ROBO-ADVICE FOR PENSIONS

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Foreword

The accessibility of appropriate and suitable financial advice has become a topical issue alongside the increasing prevalence of defined contribution pensions for which individuals need to manage their own investments. Riding the wave of technological innovation in finance, the robo-advice model has emerged as one potential solution to increase the accessibility and affordability of getting help to invest savings for retirement. These models are challenging traditional distribution channels, and are rapidly gaining market share in terms of assets under management.

This report provides an overview of the types of robo-advisors that are now available and discusses the potential benefits, risks and challenges of such platforms. It draws on insights from a roundtable held at the annual joint meeting of the Working Party on Private Pensions and the International Organisation of Pension Supervisors in June 2017 that brought together both regulators and industry participants to discuss the benefits, risks and challenges that the emergence of this business model presents. The report contributes to the OECD Going Digital project which provides policy makers with tools to help societies prosper in an increasingly data-driven and digital world. For more information, visit www.oecd.org/going-digital.

This report has been prepared by Jessica Mosher under the supervision Pablo Antolin, Head of the Private Pension Unit in the OECD Directorate for Financial and Enterprise Affairs. It benefits from comments from Delegates to the Working Party on Private Pensions. The OECD would like to thank the participants of the Roundtable who provided the valuable insights that are reflected in this report.

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Introduction

This report discusses the robo-advice platforms that are rapidly emerging as an alternative to traditional financial advice and that are increasingly available for investing pension assets. These platforms automate much of the investment process, suggesting particular investments based on information provided by the consumer.

The emergence of robo-advice platforms has been driven by a combination of regulatory, market and technological trends. Regulation of financial advisors has been moving towards increased transparency for consumers with respect to what they are paying for financial advice and the potential conflicts of interest that their advisor may face. This has been achieved through the requirement of simplified and comprehensive disclosure requirements as well as limits on opaque remuneration structures that present conflicts of interest (OECD, 2016).

These developments have had an impact on both the supply and demand for financial advice for retirement, particularly for low to moderate wealth consumers. On one hand, the limits on opaque remuneration structures can result in an increase in the use of more transparent structures such as fees based on a percentage of assets under management, which reduces the profitability of lower wealth clients and thereby the incentives for the advisors to serve these clients. On the other hand, the increased transparency has made consumers more aware of the cost of advice, and many are simply not willing or able to pay the high fees. This has directly impacted the advice gap, reducing the availability and the perceived affordability of financial advice.

These trends have created an opportunity for low-cost technology-driven business models offering investment advice services to enter the market. Robo-advisors, a term coined to refer to digital platforms which offer automated portfolio management services, have multiplied exponentially in recent years, with assets under management expected to reach USD 1 trillion by 2020 (BI Intelligence, 2017). Their business models rely heavily on automation and algorithms, allowing them to offer services at significantly lower costs compared to traditional investment services due to gains in efficiency. Many of the early movers in this market were independent. Established players in the investment advice market are also beginning to offer their own proprietary robo-advice services as a lower cost alternative to their traditional advice channels in order to be able to compete in this market.

While all robo-advisors generally emphasise their lower cost services and transparent fee structures, they can differ widely in their individual value propositions. The majority target individual retail investors, though an increasing number are also offering services for institutional investors such as pension funds or even to financial advisors themselves as a means to increase the efficiency of their services. Robo-advisors also differ in terms of their investment approach and advice services offered. The low-cost feature of robo-advice has been its main draw, but these types of platforms also offer additional benefits for consumers such as increased accessibility and objectivity. Nevertheless, this innovation is not without risks. Regulators will need to ensure that the appropriate framework is in place to ensure adequate consumer protection for the users of these platforms and to mitigate the potential investment and other risks that these platforms present.

The key findings of this report are:

- Robo-advice platforms have the potential to increase accessibility of investing to a broader market and to do so relatively more cheaply than through the traditional channels.
- Robo-advice platforms have the potential to deliver financial advice that is objective, consistent and transparent.
- However, the increased level of automation may require different approaches to ensure that the users have a sufficient level of understanding of the investments they are making.
- Policy makers will need to ensure that existing legislation applies to robo-advisors with respect to the applicability of duty of care requirements, avoidance of conflicts of interest, transparency of disclosure and access to redress in the case of an unfair outcome for the consumer.
- Regulators and supervisors will need to have processes in place to ensure that the algorithms that these platforms use are accurate and robust.

