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Robo-Advisory Services and Investor Protection

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I. Introduction

1. During the last 30 years, the technological evolution has had an enormous impact on the way investment services are provided. In the late 1990's, the development of the Internet for commercial purposes, suddenly made it possible for investors to trade financial instruments electronically from home, using online brokers[1]. Since 2007, the introduction of smartphones and the subsequent launch of mobile trading apps further facilitated the communication of orders in financial instruments, enabling investors to trade 24/7 from wherever they have an Internet connection. However, traditionally, the services of these online and mobile brokers were (and are) limited to the mere execution and reporting of orders (so called execution only services). By 2010, technological advancement had created the possibility of also providing investment advice and managing funds without any, or with only limited, human intervention (so-called robo-advice or digitized advice)[2].

Basically, robo-advisors are digital platforms created by financial intermediaries comprising interactive and intelligent user assistance components guiding customers through an automated investment advisory process[3]. More specifically, an algorithm is used to collect the client's data, assess the suitability of the investment services provided, and subsequently advise investment decisions to the client[4]. Afterwards, the robo-advisor generally focusses on rebalancing and updating the investment portfolio. Major opportunities of robo-advice are that it makes advisory services easily accessible and more cost-efficient[5]. Robo-advisory services are indeed far less expensive than equivalent services provided by traditional human advisors[6]. Also, investments thresholds are generally much lower. Consequently, not only affluent investors can enjoy individual investment advice and/or portfolio management, but also the broader group of average less wealthy retail investors.

2. Recently, ESMA came to the conclusion that the last few years there has (only) been a *limited* growth of the phenomenon of robo-advise[7]. Philipp MAUME – in his recent study (2021) on robo-advisors for the European Parliament – also stresses that, although the market share of the assets under

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[1] J. Wu, M. Siegel and J. Manion, *Online trading: an Internet Revolution*, 1999,
https://web.mit.edu/smadnick/www/wp2/2000-02-SWP%234104.pdf.
[2] The history of robo-advisory began in the United States. Betterment entered the market in 2010, the competitor Wealthfront followed shortly after.
[3] D. Jung, F. Glaser and W. Köpplin, "Robo-Advisory – Opportunities and Risks for the Future of Financial Advisory", *Advances in Consulting Research,* Springer, 2019, 408.
[4] Better Finance, *Robo-Advice. Can Consumers Trust Robots?*, 2020, (https://betterfinance.eu/wp-content/uploads/Robo-Advice-Report-2020-25012021.pdf), p. 12.
[5] ESMA, *Final Report on the European Commission mandate on certain aspects relating to retail investor protection*, 2022, (https://www.esma.europa.eu/sites/default/files/library/esma35-42-1227_final_report_on_technical_advice_on_ec_retail_investments_strategy.pdf), p. 47.
[6] Better Finance, *Are robo-advisors sufficiently intelligent to provide suitable advice to individual investors?*, 2021, (https://betterfinance.eu/wp-content/uploads/Robo-advice-2021-Report-Are-Robo-advisors-sufficiently-intelligent-to-provide-suitable-advice-to-individual-investors.pdf), p. 31-34.
[7] ESMA, *Final Report on the European Commission mandate on certain aspects relating to retail investor protection*, *ibidem*, p. 49.

management by robo-advisors has reached a significant size, it is still only a small fraction of the global markets (below 1%)[8]. The robo-advice market seriously undershot the 2015 growth projections[9]. The main barriers identified to explain the relatively low use of robo-advice are on the one hand from the service provider's side, the fact that the implementation of robo-advisory tech can be costly and on the other hand, from the investor's side, the general distrust in financial service providers, limited awareness of this business model, low level of financial literacy and the preference of many investors to rely, at least partially, on human interaction[10].

The rather limited growth of robo-advice seems to be in contrast with the increasing popularity of investing in the stock markets, in particular with young investors. Young investors, that have entered the market in high numbers during the pandemic[11], in search for higher yield, seem to be more interested in investing through online brokers, exclusively offering execution only services at a low – or even without *direct* – cost (so called neo-brokers), than in receiving digitized advisory services[12]. This makes them more vulnerable to unsuitable transactions, especially when they base their investment decisions mainly on opinions from peers on social networks.

