The next frontier
The future of automated financial advice in the UK
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Executive summary

Much has been written about how automated advisers, more commonly termed ‘robo advisers’, could disrupt the market for investment advice. In this paper, we seek to answer a broader question: what is the potential for automated financial advice to grow in the UK, over the next decade, across the following six markets?

![Simple financial planning](image1)
![Investing](image2)
![Defined contribution pension saving](image3)
![At-retirement](image4)
![Mortgages](image5)
![Individual protection](image6)

The views we express in the paper have been informed by discussions with key players and start-ups in the banking, insurance, wealth and investment management markets, as well as by a Deloitte survey of over 2,000 consumers.

**Pool of potential adopters**

Our main conclusion is that the UK offers a rich opportunity for automated advice. There is a significant ‘advice gap’, driven by the high cost of advice, low financial literacy, low engagement and a lack of trust following past instances of mis-selling.

With individuals being increasingly tasked with managing their own pension provision, and in the context of a relatively low state pension, automated advice can play a key role in generating low-cost solutions. Our survey research points to a sizeable pool of potential adopters in each of the markets we examined (see Figure 1).

Our main conclusion is that the UK offers a rich opportunity for automated advice. There is a significant ‘advice gap’, driven by the high cost of advice, low financial literacy, low engagement and a lack of trust following past instances of mis-selling.
Figure 1. Estimated number of future users of automated advice

**Simple financial planning**
- 33m heads of families and single adults
- around 11m potential adopters
- 34% willing to pay

**Investing**
- 18m adults with > £5,000 savings and investments
- around 7m potential adopters
- 40% willing to pay

**Defined contribution pension saving**
- 9m workers with a defined contribution pension
- around 3m potential adopters
- 35% willing to pay

**At-retirement**
- 4m workers aged 30+ with >£20,000 pension savings
- around 1.2 million potential adopters
- 40% willing to pay

**Mortgages**
- 19m heads of families and single adults aged under 50
- around 7m potential adopters
- 38% willing to pay

**Individual protection**
- 6m heads of families with children aged <18
- around 3m potential adopters
- 45% willing to pay

Source: YouGov 23-24 January 2017, Deloitte analysis of consumer survey data. Samples: simple financial planning (2,046), investing (842), defined contribution pension saving (342), at-retirement (173), mortgages (989), protection (457). Note: respondents indicated that they would be willing to pay for automated advice in more than one market.
Overall, our survey analysis suggests that up to 15 million GB adults would be willing to pay for automated advice in at least one market. However, demand varies considerably by consumer segment. At a macro level it is:

- **high among consumers in their early forties**, despite the fact that this group is often considered to be less enthusiastic about new technologies than millennials
- **high among those with above average income**, despite the fact that this group is more able to afford traditional financial advice than those with average incomes
- **consistent, overall, across wealth levels with the exception of defined contribution (DC) pensions**, where appetite for automated advice is highest among those with the smallest DC pots. This is a clear opportunity in our view and may reflect the lack of publically available information on investing within a DC pension.

Pricing these services affordably, however, will be key. Our research found that although more than a third of consumers would be willing to pay for automated advice, the amounts they are prepared to pay are generally low. That said, we believe large potential customer pools, coupled with highly efficient digital solutions, could create economies of scale, making automated advice both affordable for the consumer and viable for the provider.

Figure 2 captures our key insights on which players may be most advantaged in each market and the most appropriate channels to deliver automated advice. It draws on our consumer research, interviews with subject matter experts and consideration of a range of future scenarios.

**Figure 2. Future of UK automated advice research framework**

Source: Deloitte analysis. Note: financial planning refers to simple financial planning, such as deciding whether to invest in an Individual Savings Account (ISA) or a pension.
In terms of channels, for more complex decisions, customers will still want to speak with an adviser in addition to using a website – the so-called hybrid model - to ensure they have made good choices. Hybrid models are also likely to be prevalent in certain markets (e.g. mortgages, at-retirement) because they can ensure safeguards to the suitability of advice.

In terms of industry players, no single type of financial services provider is advantaged across the entire opportunity set. However, incumbents generally enjoy an advantage over start-ups in direct-to-consumer (D2C) opportunities due to their existing scale and brands.

What does the future look like?
To date, automated advice has been most prevalent in wealth management, which we believe will remain fertile ground for innovation, given the increased need for higher net returns from savings in a low interest rate environment. However, the low cost, high convenience and consistency of automated advice will drive adoption into other large markets, especially those where there is a significant unmet need for advice, such as retirement products, and those which are heavily intermediated but often have inefficient customer-facing processes, such as mortgages.

Low consumer financial literacy and engagement are the key demand barriers preventing automated advice from reaching its full potential. Supply barriers include high customer acquisition costs, low fees driving thin margins, incumbent fears of customer switching into lower margin products, and regulatory risk. Some of these challenges can be overcome by using technology to make it easier for consumers to engage with their finances, creating cost efficiencies through economies of scale, targeting services at particular consumer segments, and effective compliance controls.

Providers frequently report that regulatory uncertainty in determining which services are regulated is a big inhibitor, suggesting that more clarity from the regulator would unlock development. Other regulatory challenges include clarity of customer communications, the design and oversight of algorithms and cyber risk. The Financial Conduct Authority (FCA) is supportive of the development of automated advice models and is planning to publish regulatory guidance and feedback that should help address some of the regulatory barriers to their development. However, automated advice can also lead to regulatory advantages for firms, by way of a clearer audit trail and consistent customer outcomes.

In the US, certain incumbents dominate in terms of asset gathering and are driving the path and pace of adoption. However, this is due to their decision to proactively exploit this opportunity, disrupting markets even at the risk of some customers switching to lower margin products. We believe adopting such a mindset will be necessary, otherwise incumbents risk being bystanders to the future of their industry.

Start-ups, however, have a variety of opportunities in both services provided to other businesses and D2C. Their advantages in technology, focus and nimbleness enable them to build more engaging customer interfaces and adapt faster to changing markets. Due to the high hurdle of customer acquisition costs, we believe their key opportunity initially will be to offer white label solutions to bigger players.

This paper is divided into two parts:

- **Part 1** explores what is meant by ‘automated advice’, provides an overview of the UK automated advice market, and assesses the regulatory challenges.
- **Part 2** discusses the opportunities arising from automated advice, the barriers and the implications for industry players across the following markets: simple financial planning, investing, DC pension saving, at-retirement, mortgages and individual protection. It then draws out our key questions for firms and overall conclusions.

To date, automated advice has been most prevalent in wealth management, which we believe will remain fertile ground for innovation, given the increased need for higher net returns from savings in a low interest rate environment.
Part 1
Automated financial advice market overview
1. What is automated financial advice?

The terms ‘automated financial advice’, ‘robo advice’ and ‘digital advice’ are often used interchangeably, but what exactly do they mean? They can be used to describe services ranging from regulated advice, unregulated guidance and discretionary investment management. The provision of the service can be purely automated, or partly automated with some human intervention. The service may be provided by a single firm, or by more than one firm partnering together. There is no consensus on exactly which services and channels are included within these terms. Automated advice is not typically defined in legislation or regulation. Descriptions by regulators have common elements but differ in details.

Figure 3 shows the services and channels associated with the term ‘automated advice’. In this paper, when we refer to ‘automated advice’, we mean this in a generic sense including all of the services and channels which are shaded in Figure 3. Where we are only referring to certain services or channels, we will use specific terms, such as ‘regulated advice’, ‘guidance’ and ‘fully automated’.

Currently the computer algorithms used to provide these services tend to be programmed to deliver pre-determined outcomes based on the data inputted. However, looking ahead there is an opportunity for artificially-intelligent learning algorithms to enable automated systems to respond to a broader range of more complex scenarios. This is further explained in Section 4.

Looking ahead there is an opportunity for artificially-intelligent learning algorithms to enable automated systems to respond to a broader range of more complex scenarios.
### Figure 3. What is automated financial advice?

<table>
<thead>
<tr>
<th>Channel</th>
<th>Regulated advice **</th>
<th>Guidance (unregulated)</th>
<th>Discretionary investment management (regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Advice given to a person on the merits of taking a specific action (e.g. buying, selling) in relation to a specific financial product</td>
<td>The provision of information, generic advice on what types of product may be suitable and/or a general recommendation supporting customers in making their own decisions which does not (in and of itself) involve a personal recommendation</td>
<td>An investment manager decides what products to buy and sell on behalf of the customer, based on a mandate agreed with the customer</td>
</tr>
<tr>
<td>Traditional face-to-face</td>
<td>Customers interact with a human, who generates advice, investment decisions or information (depending on the service provided) without the aid of a computer algorithm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Face-to-face assisted by an algorithm</td>
<td>Customers interact with a human, who uses a computer algorithm to generate advice, investment decisions or information (depending on the service provided) but can override the algorithm if needed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hybrid</td>
<td>Customers interact with a website but may also interact with a human (e.g. via a webchat or by phone), for example if customers have questions or the firm needs to ask for additional information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully automated</td>
<td>Customers normally interact with a website only. They may still be able to speak to a human if they need to resolve any IT issues, make a complaint or clarify terms and conditions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Key**

- 🟢 Automated regulated advice
- 🟡 Automated guidance
- 🟢 Automated investment management

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*The definitions of regulated advice and guidance in Figure 3 are based on the UK regulatory definitions but are not direct quotations because the details of the definitions vary across financial services markets.

**Suitability requirements apply when regulated advice involves a ‘personal recommendation’, for example advice based on a consideration of the circumstances of the customer.*
2. The context

To date, automated financial advice in the UK, as in most overseas markets, has primarily taken the form of investment portfolio optimisation based on customer needs, using largely (but not exclusively) passive investment products. Innovation has largely been led by start-ups, which are hampered by very high customer acquisition costs and low customer fees. Stringent UK regulatory requirements have made some innovators more cautious.

Outside of wealth management, there has been very limited development of automated financial advice by either incumbents or start-ups, with players such as Habito (mortgages) and Wealth Wizards (retirement advice) being few and far between.

However, the need for affordable advice is growing, with individuals being increasingly tasked with managing their own savings, as evidenced by a shift from defined benefit (DB) to DC pensions, auto-enrolment and ‘pensions freedom’. This is in the context of generally low financial literacy and engagement.

The potential for automated advice
Consumers need financial advice at different times in their lives. Their needs vary considerably as does the complexity of those needs. Taking out a mortgage has little in common with topping up a stocks and shares ISA. The financial decisions facing individuals at retirement (when wealth typically peaks) are very different from those facing individuals just joining the workforce for the first time. We have identified six important advice scenarios (see Figure 4).

Figure 4. Illustrative customer life cycle, wealth by age, UK
The high cost of advice and disinclination to take it (regardless of cost) are key barriers across these scenarios. We note the very low take-up of any form of paid advice among our survey respondents with the relatively wealthy more likely than others to take advice. For instance, among those with savings and investments worth more than £30,000, a fifth had taken advice from an independent financial adviser in the past three years compared to 11 per cent among all adults (see Figure 5). The increased disclosure of costs and charges under the revised Markets in Financial Instruments Directive (MiFID II) from 2018 could further heighten consumers’ cost consciousness for advice on retail investment products.

In contrast to face-to-face advice, automated advice has several advantages. The most commonly accepted are:

- lower costs
- high convenience, given its availability 24x7
- consumers may be more willing to disclose details of their financial situation to a machine rather than to a human adviser
- potential to increase efficiency for providers
- advice is consistent across clients and can provide a full audit trail.