The structure of the report is as follows:

Section I describes the main features of robo-advice platforms.

Section II highlights the benefits that these platforms can present to consumers.

Section III discusses potential risks that these platforms could present.

Section IV addresses additional challenges that policy makers may face with the increasing prevalence of robo-advisors.

Section V concludes.

Section I: The value proposition of robo-advisors

The main value proposition of robo-advisors for retail clients is to make investing more affordable and accessible by relying on user-friendly digital platforms, algorithms and primarily low-cost passive investments. Those targeting mass retail consumers and younger generations often have low initial investment requirements to encourage new investors to begin investing. There are also a few robo-advisors that target more affluent investors and therefore require a higher minimum investment, and often also include some level of access to a human advisor.

Robo-advisors are also increasingly offering their services to institutional investors, particularly for pension providers. These platforms can allow pension providers to reduce the costs for their members and more easily manage their investment risk profile.

Still other robo-advisors target financial advisors as a way to improve the advice services they offer to their clients and remain competitive given the increasing prevalence of retail robo-advisors. These services propose to reduce the time the advisors spend on monitoring the portfolio and meeting regulatory requirements, and to improve the investment interface for their clients.

While robo-advisors all tend to offer a lower-cost alternative to existing investment advice solutions, they differ in their approach to providing investment recommendations and portfolio management. These differences can relate to the types of investment accounts offered, the funds which are available to invest in, the algorithm to generate the recommended investment, the additional services offered and finally how they are compensated for their services.

Type of account

Robo-advisors can allow their retail clients to open various types of accounts on their platforms. The standard type of account is a simple brokerage account which allows the client to invest in the securities market. However, tax-sheltered accounts, such as those used for retirement savings, can also be offered subject to meeting the relevant regulatory requirements. In the United Kingdom, for example, many robo-advisors offer Individual Savings Accounts (ISAs) for which the capital gains are not taxable, and some also offer investment for personal pensions. In France, life insurance, which offers reduced taxation on capital gains, is commonly offered by robo-advisors. In the United States, robo-advisors offer Individual Retirement Accounts (IRAs) which either defer tax to retirement or allow capital gains to be tax-free at retirement. For the moment, the focus of most of these services for pensions is on the accumulation phase, as automated services for the decumulation phase are much more complex.

Robo-advisors also offer services for institutions sponsoring pension plans. Betterment, for example, offers a service directly targeting employer-sponsored 401(k) retirement savings plans in the United States, and Decimal offers a wrapper for superannuation funds in Australia.

Investment products offered

Most robo-advisors focus on offering low-cost passive investment. The most common of these are Exchange Traded Funds (ETFs), favoured for their low cost, high liquidity and high diversification potential. ETFs behave like index funds, in that they are designed to track a basket of underlying assets. They are regularly traded on exchanges, and can be purchased in small amounts making them convenient for individual investors.

Robo-advisors typically use a set of criteria to select the ETFs they make available on their platform based on the desired profile of investment options. These criteria can include cost, liquidity, tracking performance, spread, sector, risk level and volume, among others.

While many robo-advisors offer ETFs exclusively, some robo-advisors also offer other options, such as direct investment in indices. Other robo-advisors may not subscribe fully to a passive investment strategy, and may offer actively managed options such as mutual funds.

The provider of the product may also be a consideration in product offer when the robo-advisor is not fully independent. Some robo-advisors have partnered with specific product providers, and others act as proprietary distribution channels of large asset managers whose products would be favoured for selection.

Investment recommendation

The type of recommendation provided by robo-advisors varies in the extent to which it is tailored to the situation of a specific individual. At the very least, the recommendation will take into consideration the investment goal and the time horizon of the investment in order to define the risk level of the recommended portfolio. If the goal is retirement savings for someone under the age of 40, for example, the initial recommendation would include a higher proportion of equities given the long time horizon. A more thorough assessment of an individual's risk tolerance is also often performed before making a recommendation. This assessment usually takes the form of a questionnaire and many

rely on insights from behavioural economics to more accurately assess the individual's willingness and ability to take investment risk.