3. In this paper, it will be argued that robo-advice *in itself* offers additional protection to retail investors who would otherwise simply use online and mobile brokers only providing execution only services[13]. However, robo-advice, in particular when compared with traditional investment advice and portfolio management, also creates certain risks, in particular because of the lack of personal contact between the investor and the advisor and because of the use of algorithms. After a brief description of the concept of robo-advice, this paper deals with the application of two important rules of investor protection (the "know your customer" rule and the "inform your customer" rule) in the context of robo-advice.

     II.   **The concept of robo-advice**

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[8] P. Maume, *Robo-advisors. How do they fit in the existing EU regulatory framework, in particular with regard to investor protection?*, Publication for the committee on Economic and Monetary Affairs, Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament, Luxembourg (https://www.europarl.europa.eu/RegData/etudes/STUD/2021/662928/IPOL_STU(2021)662928_EN.pdf), 2021, p. 14-16.

[9] Better Finance, *Are robo-advisors sufficiently intelligent to provide suitable advice to individual investors?*, 2021, *ibidem*, p.9.

[10] ESMA, *Final Report on the European Commission mandate on certain aspects relating to retail investor protection*, *ibidem*, p. 49; Better Finance, *Robo-Advice. Can Consumers Trust Robots?*, 2020, *ibidem*, p. 5.

[11] See for example the results of a study conducted by the Belgian Financial Services Market Authority relating to young people on the stock market (https://www.fsma.be/en/news/young-people-stock-market). This study, relating to the year 2021 and confirming the results of an earlier study (2020), revealed that those in their twenties were the largest group of new investors. See also: S. Malhotra, "Study of features of Mobile Trading Apps: a silver lining of Pandemic", *Journal of Global Information and Business Strategy* 2020, 75.

[12] French Autorité des Marches Financiers (AMF) (2021): *Retail investors and their business since the COVID crisis: younger, more numerous and attracted by new players* (https://www.amf-france.org/sites/default/files/private/2021-11/20211129-etude-a-publier-vfinale-en.pdf).

[13] See also: Autoriteit Financiële Markten (The Netherlands), *Visie op roboadvies. Kansen, zorgplicht en aandachtspunten*, 2018 (https://www.afm.nl/~/profmedia/files/onderwerpen/roboadvies-sav/visie-roboadvies.pdf) p.6

4. ESMA defines robo-advice as "*the provision of <u>investment advice or portfolio management</u> services, (in whole or in part) through automated or semi-automated systems used as a client-facing tool*"[14]. In the following paragraphs, it will first be argued why robo-advisory services normally entail investment advice and in many cases portfolio management. The importance of this finding may not be underestimated, since investors receive additional protection in case of investment advice and portfolio management. After that, an overview will be given of the different robo-advisory models and their compatibility with article 22 GDPR.

5. According to MiFID, *investment advice* is the provision by an investment firm of a *personal recommendation* to a client, either at the client's request or at the firm's initiative, in respect of one or more transactions relating to *financial instruments*[15] (art. 4.1 (4) MiFID II)[16]. A recommendation can be considered as *personal* when it is presented as suitable to a specific investor or based on a consideration of the person's circumstances[17]. CESR stressed in this regard that it is sufficient that the client reasonably believes that a *personal* recommendation is provided, because it is reasonable to think either that the recommendation is being presented as suitable or that it is based on a consideration of his circumstances[18]. Recommendations that are exclusively made to the public at large on the other hand do not constitute investment advice[19].

Online brokers giving only generic advice (for example on potentially attractive investments) directed towards all visitors of their website – advice which clearly does not consider the investor's personal situation – do not provide investment advice as defined under MiFID. Robo-advisors on the other hand proposing investments on the basis of the investor's preferences, determined on the basis of the information received from the investor, clearly do. The difference between robo-advice and traditional investment advice, is that it is an algorithm, instead of a human financial advisor, that provides the advice.

Once the advice is given, it is up to the client to decide whether or not to follow the advice. When the investment firm provides an online interface, i.e. combines advice with online brokerage, the client following the advice can give the order using this interface.

If the contractual relationship with the client is ongoing, the software will also monitor the purchased assets and provide updates or warnings to the client.