Figure 5. Usage of advice on product purchases among GB adults, 2014-16

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### Figure 5. Usage of advice on product purchases among GB adults, 2014-16

- **Not purchased product**: 36%
- **Purchased without advice**: 20%
- **Family and/or friends**: 12%
- **A bank – free advice**: 11%
- **An independent financial adviser**: 11%
- **A website or online platform**: 10%
- **A bank – advice for a fee**: 7%
- **My employer/previous employer**: 6%
- **Mortgage broker**: 5%
- **Don’t know**: 4%
- **An accountant or solicitor**: 3%
- **Other professional advice**: 1%
- **Non-professional advice**: 0%

We analyse consumers’ attitudes towards automated financial advice across six scenarios and draw out the key implications for industry players later in the paper. However, we summarise some overall themes that apply in all six scenarios below.

More than a third of respondents in all scenarios showed a willingness to pay for an automated advice solution (see Figure 6). We consider these figures high in the context of low take-up of regulated advice and that automated advice is still in the early stages of development.

Figure 6. Willingness to pay for automated advice by scenario

More than a third of respondents in all scenarios showed a willingness to pay for an automated financial advice solution.

Source: YouGov 23-24 January 2017, Deloitte analysis. Samples: Finding life insurance (457), investing £11,000 (842), converting £30,000 pension to lump sum and income (173), finding a mortgage (989), investing £80 monthly pension contributions (382); simple financial planning (2,046).
Attitudinal barriers to seeking automated advice
We also asked those individuals who were unwilling to use an automated solution to explain the reasons for their reticence, to gauge the attitudinal barriers to adoption. These are remarkably similar across the six advice scenarios, and speak to the reassurance consumers seek about the capability of these services, as well as the need for an affordable price.

The two most cited reasons (by around a third of respondents) are a lack of trust in a digital solution, as well as an unwillingness to pay. This is unsurprising given that these services do not yet exist at any substantial scale. In addition, the unwillingness to pay is also evidenced by the existence of an ‘advice gap’: people unable to get advice at a price they are willing to pay.

A significant number of respondents said they would find it easier to speak to a financial adviser than use a website, implying that building easy-to-use customer interfaces is key to success.

With the notable exceptions of at-retirement and mortgages, more than 20 per cent of respondents in each of the other four scenarios also said they would not want help with these decisions. In our view, this makes it clear that provider marketing will need to educate consumers about the value of advice and tackle low engagement including, but not limited to, financial literacy and inertia.

Despite these concerns, even among those unwilling to pay for automated advice, very few respondents (a tenth or less) in each scenario believe their financial affairs are too complex for a website to handle. While some may well be under-estimating the complexity of their financial affairs, this suggests that if providers can devise and price appropriate services, the market for affordable automated advice could potentially be very large.

How do attitudes vary by consumer segment?
We analysed consumers’ willingness to pay for automated advice across ten key variables including age, income and wealth to identify where demand is highest. Figure 7 outlines insights from this analysis.

Figure 7. Insights from analysis of consumers’ willingness to pay for automated financial advice by demographic

- **Age**: Demand highest among people aged 18-44
- **Income**: Demand rises with income
- **Wealth**: For financial planning and investing, demand is consistent across wealth levels
- **Pension pot**: For pension contributions, demand is greatest among those with pots of less than £10,000
- **Gender**: Men keener for automated advice than women
- **Region**: Londoners are keenest for automated advice; people in Yorkshire have least interest
- **Children**: Parents want automated advice more than those without children
- **Social media**: LinkedIn users keener; Facebook users less so

Automated financial advice has an older target market than many might assume

Automated advice is often associated with millennials (people born between 1980 and 2000) because this generation is considered the most tech-savvy and our analysis shows that demand is indeed highest among the youngest age groups in the survey. However, we also found that demand is high across five scenarios among those aged 35-44. In the case of pension contributions, 43 per cent of respondents aged 35-44 would use automated advice compared to 24 per cent and 21 per cent of those aged 45-54 and 55+.

The need for affordable advice is growing, with individuals being increasingly tasked with managing their own savings, as evidenced by a shift from defined benefit (DB) to DC pensions, auto-enrolment and ‘pensions freedom’.

Figure 8. Willingness to pay for automated advice by age

Automated financial advice has the potential to prove popular among people with high incomes

Due to its low cost, automated advice is considered a potential solution for those on lower incomes who struggle to afford mainstream financial advice. However, counterintuitively, we found that across five advice scenarios demand rises with income. For instance, 51 per cent of those on incomes of £45,000 to £70,000 would use an automated financial planner but only 28 per cent of those on incomes less than £15,000 would do so. For people on lower incomes, consumer engagement is key as this group may not perceive a need for financial advice.

A similar story emerged when we looked at demand for automated advice across different wealth brackets, with demand surprisingly high among those most able to afford financial advice. For investing, for example, respondents with £100,000 or more in savings and investments are almost as likely (36 per cent) as those with £1,000 or more (40 per cent) to opt for automated advice. In our view this reinforces the conclusion that automated advice should not be exclusively aimed at lower wealth segments. Indeed, incumbents are right to be worried about the potential for wealthy clients to switch into their lower margin products.

Figure 9. Willingness to pay for automated advice by income

![Figure 9. Willingness to pay for automated advice by income](image-url)
There is a high demand for automated financial advice on pension contributions among the less wealthy

Forty-five per cent of those with pension pots worth less than £10,000 would pay for automated advice on where to invest their contributions. In contrast, among those with pots of £75,000 or more, the figure is roughly a third. We believe this may reflect the lack of advice and information that is publicly available on DC pensions for those with less than £50,000 to invest. In contrast, there is a plethora of websites aimed at small non-pension investors. We feel the relatively underserved low-pension-wealth segment is a clear opportunity.

In addition to the demographic groups discussed above, we believe there is scope for providers to identify target consumer segments based on other, less-obvious, demographic, socio-economic and cultural factors. In Figure 10 we highlight four potential target consumer segments with above-average propensity to pay for automated advice.

Figure 10. Characteristics of potential target consumer segments

<table>
<thead>
<tr>
<th>Consumer segment</th>
<th>Young high earners</th>
<th>Tech-savvy over 45s</th>
<th>Small DC pot holders</th>
<th>Southern home owners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>GB adults aged 18-34 with &gt;£25,000 income and &gt;£5,000 in savings &amp; investments (excluding pensions and property wealth)</td>
<td>GB workers aged 45+ who use LinkedIn with pension savings of &gt;£20,000</td>
<td>GB workers with a DC pension and total pension savings &lt;£40,000</td>
<td>GB adults aged under 50 who live in London or the South East and own property</td>
</tr>
<tr>
<td>Number of consumers in segment</td>
<td>1.2 million</td>
<td>1.2 million</td>
<td>2.6 million</td>
<td>3.0 million</td>
</tr>
<tr>
<td>Willingness to pay for automated advice (peer average)</td>
<td>56% would pay for automated advice on investing £11,000 (40%)</td>
<td>44% would pay for automated advice on converting £30,000 pension savings into a lump sum and retirement income (40%) (35% among consumers aged 45+)</td>
<td>45% would pay for automated advice on investing £80 monthly pension contributions (35%)</td>
<td>45% would pay for automated advice on finding a mortgage (38%)</td>
</tr>
<tr>
<td>Net wealth excluding pensions and properties (peer average)</td>
<td>20% have net wealth of £10,000-£30,000 (11%)</td>
<td>10% have net wealth of £100,000-£250,000 (5%)</td>
<td>28% have net wealth of &lt;£1,000 (15%)</td>
<td>10% have net wealth of £100,000-£250,000 (5%)</td>
</tr>
<tr>
<td>Net property wealth (peer average)</td>
<td>• 63% own property (66%)</td>
<td>• 82% own property (66%)</td>
<td>• 66% own property (75%)</td>
<td>• 25% own property worth &gt;£500,000 (6%)</td>
</tr>
<tr>
<td></td>
<td>• 6% own property worth £20,000-£40,000 (3%)</td>
<td>• 19% own property worth &gt;£500,000 (6%)</td>
<td>• 13% own property worth £150,000-£200,000 (10%)</td>
<td></td>
</tr>
<tr>
<td>Pension holdings (peer average)</td>
<td>43% hold a DC pension (23%)</td>
<td>33% hold a DC pension (23%)</td>
<td>7% belong to a DB scheme (27%)</td>
<td>23% hold individual pensions (12%)</td>
</tr>
<tr>
<td>Value of all pensions (peer average)</td>
<td>48% have total pension wealth of £75,000-£100,000 (1%)</td>
<td>8% have total pension wealth of £75,000-£100,000 (1%)</td>
<td>N/A</td>
<td>9% have total pension wealth of £20,000-£40,000 (7%)</td>
</tr>
</tbody>
</table>

Note: For more information on peer averages see Endnote 7.
3. The regulatory perspective

Making financial advice more affordable and attractive to customers, including those with smaller amounts of money or more basic needs, is a priority for the FCA. It is part of a wider public policy objective of ensuring individuals save more and are better prepared for their retirement. Regulators, both in the UK and elsewhere, believe that automated advice could play a pivotal role in achieving this aim.

In theory, firms’ incentives should be aligned with regulators’ in providing an efficient and cost-effective solution which meets customers’ needs and effectively manages risks. Automation also has the potential to offer some tangible regulatory benefits. One firm planning to offer advice on a standard and limited set of portfolios told us that, provided firms “get the algorithms right”, automated advice could actually be “compliance nirvana” ensuring both consistency of advice and a clear automated audit trail.

However, in practice, market developments have been slower than expected, with regulatory uncertainty and risk consistently cited in our discussions with firms as one of the main barriers to technological innovation and automation. Current regulations in the UK, as well as in other countries such as the US, Australia and Germany, are designed to be ‘technologically neutral’ - whether you give advice in person or via a website, firms are required to meet the same set of customer protection rules. So if the rules are the same, why the uncertainty and added risks in relation to automated advice and how can firms address them?

In the following sections we explore this question focusing on the advice boundary, customer communications, design and supervision of algorithms, and cyber-resilience. Finally, we conclude on whether automated advice can offer ‘compliance nirvana’, or whether it’s actually a ‘compliance nightmare’.

“The distinction between advice and guidance, once reasonably clear, has become much greyer with the advent of platforms and the potential of robo advice.”

John Griffiths Jones, Chair of FCA, February 2017

The advice boundary

A key regulatory challenge for firms in providing automated advice is understanding which side of the ‘advice boundary’ they fall on – guidance or regulated advice – and hence which regulatory requirements apply.

This challenge exists whether a firm provides these services online or face-to-face. The reason that this is a particularly thorny issue for automated models is that some services that are closer to the boundary are not profitable to provide face-to-face but could lend themselves very well to online distribution, especially for retail investment products.

Figure 11 (see over) illustrates how the cost of providing the service increases as firms move from providing guidance to regulated advice, due to the additional consumer protection rules, increased compliance and oversight costs, and enhanced liability that apply to regulated advice. The rate of return that firms receive also increases, as the greater value they provide to customers through regulated advice rather than guidance means they can charge more and/or increase customer loyalty.

“Automated advice is a ‘compliance nirvana’. If you get the algorithms right, it can’t go wrong, unlike with human advisers. And there is an audit trail.”

