the mentioned counter-nudging). For instance, the variance in appropriate technical advice tends to increase with age, making defaults and nudges toward a particular outcome problematic. Indeed, Dellaert et al. (2019) claim that defaults have been mostly applied disregarding heterogeneity in individual preferences, and call for more ‘smart’ defaults to be developed that accommodate different preferences of agents (Goldstein et al., 2008).

The final argument against nudging that this report highlights is the existence of other choice architecture tools facilitating improved financial wellbeing. Such tools might be more cost-effective and more transparent in the way they induce individuals to reach particular decisions (Johnson et al., 2012). For instance, Johnson et al. (2013) show that reducing the

menu of health insurance plans may work similarly to making agents default into such plans. This is because presenting fewer options reduces the cognitive overload associated with a large number of possible choices (Diehl, 2005). In the same context, Choi et al. (2005) demonstrate that forcing individuals to an active selection between participating or not participating in a retirement plan increases the participation by almost 25% as compared with a standard non-enrolment default. Similarly, new employees could be given a specific deadline with less time to sign up for a retirement saving plan rather than be defaulted into one (O'Donoghue and Rabin, 1999). Moreover, Iyengar et al. (2003) show that the number of offered funds in the 401(k) plan is negatively correlated with the likelihood of employee participation, and the more funds in a plan, the greater the allocation to the money market and the bond funds (Iyengar and Kamenica, 2010), since employees seek foremost simplicity. Given the significance of product proliferation in financial markets, financial advisers should present individuals with a small number of selected financial options. Therefore, it is necessary to explore the impact that other nudges, including ordering and framing options, may have on customers' choices.

While Loewenstein and Chater (2017) provide further examples of policy tools that can substitute nudges, they point to the fact that these other policy options have not received equal scrutiny as nudges have. They suggest that nudges might be the most prominent tools in influencing people's choices, but they are not necessarily the most powerful.

Ultimately, the analysis of arguments in favour of and against nudging provides mixed results. On one hand, well-designed defaults and nudges can lead to financially healthier individuals over time: nudges can jump-start good financial decisions and make individuals stick with them. On the other hand, nudges do not provide a perfect solution – their effectiveness depends on numerous psychological and contextual factors. These results have important implications for financial advisers, who should make their clients aware of the insights reported here.

Summary

This report attempted to outline prominent work focused on the use of nudges for an improved financial wellbeing. Given the vast volume of studies illustrating the impact of nudges, the present report concentrated solely on the review and evaluation of the outcomes of default rules, which have been particularly debated in the literature. Specifically, the discussion focused on the application of default rules to decisions concerning pension and retirement savings, as well as credit markets and health insurance. In assessing the outcomes of default rules, relevant behavioural biases and heuristics underlying the rationale behind this rule have been invoked. Finally, some recommendations regarding how the use of default rules and nudges in general can facilitate financial planners' advice have been provided.

It has been shown that in all three areas of the application considered here the use of the default mechanism has been widely successful. The application of default rules in the US and the UK helped not only in securing a higher employee participation rate in retirement pension schemes, but it also increased these employees' contribution rates as part of the Save More Tomorrow programme (Benartzi and Thaler, 2004). Furthermore, defaults embedded in the design of government legislations in the US credit market led to an improvement in consumers' financial wellbeing increasing their protection from exploitative practices of banks and their rules on the use of overdrafts (Credit Card Accountability Responsibility and Disclosure Act, 2009). This ultimately decreased costs for borrowers with poor credit. Finally, the reader could appreciate the outcomes of default rules also in the context of the Affordable Care Act (2010) introduced by Obama's administration, which managed to successfully sway millions of US consumers to make better decisions concerning their health and life insurance options. All these outcomes have significant welfare implications.

Overall, the literature reviewed within the decision areas concerning pension and retirement savings, credit markets and health insurance highlighted that inexpensive behavioural initiatives, such as default rules, have significant positive effects. In line with this finding, other advantages of defaults, and nudges more generally, have been explored in this report to provide further evidence of nudges' ability to improve financial wellbeing. In addition, the implications of the findings for financial advisers have also been provided where appropriate. While aspects such as high cost-effectiveness, freedom of choice and reduction in disparities count as some of the greatest strengths of nudges, the indisputable public support for the implementation of these policy tools by government officials is particularly important for financial planners.