Although investment advice can relate to any kind of financial instruments (stocks, bonds, funds,…), most robo-advisors today advise their clients only to deal in ETF's (exchange traded funds[20]). An ETF is

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[14] ESMA, *Guidelines on certain aspects of the MiFID I suitability requirements*, 2018, https://www.esma.europa.eu/system/files_force/library/esma35-43-869-_fr_on_guidelines_on_suitability.pdf?download=1, p.4, nr. 6.

[15] Since virtual currencies are no financial instruments. personal recommendations with regard to buying or selling virtual currencies do not constitute investment advice.

[16] Since MiFID II, a further distinction is made between advice that is given on an independent and a non-independent basis. Firms that provide investment advice on an independent basis will generally not be allowed to receive inducements and are required to assess a sufficient range of financial instruments in the advice, meaning that different types of financial instruments offered by various providers must be included in the independent advice (art. 24 MiFID II).

[17] Art. 9 MiFID II-DelReg.

[18] CESR, *Understanding the definition of Advice under MiFID*, 2009, (https://www.esma.europa.eu/system/files_force/library/2015/11/09_665.pdf), p. 4.

[19] CESR, *Understanding the definition of Advice under MiFID*, 2009, *ibidem*, p. 12.

[20] Article 4(1)(46) MiFID II defines ETF's as "*a fund of which at least one unit or share is traded throughout the day on at least one trading venue and with at least one market maker which takes action to ensure that the*

a type of pooled investment security that tracks the performance of a benchmark index and can be purchased or sold on a stock exchange the same way that a regular stock can. Since ETF's are based on an index, they make it possible for investors to buy and sell a basket of assets without having to buy all the components individually. The ETF replicates the performance of its underlying assets, therefore automatically providing the diversification benefits of mutual funds, but with significantly lower fees[21].

6. *Portfolio management* is defined under MiFID as managing portfolios in accordance with mandates given by clients on a discretionary client-by-client basis where such portfolios include one or more financial instruments (art. 4.1 (8) MiFID II). Contrary to the investment advisor, the portfolio manager has the discretion of taking investment decisions himself. Robo-advisory services often include *portfolio management*[22], since, after the initial investment decision, the software continues to manage the clients portfolio on behalf of the client. Most robo-advisors use a mere passive strategy, in which the portfolio management is limited to rebalancing the portfolio in order to reduce drift from the original target allocation. Active strategies will try to beat the market. They are however more complex and involve a higher level of activity (and therefore create higher costs).

7. As far as robo-advisory services are concerned a distinction can be made between fully-automated, semi-automated and hybrid models**.** When processes are fully automated, all steps take place electronically, from the customer inventory to the provision of the advice: electronic questionnaires are used to obtain the investor's profile and an algorithm determines which financial instruments are suitable for the investor. Some systems (hybrid or semi-automated) make it possible for the investor to ask for human intervention, for example by allowing the investor to (video)call, e-mail or chat with a human advisor. Such interaction can take place at any stage of the process: when certain information or questions are not sufficiently clear for that investor and the investor needs additional clarification, when the investor wants to discuss the advice that was provided by the algorithm, or as a follow-up. In a blended model, human intervention is an integral part of the model: human advisors and robo-advisors are equal. The algorithm focuses on the analysis and execution of investment decisions. The human advisor is responsible for strategy and overall planning.

The question arises whether fully automated investment advice, is compatible with article 22 GDPR[23]. Article 22 GDPR contains the right for natural persons not to be subject to a decision based *solely on automated processing*, including profiling, when that decision either produces legal effects concerning him or her or similarly significantly affects him or her. Although (fully automated) robo-advisory services are likely to qualify as such automated decisions and therefore fall under the scope of the provision, article 22 GDPR does not prevent fully automated systems, as it contains several exceptions. More specifically, the prohibition does not apply if the automated decision is necessary for entering into, or the performance, of the contract, or when the investment firm obtains the investor's explicit consent for such automated decision making[24].

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price of its units or shares on the trading venue does not vary significantly from its net asset value and, where applicable, from its indicative net asset value".

[21] Better Finance, *Robo-Advice: European Individual Investors Take a Look under the Hood*, 2018 (https://betterfinance.eu/wp-content/uploads/Robo_Advice_Report_2018_-_for_website.pdf), p. 7-8.

[22] Better Finance, *Robo-Advice: European Individual Investors Take a Look under the Hood*, 2018 *ibidem*, p. 10.

[23] 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* 4 May 2016, 119/1 (General Data Protection Regulation).

