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Automated Investment Advice in the EU: The difficult balance between investor protection and the development of robo-advisors

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The use of technology to enhance the provision of financial services is increasing each day.[1] This phenomenon is commonly designated as FinTech, which can be defined as the application of technology to certain financial services and financial products in such a way as may result in the creation of new products or business models and have a direct or indirect impact on financial markets and financial entities.[2] One of the best examples of the rise of FinTech has been automated investment advice, also known as robo-advice, which entails a robot making recommendations to a client regarding the acquisition of financial products or the effective acquisition of financial products by a robot on behalf of a client. CS'

A. Robo-advice: definition, process and operation

Robo-advice involves the application of artificial intelligence – the science behind computer programmes performing certain tasks, as is the case of decision-making processes. In the specific case of robo-advice, the computer programme provides the investor with investment advice or portfolio management services with a reduced degree or with no human intervention.[3]

[1] R. Houben, *Financial consumers: beware of robo-advice (?!)*, (2020) 35(2) Journal of International Banking Law and Regulation, pp 55-66
[2] Financial Stability Board, *FinTech and market structure in financial services: Market developments and potential financial stability implications*, (2019) available here, accessed 26 November 2022
[3] Toronto Centre, Fintech, Regtech and Suptech: What they mean for Financial Supervision, (2017) Available here, accessed 26 November 2020

From the perspective of its operation, the robo-advisor will work based on an algorithm created by a programmer; it is important to note that the owner of the algorithm – which may not be the programmer – will also be the owner of the robot. Based on the algorithm, the robot will provide investment advisory services to its user. This services may include advice to purchase certain financial products (in which case the user will probably be the investor) or advice for the acquisition of products and the management of portfolios (in which case the user of the programme is usually an investment firm or a bank). The algorithm is the robo-advisor's essential tool and simply entails a formula that ranks financial products for the investor to select and, after a selection has been made by the robo-advisor, automatically matches the investor to a product.[4] Based on the algorithm, the robo-advisor will suggest or acquire on behalf of the investor certain financial products that are considered to be suitable for the investor taking into account the information provided by the latter in a questionnaire that the investor has completed. This questionnaire is used to grade the investor's risk profile and to classify the type of investor to set the types of financial products that can be acquired or suggested for acquisiton by the investor.

Different classifications of robo-advisors are generated according to the different levels of human intervention, the relationship between the user of the robo-advice programme and the roles performed by the robot.[5] For the purposes of this **CS'Insight**, only the different classifications of robo-advisors resulting from the level of independence between the owner and the user will be taken into account. There are the following four types of robo-advisors:

- **Robo-advisor tool**. This is the oldest type of robo-advice and is simply a tool used by a human advisor to analyse different portfolios and propose the acquisition of certain financial products – it is important to note that the user (i.e., the human advisor) will make the final decision regarding the products suggested by the robot;

- **Bank-integrated robo advisor**. A robo-advisor used internally by banks and other financial firms in their business models, which performs tasks such as the analysis and construction of the investor's profile, for example.

[4] T. Baker and B. Dellaert, *Regulating Robo-Advice across the Financial Services Industry*, (2018) 103 Iowa Law Review pp. 713-750 (n6)

[5] See Pablo Sanz Bayón and Luis Garvía Vega, *Automated Investment Advice: Legal Challenges and Regulatory Questions*, Banking & Financial Services Policy Report, Volume 37, Number 3, March 2018, pp. 1-11

- **Bank-independent robo-advisor**. This performs the same tasks as the bank-integrated robot, the difference being that it is not integrated within the banks' or financial firms' structures

- **Independent robo-advisor**. A robot which effectively performs the role of an individual advisor by supervising the creation of the investor's profile, the portfolios offered to the investor and that monitors the investments made

Of the different types of robo-advisors, independent robo-advisors represent a significant revolution, although they cannot be considered as something entirely new.[6]

Under the EU legislation, namely MiFID II, independent robo-advisors are the only type of robots allowed to provide automated investment advisory services. At the same time, robo-advisors of this kind are also representative of the more recent developments of robo-advisors. Therefore, and in order to fully understand how this recent form of robo-advisor should be regulated, it is important to analyse what the advantages they have for investors and the market, as well as the new issues that emerge from their use. The next section provides an analysis of the pros and cons of the use of independent robo-advisors. CS'

B. Pros and cons of robo-advice

Like any other innovative financial service or financial product, independent robo-advisors represent an improvement within the financial market and, at the same time, pose new challenges for market regulators due to the new issues that emerge from their use.