To maintain an objective perspective, this report also addressed potential shortcomings of nudges' design and their implementation. For instance, there is a considerable disagreement among researchers surrounding the manipulative nature of nudging. More importantly, further challenges in the use of nudges that this report identified are their lack of transparency and in some cases efficacy. The latter weakness has emerged as a result of strong antecedent preferences held by agents or the impact of other (counter)-nudges. This report also shows that these may lead to individuals' reactance to nudging. Most importantly, the review of studies also highlighted that alternative policy instruments could achieve similar or even better results in certain contexts, calling for more rigorous evaluation of the impact that nudges have for financial outcomes. As argued by Thaler (2020, OBHDP), effective nudging in the context of complex systems might be less effective than eliminating barriers that make good decisions difficult, thus reducing sludge.

Indisputably, the range of behaviourally informed policy tools available to the policy makers is considerably higher and goes beyond the default rules discussed in this report. Nudges involve simplification, reminders, warnings, disclosure, use of social norms, educational programmes, increasing ease and convenience of the selection process by framing and ordering choices, and pre-commitment strategies, to mention a few. While this report focused explicitly on the default rules as they are considered the most promising and simultaneously most discussed instruments in the choice architect's repertoire, it is acknowledged that further exploration of the impact that other nudges have on financial wellbeing of individuals is needed to fully assess how far nudges can help individual investors.

Conclusion and recommendations

It is difficult to design effective policies that benefit citizens' welfare when these citizens' hold heterogenic preferences and have the tendency not to act in their own interests (de Meza et al., 2008). This is also the case in financial planning, where clients rarely implement recommendations they have received (Kitces, 2013). However, there is consensus that some policies can provide a guidance for decision-makers that address this problem. Furthermore, the proposed policies do not impede exercising free will simultaneously directing agents towards better choices. This report focused on such policies, commonly labelled as nudges, in the context of financial decisions making.

It has been shown that the agenda of libertarian paternalism (Sunstein and Thaler, 2003) often relies on an appropriate understanding of heuristics and biases affecting individuals' decision-making – a feature that makes nudges particularly effective. This effectiveness has been explored in this present report for the application of default rules to choices concerning pension and retirement savings, credit markets as well as health and life insurance.

This report highlights that the last two decades evidenced significant achievements by employing nudges as policy-making tools, which resulted in improved choices and financially healthier individuals. Yet, the use of nudges in some contexts has been less successful than anticipated and their efficacy has been put under scrutiny. Furthermore, the evidence regarding the outcomes of nudging comes overwhelmingly from the US, where nudges has been integrated into the policy toolbox. Thus, more research into their effects in other countries is needed to fully assess the impact of country-specific intricacies on their effectiveness and popularity. Moreover, while researchers still agree that nudges provide a powerful set of behaviourally informed instruments, they also acknowledge that these tools alone are not a viable alternative to tackle challenges faced by governments and individuals (Loewenstein and Ubel, 2010). Thus, the effects of interactions between nudges and other interventions should be further explored if outcomes that are more promising are to be obtained.

Specifically, this report points to two avenues for future research. First is to explore how nudging can be further supported by sludging – the idea of eliminating the obstacles that make otherwise good decisions difficult. In the words of Thaler (2018 Science): “*Let’s continue to encourage everyone to nudge for good, but let’s also urge those in both the public and private sectors to engage in sludge clean-up campaigns. Less sludge will make the world a better place*”. In the context of financial planning, this idea translates into removing a default rule that is employed to make clients stick to an undesirable and high-priced alternative.

Second is to test whether the idea of bumping – using structure choice architecture to influence agents' behaviour in a less intrusive way by engaging capacities that underlie rational agency (Kumar, 2016) can complement the use of nudges. Answering these important questions will further determine to what extent governments, policymakers and financial advisers engage into nudging individuals towards better decision-making in the financial context. Ultimately, further research should inform these stakeholders of how the decisions are being presented to encourage individuals to act in their best interest.