Deloitte interview with wealth manager, 2016
Figure 11. Advice boundary

Customers enter information, such as on their outgoings and whether they are saving for retirement, as part of an online financial ‘health check’, which suggests they consider investing more each month in a stocks and shares ISA.

A firm sells products via its website. The website has a filtering tool which allows customers to filter products by objective factors (e.g. product type, asset class).

Having suggested that the customer invests more in a stocks and shares ISA, the tool shows the customer a list of 10 ‘high performing funds’ available within an ISA, with a disclaimer saying that this is not a personal recommendation.

In addition to the filtering tool, the website gives general information about which kinds of products may be appropriate for people with different goals (e.g. saving for a car, retirement plans).

The filtering tool allows customers to filter products based on factors relating to their life and situation, such as goals, age, use of tax wrappers, marital status or other products the customer has.

Notes:

i) The figure is designed to illustrate that the compliance (and related) costs of delivering advice rise steeply, due to the current regulatory uncertainty, for those services close to the boundary between guidance and regulated advice. This is because firms, unable to determine exactly where the boundary is, may choose to comply with more stringent requirements that apply to regulated advice to make sure that they protect themselves against any subsequent claim that the service they provided was regulated advice rather than guidance. The revenue line indicates that, in general terms, revenues will tend to rise less steeply than the costs, as customers will not be willing to pay very much until firms offer them actual personalised advice. Revenues and costs lines in this figure are for illustrative purposes only.

ii) Where this chart refers to ‘regulated advice’, this means cases where a regulated personal recommendation has been made and suitability requirements apply. See Endnote 8 for more information.
However, firms currently view the costs and risk of providing guidance close to the advice boundary as too high, as regulatory uncertainty makes it too difficult for them to understand where exactly the boundary is. To illustrate this, Figure 11 provides some examples of additional services firms could provide to clients, but where regulatory uncertainty acts as a barrier. In general, much of the uncertainty hinges on the amount of information the firm can ask the customer to provide before it tips the service into personal recommendation, and thus regulated advice.

**So how can this barrier be overcome?**

From a public policy perspective, there is a trade-off between enabling consumers who cannot afford advice to obtain some high-level direction on what products may be relevant for them, and reducing the risk that a consumer is steered towards a product which is not suitable in the light of their detailed financial circumstances.

As part of the Financial Advice Market Review (FAMR), HM Treasury (HMT) and the FCA are seeking to find the right balance and are taking forward two main actions. First, the FCA recently launched the ‘Advice Unit’, through which it will support firms developing automated advice propositions that can help provide low cost, high quality regulated advice to customers in the areas of investments, pensions and protection markets. It will do so by providing them with regulatory feedback, both individually (for firms selected to receive direct support) and by publishing public resources, including further guidance on streamlined advice, starting from April 2017.

Second, HMT intends to narrow the UK definition of investment advice for regulated firms to bring it into line with the EU definition in MiFID II, so that non-personal recommendations (which do not take into account the client’s personal circumstances) provided by regulated firms will no longer be considered regulated advice. This should make it easier for firms to provide more detailed information to customers about the target market or risk profile of their products, with less risk of inadvertently straying into regulated advice.

Both of these actions will be welcomed by firms. Their success will depend in part on how much clarity the FCA is able to provide in its guidance and on the extent to which the FCA is prepared to allow firms to provide ‘semi-personalised’ recommendations, i.e. where a firm gives a customer a steer using basic personal information such as their age and goals but does not ask more detailed questions about their financial circumstances. For now, to avoid undue regulatory risk firms will either choose to stay clear of the ‘grey area’ and provide services that are clearly only guidance or regulated advice, or err on the side of caution and assume they are entering regulated advice territory. They will only do the latter if they believe that the economic benefits, direct or indirect, in the short and medium term offer an acceptable return on investment.

**Customer communications**

Another challenge specific to automated advice models is that, without human interaction, all information provided to customers, as well as questions to customers and possible answers, must be specified in advance. The customer has limited opportunity to seek clarification, and the automated adviser cannot test the customer’s understanding through conversation or reading body language.

“Information itself does not necessarily empower the consumer. Our work on behavioural economics has clearly shown it can overwhelm, confuse, distract or even deter people from making effective choices if presented in a way people struggle to engage with.”

Christopher Woolard, FCA director of strategy and competition, June 2015

In addition, a number of weaknesses have been found in firms’ communications in automated advice. The Financial Services Customer Panel (FSCP) recently reported that firms offering automated advice services often do not use language that customers can easily understand, but instead use jargon and potentially misleading explanations. The FSCP also found that the language used by firms often assumes an unrealistic level of familiarity with concepts such as ‘funds’ and ‘ISAs’.

The FCA and FSCP found that most customers do not understand the regulatory distinction between guidance and regulated advice or that these offer different levels of protection.
The FCA and FSCP found that most customers do not understand the regulatory distinction between guidance and regulated advice or that these offer different levels of protection. Firms need to communicate clearly what they are offering, and what this means for the customer. Furthermore, customers may click through disclaimers without reading them thoroughly, or they may not fully understand them, and therefore believe they are being given a personal recommendation. The FCA states that if “a recommendation is put forward in such a way that a reasonable observer would view it as being based on a consideration of a customer’s circumstances or presented as suitable, then this is likely to amount to a personal recommendation”.

While the FCA agrees that a customer’s perception of the service received will not always be correct, firms are responsible for ensuring they take all reasonable steps to avoid any confusion or misunderstanding.

In Figure 12 below we provide some examples on the ‘Dos’ and ‘Don’ts’ for customer communications in automated advice and guidance.

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**Figure 12. ‘Dos’ and ‘Don’ts’ for customer communications for automated advice**

**Dos**

- Consider behavioural biases, e.g. present bias, loss aversion, overconfidence. Encourage customers to think about their long-term finances when answering questions about their preferences.
- Make communications more visual, interactive and engaging. This can include the use of interactive videos.
- Employ behavioural testing to gauge whether small changes in the ways information is presented or questions are asked boosts engagement and understanding on the part of the consumer.
- Test whether customers have understood the implications of the choices they make as they progress through the online process (e.g. by asking questions, or specifying what the firm is assuming about the customer) and provide a means for customers to seek further clarifications (e.g. on webchat or by providing a phone number).
- Explain clearly the nature of the service being offered and what protections are available to customers if things go wrong.
- Ensure that all important considerations are displayed prominently when providing information or asking customers questions.
- Include links to pop-up boxes where customers can obtain further explanations if needed.

**Don’ts**

- Use jargon, e.g. ‘portfolio management’ or ‘defined contribution pension scheme’ without a clear explanation of what the term means.
- Assume the customer knows the difference between regulated advice and guidance, and the implications for consumer protection.
- Include long disclaimers or important information that consumers can ‘tick through’ without reading.
- Refer to detailed terms and conditions without providing a summary of key points.
- Overload customers with excessive information.
- Express risk on a scale of 1 to 5 without specifying what this means in practice.
- Keep risk disclosures to the end of the customer journey or only in follow-up sales documentation.
Automated advice provides an opportunity for firms to make their risk profiling processes more visual, interactive and engaging. Some firms are even experimenting with virtual reality technology to bring investment decisions to life. For example, StockCity, by Fidelity, is a virtual city which helps clients visualise an investment portfolio. Each building in the skyline represents a stock; its height represents the price of the stock in the investment portfolio, while its width represents the number of outstanding shares. The skyline of the city changes with the fluctuations in the market – a downturn will cause a rainstorm, while a sunny day means share prices are rising.

The FCA is working with the industry to improve the clarity of customer communications through its Smarter Communications work. We believe firms should proactively contribute to the development and implementation of industry best practices. They should also use insights from behavioural economics and undertake testing in the design of their customer interface, taking into consideration customers’ vulnerabilities and cognitive biases and heuristics which can result in customer responses being influenced by the way that questions are framed.

### Figure 13. Opportunities to deploy behavioural economics in automated financial advice

<table>
<thead>
<tr>
<th>Behavioural biases</th>
<th>Potential solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Herdng</strong> Seeking comfort from ‘being with the crowd’</td>
<td>Provide customer with comparisons vs. peer groups, e.g. savings rate, accumulated wealth. Make advice communications highly personalised so that customers understand their unique needs.</td>
</tr>
<tr>
<td><strong>Mental accounting</strong> Allocating wealth to different mental accounts and treating them differently when it may be inappropriate to do so, e.g. an ISA may be more valuable than a pension because it is more accessible.</td>
<td>Use websites to present customers’ wealth in an integrated manner that removes inappropriate segregation between mental accounts.</td>
</tr>
<tr>
<td><strong>Financial loss aversion</strong> Aversion to ‘losing’ leads some people to make sub-optimal investment decisions, e.g. taking too little risk.</td>
<td>Provide advice on ‘micro-journeys’, i.e. short decision-making processes. Deploy advice through easy-to-use mobile apps.</td>
</tr>
<tr>
<td><strong>Status quo bias</strong> Preferring to stick with the current situation, e.g. not taking advice, not updating life insurance.</td>
<td>Proactively contact investors that display behavioural biases. Educate investors with tools that demonstrate the impact of biases. Tailor advice depending on the propensity of the customer to display biases.</td>
</tr>
<tr>
<td><strong>Overconfidence</strong> Making overly optimistic assumptions about one’s financial future.</td>
<td>Anchor customers’ savings and investment decisions based on prominent and appropriate targets. Use gamification to make chasing goals fun and engaging.</td>
</tr>
<tr>
<td><strong>Hyperbolic discounting</strong> Preferring smaller payoffs now over larger payoffs later.</td>
<td>Proactively contact customers in advance of when they need to take action, e.g. automated alerts to review finances before life events.</td>
</tr>
<tr>
<td><strong>Anchoring</strong> Making decisions based on an arbitrary reference point.</td>
<td>Educate customers using online tools that demonstrate realistic assumptions, e.g. projected level of retirement income.</td>
</tr>
<tr>
<td><strong>Time loss aversion</strong> Aversion to ‘losing’ time on administration tasks such as managing finances.</td>
<td></td>
</tr>
</tbody>
</table>

Note: Figure 13 shows behavioural biases that can prevent customers from making rational financial decisions. Behavioural biases are not aligned with specific potential solutions. This is because in certain cases potential solutions relate to more than one bias.
Design and oversight of algorithms

The key success factor for any automated advice model is the strength of the algorithm underpinning it. Flaws in its design and poor governance may result in widespread mis-selling, which both firms and regulators are understandably keen to avoid.

Therefore the way algorithms are designed, approved and reviewed is a new and key risk for firms developing automated advice models.

“We have rules about what sort of exams a human adviser must pass before they are qualified to advise; how would we apply these to an algorithm?!”

Mary Starks, Director of Competition, FCA, June 2016

Below is a summary of some of the essential principles firms can consider applying when establishing a framework to design, govern and supervise their algorithms.22

1. A qualified adviser should always be fully involved in the design process, and be responsible for understanding the assumptions and logic embedded in the algorithm in each potential scenario, and whether these provide good customer outcomes.

2. Firms should use a full set of skills in the design of algorithms, including IT, modern portfolio theory, and behavioural economics to understand any potential biases in the collection and analysis of customers’ data.

3. Exit chutes should be coded into algorithms so that customers who display abnormal behaviours (potentially vulnerable customers) or customers with complex needs can be redirected to human interaction.