Advantages	Risks
Low fees and investment	Unsuitability risk
Financial inclusion	Systemic risk
Increased investor suitability	Algorithm risk
Avoidance of conflicts of interest	Cyber risk
	Lack of human intervention

[6] Andrea L Seidt, Noula Zaharis and Charles Jarrett, *Paying Attention to That Man behind the Curtain: State Securities Regulators' Early Conversations with Robo-Advisers*, (2019) 50 U Tol L Rev 501

As for the positive outcomes from robo-advice, it is commonly considered that there are four main benefits:

- **Low fees and investment**. Conversely to what happens with human advice, the fees charged to the investor and the minimum volume of investment are low;

- **Financial inclusion**. As a result of the low cost associated with robo-advice, more investors have access to services and financial products which, due to the associated costs, are not usually available to them;

- **Increased investor suitability**. Robo-advice may benefit the investor because it will be, theoretically, able to offer the products that, according to the algorithm, are most suitable for that investor.[7] Besides, the robot is not subject to the behavioural biases and cognition limitations of human advisors and, therefore, its advisory services will not be restricted by those traditional human traits which, in certain cases, may affect human advisors' ability to provide the best advisory services to each investor;[8]

- **Avoidance of conflicts of interest**. Finally, robo-advice has the potential to mitigate conflicts of interest that often arise in the case of human advice. Robo-advisors are more transparent in their operations because the financial products that they offer will vary taking into account the matches between products and investors made by the algorithm. Additionally, robo-advisors are not limited by any less transparent incentives as can happen with human advisors when they sell the same products that they recommend. Furthermore, the fee for the robo-advisor is fixed and the products offered to the investor will therefore effectively be, at least in theory, the most appropriate and suitable.[9]

Notwithstanding the above pros, robo-advisors also generate a number of issues for investors and, consequently, new regulatory challenges for financial regulators. This **CS'Insight** highlights five main issues that are associated with robo-advice:

- **Unsuitability risk**. This arises where there is a lack of completeness in the questionnaires completed by the investors, which do not give

[7] Francesco D'Acunto, Nagpurnanand Prabhala and Alberto G Rossi, *The Promises and Pitfalls of Robo-advising*, (2018) CESifo Working Paper No 6907
[8] Stephen Foerster, Juhani T. Linnainmaa Brian T. Melzer and Alessandro Previtero, Retail financial advice: *Does one size fit all?*, (2017) 72 The Journal of Finance, pp. 1441-1482
[9] Wolf-Georg Ringe and Christopher Ruof, *A Regulatory Sandbox for Robo Advice*, (2018) EBI Working Paper Series no 26

the robot all of the individual information to effectively evaluate the investor's capacity and appetite for risk. As the information in the questionnaires represent half of the algorithm's formula, the robo may ultimately advise on the the acquisition of products that are not suitable to a particular investor, which may, in turn, suffer losses due to investment in a product that did not properly match its investor profile.

- **Systemic risk**. This may occur if robo-advice continues to grow and becomes one of the dominant forms of investment advice in the financial markets (as it is currently expected to occur). As the algorithms used by robo-advisors are similar and also tend to behave in a similar way when facing market stress scenarios, liquidity risks could arise – if robots start to sell their clients' investment positions when a market stress event occurs – and market price instability, which may ultimately affect the financial stability of the markets.

- **Algorithm risk**. This risk is related to a potential error that may occur in the formula, which could potentially result in the robot offering incorrect advice to the investor. The biggest issue with an algorithm error of this kind is that it has the potential to negatively impact several investors, as the robot would be advising several different investors based on the same algorithm;[10]

- **Cyber risk**. This issue is not exclusive to robo-advice and is commonly associated with the use of any types of technology in financial services. Indeed, with the increased use of technology, the financial system will be more exposed to cyber-attacks. In the case of robo-advisors, this could, in turn, result in market manipulation;[11]

- **Lack of human intervention**. Human intervention is, for some investors, an important factor in the sense that a human advisor can provide recommendations of other kinds (e.g., the amounts that an investor should invest or sell). Consequently, the lack of human intervention may reduce investor confidence in this type of advice and, as a result, restrict the development of robo-advice.[12]

On the basis of the risks posed by robo-advice, it certainly represents a number of new challenges for financial regulators. Regulators will have