Bibliography

Afif, Z. I., William, W., Calvo-Gonzalez, O., Dalton, A. G. (2019) *Behavioral Science around the World: Profiles of 10 Countries (English)*; World Bank: Washington, DC, USA.

Affordable Care Act. (2010) The Patient Protection and Affordable Care Act of 2010. Pub L No 111-148, 124 Stat 119, codified in various sections of Title 42.

Agarwal, S., Chomsisengphet, S., Mahoney, N., and Stroebel, J. (2013) Regulating Consumer Financial Products: Evidence from Credit Cards, *Quarterly Journal of Economics* (first published online November 25, 2014), doi: [10.1093/qje/qju037](https://doi.org/10.1093/qje/qju037).

Akerlof, G., and Shiller, R. (2015) *Phishing for Phools: The Economics of Manipulation and Deception*. Princeton, New York. Princeton University Press.

Antonisse, L., Garfield, R., 25, Artiga, S. (2018) Published: Sep. The effects of Medicaid expansion under the ACA: Updated findings from a literature review. 2017. [Online] [Accessed on 12th March, 2018] Available from: <https://www.kff.org/medicaid/issue-brief/the-effects-of-medicaid-expansion-under-the-aca-updated-findings-from-a-literature-review-september-2017/>.

Bannister, P. (2004) 25 Fascinating facts about personal debt. [Online] [Accessed on 12th March, 2018] www.bankrate.com, Available from: (<http://www.bankrate.com/brm/news/debt/debtguide2004/debt-trivial1.asp>).

Bell, D. E. (1982) Regret in decision making under uncertainty. *Operations Research* 30(5), 961-981.

Benartzi, S., Beshears, J., Milkman, K. L., Sunstein, C. R., Thaler, R. H., Shankar, M., Tucker-Ray, W., Congdon, W. J., and Galing, S. (2017) Should governments invest more in nudging? *Psychological Science* 28(8), 1041-1055.

Benartzi, S., and Thaler, R. H. (2007) Heuristics and biases in retirement savings behavior. *Journal of Economic Perspectives* 21(3), 81-104.

Benartzi, S., and Thaler, R. (2013) Behavioral Economics and the Retirement Savings Crisis. *Science* 339 (6124).

Benton, M., Meier, S., and Sprenger, C. (2007) Overborrowing and undersaving: Lessons and policy implications from research in behavioral economics *Federal Reserve Bank of Boston*, DP 07-4.

Beshears, J., Choi, J., Laibson, D., and Madrian, B. (2010) *The Limitations of Defaults*. Unpublished manuscript. [Online] [Accessed on 12th March, 2018] Available from: <http://www.nber.org/programs/ag/rrc/NB10-02,%20Beshears,%20Choi,%20Laibson,%20Madrian.pdf>.

Beshears, J., Choi, J. J., Laibson, D., Madrian, B. C., and Wang, S. (2015) Who Is Easier to Nudge? *NBER Working Paper*, 401.

Bovens, L. (2009) The ethics of nudge Grüne Yanoff, T., and Hansson, S. O. (Eds.) *Modeling Preference Change: Perspectives From Economics, Psychology and Philosophy*, Springer, Berlin. pp. 207-219.

Bruns, H., Kantorowicz-Reznichenko, E., Klement, K., Luistro Jonsson, M., and Rahali, B. (2018) Can nudges be transparent and yet effective? *Journal of Economic Psychology*. *Forthcoming*.

Cabinet Office (n. d.). The behavioural insights team. [Online] [Accessed on 12th March, 2018] <http://www.cabinetoffice.gov.uk/behavioural-insights-team>.

Cagan, P. (1965) The effect of pension plans on aggregate savings. *National Bureau of Economic Research*, New York.

Camerer, C., Issacharoff, S., Loewenstein, G., O'Donoghue, T., Rabin, M. (2003) Regulation for conservatives: Behavioral economics and the case for "asymmetric paternalism. *University of Pennsylvania Law Review* 151(3), 1211–1254.