While most robo-advisors currently only take into consideration the individual's goals for the specific investment in question, some platforms offer recommendations based on a more comprehensive view of the individual's particular financial situation. For example, such recommendations may also take into consideration other assets and investments, spousal income and tax implications.

Based on these inputs, algorithms will generate a recommended asset allocation based on commonly accepted financial theories such as mean-variance optimisation, which aims to maximise return for a given level of risk. While the individual usually does not have much of a choice in which specific funds are invested in, they may still be able to adjust the risk level of their portfolio, for example by increasing the proportion of equities. Algorithms can then automatically continue optimising the portfolio on a regular basis. While this process can be fully automated, some robo-advisors include a certain level of manual management of assets by investment managers which can take into account dynamic considerations such as current events. Robo-advisors targeting non-retail clients may offer more flexibility in how the portfolio is determined. Decimal, for example, allows the institutional client to select the algorithm applied.

Hybrid robo-advisors offer the possibility of consulting with a human advisor in addition to automated services, though usually in a limited manner. For example, this component could be reserved for those with sufficiently high balances, or the length or frequency of the consultations could be limited. These consultations are usually offered via telephone or internet, but Yellowadvice is an example of a platform which also provides this service through physical branches if the client prefers to discuss in person.

Platforms which are the most automated naturally tend to offer lower fees, while those offering higher levels of human involvement and/or interaction also charge more for their services. Jurisdictions vary with respect to the type of business model which is most prevalent. Platforms in the United States, for example, tend to offer higher levels of automation, while those in continental Europe tend to maintain relatively high levels of human interaction with their clients.

While the types of robo-advisors discussed here provide an explicit recommended investment strategy, the term 'robo-advisor' is also commonly applied to a wider range of digital trading platforms which may not provide an investment recommendation. Box 1 provides a brief overview of other types of automated trading platforms which also aim to increase the accessibility and affordability of investing through user-friendly platforms which have low and transparent fees, but which do not make a specific recommendation.

Box 1. Other 'robo' trading platforms

Online platforms which facilitate investing in securities at a low cost are increasing in prevalence along with robo-advisors. While these platforms are more self-directed and do not provide specific investment recommendations, they can incorporate a certain level of automation (e.g. rebalancing or tax optimisation) and a variety of pre-packaged investment strategies that individuals can choose from.

One type of platform offers the opportunity for individuals to invest in pre-defined strategies which can be purchased as-is or can be adjusted by changing the exposure of each of the underlying securities. Folio, for example, offers target-date funds which reduce investment risk as the target date approaches, and offers conservative, moderate and aggressive risk options. Other portfolio options offered include those based on investment strategy, geography, or sector. Motif offers a similar platform, including professionally built portfolios based on certain income strategies, values, even global opportunities, among others.

Online investment platforms have also facilitated the phenomenon of social trading, where investors can copy the strategies of others or be copied themselves and be compensated. Motif, for example, allows individuals to also construct their own portfolios in which other people can then invest. eToro offers an algorithm that automatically copies the investments of selected traders.

Other services offered

Beyond the initial portfolio recommendation, robo-advisors can offer numerous additional automated services for their clients. The most common are automatic rebalancing of investment to maintain the desired level of risk and automatic reinvestment of dividends. Tax efficient investment is also commonly offered for taxable accounts, namely using tax-loss harvesting algorithms which sell securities generating losses to offset capital gains for tax reporting purposes. This can improve total net returns for the investor.

The robo-advisor may also provide suggestions for the investor that are not automatically executed. These could be suggestions to buy or sell, or simply a suggestion to stay put during a period of market turmoil, providing some of the hand-holding that human advisors claim to provide to prevent their clients from panic selling following a market downturn. Indeed such communications can be quite effective; advize reports that 90% of clients follow its recommendations within 15 days (Finance Innovation and Cappuis Holder & Co., 2016). Some services also suggest actions to meet specific goals on an ongoing basis, for example additional deposits or suggestions on how much income to withdraw from a pension. Active Asset Allocation, for example, provides proposals for pension funds on how to best reach their funding objectives or optimise drawdown.