[10] ESAs, *Report on automation in financial advice*, (2016) available here, accessed 26 November 2022
[11] Wolf-Georg Ringe and Christopher Ruof (n19)
[12] Jill E Fisch, Marion Laboure and John A Turner, *The Economics of Complex Decision Making: The Emergence of the Robo Adviser*, (2018) available here, accessed 26 November 2022

to decide on how to deal with certain risks that are uncommon in the financial system, namely supervision over the algorithms and the operation of an advisor that works automatically. At the same time, regulators have to ensure that the regulation does not jeopardise the development of a tool that has the potential to significantly increase market integrity and competition. The next section provides an analysis and assessment to the regulatory approach currently used by the EU regulator. CS'

C. The EU's regulatory approach

In the EU, robo-advisors are regulated by MiFID II, which is applicable to all types of investment advisory services, as the EU legislator chosen to follow a legislative neutral technology approach. Under MiFID II, two types of investment advisory services (in broad terms) exist. These are: "investment advice", as provided for in Article 4(1) no. 4 MiFID II, entailing the provision of investment advisory services to a client regarding a specific financial product; and "portfolio management" as provided for in Article 4(1) no. 8 MiFID II, entailing the management of any portfolio of financial products in accordance with a mandate granted by a client. For these two types of investment advice, MiFID II establishes several obligations applied to investment advisors, including robo-advisors. Among these obligations, it is important to highlight (i) the licensing requirements that foresee that each investment advisory firm has to have a minimum value of capital, and (ii) the information requirements under which any investment advisor has to obtain sufficient information from the client to offer it the most suitable products. It should also be noted that each investment advisor must comply with other legal requirements, as in the case of data protection. [13]

The major issue with the neutral technology approach followed by EU legislation is that it creates certain barriers to the development of robo-advice and, at the same time, it does not fully address the issues arising from robo-advice. The licensing requirements are too burdensome for entities that are usually just starting up their business. Simultaneously, the information requirements that each investment advisory firm must request from their clients are not clearly defined. This uncertainty creates difficulties for investment advisors. It may also jeopardise investors' protection in the sense that, if the information is not correctly or completely collected, it is likely that the

[13] Wolf-Georg Ringe and Christopher Ruof (n19)

robo-advisor will offer the client unsuitable financial products. To address these issues, ESMA published some guidelines in which it has clarified some specificities of robo-advice activities. The clarifications include, inter alia, the requirements applicable to the questionnaires to be completed by the clients of robo-advisors, the special information duties that robo-advisors must fulfil before providing services to an investor, and some recommendations on how to address the clients' overestimation of their own knowledge and experience when answering the questionnaires.[14] Notwithstanding the benefits of these guidelines, these were made on broad terms and do not fully address the legal uncertainty issue. In addition, the neutral technology approach does not cover the specific risks arising from technology, such as algorithm risk or cyber-risk.

As referred to above, robo-advice represents an evolution of a service and a technology that already existed beforehand. Therefore, this evolution needs to be accompanied by a similar legislative evolution and not by a neutral approach that jeopardises the development of robo-advice development and does not guarantee investor protection against the new inherent risks that have emerged alongside the technology. The next section provides an overview of the solutions that have already been proposed by legal scholars and the proposal submitted in this **CS'Insight** to properly address all aspects of robo-advice. CS'

D. Proposal: EU-specific legal approach

Taking into account the different aspects of robo-advice that are not covered by EU legislation, some legal scholars propose the creation of a regulatory sandbox for robo-advisors[15] or the amendment of the licensing requirements applicable to them.[16] The first solution aims to test the robo-advisory services in a controlled space that makes it possible to limit the potential harm caused to investors and contributes to the development of robo-advisors. The second solution proposes the application of current regulation with the exception of the licensing requirements, which need to be amended to allow new robo-advisors to access the market and, consequently, result in increased market competition.

[14] ESMA (n9)
[15] See Wolf-Georg Ringe and Christopher Ruof (n19)

In this **CS'Insight** it is submitted that robo-advice needs a specific legal framework to cover all the new aspects of this activity without jeopardising its development or the protection afforded to investors. This specific legal framework would have five main components:

- **Regulatory Sandbox**. The first part refers to the licensing requirement process, which will be made in a regulatory sandbox, which will allow robo-advisory services to be tested and to be examined by the financial supervisor;

- **Suitability Criteria**. Secondly, the legal framework would establish suitability criteria applicable to robo-advice. The suitability test should cover not only the information provided before engagement with a client, but also the specific rules applicable to the questionnaires used by robo-advisors;

- **Mandatory Registration**. Furthermore, the legal framework should also include mandatory registration of any algorithm developer with the financial supervisor[17] as well as joint and several liability between the owner of the robo-advisor and the developer for any harm caused by the robo-advisor due to algorithm error. The latter will also be subject to a code of conduct.