4. Governance committees overseeing automated advice should include a mix of compliance, technology and business leadership. Executive members should be trained to understand the risks of using algorithms, establish the metrics to build into the testing and quality assurance (QA) reviews and regularly review systems performance and sign off any changes required.

5. Firms should conduct, and document, robust testing of algorithms, always in a non-live environment, before any advice is provided to a client, and also subsequently. (See Box 1)

6. Firms need to ensure that staff in their Risk, Compliance and Internal Audit teams have the skills needed to understand the algorithms, and sufficient skills to follow up on information provided by automatic alerts.

7. Firms should have clear lines of accountability, including a clearly identified owner for each algorithm, and adequate human and technological resources, throughout the development, testing, deployment, monitoring, reviewing and updating of algorithms.

8. Firms should consider deploying algorithms gradually, i.e. to a limited number of clients, to ensure they are working as expected. Their performance should be closely monitored, and the full deployment should be signed off only if QA metrics are fully met.

9. The algorithm owner should be in charge of initiating the review and updating algorithms whenever there are relevant factors that may affect them and, in turn, the customers (e.g. market or regulatory changes).

10. Firms should have effective controls and processes in place to suspend the provision of advice if an error within an algorithm is detected. They should also perform a manual review of any advice provided before the error was detected.

11. The firm should be able to explain to the regulators how the tool works and how it complies with regulatory requirements and the firm’s risk appetite. Firms should also be able to provide details of the parameters or limits to which the system is subject and the key compliance and risk controls that are in place.

Australian and US regulators have already published some guidance in this area. Firms can use these sources to inform their thinking and plans.20, 21 Parallels and commonalities can also be found with the MiFID II rules on controls for algorithmic trading and the supervision of internal models.

“Our number one conduct risk concern is the potential for mis-selling en masse. To mitigate the risk, the digital solution should recognise when it is no longer appropriate to proceed with the customer along the journey.”

Deloitte interview with insurer, 2016
Box 1 – FINRA principles and effective practices for governance and supervision of algorithms

Initial reviews
- assessing whether the methodology a tool uses, including any related assumptions, is well-suited to the task.
- understanding the data inputs that will be used.
- testing the output to assess whether it conforms with a firm’s expectations.

Ongoing reviews
- assessing whether the models a tool uses remain appropriate as market and other conditions evolve.
- testing the output of the tool on a regular basis to ensure that it is performing as intended.
- identifying individuals who are responsible for supervising the tool.

“People often talk about automated advice being an innovation in the advice process, but it also requires innovation in risk and governance practices.”
Deloitte interview with insurer, 2017

Cyber-resilience
Firms looking to develop online platforms to provide advice should consider cyber as one of their largest risks, both from a regulatory and reputational perspective.

From a regulatory perspective, firms should ensure that they have sufficiently prepared themselves in three principal areas:23

- risk identification and management – firms should be able to demonstrate that they understand the extent of their exposure to cyber and IT risk at all levels of their organisation
- risk governance – firms should have robust internal governance models to cope with the complexity and pervasiveness of cyber risk
- risk resilience – firms must demonstrate that they have developed contingency plans and capabilities to respond effectively to cyber breaches in a way that allows them to minimise disruption to customers.

Cyber security and resilience are key considerations for all internet-based customer platforms, not only for automated advice. However, firms building a customer platform for the first time will need to ensure that cyber risk, including client data protection, is at the top of the executive agenda.

Compliance nirvana or nightmare?
Automated advice faces different and in some cases more complex regulatory challenges than traditional face-to-face channels. Firms will need to adjust their risk and control frameworks and management information to reflect the different customer journeys and to identify, review and manage the different types of risks automated advice presents. However, the challenges in relation to consumer communications, use of algorithms and cyber risk are surmountable and the risks manageable, consistent with the analysis set out in this paper.

At the same time, automated advice also gives rise to regulatory benefits. It allows firms to maintain consistency of advice, it provides an audit trail of customer interactions as part of the advice process, as well as an opportunity for firms to make communications more visual, interactive and engaging, including through exploring the use of virtual reality technology.

One major outstanding question is whether the FCA will be able to tackle the regulatory uncertainty over the advice boundary to an extent which makes firms willing to offer services ‘at the boundary’. We believe that the FCA’s work in this area will reduce uncertainty, but eliminating it entirely will be challenging. Ultimately, the FCA’s decision on exactly what constitutes regulated advice will be determined by the balance it is willing to strike between its consumer protection objective and its ambition to make guidance more widely available and affordable across all segments of society.

In conclusion, therefore, while automated advice presents no ‘compliance nightmare’, there is still some way to travel before we reach ‘compliance nirvana’.
Automated advice algorithms can also be designed with the ability to ‘learn’. In machine learning, an application of the broader concept of Artificial Intelligence (AI), computer programs can be trained by subject matter experts (SMEs), such as qualified advisers, to respond to situations without being explicitly programmed and to change their response when exposed to new data.

Once SMEs complete the training, and learning algorithms have been properly tested, the ability to ‘learn’ can (and should) be switched off, before these AI applications are deployed to interact with consumers. At any point further learning can be resumed, in ‘offline’ mode, by feeding the computer new or additional data.

As AI applications evolve and increase in sophistication (for example, improve their ability to understand and respond in natural language), machines will increasingly be able to replicate human interaction. Although the regulatory and legal requirements under which advice is given should be coded into the algorithm rather than learned over time, machines will be able to have progressively more complex conversations with clients to, for example, understand their preferences or test their level of comprehension. Machine learning is already being applied successfully, particularly in business-to-business and functions that do not require customer input (e.g. portfolio rebalancing). The first insurance chatbot has already been launched (Spixii), and Amazon’s Alexa can provide information on annuities for instance.24,25,26

Although firms have a much greater ability to control and test AI applications than is commonly believed, regulators will be watching developments closely. The principles for design, governance and supervision we discussed in Section 3 apply to both learning and non-learning algorithms. However, for learning algorithms, there needs to be a strong focus on the policies governing the quality of data fed to the algorithm, the type, extent, and length of the training and the criteria for testing the algorithm.

Under this scenario, automated advisers could be able to provide advice against a relatively complex set of needs and goals, and enhance firms’ ability to profile customers and ‘test’ their understanding of both products and the potential risks. AI will also be able to monitor and understand very complex and regularly changing regulations, probably much more effectively than any single human adviser could. Over the next decade, therefore, it is possible that we will see automated advisers enter more sophisticated advice markets and be able to deal with issues as complex as tax and holistic financial planning, thus providing services for wealthier customer segments.

Having said that, the transition will be gradual and probably only partial, not only because AI technologies are still relatively immature, but also because it will require a change of ‘hearts and minds’ on the part of consumers. Some of the reticence is generational, but some is rooted in the human need for forming bonds of friendship, trust, and empathy.

4. Machine learning and Artificial Intelligence
Part 2
Automated financial advice – a view of individual markets

In Part 2 we discuss the opportunities arising from automated advice, the barriers and the implications for industry players across the following markets: simple financial planning, investing, DC pension saving, at-retirement, mortgages and individual protection. We then draw out our overall conclusions and the next steps for firms.

As in Part 1, where we refer to ‘automated advice’, this includes regulated advice, guidance and discretionary investment management, which can be delivered via a purely automated system, a hybrid service or face-to-face assisted by an algorithm. Where we refer to specific services or channels we use specific terms such as ‘regulated advice’ or ‘purely automated’.
The opportunity
We believe there is significant unsatisfied demand for an automated financial planning product or tool to help with a range of financial decisions, especially among younger millennials. Consumers need guidance ranging from ‘micro-journeys’ – by which we mean financial decisions that can be made based on short advice processes – all the way through to holistic financial planning, which takes longer and is more involved. Micro-journeys vary by age and life-cycle stage. They include deciding between paying down debt and saving into an ISA, guidance on building a deposit for a house and choosing between investments within an ISA.

Our survey shows that 34 per cent of respondents are willing to pay for an automated solution for financial planning. We view this figure as high. Financial engagement and literacy among consumers, which drives interest in financial planning, is generally low. Moreover, while some such tools are available in the marketplace, awareness is low.

Price sensitivity among the consumers who would use automated financial planning is high. More than 70 per cent of respondents would not pay more than £125 for this service, which is less than a quarter of the cost of a typical financial planning session with an adviser (see Figure 14).27

What are the barriers?
Commercial viability is the key question for providers. Younger millennials show the highest appetite to use automated financial planning, but their savings and ability to pay for advice are low relative to older consumers. Marketing costs would need to be high to overcome low consumer engagement in financial matters, and the need to achieve significant scale to offset low fees.

The combination of low fees and high marketing costs make the economics challenging. However, given the significant unsatisfied demand among select groups such as younger millennials, offering a financial planning tool could be a point of differentiation for providers and a means of gathering valuable consumer data and increasing customer loyalty. This would help providers who earn consumers’ trust to market to them in future years. As a result, some larger providers could consider providing financial planning guidance for free or at-cost.

We believe there is significant unsatisfied demand for an automated financial planning product or tool to help with a range of financial decisions, especially among younger millennials.
It is currently difficult to provide a holistic automated advice solution for financial planning due to complications such as tax and inheritance planning where human overlay is necessary at present. In addition, the shorter attention span of most people in a digital environment will limit the number of detailed questions they can be asked relative to face-to-face advice. However, automated advisers can provide tools to help simpler micro-journeys, such as choosing between ISA and pension contributions. A digital-only solution is most likely to succeed, with a hybrid solution combining digital and face-to-face advice offered for more complex cases.

In the UK, advice is regulated if it involves recommending specific financial products.28 Where a firm provides regulated advice to customers based on their individual circumstances, the firm will be subject to suitability requirements. If firms are shown to have given unsuitable advice they are liable to pay redress and potentially regulatory fines. However, many micro-journeys, such as deciding whether to invest in an ISA or a pension, or working out how much deposit a consumer needs to buy a house, do not involve recommending specific financial products and are only regulated if provided alongside regulated advice. Where firms provide only unregulated services, they should face significantly reduced compliance costs. These services may provide firms with fewer opportunities to charge customers or to sell their products, but can build customer loyalty.

Where firms provide regulated personal recommendations on retail investment products (including insurance-based investments and pensions), UK rules require this to be remunerated through adviser charges. Firms wanting to provide regulated advice for free or below cost will therefore need to consider carefully how this could be funded. More detail on this is set out in Section B.

Implications for industry players
Banks are relatively well positioned because they have unrivalled access to mass market customers and customer data. They have the ability to offer financial planning guidance as a free or low-cost solution to build customer loyalty. Moreover, their customer access solves the challenge of high customer acquisition costs. For banks to exploit this opportunity fully, the key will be developing and deploying the right tools to analyse this data, which may have to be with a FinTech partner.

Employers could offer online financial planning as a benefit to their employees via a financial services provider. Mass employers such as retailers are uniquely positioned to offer this service to their employees, again side-stepping the customer acquisition cost problem. However, their access to employee finances is limited to salaries. A solution would need access to non-income financial data such as on borrowings and outgoings. Trust could be a barrier here.