Several platforms offer self-directed tools that the individual can use to help them plan for their financial goals, particularly for retirement. Such tools can recommend how much an individual needs to save to maintain their desired standard of living, taking into account factors such as spousal income, desired location and tax implications. Others can help individuals decide how to draw down their pension savings. Evalue, for example,

has created a pensions freedom planner in light of the removal of the requirement to purchase an annuity in the United Kingdom, helping individuals to decide what to do with their assets at retirement. Some platforms also promote financial education, such as Yellowadvice, which provides easy-to-read articles on financial news and incorporates gamification on its website to improve investment knowledge. WealthKernel stresses the importance of educating clients, as if they understand the risk they face, they will stay invested longer and ultimately be more profitable clients in the long term.

Services can also be provided to facilitate the fulfilment of regulatory requirements for institutional investors or financial advisors. For example, suitability reports can be automatically generated in compliance with regulatory requirements. Regulatory alerts can also be provided to help advisors stay up-to-date with any changes.

Pricing structures

As one of the main benefits of robo-advisors is their ability to offer investment services at a lower cost, they tend to be upfront and transparent about the fees that will be charged to consumers. Generally, the platform charges a management fee as a percentage of assets under management. The level of this fee varies widely from one platform to the next, however, and also depends on the additional services offered. The high end of the range charges around 1%, but often management charges are significantly lower than this. The management cost can also be defined in terms of a flat fee, but this is less common particularly for investments above a certain minimum threshold.

On top of this management fee are the expense fees of the underlying funds which are invested in. For robo-advisors which concentrate on offering ETFs these fees are generally quite low, coming in at under 0.2-0.3% on average. Fees for other investment offerings, however, may be higher.

The services that robo-advisors offer to their clients are usually included in the management fee. However some business models offering ultra-low management fees may generate their revenues from charging for complementary services. WiseBanyan, for example, charges 0.25% for tax-loss harvesting which intends to increase total net returns on investment by reducing the taxes owed.

Despite the increased transparency in costs, the potential for conflicts of interest remains. Proprietary platforms face the conflicts of offering their own funds for investment. Some services also accept retrocessions and rebates from third parties. Therefore although the cost that the consumer pays upfront may be transparent, there may still be hidden costs with respect to the criteria used for the selection of investments available on the platform.

Section II: The benefits of robo-advice

The increased prevalence of robo-advisors has the potential to greatly increase both the affordability and accessibility of financial advice, particularly for mass affluent clients. The use of digital platforms and algorithms can reduce costs and improve efficiency, while user-friendly interfaces can facilitate investing and make the process more transparent and accessible. The use of algorithms can also increase the objectivity of financial advice, overcoming the challenge of human and emotional bias in traditional channels. Furthermore, algorithms make the logic and rationale of the financial advice transparent, facilitating the audit and supervision of such platforms.

Increased affordability and accessibility

First, robo-advisors can reduce the cost of financial advice in terms of direct fees paid by the client. Robo-advisors can automate many of the time-consuming activities of financial advisors such as the monitoring and rebalancing of the portfolio, reducing the need for costly human intervention. Indeed, algorithms can perform some portfolio management tasks such as rebalancing and tax-loss harvesting much more efficiently and effectively than a human advisor. Furthermore, the reliance on passive instruments reduces the cost of investment compared to actively managed funds.

Given the online nature of these platforms, robo-advisors can also reduce the search costs and the time individuals spend to make their investment decision and monitor their investments. The time it takes to make a recommendation can also be significantly reduced. For the fully automated platforms, clients may spend only around 15 minutes filling out the questionnaire about their goals and risk tolerance. Once invested, consumers have the ability to access their account and see their investments on demand whenever is convenient for them.

These platforms have the potential to have a significant positive impact on financial inclusion. The user interfaces of robo-advisor platforms are typically designed to be user-friendly, making them easy to use and understand. This increases their accessibility to a much wider audience, even those with lower levels of financial literacy. Clients are prompted with questions and proposed recommendations in simple and concise language, and these platforms often make linking to other accounts straightforward.