[24] A third exception, which is however not relevant in this case, refers to the situation where the decision is authorised by Union or Member State law to which the controller is subject and which also lays down suitable measures to safeguard the data subject's rights and freedoms and legitimate interests.

8. Further distinctions can be made in function of the information that is used to provide suitable investment advice. Simplistic advisors use conventional profiling to come up with a portfolio, which means that their risk profile is assessed and the portfolio is designed on the basis of information gathered through online questionnaires. Comprehensive advisors go beyond the usual risk profile quiz and use AI to create a more in-depth understanding of the investor profile, predicting behaviour by using artificial intelligence (AI) and data[25]. In this category, the data tells the algorithm about the investor's actual net worth, his current liabilities, spending patterns and behaviour in various situations and scenarios. When robo-advisors want to include external data, they need the investors prior consent (except when it could be stated that processing of such information is necessary for entering into/the performance of the contract (see art. 22, 2 GDPR).

III.   Investor protection

A. Introduction

9. One of the main objectives of European financial regulation is to protect investors. At the time being, there are no specific rules for robo-advice. Rules of investor protection are technology neutral and apply irrespective of the way that investment services are provided[26]. Therefore, existing rules must be applied in the online context in which robo-advisory services are performed. Most rules that aim at protecting investors can be found in the MiFID II legislation, containing amongst others detailed rules of conduct, but other provisions also contribute to investor's protection. For example, ETF's are packaged retail investment products, and therefore require a KID (key information document), if offered to retail investors[27].

10. First, it will be argued that the suitability test, which is only applicable to investment advice and portfolio management, in itself offers additional protection to investors using robo-advisory services, in particular when these investors would otherwise use execution only services offered by online brokers. However, it will as well be stressed that the lack of human intervention and the use of algorithms also creates specific risks, that must be dealt with in order to protect these investors. Before diving into some of the MiFID II provisions[28], it is worth emphasizing that only the position of non-professional or retail investors – a category which is substantially broader than the consumer in traditional consumer law legislation[29] - will be discussed.

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[25] The application of AI in robo-advisors is not common at the moment: Better Finance, *Are robo-advisors sufficiently intelligent to provide suitable advice to individual investors?*, 2021, *ibidem*, p. 17.

[26] P. Maume, *Robo-advisors. How do they fit in the existing EU regulatory framework, in particular with regard to investor protection?*, *Ibidem*, p. 22-23. An exception to this basic principle are the rules on algorithmic trading which contain additional requirements, such as the requirement to take all reasonable steps to ensure continuity in the performance of the service (art. 16 (4) MiFID II). Although providing investment advice does not qualify as algorithmic trading, the automated rebalancing of portfolios does.

[27] Art. 5 Regulation (EU) No 1286/2014 of the European Parliament and of the Council of 26 November 2014 on key information documents for packaged retail and insurance-based investment products (PRIIPs), *OJ* L 9 December 2014, 352/1.

[28] In this paper I will not elaborate on the topics of conflict of interests and inducements. See in particular: P. Maume, *Robo-advisors. How do they fit in the existing EU regulatory framework, in particular with regard to investor protection?*, *Ibidem*, p. 31-38; Better Finance, *Are robo-advisors sufficiently intelligent to provide suitable advice to individual investors?*, 2021, *ibidem*, p.17-18.

[29] Not as much the purposes for which investments are made, matters (as in consumer law: ECJ 3 September 2015, C-110/14, *Costea*, ECLI:EU:C:2015,538). It is the lack of expertise that justifies more extensive protection.

B. Suitability-test: a major protection for investors using robo-advisory services

11. One of the cornerstones of European investor protection is the "know your customer rule" which requires investment firms to obtain certain information from the investor, prior to providing the service (art. 25 MiFID II). Basically, the idea is that, in order to be able to act in the client's best interests, it is necessary for the investment firm to know which type of investor the customer is.

In case of *investment advice or portfolio management* – and therefore in case of robo-advice – the investment firm must collect information on 1) the investor's knowledge and experience in the investment field relevant to the specific type of product, 2) the client's financial situation including his ability to bear losses and 3) the client's investment objectives, including risk tolerance (art. 25 (2) MiFID II). On the basis of this information a suitable investment (service) must be recommended or performed, meaning that the investment firm may only advise financial instruments of which the client is able to understand the risks involved and of which he will be able to bear these losses if these risks would materialize. Moreover, the advised instruments must meet the investor's objectives[30]. From 2 August 2022 onwards, investment firms will also be obliged to check their client's suitability preferences and advise in line with these[31].