Technology-enabled start-ups may be best positioned to provide engaging interfaces to encourage adoption, besides providing the technology for any solution. Ongoing changes in regulation, such as Payment Services Directive II (which mandates the opening up of bank data to third parties with customer consent), will help them access data. However, this still does not solve the problem of very high customer acquisition costs that any stand-alone start-up will face due to low brand recognition.
The opportunity
We believe there is a significant unsatisfied demand for efficient ways to invest smaller sums of money, both regular contributions as well as lump sums. All too often, individuals are either risk averse, preferring to hold their savings in cash, or lack the understanding to invest them in potentially higher growing or yielding assets. The market is very significant, with £828 billion held in individual deposits at high street banks as of December 2016. Cash ISAs alone accounted for £269 billion of funds in the 2015-16 tax year, and inflows into cash ISAs amounted to around £60 billion in both the 2014-15 and 2015-16 tax years. The level of inflows is likely to increase further in the 2017-18 tax year, with the increase in the adult ISA allowance from £15,240 to £20,000.

“Automated advice would allow us to expand our services to a wider range of clients, by lowering the sum needed for investable assets.”
Deloitte interview with UK-based wealth manager, 2016

Forty per cent of respondents in our survey would pay for automated advice to help with such investment decisions. This is remarkable in the context of low engagement and financial literacy, and in the absence of any major initiatives by UK incumbents.

“There is a customer segment that is price sensitive yet wealthy. They understand the impact of fees, are seeking value and are willing to pay for automated advice. You might see large sums allocated to automated advice, representing small shares of wealthy portfolios.”
Deloitte interview with UK-based fund manager, 2016

Wealth managers typically have minimum client account sizes above £500,000 and these account minimums are rising for many players. The cost of procuring human advice at £150 per hour on average makes it prohibitively expensive for sums below £100,000 to be invested with advice. However, even among wealthier investors, cost consciousness is rising. We believe that many will allocate a portion of their assets to be managed passively through a low cost digital adviser. In the US, the evidence shows sizeable variance in the digital advice market – average account sizes range from $26,410 at Betterment to $145,989 at Personal Capital. Our survey results back this up, showing a clear appetite among wealthier investors to invest relatively large sums of money through automated channels. In fact, willingness to pay for automated advice to invest £10,000 clearly rises with wealth (see Figure 15).
Those willing to use an automated advice solution are clearly price sensitive (see Figure 16). However, we believe low cost solutions are commercially viable. More than two fifths of respondents who would pay for automated advice would pay less than £100. For large scale providers, this price point may be achievable as evidenced by annual management charges of 45 basis points per year on accounts with funds up to £250,000 at Hargreaves Lansdown. For example, a capital sum of £22,000 charged at 45bps would generate a provider fee of £100.

We recognise that a digital asset allocation solution using mainly passive investments is likely to be the best means of offering low-fee automated advice that achieves acceptable returns for providers. For wealthier investors, this solution may also incorporate active investments. However, offering such a product poses clear dangers for incumbent wealth and active asset managers: a corollary of the rising popularity of such a platform is even more attention to fees. While a substantial element of the business generated will be new to the industry (i.e. money that was held in cash), there will be some switching from higher margin accounts and active products.

Figure 15. Willingness to invest more than £10,000 using automated financial advice by wealth level

Source: YouGov 23-24 January 2017, Deloitte analysis. Samples: GB adults with more than £1,000 in savings and investments (excluding pensions and property wealth). Samples: £1,000 or more (1,046), £5,000 or more (842), £30,000 or more (461), £100,000 or more (212).

Figure 16. Willingness to pay for automated financial advice for investing £11,000

What are the barriers?
We note that provider marketing will also need to convince potential clients of the need to invest money in higher return assets as well as educate and reassure them about the capabilities of their automated products.

Low thresholds will be key to attracting consumers from the less wealthy target market who do not have access to traditional, higher-end wealth managers. In addition, low fees are vital to bring in the price-sensitive consumers who inhabit all segments of the wealth spectrum, as shown in Figure 16. However, customer acquisition costs will be high, especially for new entrants and those with little/no brand awareness in this market.

As a result of these factors, making a profit on stand-alone automated advice business is challenging, particularly in the early years. We estimate that a stand-alone automated advice business is likely to need anywhere between £4 billion to £10 billion in assets to break-even (see Figure 17) skewed in all likelihood towards the higher end of that range, a level substantially higher than where we are today.

Some firms developing regulated automated advice models may want to offer their services below cost, or for free, on an ongoing basis to improve their overall offering. Firms wanting to do this will need to consider carefully their approach since the FCA’s rules state that a firm can only be remunerated for a personal recommendation on retail investment products by adviser charges.\textsuperscript{35,36}

This is an area where more regulatory guidance would be beneficial, and firms may need to seek feedback on their proposed approach from the FCA. In any case, firms would at least need to ensure that customers of other business lines did not face higher costs as a result of automated advice being provided for free. If a service is clearly guidance, it can be provided for free, as guidance is outside the scope of these rules.

Implications for industry players
Asset managers largely see themselves as ‘manufacturers’ of investment products. Few have sizeable D2C businesses, and most are reluctant to spend the money to build a brand with high recognition among mass market consumers. However, rapid adoption of digital advice has the potential to accelerate an ongoing shift to passive investments. To maintain growth, asset managers will need to focus either on differentiated products and/or find a way of participating in this change through, for example, building or partnering to create a D2C route. This raises channel conflict issues that they will need to resolve. Asset managers typically go through intermediaries, such as platforms, banks and wealth managers, and any move into direct distribution would bring them into competition with these established distribution channels.

Figure 17. Estimated break-even assets under management for a UK stand-alone automated advice platform\textsuperscript{37}

![Figure 17. Estimated break-even assets under management for a UK stand-alone automated advice platform](image-url)
Retail investment platforms and wealth managers are the best positioned to add on digital investment advice services given their branding and direct access to consumers. They can add this service at relatively low incremental cost, although they will need to build or buy technological expertise.

Retail investment platforms are especially well placed, as they can attract business away from wealth manager clients looking for lower-priced passive solutions. The US provides evidence that this is already happening. We estimate that between them, two large investment platforms have already captured nearly 80 per cent of the digital advice market. While select challengers are continuing to grow, incumbents are growing just as fast by targeting potential entry-level wealth manager clients attracted by their lower fees. The importance of scale suggests that even among incumbents few will be successful in this channel: Hargreaves Lansdown leads the current D2C market by some distance and has been unrivalled in its success at building a D2C channel with a widely recognised brand.

Wealth managers will, however, need to be mindful of customers switching from higher margin, active and advised product ranges, to lower margin digitally-advised products, amid higher fee transparency. One option for wealth managers to protect their brands is to limit account minimums to relatively high amounts and offer an added-value hybrid digital-human product, such as a dedicated human adviser above a minimum account size.

“The investment expertise and safe custody are important in a business that depends mainly on trust. This is where incumbents have a huge advantage.”

Deloitte interview with UK-based wealth manager, 2016

For wealth manager clients, given other complexities such as tax efficiency, inheritance and broader risk management, a digital solution may, in any case, be only part of a wider allocation of assets. Over time, the focus of the adviser may shift towards incorporating non-investment matters such as tax planning into the investment solution. Wealth managers who wish to widen their reach beyond their existing client characteristics, given their typically niche audience, will also have to spend significant amounts on customer acquisition costs.

IFAs, in particular, look vulnerable in terms of both fee pools as well as the scope of their tasks. We believe retail investment platforms are well positioned to offer mass affluent clients (with investable assets of £50,000 to £250,000) competitive offers that could pressure IFA fees. With the availability of digital tools to manage portfolios, the role of IFAs will shift towards areas such as tax optimisation and estate planning, and the gradual narrowing of the range of tasks they perform could place further pressure on fees.

Given banks’ access and ongoing relationships with their customers, targeting investors with small sums to invest is an opportunity with a relatively low acquisition cost. However, the challenges here are likely to be low financial literacy, high risk aversion and the need to keep this solution affordable. Banks are also likely to need to buy in technology solutions to provide and service this offer, and graft these onto their legacy systems. That said, this will be largely incremental business to banks, whether built through partnerships or internally and will be a useful tool to differentiate their offer. The ability to view and manage investments on the same platform as day-to-day banking will appeal to many, and banks are in pole position to provide this. In the upcoming era of Open Banking whereby banks will be required to share customer data with third parties, adding these services offers banks a way of improving customer engagement rather than being on the defensive.

Start-ups have certainly led the way in terms of delivering digital advice models that can deal with smaller sums of money. Their focus has generally been to attract customers through lower fee products, enabled by their digital platforms. While everyone will be in favour of lower fees, engagement with investing is very low and, in that context, trust in their financial provider is a key desired trait. As a result, customer acquisition costs for start-ups are magnified to uneconomic levels by the generally ultra-low awareness of start-up brands among all but the most digitally savvy investors. We struggle to find examples of those that can overcome this key challenge and build scale. Thus, we believe, barring a select few, a more viable solution is likely to be either to partner with or to sell incumbents their services as a white label product.
C. Defined contribution pension saving

Key finding
DC pensions are a unique opportunity for automated advice due to a large and fast growing market, access to customers through the trusted and low-cost workplace channel and a lack of publically available information on how to invest contributions. The key challenge will be developing highly engaging marketing and online advice portals, and ensuring the algorithms are robust enough to meet regulatory requirements.

The opportunity
The UK DC pension market is huge, with more than £650 billion in estimated assets under management and annual profits in the region of £1.6 billion. In addition, the UK DC market is growing quickly due to a combination of population ageing, auto-enrolment and the continuing shift from DB to DC pension schemes. We estimate that the UK DC profit pool will grow at around 6 per cent each year to about £3 billion by 2025.

The dominant workplace pension providers are typically large insurers and asset managers. In our view, automated advice on workplace pensions presents two major opportunities for incumbents to defend their dominant position in DC pensions. The first opportunity is to increase customer engagement. Many people are disengaged with their DC pensions. For instance, only 52 per cent of DC savers have a fairly good idea of how their funds are invested. This leads to sub-optimal outcomes. Most obviously, DC savers save too little and take too little risk, both of which inhibit the growth of their pension pots. Others fail to maximise their tax breaks. Nevertheless, the introduction of the Pensions Dashboard, starting with a pilot from March 2017, will enable pension savers to see all their pension pots in one place, which could increase engagement. We see three main ways in which automation can further increase engagement.

• More proactive. Automated alerts can keep people updated about their balances, the income they are due to receive in retirement and let them know when new funds become available to invest in. Reminders to review savings rates and/or investment choices can be issued periodically, and chased up if no action is taken. Just under a quarter (23 per cent) of our survey respondents who have not retired said they would like online help understanding how much money they are on track to receive in retirement.

• More accessible. Providers can make pension saving more accessible by using visual tools within automated advice. For example, visuals that illustrate key points such as the build-up of funds over time, the influence of risk on returns and progress against goals would likely prove more accessible and engaging than paper-based communications.

• More powerful. Providers can use insights from behavioural economics to make their customer communications more powerful (see our discussion on customer communications in Section 3). Research found that households cut their energy consumption when they compared it with that of neighbours. The same thinking could be applied to pensions with savers shown anonymised real life examples of how their peers are doing.