Furthermore, digital platforms offer flexibility of access that investors could not previously have. People can access their portfolios when it is most convenient for them, such as in the evenings or on weekends. They can take the time to look up terms or concepts that they do not understand without embarrassment or feeling pressured.

The benefits of the affordability and accessibility of robo-advice furthermore have the potential to increase the proportion of individuals investing, particularly in stock markets, which could help to address the problem of the inadequacy of pension savings by allocating more savings to investments with higher expected returns. One study with a German bank showed that sending customers an invitation to use their robo-advice service significantly increased client participation in the stock market (Scheurle, 2016). As an invitation to receive personal advice did not have the same observed effects, the author attributed this participation to the reduced perception of the cost of participating, both in terms of time and potential advisor fees.

Increased objectivity, consistency and transparency

The use of algorithms allows investment recommendations to be based on financial techniques and theory free from the behavioural bias of an advisor, resulting in objective recommendations for the client. This is a key benefit of robo-advice, as advisor bias can significantly influence the investment recommendations they make to their clients, though some bias may still remain in the selection of the algorithm itself. Conflicts of interest, particularly those relating to the compensation received from advisors' recommendations, has been shown to result in recommendations that are not in the client's best interest and that result in inferior investment performance.

The use of algorithms will also result in consistent recommendations. The standardised profiling of clients to assess their goals and risk tolerance will be free from subjective or emotional judgements of the financial advisor, resulting in consistent recommendations

for clients with a given profile. Critics of this type of profiling cite the lack of ability to check the accuracy of the responses or the ability to follow up if responses are not consistent. However, such profiling techniques can also include consistency checks, and should define how any inconsistencies are treated, and some platforms such as Easyvest still follow up with the client with a human advisor to address any anomalies.

Finally the use of algorithms increases the transparency of the process followed and logic used to make the recommendation. Unlike advice from a human, the reasons why a specific recommendation is made are unambiguous, as the recommendation simply follows the logic underlying the algorithm. This facilitates supervision to ensure that the advice is compliant with regulation and that the necessary due diligence was performed and duty of care standards respected.

Section III: The challenges and risks of robo-advice

The potential benefits of robo-advice in helping individuals reach their retirement savings goals are clear, but policy makers must also be aware of the potential risks from these platforms and make sure measures are in place to mitigate these risks. Regulators need to ensure that existing regulation for financial advice is appropriately applied to robo-advisors, particularly with respect to how the recommendations made by these platforms fit within the definitions of financial advice, how potential conflicts of interest should be addressed and how the robustness and appropriateness of algorithms is assessed. Ensuring that consumers continue to pay attention to their investment is also likely to be a challenge, as an automated process where no large decisions are required by the consumer may result in consumer disengagement from the investment process even when financial circumstances may change. Finally, mechanisms need to be in place to protect consumer's assets and mitigate potential systemic risk from these platforms.

Definition and suitability of financial advice

A key challenge for the regulation of robo-advice platforms is determining to what extent they actually provide financial advice and how the existing regulation of financial advice, particularly relating to duty of care standards, should apply. Regulation often stipulates that a recommendation is considered advice only when it is personalised, i.e. is tailored to an individual's specific circumstances, rather than a general recommendation (OECD, 2016). Which personal details need to be taken into account for advice to be considered personalised therefore need to be clearly defined. It needs to be determined, for example, whether a recommendation based on a goal of retirement in 20 years' time is simply a general recommendation or one which is personalised.

Where regulation determines that the recommended advice is personalised and/or in scope of the regulation, it must also clarify the scope of the advice. Regulation often distinguishes between simplified advice, which is provided for a matter of limited scope, and comprehensive advice which considers the entire financial situation of the individual (OECD, 2016). Many robo-advisors provide recommendations which relate only to the specific account and investment goal. However several robo-advisors are now also taking other assets or spousal income into account. The definition between the two types of advice will need to be clear in order to determine the level of due diligence required, as established by the existing regulation. Policy makers will also need to consider whether the existing regulation is sufficient for these platforms and business models.