When the investment firm only executes an order given by a client (without providing any investment advice), the role of the investment firm is (much) more limited. When the order relates to "non-complex" financial instruments – and as far a few other conditions are met[32] – no information at all must be obtained from the investor, and no test must be performed (art. 25 (4) MiFID)[33]. When an order relates to complex financial instruments information on the client's knowledge and experience must be obtained in order to perform an appropriateness test (art. 25 (3) MiFID II). The objective of this test is solely to verify whether the client understands the financial instruments and the risks involved (if not, the client must be warned). Whether the risks can be borne by the investor and whether the transaction is in line with the investor's objectives (including his risk-appetite) has not to be examined.

ETF's which are structured as UCITS must be considered non-complex financial instruments[34], implying that online brokers only allowing their clients to trade in such ETF's (and other non-complex financial instruments) must not even verify whether they are appropriate for that investor. Only if the platform allows for transactions relating to certain ETF's that must be considered complex financial instruments (such as leveraged and inverse ETF's) or also allows the investor to trade other complex financial

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[30] Art. 54 (2) MiFID II-DelReg.

[31] Commission Delegated Regulation (EU) 2021/1253 of 21 April 2021 amending Delegated Regulation (EU) 2017/565 as regards the integration of sustainability factors, risks and preferences into certain organizational requirements and operating conditions for investment firms, *OJ* L 2 August 2021, 277/1. The 2021 report by Better Finance shows that robo-advisors will have to adjust their models to this additional requirement: Better Finance, *Are robo-advisors sufficiently intelligent to provide suitable advice to individual investors?*, 2021, *ibidem*, p. 39-41.

[32] The service must be provided at the initiative of the (potential) client's request, the (potential) client must be informed that the investment firm is not required to assess the appropriateness of the financial instrument or service provided and the investment firm must comply with the rules on conflicts of interests (art. 25 (4) MiFID II).

[33] In such situation the investor must be warned that no appropriateness assessment will take place.

[34] CESR, *MiFID complex and non-complex financial instruments for the purpose of the Directive's appropriateness requirements*, 2009, (https://www.esma.europa.eu/sites/default/files/library/2015/11/09_558.pdf), p. 22.

instruments (which is quite common), an appropriateness-test has to be performed before the investor can trade on the platform.

12. What precedes illustrates that existing robo-advice applications, providing investment advice with regard to ETF's at a low(er) cost (than traditional investment advice), have several advantages compared to execution only services offered by online brokers. First, the advice comes cheap and is easily accessible, which makes it accessible to a larger category of investors. Secondly, a suitability test must be performed, ensuring that the advised ETF's are suitable for that investor (otherwise they cannot be advised[35] !). Thirdly, robo-advice takes the emotion out of investing and avoids that staff of the investment firm influences the investor when answering questions in the context of the suitability assessment[36]. Finally, ordinary ETF's, which are typically advised by robo-advisors, create less risk than many other (even non-complex) financial instruments. In particular, equity-ETF's are less volatile than individual stocks (because of the risk diversification they automatically apply). Therefore, existing robo-advisory services in itself offer additional protection to investors that would otherwise stick to online brokers solely providing execution only services.

C. The suitability test in the context of robo-advice

13. Article 54 (1) MiFID II-DelReg explicitly determines that *where investment advice or portfolio management services are provided in whole or in part through an automated or semi-automated system, the responsibility to undertake the suitability assessment lies with the investment firm providing the service and cannot be reduced by the use of an electronic system in making the personal recommendation or decision to trade.* In other words, the use of robo-advisory services may not reduce investor protection in this regard[37]. ESMA has published extensive guidelines on the suitability requirements[38], which include several specific recommendations regarding the application of the suitability test in the case of robo-advice.