The second opportunity is to improve pension saving decisions by making advice more affordable. The average DC pot at retirement is £25,000, though many people have multiple pots and other sources of wealth. Yet many financial advisers will turn away consumers with less than £50,000. For these consumers, the cost of advice would use up too much of their pots to be worthwhile.
For employees who cannot afford to see a pension adviser, advice could be provided via a workplace pension portal with minimal human intervention. The website could provide help with key decisions, such as which fund to invest in. This would likely be much cheaper than traditional advice for two main reasons. One, it would save financial advisers’ time and fees. Two, the costs of the technology could be spread across many scheme members creating significant economies of scale. For example, Wealth Wizards provides automated workplace pension advice for £100 per employee per year.44

Making pension advice more affordable and accessible would have a large positive impact on savers. According to research, UK savers with a pension pot of £100,000 save an average of £98 more every month and receive an additional income of £3,654 every year of their retirement if they take financial advice.45

Given relatively low levels of customer engagement in DC pension saving, our survey suggests surprisingly high willingness to pay for automated advice: more than a third (35 per cent) of workers with a DC pension in our survey would pay for automated advice on investing monthly pension contributions of £80. This represents a population of at least three million people.

What are the barriers?

Price sensitivity. Consumers would demand low fees. Roughly two-thirds (68 per cent) of working DC members who would pay for this service would not pay more than £125, equivalent to a discount of more than 75 per cent on the typical cost of face-to-face advice in this scenario.46

Small pots. A key challenge for providers is the small size of many DC pension pots. This necessitates a low-cost solution to keep fees affordable. This need is amplified by the low levels of engagement and awareness typical of DC plan participants. The key to making this viable will be scale – higher volumes could compensate for low individual account fees.

Acquisition costs. Marketing campaigns to persuade savers to try the service could prove costly. A successful campaign would need to overcome low consumer engagement and financial literacy, especially for plans with a large number of auto-enrollees.

Despite these barriers, a low-cost digital solution coupled with a large customer base can make this product viable on a stand-alone basis in our view. Given the low cost imperative, we see a largely automated allocation tool driven by passives, typically operating on a workplace website. We see this as digital by default, with human touch points as complexity rises.

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**Figure 18. Willingness to pay for automated financial advice on £80 monthly pension contributions, DC pension members**

<table>
<thead>
<tr>
<th>Less than £125</th>
<th>£125</th>
<th>£250</th>
<th>£400</th>
<th>£450</th>
<th>£475</th>
<th>£500</th>
</tr>
</thead>
<tbody>
<tr>
<td>68%</td>
<td>14%</td>
<td>7%</td>
<td>6%</td>
<td>2%</td>
<td>1%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Firms will need to think about whether the service is regulated and, if so, ensure they have robust processes to ensure compliance with regulatory requirements. In general, the regulatory considerations relating to advice on DC pension schemes are similar to those for other retail investment products as described in Section B. However, there is an exemption from the rules on adviser charging where firms provide advice to an employer in connection with a workplace pension scheme. Nevertheless, any personal recommendation given to employees will be covered by the rules.

Implications for industry players
We believe that the life insurers and asset managers that are the major workplace pension providers are well positioned to automate advice on workplace pensions. The main reason is that they have unrivalled access to customers. This gives them a good chance to side-step the challenge of high customer acquisition costs that has hampered pioneers of automated advice in the non-retirement investment space. Workplace pension providers communicate with account holders and can use these communications to offer them automated advice. The challenge will be to engage these customers.

“Auto-enrolment is a huge opportunity for automated advice. A range of players could offer an ‘account for life’ concept. I could see banks tying in pension advice with current accounts and offering an aggregated platform.”

Deloitte interview with UK-based insurer, 2016

Providing innovative automated advice services could also be a tool for workplace pension providers to win business from employers. Employers can play an important role in increasing employee engagement with their pension, primarily through communicating and reinforcing the perceived value of workplace pensions as the most important component of retirement savings for most consumers. Employers may benefit from such efforts if they increase employee satisfaction.

Asset managers will benefit from higher flows into investment products in which savers will be advised to invest. We regard two distinct categories of asset manager as well-placed to capture this opportunity. Asset managers that are owned by major life insurance groups are well placed because they belong to the same groups as some of the major workplace pension providers. Leading passive fund managers also appear likely winners because their funds fit better within an ultra-low-cost model.
D. At-retirement

Key finding
There is significant demand for low-cost financial advice in the at-retirement market. Due to the complexity of the decisions that need to be made, the most effective model is likely to be a hybrid model where most of the process is automated but customers speak to a human adviser to complete the process. This can save time and cost for advisers and customers alike, allowing both parties to focus on the most complex decisions. The question is how to design a system sophisticated enough to deal with a complex market and to understand the different priorities customers may have for their retirement.

The opportunity
Consumers experience the greatest need for financial advice when they retire. They have to decide how to fund retirement with savings accumulated over a lifetime and are faced with tough decisions – such as how much cash to withdraw while leaving enough invested to provide a decent income – and complex products. The need for at-retirement advice markedly increased when Pensions Freedoms were introduced in 2015. The new rules give retirees a much wider range of options on how to convert their pension pot into retirement income than previously when many people were ‘forced’ into an annuity.

However, many retirees shun advice. Currently around 33 per cent of annuities customers and 65 per cent of income drawdown customers use a regulated adviser. We would expect higher take-up of advice for those using income drawdown than for annuities. Income drawdown can be riskier than annuities in that it has no in-built insurance against running out of money.

Two main barriers prevent and discourage more people from taking advice. The first is disengagement. Many retirees are disengaged with their pensions. This helps explain why only around 20 per cent of consumers at retirement use Pension Wise even though it offers free guidance. Second, for many advice is too expensive to be worthwhile. That said, from April 2017 consumers will be allowed to access £500 tax-free up to three times from their pension pot to offset the cost of regulated retirement advice. This could increase some consumers’ ability to pay for advice, but consumers will still demand good value for money. Moreover, face-to-face advice often costs more than £500.

Automated advice can help lower both barriers. Engagement is won in the accumulation phase long before retirement. As discussed in Section C, automated advice communications that are more proactive and accessible than today’s paper-based annual statements can build customer’s interest and involvement in DC saving. Efforts here would likely gain regulatory support.
The FCA has been considering how firms can better engage with customers as part of its smarter communications initiative. It already requires firms to provide clients with a summary of their open market options before selling them a retirement income product, and is behaviourally testing how at-retirement communications from providers (known as ‘wake-up packs’) can be clarified and simplified to help consumers exercise choice effectively.

It is also consulting on requiring annuity providers to show consumers the difference between their quote and the highest guaranteed quote available on the open market. This latter initiative should encourage customer engagement by making it clear how much money could be at stake. The FCA has suggested that in future it may develop comparison tools for other retirement income products, such as income drawdown products.

In addition to making advice more engaging, automation can radically lower its cost. In-person advice on converting £30,000 pension savings into a lump sum and a retirement income product, which is a typical advice scenario, costs around £800. We believe the combination of a website using algorithms and an adviser speaking with customers over the phone (to ensure advice is suitable) can deliver good quality advice at a fraction of this cost. Our research indicates that the time an adviser would need to spend on automated cases would be less than half that of traditional cases.

Low cost is key because many consumers would demand a deep discount on in-person advice. Figure 19 shows that, among those who would pay for it, almost half (48 per cent) would pay less than £205 for automated at-retirement advice.

This is an opportunity for providers in two ways. First, it is chance to earn new advice-based revenues. Many people are willing to pay for automated advice at retirement. Second, more importantly, it is chance to win and retain customers at the crucial at-retirement stage. More than 300,000 people retire each year with a DC pot. For providers that sell decumulation products, providing easy-to-use and low-cost advice is the way to market these products and to ensure that they are well matched to customers’ needs.

Consumers experience the greatest need for financial advice when they retire. They have to decide how to fund retirement with savings accumulated over a lifetime and are faced with tough decisions – such as how much cash to withdraw while leaving enough invested to provide a decent income – and complex products.
What are the barriers?
A key concern for firms is regulatory risk. Firms giving regulated advice on pensions are likely to face a high degree of supervisory scrutiny given that large sums of money may be involved and consumers could run out of money in retirement if they are given poor advice. Many retirees have complex financial and personal circumstances and need to weigh up carefully different priorities for their retirement. Some customers may be vulnerable to behavioural biases when thinking about their retirement. Examples include projection bias, where consumers may assume they will be able to live on the same income in 20 years’ time without factoring in changes such as the possibility of going into a care home, and overconfidence bias, where consumers may overestimate the returns they will earn if they leave their pension invested and draw it down over time.

To ensure they give suitable advice, firms will need to consider how behavioural biases could affect how a customer answers questions and frame questions carefully to minimise this risk. Given that both customer circumstances and retirement options are often complex, it is also likely that firms will need to supplement their automated advice solution with a human interaction, so that a human adviser can check the customer’s understanding and clarify any points if the firm needs additional customer-specific information. Over the longer term, we may see firms developing more fully automated advice solutions that can meet regulatory requirements, but in the short and medium term a hybrid model is more likely to be effective.

Implications for industry players
The large life insurers and asset managers that are major workplace pension providers appear better placed than other players to win customers by providing automated at-retirement advice. Four reasons stand out. First, they have the greatest scale, and with it, ability to provide a low-cost service. Second, they can use their unrivalled customer data from the accumulation phase to provide more personalised advice than other players. Third, they can use the same data to pre-populate forms making advice from them more convenient than elsewhere. Finally, for life insurers, only they can provide annuities which, for many risk-averse customers, could be a more suitable recommendation from advice than income drawdown.

For advisers, automation can allow them to spend less time on the more straightforward parts of the process, such as data capture, and instead focus on the high-value areas. For instance, advisers could automate product recommendation and spend more time advising on tax considerations in more complex cases.

The large life insurers and asset managers that are major workplace pension providers appear better placed than other players to win customers by providing automated at-retirement advice.
E. Mortgages

Key finding
More automation in the mortgage advice and application processes could unlock significant efficiencies. Borrowers will benefit from wider choice and potentially lower fees, while both lenders and borrowers will benefit from smoother, faster and more accurate processing of applications. Since customers may be vulnerable and/or have complex financial circumstances, the most effective advice model is likely to be a hybrid where most of the process is automated but customers speak to a human adviser at the end.

The opportunity
The annual mortgage market is large, with gross lending volumes of £246 billion in 2016. Mortgages finance the largest lifetime purchase and most valuable asset of most individuals. Moreover, given varying individual risk appetites and time horizons, there are several complex choices to be made including, but not limited to, fees, loan duration, interest rate type, and interest-only or capital repayment options. This combination of a high-value debt product and the need to choose between multiple product attributes often creates a need for advice. In the UK, the FCA requires firms selling mortgages to give advice in many cases, under rules put in place in 2014. This has contributed to an increase in the proportion of consumers receiving advice when taking out a mortgage from 67 per cent in 2008 to 97 per cent in H2 2016. Meanwhile, intermediated sales rose from 50 per cent in 2009/10 to 67 per cent in H2 2016. The large size of the mortgage advice market creates an opportunity for both mortgage lenders and intermediaries to invest in more automation which can reduce costs for firms and improve the customer experience.

Our survey indicates a high level of receptivity to a digital solution for this service – 38 per cent of all respondents are willing to pay for this option. On average, borrowers pay around £500 to a mortgage broker for their services. These fees can be higher, depending on mortgage value and other complexities. Brokers are paid 0.3-0.5 per cent of the loan value by lenders in commissions – an arrangement that is allowed under the UK regulatory regime for mortgages unlike for investments. Some brokers choose to reduce borrower fees, subsidising this from lender commissions. Our survey results suggest that while potential users are price sensitive, as many as 47 per cent of respondents willing to pay for an automated solution would pay £125 or more for this service. What makes this proposition exciting is that we believe a digital offering is potentially viable on lender fees alone, as the service can be provided more cheaply than a face-to-face offering.