With these three rules, algorithm risk would be mitigated and any error in the development of an algorithm would result in liability of the entities responsible for the creation and use of the robot.

- **Cyber-Protections**. A fourth component of the applicable legal framework would entail mandatory cyber-protections that any robo-advisory service provider must engage to mitigate the risk of hacking that may result in market manipulation.

- **Robo-advisor officer**. Finally, this legal framework would establish an obligation for each entity that owns robo-advisors to have a robo-advisor officer – this officer would equate to the position of a data protection officer under the General Data Protection Regulation.[18] The robo-advisor officer would be responsible for monitoring the work of robo-advisors and would act as a human intermediary between the robot and the investor – this would therefore increase investor confidence in this new technology.

[16] See Philipp Maume, Regulating Robo-Advisory, (2019) 55 Tex Int'l L J, pp. 49-88
[17] Andrea L Seidt, Noula Zaharis and Charles Jarrett (n16)
[18] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC OJ L 119

This legal framework would also require a change in financial regulation[19] as financial regulators would have to restructure their organisations by creating specialised IT departments able to supervise the use of algorithms and identify any potential new risks that may emerge.

The legal framework proposed above would effectively require further studies and some investment in financial regulation. Although these are obstacles to the implementation of a new legal framework, legislation should evolve to address the evolution of the role of technology in financial services. The proliferation of regulatory sandboxes is a good sign, but only represents an intermediate phase. Therefore, a new phase composed of legal specific technology approaches is needed. CS'

Conclusion

In conclusion, a specific legal framework applied to robo-advice is needed to ensure a balance between the development of robo-advisors and investor protection. The current EU neutral-technology approach generates legal uncertainty and does not address the specificities of the robo-advice activity, such as the development of the algorithm or the lack of human intervention in the process. A specific technology approach that covers the new risks arising from robo-advice and addresses the specificities of that activity is needed. Further studies to this specific approach are required, but it is crucial to start studying and developing the final stage of FinTech instead of spending too many resources on intermediate steps such as regulatory sandboxes. CS'

[19] Benjamin P Edwards, *The Rise of Automated Investment Advice: Can Robo-Advisers Rescue the Retail Market*, (2018) 93 Chi-Kent L Rev 97

Bibliography

R. Houben, Financial consumers: beware of robo-advice (?!), (2020) 35(2) Journal of International Banking Law and Regulation

Financial Stability Board, *Monitoring of Fintech*, (2019) available here

Benjamin P Edwards, *The Rise of Automated Investment Advice: Can Robo-Advisers Rescue the Retail Market*, (2018) 93 Chi-Kent L Rev 97

Wolf-Georg Ringe and Christopher Ruof, *A Regulatory Sandbox for Robo Advice*, (2018) EBI Working Paper Series no 26

T. Baker and B. Dellaert, *'Regulating Robo-Advice across the Financial Services Industry'*, (2018) 103 Iowa Law Review pp. 713-750

Toronto Centre, Fintech, Regtech and Suptech: What they mean for Financial Supervision, (2017) Available here

Pablo Sanz Bayón and Luis Garvía Vega, *Automated Investment Advice: Legal Challenges and Regulatory Questions*, Banking & Financial Services Policy Report, Volume 37, Number 3, March 2018, pp. 1-11

Andrea L Seidt, Noula Zaharis and Charles Jarrett, *Paying Attention to That Man behind the Curtain: State Securities Regulators' Early Conversations with Robo-Advisers*, (2019) 50 U Tol L Rev 501

Francesco D'Acunto, Nagpurnanand Prabhala and Alberto G Rossi, *The Promises and Pitfalls of Robo-advising*, (2018) CESifo Working Paper No 6907

Stephen Foerster, Juhani T. Linnainmaa Brian T. Melzer and Alessandro Previtero, Retail financial advice: *Does one size fit all?*, (2017) 72 The Journal of Finance

ESAs, Report on automation in financial advice, (2016) available here

Jill E Fisch, Marion Laboure and John A Turner, *The Economics of Complex Decision Making: The Emergence of the Robo Adviser*, (2018) available here

Philipp Maume, Regulating Robo-Advisory, (2019) 55 Tex Int'l L J