Campbell, N. (2013) Automatic enrolment opt out rates: findings from research with large employers. [Online] [Accessed on 12th March, 2018] Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/227039/opt-out-research-large-employers-ad_hoc.pdf.

Carroll, G. D., Choi, J. J., Laibson, D., Madrian, B., and Metrick, A. (2005) 'Optimal defaults and active decisions (No. w11074)', *National Bureau of Economic Research*.

Carroll, G. D., Choi, J. J., Laibson, D., Madrian, B. C., and Metrick, A. (2009) Optimal Defaults and Active Decisions. *The Quarterly Journal of Economics* 124:1639-74.

Cheng, S. (2020) The Power of Nudges in Financial Advice. CFA Institute. [Online] [Accessed on 12th March, 2018] Available from: <https://blogs.cfainstitute.org/marketintegrity/2020/10/21/the-power-of-nudges-in-financial-advice/>.

Chetty, R., Friedman, J., Leth-Petersen, S., Nielsen, T., and Olsen, T. (2014) Active vs. Passive Decisions and Crowdout in Retirement Savings Accounts: Evidence from Denmark. *The Quarterly Journal of Economics*, Volume 129, Issue 3, pp 1141–1219.

Chiteji, N., and Walker, L. (2009) Strategies to Increase the Retirement Savings of African American Households. In Gale, G., et al. (Eds.), *Automatic* (231-260), Harrisburg, VA: R. R. Donnelley.

Choi, J. J., Laibson, D., Madrian, B. C., and Metrick, A (2002) [Defined contribution pensions: Plan rules, participant choices, and the path of least resistance](#) *Tax Policy and the Economy* 16, 67-114.

Choi, J. J., Laibson, D., Madrian, B. C., and Metrick, A. (2003) Optimal Defaults. *American Economic Review* 93 (2), 180-185.

Choi, J. J., Laibson, D., Madrian, B. C., and Metrick, A. (2004) 'For better or for worse: Default effects and 401 (k) savings behavior', in D. A. Wise (ed.) *Perspectives on the Economics of Aging*, Chicago, IL: University of Chicago Press, 81–126.

Choi, J.J., Laibson, D., Madrian, B. C., and Metrick, A, (2005) Passive decisions and potent defaults. *Analyses in the Economics of Aging*, 59-78.

Choi, J. J., Laibson, D. I., and Madrian, B. C. (2006) Are empowerment and education enough? Underdiversification in 401(k) plans. *Brookings Papers on Economic Activity*, 151-213.

Ciccotello, C. S., and Yakoboski, P. J. (2014) A tale of two nudges: Improving financial outcomes for Boomers and millennials. *Benefits Quarterly*. Third Quarter 2014.

CLASS Act (2010) Pub L No 111-148, title 8, 124 Stat 828, codified at 42 USC § 300.

Conly, S. (2013) *Against Autonomy: Justifying Coercive Paternalism*, Cambridge, UK: Cambridge University Press.

Hunt, E. C., and Findley, T. S. (2020) Short Planning Horizons and the Save More Tomorrow Program (25th September, 2020). [Accessed on 16th November, 2020] Available from: SSRN: <https://ssrn.com/abstract=3701376> or <http://dx.doi.org/10.2139/ssrn.3701376>.

Credit CARD Act (2009) Pub L No 111-24, 123 Stat 1734, codified in various sections of Titles 15 and 16.

Cribb, J., and Emmerson, C. (2016) What happens when employers are obliged to nudge? Automatic enrolment and pension saving in the UK, IFS Working Papers, No. W16/19, Institute for Fiscal Studies (IFS), London, <http://dx.doi.org/10.1920/wp.ifs.2016.1619>.

Cronquist, H, Thaler, R, and Yu, F. (2018) When Nudges Are Forever: Inertia in the Swedish Premium Pension Plan *AEA Papers and Proceedings 2018*, 108: 153–158. [Online] [Accessed on 12th May, 2018] Available from: <https://doi.org/10.1257/pandp.20181096>.