Ultimately, whether or not the client perceives the investment recommendation as being personalised for them should determine the applicability of regulation. Numerous platforms have tried to avoid regulatory requirements by including a disclaimer that the recommendation they provide is a general recommendation and should not be interpreted as personalised. Regulators will need to ensure that suitability requirements still apply to the recommendation provided if it is likely that the client would feel that it has been tailored according to their characteristics.

The effectiveness of the questions asked to determine the suitability of a recommendation for an individual should also be considered. Robo-advisors vary with respect to the number and types of questions asked to determine an individual's needs and risk profile. Among the platforms participating in the roundtable, the number of questions used to profile clients ranged between five and 22. Yomoni, which was at the high end of this range, asks not only how much money individuals are willing to lose in a market downturn but also how much they have ever lost in order to determine a client's risk tolerance. All participants recognised the importance of getting the profiling right and providing a suitable recommendation to their client, however. If clients are invested in line with their risk tolerance and needs, they will be more likely to stay invested for longer and less likely to panic sell in a market downturn. Therefore regulators and supervisors should emphasise this point and ensure that the interests of the provider and the consumers remain aligned.

Conflicts of interest

While the use of algorithms can remove human bias in the recommended portfolio, there may still be bias with respect to the funds chosen to be available on the platform, as this choice in particular could potentially be influenced by conflicts of interest. Platforms that are not independent may have incentives to recommend their own products and funds more frequently, which could result in higher costs for the consumer. There are also robo-advisors that accept retrocessions and other payments from third parties relating to the funds or their trading. As such, even if the consumers are not paying these fees directly, there may be hidden costs in terms of the fund options which are available to them and the process followed to execute the trade. These costs and conflicts are not always made clear to the consumer.

Regulators therefore need to ensure that the relevant regulation requiring the avoidance, mitigation or disclosure of conflicts of interest is applied to robo-advisors and consider whether adaptation of the current regulation is necessary to ensure that issues specific to robo-advisors are in scope. Avoidance and mitigation of conflicts of interest could be enforced, for example, through a required conflicts of interest policy, which is already mandatory in several jurisdictions for entities providing financial advice. Applied to robo-advisors, such policies could require details of transparent and objective processes and criteria used to select funds, and define the frequency that funds are reviewed to ensure that they continue to fulfil the criteria. Regulators also need to ensure that full disclosure requirements are being met, particularly with respect to how these services are being compensated and earning revenue.

Robo-advisors should not be held to lower standards than their equivalent human counterparts. For example, the robo-advisor quirion is registered in Germany as a fee-remunerated investment advisor, and must therefore pass all commissions and kickbacks received to their clients, in line with regulatory requirements for all investment advisors

registered as independent. By contrast, Vamoo (also operating in Germany) did not register, as it claims that it is simply a placement agency and not an advisor.

Robustness and transparency of algorithms

Given the high reliance on algorithms for providing investment recommendations and managing portfolios, it is vital that these algorithms are accurate and robust. Procedures need to be in place to ensure proper oversight of the development of the algorithms, thorough auditing, and testing for resilience in extreme scenarios as well as mechanisms to allow consumer access to redress in the event that the algorithms fail.

The individuals developing the algorithms must have a sufficient understanding of the financial theory underlying the algorithm and its output. Some jurisdictions are considering aligning the qualification standards of those who develop the algorithms with those of financial advisors to help ensure that this is the case. The process to set and update assumptions used for inputs into the model also needs to be clearly laid out to make sure that the models can adapt to changing financial environments, and checks need to be in place to ensure that the underlying model continues to be relevant.

Existing regulation for financial advice, however, may not address the need for auditing and stress testing of financial advice provided. Regulators will need to make sure that these aspects are addressed to ensure that the algorithms are robust and will not cause problems for consumers or the financial markets particularly in extreme scenarios, such as the flash crash of 2010, where markets fell dramatically before rapidly rebounding. Even in normal markets, however, coding errors could result in large-scale systematic mis-selling to consumers.

In addition, robo-advisors should be required to be affiliated with the relevant dispute resolution scheme in the jurisdiction to ensure consumer access to redress as a result of any flaws in the algorithm or investment process.