The annual mortgage market is large, with gross lending volumes of £246 billion in 2016. Mortgages finance the largest lifetime purchase and most valuable asset of most individuals.
We believe that this high willingness to adopt a digital solution despite the infancy of this offer (with only a few start-up providers) suggests significant inefficiencies in the mortgage application and approvals processes.

While brokers scan the full set of products available and relevant to customer needs depending on their level of service or access to the market, in practice, they can only be familiar with the details of the underwriting practices of a limited number of lenders, knowledge of which is key to delivering a product successfully to a borrower. In contrast, a digital tool should be capable of scanning for products much more widely and automatically assessing the customer against the lending criteria, benefiting consumers and potentially lowering rejection rates. Nevertheless, in practice, an automated system is likely to need to be supplemented with some involvement from a human, particularly in assessing suitability and checking that the customer understands the product.

But equally as exciting, we believe, is the potential to increase efficiency throughout the mortgage application and approval process, yielding sizeable savings for borrowers and lenders alike.

Mortgages are documentation-heavy – this relationship is deeply intermediated, and many consumers have a different mortgage provider to their current account provider. As a result, borrowers often face repeated requests for documentation as part of their applications, which often needs to be verified and/or certified, with a lot of time lost in the processing of this information.

We believe that more automation in the advice and application processes could benefit borrowers and lenders in two ways: by increasing efficiency and by speeding up the process. By digitally accepting and processing documents, digital intermediaries can add significant convenience to customers. If firms can devise a process whereby these digital formats are acceptable to lenders, they can both speed up processing substantially as well as ease pressure points for lenders.

Ultimately, the wider choice a digital broker can offer a borrower and the efficiency gains for lenders and borrowers alike are huge benefits.

Our survey indicates a high level of receptivity to a digital solution for this service – 38 per cent of all respondents are willing to pay for this option.
What are the barriers?
Any digital intermediary will face very high customer acquisition costs. Consumer awareness of alternatives is very low and given the high value of this product to the borrower, building trust will take both time and money.

A digital intermediary will need to build deep knowledge of the underwriting requirements across lenders. Integrating any digital document processing capabilities with lender systems is another challenge. The system will also need to be sophisticated enough to consider competing objectives that the customer may have, such as price and speed.

For most people, taking out a mortgage is a very material financial decision and an unsuitable mortgage could result in significant hardship, including potential eviction from their home. In this context, firms providing advice on mortgages can expect a high degree of scrutiny from the FCA. The FCA is supportive of innovation in the advice market and is currently considering potential regulatory barriers to firms providing automated advice for mortgages as part of its mortgages market study.

However, any automated solution will need to meet the FCA’s strict consumer protection requirements for mortgage advice, including suitability assessments.54

In practice, some regulatory requirements are likely to pose more challenges for an automated solution than for a human adviser. For example, an adviser needs to ensure that the customer understands the implications of taking on a significant amount of debt in the face of uncertainties about future interest rates and the customer’s future income and expenditure. Advisers also need to be able to identify where customers may be vulnerable or may be overly optimistic about their ability to make repayments. Human advisers may find this easier as they are more able to read body language, ask probing questions which are specific to the information provided by the customer, and gather background information through talking informally to the customer. Customer vulnerability is a key focus for the FCA across all financial services markets, but is especially relevant to mortgages as they are long-term debt products.55

“In very complex cases, a purely automated service would be difficult – for example if someone wants to purchase buy-to-let mortgages simultaneously.”

Deloitte interview with UK-based start-up, 2016

As a result of these challenges, it is likely that firms will need to supplement their automated advice solution with a human adviser who can check the customer’s understanding and clarify any points if the firm needs additional customer-specific information. Existing online mortgage advisers require all customers to speak to a human by phone or webchat as part of the process. Over the longer-term we may see firms developing more fully automated advice solutions that can meet regulatory requirements, but in the short and medium term a hybrid model is more likely to be effective.

Implications for industry players
Traditional mortgage brokers will be hardest hit. Over time, fee levels are likely to decline. We believe that borrower fees could eventually disappear, with intermediaries funded through lender fees. Without a reset to their operating model, or a model that significantly enhances the role of digital capabilities, they are likely to see both diminishing share and diminishing profits.

Lenders will see greater product transparency and may face heightened competition. However, this should be offset by significant efficiency gains from digital solutions. In addition, with access to the right technology, banks could exploit their advantaged access to customer data (e.g. on current accounts) and disintermediate brokers by directly targeting potential mortgage customers with tailored offers. They could even set up their own online mortgage brokers that could act as an additional distribution channel.

We believe online advisers are well placed. However, they need to overcome several challenges including high customer acquisition costs, building knowledge of lender underwriting criteria and meeting regulatory requirements.
F. Individual protection

Key finding
Automated advice can play a key role in making the product more relevant in the digital age. In-the-moment advice and proactive marketing can better demonstrate the clear need for protection to customers. A smooth purchasing experience can make it easier for them to buy it. The hurdles will be obtaining the necessary customer data and winning customers’ trust.

The opportunity
In the UK there is a large market for individual protection. This type of product insures policyholders and their dependants from the adverse financial consequences of death, illness or disability. The main product lines are term assurance, critical illness, whole life and income protection. We estimate the protection profit pool is around £1 billion annually.

However there is a stubborn ‘protection gap’. Many consumers are reluctant to buy enough protection to match their needs. Swiss Re estimates this gap between the level of cover in place and that required to maintain the living standards of dependants is more than £2 trillion for the UK adult population.

The key barriers to wider consumer take-up are a lack of perceived need and, connected to this, perceived high cost. Only a fifth (22 per cent) of adults consider life insurance as ‘necessary’ and only ten per cent consider it ‘affordable’. This is despite half (49 per cent) of term assurance policyholders paying less than £20 per month.

In the UK there is a large market for individual protection. This type of product insures policyholders and their dependants from the adverse financial consequences of death, illness or disability.

Two issues have lowered sales. First, consumers incorrectly associate protection with payment protection insurance (PPI). This weighed down demand from the late 2000s due to accusations of PPI mis-selling. Second, in recent years banks and building societies have been scaling back their advisory services for mass market customers. This has led to fewer bank advisers, and in turn, fewer recommendations of protection.

We believe that automated advice can address two key challenges in the protection market: the lack of perceived need for cover at the root of the ‘protection gap’, and the expense attached to the advice process that has led some advisers to retreat.

Responding to life events. Automated advice can demonstrate the need for protection in a proactive way that could help close the ‘protection gap’. More than half (52 per cent) of adults are expecting a change in their personal circumstances over the next 12 months. These events will trigger a change in the need for protection. For instance, 24 per cent are expecting to change jobs and these moves will trigger a change in the need for replacement income in the event of long-term illness. These people could be targeted with timely communications explaining why they need protection, how their need is changing and what to do about it with a link to an automated advice portal. We would envisage this as being provided by life insurers in partnership with another organisation with access to a wider pool of customers, such as a bank or retailer.
Automated sales process. Automated advice tools can help encourage more advisers to recommend protection by giving them a quicker, light-touch sales channel. Two opportunities stand out. First, in the market for protection to cover a mortgage, application forms could be pre-populated using data captured from the mortgage application process. This would save valuable adviser time on the phone asking customers for basic information. Second, customers could be guided through the relatively simple steps in the advice process on a website before speaking with an adviser to complete the process, the so-called hybrid model. This would save cost and allow advisers to focus their time on the hardest parts of the process such as choosing a product. This represents a chance for advisers to reduce the cost of advice and, potentially, increase its quality.

Our survey suggests automated protection advice could be adopted by many people. Overall, almost half (45 per cent) of adults with children aged 18 and under would pay for automated advice to find life insurance. These people number about five million.

Almost half (45 per cent) of adults with children aged 18 and under would pay for automated advice to find life insurance.

What are the barriers?
The main challenge for an advice proposition that targets customers as their needs for protection change would be winning customers’ trust. There are examples from the retail industry where customers object to precisely targeted marketing because it feels somewhat intrusive. Nonetheless, we feel that this barrier is surmountable. Many more people recognise the benefit of having life insurance than have it. For example, 70 per cent of parents with children under 18 in their household agree life insurance is worth having at the right price but only 45 per cent hold a policy. To us, this suggests that customer inertia is a problem, i.e. some customers are put off buying life insurance and never get round to it. Some of these people would likely benefit from a nudge to take action.

Connected to the challenge of winning customers’ trust is the issue of how to collect, store, manage and use customer data securely, and firms need to ensure that they fully take into account current and future data protection regulations as they design their solutions. The new General Data Protection Regulation (GDPR), which will apply to both regulated advice and guidance and enter into force in 2018, will mandate organisational accountability, and will require firms to implement robust privacy governance and in general take a more proactive approach to privacy compliance. The GDPR introduces a new maximum monetary penalty of 4 per cent of annual global turnover that can be imposed in cases of serious non-compliance.
Where a firm targets its marketing communications based on the customer’s circumstances, this does not automatically mean the firm is providing regulated advice. However, if the firm highlights to the customer the personal circumstances which have led to them being contacted and suggests specific products which are relevant for them, this is likely to be considered by the FCA to be an implicit personal recommendation. Firms providing personal recommendations are subject to suitability requirements and are liable to pay redress and potentially regulatory fines if they have not taken reasonable steps to ensure the suitability of their advice. Therefore, they need to ensure that they collect all relevant information about a customer’s circumstances and can demonstrate suitability. In most cases, the customer information already held by the firm is unlikely to be sufficient for this. Providers could direct customers to a website where they are asked more questions about their circumstances, although this process may deter some customers from completing the purchase.

Implications for industry players
Life insurers which distribute their products through partnerships with banks and building societies are best placed to offer proactive automated advice. This is because banks and building societies have access to a wide pool of customers, including those who are uninsured. They also have data that would provide an insight into the life events that change the need for protection. We note that the largest protection providers sell through the bank channel. Proactive automated advice would, therefore, favour the large incumbents.

Advisers would be winners from a move to automate the initial steps in the advice process. This would reduce the amount of time spent on each case and lower costs. As in the mortgage broking market, start-ups may lead the way in developing hybrid (human plus digital) advice interfaces. The key to success is an easy-to-use interface with a seamless experience when a customer moves from using the website to speaking with an adviser. Start-ups have a track record of innovation built on smooth customer experience.

We believe that automated advice can address two key challenges in the protection market: the lack of perceived need for cover at the root of the ‘protection gap’, and the expense attached to the advice process that has led some advisers to retreat.
Next steps – key questions to consider

**Customer analysis**
- Which customer segments should you target?
- What methods of in-person testing (e.g. focus groups) are appropriate for you to understand customer engagement, behavioural biases and potential adoption of new technology?
- How can you design differentiated, engaging customer propositions, including across a broad range of customer needs?
- What potential channel conflicts will arise and what distribution models are appropriate?

**Regulation**
- Are the services you want to provide regulated or unregulated? If it is unclear, have you engaged with the FCA to discuss?
- If regulated, how will you comply with the relevant requirements (e.g. suitability)? Do you need a hybrid system (involving a human) for more complex cases?
- Are your risk and control frameworks fit for purpose to manage new and emerging risks presented by automated advice (e.g. design and oversight of algorithms and machine learning/AI applications)?