Crossley, T. F., and O’Dea, C. (2010) The wealth and saving of UK families on the eve of the crisis. [Online] [Accessed on 12th May, 2018] Available from: <https://www.ifs.org.uk/comms/r71.pdf>.

Davidai, S., and Shafir, E. (2020) Are ‘nudges’ getting a fair shot? Joint versus separate evaluation. *Behavioural Public Policy* 4(3), 273-291. doi: 10.1017/bpp.2018.9.

Dellaert, B. G. C., Johnson, E. J., and Baker, T. (2019) Choice Architecture for Healthier Insurance Choices: Ordering and Partitioning Can Improve Decisions (1st July, 2019). ERIM Report Series Reference, [Online] [Accessed on 12th May, 2018] Available from: SSRN: <https://ssrn.com/abstract=3418231> or <http://dx.doi.org/10.2139/ssrn.3418231>

De Meza, D., Irlenbusch, B., and Reyniers, D. (2008) Financial capability: A behavioural economics perspective. *Consumer Research Report* 69. London, Financial Services Authority.

Diehl, K. (2005) When Two Rights Make a Wrong: Searching too Much in Ordered Environments, *Journal of Marketing Research*, 42(3), 313-322.

Dinner, I. M., Johnson, E. J., Goldstein, D. G., and Liu, K. (2009) Partitioning Default Effects: Why People Choose Not to Choose (unpublished manuscript).

Eguia, E., Cobb, A. N., Kothari, A. N., Molefe, A., Afshar, M., Aranha, G. V., and Kuo, P. C. (2018) Impact of the Affordable Care Act (ACA) Medicaid Expansion on Cancer Admissions and Surgeries. *Ann Surg.* (October 2018) 268(4): 584–590.

Farkas, S., and Johnson, J. (1997) Miles to go: A status report on Americans' plans for retirement. New York, Public Agenda.

Fellner, G., and Sutter, M. (2005) Causes, consequences and cures of myopic loss aversion – an experimental investigation. *ESI Discussion Paper*.

Felsen, G., et al., (2012) *Decisional Enhancement and Autonomy: Public Attitudes Toward Overt and Covert Nudges, Judgement and Decision Making*, 202, 203 (2012).

Gale, W., Iwry, J., and Walters, S. (2009) Retirement Savings for Middle- and Lower- Income Households: The Pension Protection Act of 2006 and the Unfinished Agenda. In W. G. Gale, et al. (Eds.), *Automatic* (11-27), Harrisburg, VA: R. R. Donnelley.

Glaeser, E. (2006) 'Paternalism and Psychology', *University of Chicago Law Review*, 73(1): 133–56.

Gneezy, U., and Potters, J. (1997) An experiment on risk taking and evaluation periods. *Quarterly Journal of Economics* 112, 631-45.

Hagman, W., Andersson, D., Västfjäll, D., and Tinghög, G. (2015) Public views on policies involving nudges. *Review of Philosophy and Psychology*, 6 (3): 439 – 453.

Halpern, D. (2015) *Inside the Nudge Unit*, London, UK: WH Allen.

Hancock, R., Juarez-Garcia, A., Wittenberg, R., Pickard, L., Comas- Herrera, A., King, D., and Malley, J. (2006) Projections of Owner-Occupation Rates, House Values, Income and Financial Assets Among Older People, UK, 2002-2022. Personal Social Services Research Unit, London School of Economics, *PSSRU Discussion Paper*, 2373.

Harris, T., and Yelowitz, A. (2017) Nudging Insurance Holdings in the Workplace. *Economic Enquiry*, 55(2), 951-981.

Huffman, D., and Barenstein, M. (2004) Riches to rags every month? The fall in consumption expenditure between paydays. *IZA Discussion Paper*, 1430.

Internal Revenue Service (2009) Retirement and Savings Initiatives: Helping Americans Save for the Future. (September, 2009) [Online] [Accessed on 12th May, 2018] Available from: http://www.irs.gov/pub/irstege/rne_se0909.pdf.