Consumer disengagement

Another risk in automating the investment process is that consumers may not take the time to understand how it works or to consider the assets underlying the investment, though the reduced need to do so is arguably one of the benefits of robo-advice. Reduced engagement is even more probable where mass market consumers are targeted, who have lower levels of wealth and are also likely to have lower levels of financial knowledge. Further, given the automated nature of robo-advice, individuals may simply disengage from monitoring their investment, which could lead, for example, to not updating their information and needs following a change in circumstances.

One potential way to address this concern is to require that the algorithms and investments are appropriate for their targeted consumers. For example, high risk investments such as leveraged instruments are not likely to be appropriate for consumers with lower levels of wealth and financial knowledge, and should not be included in automated platforms targeting the mass market. Such requirements to ensure that products are appropriate for the market that they target are already included in the insurance regulation in several jurisdictions to ensure that the products being developed are likely to be suitable for the consumers who purchase them.

Regular communication with consumers could also aid in maintaining a certain level of engagement. For example, emails or texts could be sent to consumers to inform them of

their progress towards their financial goals and/or to remind them to update their information if their situation has changed.

Required disclosures should also be presented in a simple and comprehensible manner so that consumers will read and understand them. Simplified and standardised disclosures are already becoming a mainstream requirement in many jurisdictions for financial advice.

Consumer engagement is not only an issue for retail clients. Regulators will need to ensure that businesses using robo-advice services to manage the investments that they offer to their own clients understand how these platforms operate and make their assessment of suitable recommendations. Since these businesses are the contact point for their consumers, they will need to be held responsible for inappropriate investment recommendations and should not be allowed to fully pass this responsibility to the third party provider.

Sustainability of business models

While the use of algorithms and automated processes allows robo-advisors to charge lower management fees than traditional channels, some critics are concerned that the fees which are charged in practice may be too low to sustain their business models. Reasons for this include high cost of customer acquisition, low average account balances and short average holding periods (SCM Direct, 2016).

Client acquisition seems to be a major challenge for these types of platforms. Many rely at least partially on referrals by existing clients to expand their consumer base. There is also some evidence that the market is becoming overcrowded, contributing to the lower-than-expected levels of consumers investing with a given platform (BI Intelligence, 2017). Scaling up for platforms that have started by targeting a niche market may prove to be challenging.

Given these potential concerns and the fact that many of these platforms are start-ups for which the business model has not been tried and tested over the long run, regulators need to ensure that mechanisms are in place to protect the assets that consumers invest with these platforms in the event that these platforms fail. Robo-advisors should be required to be affiliated with any relevant securities insurance fund that other brokers or asset managers are required to join.

Systemic risk and pro-cyclicality

A final concern is the potential for robo-advisors to lead to pro-cyclicality in the market and affect the stability of the financial system. This could be a concern where the algorithms used by robo-advisors recommend very similar investment strategies leading to herd behaviour, and where the robo-advice market achieves a significant volume to move markets with its trading activity.

This concern is partially mitigated by the fact that differences do exist in the assumptions behind the inputs into the algorithms used to generate the recommended investment portfolio for clients. This is true even where the investment propositions are very similar, for example focusing on the offer of low-cost ETFs through mean-variance optimisation. First, robo-advisors use different criteria to select the funds available on their platform. Second, the granularity of asset classes across which the portfolio is diversified can differ, which impacts the overall balance of the recommended portfolio across funds. Third, even where an equivalent financial theory is employed, the derivation of the underlying

assumptions (e.g. mean return and variance) can differ based on the methodology used. Finally, the optimised portfolio will differ depending on the individual's inputs regarding their investment objectives, risk tolerance, and other personal characteristics.

With respect to pro-cyclical selling in market downturns, these types of platforms do not seem to necessarily present more risk than traditional advisory channels. Participants who had experience in both anecdotally noted that they even observed more pro-cyclicality with traditional channels. However, mechanisms do need to be in place to prevent pro-cyclical investing, namely through an accurate assessment of risk tolerance and effective communications to reassure clients in volatile markets.

The volume of trading activity by robo-advisors relative to the markets they trade in should be monitored by supervisors. The size and liquidity of a fund can be criteria in its selection in order to prevent regular trading activity of the robo-advisor from having an influence on the price. For the moment, the volume of assets invested by robo-advisors does not pose a concern, but these volumes are expected to grow rapidly and should be followed closely to prevent increased pro-cyclicality and market volatility.