**Business model**
- Where is it feasible for you to maximise profit in the value chain e.g. advice, products?
- How do you acquire customers profitably?
- How much to charge (if anything), and how should you structure charges, e.g. fixed or as a percentage of assets? Consider regulatory restrictions if you want to provide regulated advice on investment products for free or below cost.
- How can you scale up your propositions?
- Should you give advice only on your own products or on the wider market?

**Technology**
- How can you make use of AI and machine learning, and for what?
- Will you build or buy technology infrastructure?
- How can you ensure cyber resilience and data security?
- Can you easily integrate the automated advice platform into existing IT infrastructure?
- How do you ensure linkages and consistency with other advice channels (e.g. human or hybrid approaches)?
- How much do you want to innovate vs. follow, and what does this mean for your technology choices?

**M&A**
- In which areas can start-ups and/or thought leaders complement your offering (e.g. technology)?
- How will you structure potential partner relationships: acquisitions, joint ventures, strategic stakes?

**Talent**
- What organisational cultural changes are needed to implement automated advice, e.g. customer vs product centricity, agility?
- Do you have any gaps in required skill sets, e.g. financial advice, technology, marketing, behavioural economics, risk and compliance?
- Do you need to look to non-traditional talent pools to acquire these?
Conclusion

Initial iterations of automated advice have centred on low cost wealth management. However, we believe that its key characteristics of affordability and convenience will be attractive to a wide range of consumers across several different types of financial services. We found evidence from our consumer survey of significant, if price-sensitive, latent consumer demand. The cost efficiency of automated advice, its objectivity and ability to maintain a clear audit trail are key positive attributes for providers. We believe that increased automation in the provision of advice on retirement products and mortgages is imminent, with a hybrid model involving some human interaction likely to dominate in these markets in the short to medium term.

“In 5-10 years we will probably not use the term ‘robo advice’ – digital will just be another channel. The provision of advice will be ‘omni-channel’, although will be underpinned by a consistent underlying engine.”

Deloitte interview with UK-based insurer, 2016

Firms providing automated advice will have to navigate low financial literacy and engagement, low fees, the risk of customers switching from higher to lower margin products, as well as regulatory risk and uncertainty. However, as explained in this paper, some of these challenges can be overcome through innovative solutions to make it easier for consumers to engage with their finances, cost efficiencies driven by economies of scale and tailoring services to particular consumer segments. From a regulatory perspective, firms must invest to establish governance and compliance controls that are fit to deal with the different type and scale of risks introduced by automated advice. The FCA plans to publish additional guidance which will likely help reduce regulatory uncertainty in relation to some services.

Incumbents are well placed both to shape and drive the pace of adoption in most advice situations as they have access to a large pool of existing clients. If they do not lead, others will. This means incumbents may risk becoming bystanders as the industry rapidly adopts new products and routes-to-market, as has happened in many other industries, ranging from retail to telecoms.
Endnotes

1. YouGov plc conducted an online survey of 2,046 GB adults on 23-24 January 2017 for Deloitte. The figures have been weighted and are representative of all GB adults aged 18+.

2. The Financial Advice Market Review defined the advice gap as a situation in which consumers are unable to get advice and guidance on a need they have at a price they are willing to pay. Responses to the Call for Input indicated strongly that there is an advice gap, and that this is particularly significant in relation to pensions and savings and, to a lesser extent, protection. The Financial Advice Market Review Final Report, HMT and FCA, March 2016 https://www.fca.org.uk/publication/corporate/famr-final-report.pdf See also Bridging the advice gap Delivering investment products in a post-RDR world, Deloitte, 2012 https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/financial-services/deloitte-uk-fs-dr-bridging-the-advice-gap.pdf

3. For explanations of these terms, please see Figure 3.

4. For example, the FCA describes automated advice as ‘fully or partially automated online services and other models that use technology to deliver lower cost advice’. In contrast, descriptions by Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin), the Australian Securities and Investments Commission (ASIC) and the US Department of Labor exclude partly-automated models, talking about advice without any interaction with a human adviser. The exact services described can also differ. For example, while some regulators talk only about advice, the FCA’s description also includes discretionary investment management and BaFin’s description also includes automated ‘social trading’ (where the investment strategy of a successful trader is automatically replicated in the customer’s investment portfolio). Descriptions by international regulatory bodies, such as the International Organization of Securities Commissions (IOSCO) and the European Supervisory Authorities (ESAs), are broad, covering a range of fully- or partially-automated services. Advice Unit, FCA, June 2016, https://www.fca.org.uk/programmes/project-innovate-and-innovation-hub/advice-unit

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6. The Financial Advice Market Review defined the advice gap as a situation in which consumers are unable to get advice and guidance on a need they have at a price they are willing to pay. Responses to the Call for Input indicated strongly that there is an advice gap, and that this is particularly significant in relation to pensions and savings and, to a lesser extent, protection. The exact services described can also differ. For example, while some regulators talk only about advice, the FCA’s description also includes discretionary investment management and BaFin’s description also includes automated ‘social trading’ (where the investment strategy of a successful trader is automatically replicated in the customer’s investment portfolio). Descriptions by international regulatory bodies, such as the International Organization of Securities Commissions (IOSCO) and the European Supervisory Authorities (ESAs), are broad, covering a range of fully- or partially-automated services. Advice Unit, FCA, June 2016, https://www.fca.org.uk/programmes/project-innovate-and-innovation-hub/advice-unit

7. For explanations of these terms, please see Figure 3.

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22. The Promise of FinTech – Something New Under the Sun? Mark Carney, Bank of England, January 2017, http://www.bankofengland.co.uk/publications/Pages/speeches/2017/956.aspx. If the use of automated platforms became widespread, and the underpinning algorithms used very similar logic, there may be a risk that a significant number of customers may end up transacting in the same ways in relation to certain financial products. The ESAs Joint Committee has also highlighted this ‘herding risk’ and, like Mr Carney, believes it could lead to increased volatility in the market or increase pro-cyclicality, which in turn would result in customer detriment in the event of a market ‘shock’ event.


26. A chatbot is a computer program designed to simulate conversation with human users, especially over the internet.


28. See Section 1 for more detail on the regulatory definition of advice.


31. Private client wealth managers shun moderately rich, Financial Times, June 2015 https://www.ft.com/content/a5c19f24-15c4-11e5-be54-00144feabdc0.


37. The Deloitte UK Insight team developed a model to estimate the profitability of stand-alone robo advisers at different levels of AuM under three fee scenarios. This included assumptions on administration, compensation and marketing costs. The underlying data was obtained from publicly available sources including the reports and disclosures made by a range of UK and US asset and wealth managers as well as our own proprietary data sources.

38. Deloitte analysis based on provider Securities and Exchange Commission filings.
39. The Deloitte UK Insurance Insight team developed a model to estimate UK life insurance profits by product 2015-25. Profits were derived from estimated assets and profit margins combined with growth assumptions. The underlying data was obtained from public and private sources including annual reports, regulatory returns and analyst reports. For more information see UK life insurance futures, Deloitte, January 2016, https://www2.deloitte.com/uk/en/pages/financial-services/articles/uk-life-insurance-futures.html


44. Re: protection savings advice for £100 a year, Wealth Wizards, https://www.wealthwizards.com/blog/receiving-pension-savings-advice-for-100-a-year

45. The facts and figures behind the value of advice, Unbiased, https://www.unbiased.co.uk/value-of-advice/report-stats


49. The FCA found that in Q3 2015 20% of consumers told their providers they had used Pension Wise. Providers are only required to record when a consumer said they used Pension Wise when consumers are not using a regulated adviser. Data Bulletin Supplement Retirement income market data, FCA, April 2016, https://www.fca.org.uk/publication/data/data%20bulletin%20supplement%20april%202016.pdf


58. This includes transferring from a DB pension scheme into a DC scheme, or giving up a DC pension scheme with a guaranteed annuity rate.


60. See MCB04 5 in the FCA Handbook, https://www.fca.org.uk/handbook/FCB04/index.html. The guidance states that: ‘For the majority of customers, firms are required to provide regulated advice to customers if there is any spoken or other interactive dialogue between the firm and the customer during the sale.

61. • For certain vulnerable customers, sales must always be advised.

62. • In cases where a customer is a high net worth or professional customer, or where the loan is solely for a business purpose, the customer can opt not to receive advice even if there is a spoken or interactive dialogue between the firm and the customer during the sale.


68. According to data from the Association of British Insurers, 2014 gross written premiums totalled £8,920 million across pure life insurance, income protection, standalone critical illness, long-term care and other protection business. The Deloitte UK Insurance Insight team developed a model to estimate UK life insurance profits by product 2015-25. Profits were derived from estimated assets and profit margins combined with growth assumptions. The underlying data was obtained from public and private sources including annual reports, regulatory returns and analyst reports. For more information see UK life insurance futures, Deloitte, January 2016, https://www2.deloitte.com/uk/en/pages/financial-services/articles/uk-life-insurance-futures.html


70. Term Assurance, UK, June 2015, Mintel, June 2015

71. Note: the premium figure is based on consumer research not industry premium data

72. Term Assurance, UK, June 2015, Mintel, June 2015

73. Term Assurance, UK, June 2015, Mintel, June 2015


75. This scenario is similar to an example the FCA gives in its finalised guidance on the definition of retail investment advice. This guidance does not apply to protection products without an investment element. However, the definition of a personal recommendation in the FCA Handbook is the same for protection products as for investment products, so similar principles are likely to apply. FG15/1 Finalised guidance on retail investment advice, FCA, January 2015, https://www.fca.org.uk/publication/finalised-guidance/fg15-01.pdf

76. ICOBS 5.3 of the FCA Handbook sets out rules for advice on protection products. The suitability rules are not as stringent as for investment products, but a firm must take reasonable care to ensure the suitability of its advice for any customer who is entitled to rely upon its judgment.
Contacts

**Benjamin Lam**  
Partner - Luxembourg Investment Management Leader  
Deloitte Luxembourg  
+352 45145 2429  
blam@deloitte.lu

**Patrick Laurent**  
Partner - Technology Leader  
Deloitte Luxembourg  
+352 45145 4170  
palaurent@deloitte.lu

**François Kim Hugé**  
Partner - Distribution Technology  
Deloitte Luxembourg  
+352 45145 2483  
fkhuge@deloitte.lu

**Simon Ramos**  
Partner - Investment Management Consulting Leader  
Deloitte Luxembourg  
+352 45145 2702  
siramos@deloitte.lu

**Lou Kiesch**  
Partner - Regulatory Consulting Leader  
Deloitte Luxembourg  
+352 45145 2456  
lkiesch@deloitte.lu

Authors

**Rahul Sharma**  
Director  
Financial Services Insight  
+44 20 7007 5557  
rahulsharma@deloitte.co.uk

**Joy Kershaw**  
Manager  
EMEA Centre for Regulatory Strategy  
+44 20 7303 6575  
jkershaw@deloitte.co.uk

**Peter Evans**  
Manager  
Financial Services Insight  
+44 20 7303 0010  
peeveans@deloitte.co.uk

**Rosalind Fergusson**  
Senior Manager  
EMEA Centre for Regulatory Strategy  
+44 20 7303 7997  
rfergusson@deloitte.co.uk

**Valeria Gallo**  
Manager  
EMEA Centre for Regulatory Strategy  
+44 20 7303 6745  
vgallo@deloitte.co.uk
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