Iyengar, S. S., Wei, J., and Huberman, G. (2003) How much choice is too much? Contributions to 401(k) retirement plans. *Pensions Research Council Working Paper*, PRC WP 2003-10.

Iyengar, S., and E. Kamenica. (2010) Choice Proliferation, Simplicity Seeking, and Asset Allocation. *Journal of Public Economics* 94:530-39.

Jachimowicz, J., Duncan, S., Weber, E., and Johnson, E. (2019) When and why defaults influence decisions: A meta-analysis of default effects. *Behavioural Public Policy* 3(2), 159-186. doi: 10.1017/bpp.2018.43.

Johnson, E. J., and Goldstein, D. (2003) Do defaults save lives? *Science* 302, 1338–1339.

Johnson, Eric J. and Goldstein, Daniel G. (2012), “Decisions by Default,” in *The Behavioral Foundations of Public Policy*, Shafir, Eldar, ed. Princeton, NJ: Princeton University Press, 417–27.

Johnson, Eric J., Ran Hassin, Tom Baker, Allison T. Bajger, and Galen Treuer (2013), “Can Consumers Make Affordable Care Affordable? The Value of Choice Architecture,” *PLoS ONE*, 8(12), e81521, doi:10.2139/ssrn.2291598.

Johnson, E. J., and Goldstein, D. G. (2013) *Decisions By Default*, in *The Behavioural Foundations of Public Policy* 417. (Shafir, E., ed., 2013).

Jung, J. Y., and Mellers, B. A. (2016) *American Attitudes Toward Nudges*, 11 *Judgement and Decision Making*, 62.

Kahneman, D. (2011) *Thinking, Fast and Slow*. Macmillan. (25th October, 2011). [Online] [Accessed on 12th May, 2018] Available from: [ISBN 978-1-4299-6935-2](https://www.amazon.com/dp/0091929892).

Kahneman, D., and Tversky, A. (1979) Prospect theory: An analysis of decision under risk. *Econometrica* 47(2), 263-292.

Kahneman, D., and Tversky, A. (1984) Choices, values and frames. *American Psychologist* 39(4), 341-50.

Kitces, M. (2013) How Do You Nudge Clients Towards Their Financial Planning Goals? [Online] [Accessed on 12th May, 2018] Available from: <https://www.kitces.com/blog/how-do-you-nudge-clients-towards-their-financial-planning-goals/>

Kumar, V. (2016) Nudges and bumps. *Georgetown Journal of Law & Public Policy*, 14 (Special 2016), 861-876.

Lichtenberg, J. (2016) *For Your Own Good: Informing, Nudging, Coercing*, 14 *GEO. J.L. & PUB. POL'Y* 663.

Loewenstein, G., and O'Donoghue, T. (2017) Putting nudges in perspective. *Behavioural Public Policy*, 1: 1, 26–53.

Loewenstein, G., Friedman, J. Y., McGill, B., Ahmad, S., Linck, S., Sinkula, S., Beshears, J., Choi, J. J., Kolstad, J., Laibson, D., Madrian, B. C., List, J. A., and Volpp, K. G. (2013) "Consumers' Misunderstanding of Health Insurance," *Journal of Health Economics*, 32(5), 850–62.

Loewenstein, G., Bryce, C., Hagmann, D., Rajpal, S. (2015) Warning: you are about to be nudged. *Behav. Sci. Policy*, 1, pp. 35-42.

Loewenstein, G., Prelec, D., and Weber, R. (1999) What, me worry? A psychological perspective on economic aspects of retirement. In Aaron, H. J. (Ed.) *Behavioral dimensions of retirement*. Brookings Institutions Press, Washington DC, 215-46.

Loewenstein, G., and Ubel, P. (2010) 'Economics behaving badly', *The New York Times*, 14. [Online] [Accessed on 21st, 2016] Available from: Available at: http://www.nytimes.com/2010/07/15/opinion/15loewenstein.html?_r=1.

Loomes, G., Sugden, R. (1982) Regret theory: an alternative theory of rational choice under uncertainty. *Economic Journal*, 92(368), 805-824.