Section IV: Additional challenges for policy makers

The digitalisation of the financial advice market is not new, and actually began over a decade ago as advisors started using digital and automated models to inform their own advice to their clients. Regulators and supervisors have therefore had a gradual introduction to the types of issues that robo-advice presents in its current form. Nevertheless, existing regulation may not always be adapted and ensuring its continued relevance remains a key challenge for policy makers going forward.

In many cases, new legislation may not be required, but regulators will need to assess how existing rules apply and help new businesses to understand the regulatory requirements that they must abide by. New businesses may not understand, for example, whether they are required to be licensed and which regulations will apply to them. Some roundtable participants noted, however, that many businesses want to be licensed and regulated, as this lends more credibility to their business and may help them gain consumer trust and confidence.

Existing legislation should also be examined to assess any regulatory barriers that exist for the robo-advice market to successfully develop in a way that is most beneficial for consumers. Regulatory requirements should not be an undue burden for small players to enter the market, and regulation should apply proportionality in its application, taking into account the size of the business and risks that it may present. Inconsistent regulatory requirements across sectors may also hinder the development of some types of models. In Europe, for example, banks and insurance companies are not held to the same disclosure standards. Cross-border regulations will also need to be addressed to take advantage of the portability that digital investment platforms can offer and to facilitate the international expansion of the platforms. Fragmented regulations, and in particular different tax regimes, present large challenges for cross-border transactions to become the norm.

Regulators and supervisors may also need to undergo a cultural shift in how they operate and enforce their rules. Going from supervising humans to auditing algorithms, for example, will require a different mind-set and skill-set. Compliance with regulatory processes will also need to be adapted to a digital world. For example, Know Your Customer requirements and contract signing will need to be able to be fulfilled digitally to maximise the benefits of increased accessibility that robo-advice platforms can offer.

Regulators will also need to be mindful of the challenges of likely future developments in the provision of robo-advice. While many of the platforms existing today focus on pension accumulation, pension decumulation will become an increasingly important issue. Regulators will need to consider the scope of products that these platforms are required to offer. Purchasing an annuity, for example, could be a better solution in some cases than gradually drawing down invested assets in retirement.

Another looming challenge is the development of platforms using artificial intelligence to provide investment recommendations. Such developments would make the underlying algorithms less transparent to supervisors and more difficult to determine the basis of the recommendation and whether or not it was suitable for the client. Policy makers should be forward-looking in how they approach regulation of the robo-advice market in order to be able to address these types of issues more easily when they arise.

Section V: Key Takeaways

Robo-advice platforms vary widely with respect to the level of automation and the value for money that they offer to their clients. One thing that virtually all have in common, however, is an aim to increase accessibility of investing to a broader market and to do so relatively more cheaply than the traditional existing channels.

These new channels present many of the same regulatory challenges as traditional financial advice from human advisors. Policy makers will need to ensure that existing legislation applies with respect to the applicability of duty of care requirements, avoidance of conflicts of interest, transparency of disclosure and access to redress in the case of an unfair outcome for the consumer.

Robo-advice platforms also present new challenges which will need to be addressed. Regulators and supervisors will need to have processes in place to ensure that the algorithms that these platforms use are accurate and robust. The increased level of automation may require different approaches to ensure that the users have a sufficient level of understanding of the investments they are making.

With risks appropriately managed, however, robo-advice platforms have the potential to greatly increase the accessibility of investing in the capital markets for pension savers, thereby helping individuals to accumulate more retirement savings.

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The accessibility of appropriate and suitable financial advice has become a topical issue alongside the increasing prevalence of defined contribution pensions for which individuals need to manage their own investments. Riding the wave of technological innovation in finance, the robo-advice model has emerged as one potential solution to increase the accessibility and affordability of getting help to invest savings for retirement. These models are challenging traditional distribution channels, and are rapidly gaining market share in terms of assets under management. This report provides an overview of the types of robo-advisors that are now available and discusses the potential benefits, risks and challenges of such platforms.

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