Madrian, B. C., and Shea, D. F. (2001) The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior. *The Quarterly Journal of Economics* 116:1149 - 87.

Morrison, R. (2013) 'How a small nudge is helping people save for their retirement', Civil Service Quarterly Blog, [Online] [Accessed on 2nd October, 2016] Available from: <https://quarterly.blog.gov.uk/2013/10/22/how-a-small-nudge-is-helpingpeople-save-for-their-retirement/>.

Mrkva, K., Posner, N. A., Reeck, C., and Johnson, E. J. (2021) Do Nudges Reduce Disparities? Choice Architecture Compensates for Low Consumer Knowledge. *Journal of Marketing*. Forthcoming.

Obama, B (5th September, 2009). Weekly Address.

O'Donoghue, T., and Rabin, M. (1999) Doing it now or later. *American Economic Review* 89(1), 103-124.

O'Donoghue, T., and Rabin, M. (2001) Choice and procrastination. *Quarterly Journal of Economics* 116(1), 121-160.

Orszag, P. R., and Rodriguez, E. (2009) Retirement Security for Latinos: Bolstering Coverage, Savings, and Adequacy. In Gale, W. G., et al. (Eds.), *Automatic* 173-98. Harrisburg, VA: R. R. Donnelley.

Osman, M., Fenton, N., Pilditch, T., Lagnado, D., and Neil, M. (2018) Whom Do We Trust on Social Policy Interventions? *Basic and Applied Social Psychology*, 40:5, 249-268.

Papke, L. E., Walker, L., and Dworsky, M. (2009) Retirement Savings for Women: Progress to Date and Policies for Tomorrow. In Gale, G., et al. (Eds.) *Automatic* 199- 230. Harrisburg, VA: R. R. Donnelley.

Pension Protection Act (2006) Pub L No 109-280, 120 Stat 780, codified in various sections of Titles 26 and 29.

Rebonato, R. (2012) *Taking Liberties* Palgrave Macmillan, London.

Reisch, L. A., and Sunstein, C. R. (2016) Do Europeans like nudges? *Judgment and Decision Making*, 11, pp. 310-325.

Requirements for Overdraft Services (2010) 12 C.F.R. § 205.17.

Rhee, N. (2013) 'The retirement savings crisis: Is it worse than we think?', National Institute on Retirement Security. [Online] [Accessed on 21st October, 2016] Available from: http://www.nirsonline.org/storage/nirs/documents/Retirement%20Savings%20Crisis/retirementsavingscrisis_final.pdf.

Samuelson, W., and Zeckhauser, R. J. (1988) Status quo bias in decision making. *Journal of Risk and Uncertainty* 1, 7-59.

Shah, A. K., Mullainathan, S., and Shafir, E. (2012) Some consequences of having too little. *Science*, 338, pp. 682-685.

Sibony, A. L., and Alemanno, A. (2016) 'The Emergence of Behavioural Policy-Making', in Alemanno, A., and Sibony, A. L. (eds.), *Nudge and the Law: A European Perspective*, Oxford, UK: Hart Publishing, 1-25.

Steffel, M, Williams, E. F. and Pogacar, R. (2016) Ethically deployed defaults: Transparency and consumer protection through disclosure and preference articulation *Journal of Marketing Research*, 53, pp. 865-880.

Sunstein, C. R. (2014) 'Nudges v. Shoves', *Harvard Law Forum*, 127: 210-17.

Sunstein, C. R. (2015) Fifty shades of manipulation. *Journal of Behavioral Marketing*, 1, pp. 213-244.

Sunstein, C. R. (2016) 'The Council of Psychological Advisors', *Annual Review of Psychology*, 67: 713-37.

Sunstein, C. R. (2016) People prefer system 2 nudges (kind of). *SSRN Electronic Journal*.

Sunstein, C. R. (2017) People like nudges (mostly). In Sunstein, C. R. (Ed.), *Human agency and behavioral economics: Nudging fast and slow* (pp. 17-39). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-55807-3_2.

- Sunstein, C. R. (2016a) 'Do people like nudges?' *Administrative Law Review* 68: 177–210.
- Sunstein, C. R. (2017) 'Nudges That Fail', *Behavioral Public Policy*, 1(1): 4–25.
- Sunstein, C. R. (2018b) 'Misconceptions about nudges', *Journal of Behavioral Economics for Policy* 2(1): 61–7.
- Sunstein, C. R. (2019) *How Change Happens*. Cambridge, MA: MIT Press.
- Sunstein C. R. (2019) Behaviorally Informed Policy: A Brisk Progress Report [Online] [Accessed on 12th May, 2018] Available from: SSRN 3461781, 2019.
- Sunstein, C.R. (2019) Nudging: A very short guide. *Bus. Econ.*, 54, 127–129.
- Sunstein, C. R., Reisch, L. A., and Kaiser, M. (2019) Trusting nudges? Lessons from an international survey, *Journal of European Public Policy*, 26:10, 1417-1443.
- Sunstein, C. R., and Thaler, R. H. (2003) "Libertarian Paternalism Is Not an Oxymoron," *The University of Chicago Law Review*, 70 (4), 1159–1202.
- Sunstein, C. R., Reisch, L. A., and Kaiser, M. (2018). Trusting Nudges? Lessons from an International Survey. *Journal of European Public Policy*. [Online] [Accessed on 12th May, 2018] Available from: <https://doi.org/10.1080/13501763.2018.1531912>.
- Thaler, R. H. (1985) Mental accounting and consumer choice. *Marketing Science* 4(3), 199-214.
- Thaler, R. H. (1990) Saving, fungibility and mental accounts. *Journal of Economic Perspectives* 4(1), 193-205.
- Thaler, R. H. (1999) Mental accounting matters. *Journal of Behavioral Decision Making* 12(3), 183-206.
- Thaler, R. H. (2015) The Power of Nudges, for Good and Bad *The New York Times*.
- Thaler, R. H. (2018) Nudge no sludge. *Science* 361 (6401), 431.
- Thaler, R. H. (2020) What's next for nudging and choice architecture? *Organ. Behav. Hum. Decis. Process.* Forthcoming

Thaler, R. H., and Benartzi, S. (2004) Save more tomorrow: Using behavioural economics to increase employee savings. *Journal of Political Economy* 112(1), 164-187.

Thaler, R. H., and Sunstein, C. R. (2003) 'Libertarian paternalism', *The American Economic Review*, 93(2): 175–179.

Thaler, R. H., and Sunstein, C. R. (2008) *Nudge*. New Haven: Yale University Press.

Thaler, R. H., and Sunstein, C. R. (2009) *Nudge: Improving Decisions About Health, Wealth and Happiness*. New York: Penguin Books.

Tor, A. (2020) Nudges that should fail. *Behavioural Public Policy*. 4: 3, 316–342.

Tversky, A., and Kahneman, D. (1992) Advances in prospect theory: cumulative representation of uncertainty. *Journal of Risk & Uncertainty* 5(4), 297-323.

Ubel, P. A., Comerford, D. A., and Johnson, E. (2015) Healthcare.gov 3.0—Behavioral economics and insurance exchanges. *Obstetrical & Gynecological Survey*, 70 (6), 373-375.

Whitehead, M., Jones, R., Howell, R., Lilley, R., and Pykett, J. (2014) *Nudging All Over the World*, ESRC Report, Economic and Social Research Council, Swindon and Edinburgh. Wilkinson.

Willis, L. (2013) 'When Nudges Fail: Slippery Defaults', *University of Chicago Law Review*, 80(3): 1155–1229.

Woolhandler, S., and Himmelstein, D. U. (2017) The Relationship of Health Insurance and Mortality: Is Lack of Insurance Deadly?, *Annals of Internal Medicine*, 167, 424–431.

Zamir, E. (2014) Law's loss aversion. *The Oxford Handbook of Behavioural Economics and the Law*. New York, NY: Oxford University Press, 259-299.

Zywicki, T. (2013) The Consumer Financial Protection Bureau: Savior or Menace? *Geo. Wash. L. Rev.*, 81: 856, 875.