14. There are indeed many challenges when it comes to the application of the suitability assessment in the context of robo-advice. First, the fact that the client does not interact with a human advisor, but with a software interface, creates the risk of the client misunderstanding the software's queries, as well as of the importance of answering these questions correctly. Moreover, contrary to human advisors, existing robo-advisors might not (always) be able to detect investor's doubts when answering questions[39]. Finally, according to ESMA, the risk that investors over-estimate their knowledge and experience could be higher in case no human advisors intervene[40]. However, these risks can substantially be reduced on the one hand by stressing the importance of answering questions correctly, and on the other hand by using questionnaires, which are sufficiently clear and which allow at the same time to detect obvious inaccuracies and non-consisting information. One of the main challenges for robo-advisors in this regard is to ask *enough* questions in order to be able to provide the

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[35] Art. 54 (10) MiFID II-DelReg.

[36] Although prohibited by law, this sometimes happens and is hard to control by the supervisor (it often needs mystery shopping to detect this kind of behavior).

[37] P. Maume, *Robo-advisors. How do they fit in the existing EU regulatory framework, in particular with regard to investor protection?*, *ibidem*, p. 28.

[38] ESMA, *Guidelines on Certain Aspects of the MiFID II Suitability Requirements*, 2018, https://www.esma.europa.eu/system/files_force/library/esma35-43-869-fr_on_guidelines_on_suitability.pdf?download=1.

[39] Autoriteit Financiële Markten (The Netherlands), *Visie op roboadvies: kansen, zorgplicht en aandachtspunten*, 2018, *ibidem*, p. 1011.

[40] ESMA, *Guidelines on Certain Aspects of the MiFID II Suitability Requirements*, 2018, *ibidem*, p. 15.

most customized advice possible but *not too many* questions in order to avoid online investors losing their interest during the questionnaire process[41].

15. First, the investment firm must emphasize that the answers that clients provide have a direct impact in determining the suitability of the investment decisions recommended or undertaken on their behalf. Also, the investment firm must describe the sources of information they will use to generate investment advice. For example if an online questionnaire is used, investment firms must make it clear whether the responses to these online questions will be the sole basis for the advice or whether the firm has access to other client information or accounts that will be used when performing the suitability assessment[42].

16. Secondly, investment firms must ask questions, which are sufficiently clear, meaning that they are not subject to different interpretations by different investors. This should be previously tested with a representative customer survey. Where necessary investors must have the possibility to obtain additional clarification during the questionnaire process through tools, such as pop-up boxes or videos. In semi-automated systems additional explanation can also be provided by enabling the investor to contact a human advisor over the phone, by chat or email[43]. Doubts could be detected when the customer goes back and forth between two pages several times and/or changes his answer several times. In such situation the customer may be advised to take note of additional explanations[44].

As for the investor's understanding of the financial instruments that will be advised and their potential risks (which should be checked first), it is important to stress that it does not suffice to ask a potential client whether he is familiar with the financial instruments that can be advised via the platform and their risks. On the contrary, a test must be done (so-called quiz), in which the client's actual knowledge of these financial instruments is checked by several questions[45]. More specifically, when robo-advisory services are limited to ETF's, as is often the case today, investment advice may only be provided when the clients understanding of ETF's and their risks is demonstrated. Either the client answering the questions for the first time is already sufficiently familiar with ETF's (and answers questions correctly), or the client has become sufficiently familiar with ETF's (and answers (additional) questions correctly) after receiving additional explanation on ETF's. Taking into account the average level of financial literacy of retail investors, many of them will need additional explanation. This can be given by the robo-advisor itself, for example through an article or video explaining ETF's and their risks on the robo-advisor's website or by allowing contact with a human advisor. In any case, when the investor does not succeed in understanding ETF's and their risks (i.e. is not able to answer questions correctly), no advisory services recommending ETF's can be provided.

Investment objectives (such as the investment horizon and the investor's risk appetite) must equally be questioned with sufficient precision. In order to ensure that the investor's risk profile is correctly assessed (which is essential), once again, several questions should be asked, each of them using clear and comprehensible examples of the levels of loss and return that may arise depending on the risks taken. Using different questions, such as questions on the client's personal choices in case of risk

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[41] See also: Better Finance, *Robo-Advice: Can Consumers Trust Robots*, 2020, *ibidem*, p. 47.
[42] ESMA, *Guidelines on Certain Aspects of the MiFID II Suitability Requirements*, 2018, *ibidem*, p. 7.
[43] ESMA, *Guidelines on Certain Aspects of the MiFID II Suitability Requirements*, 2018, *ibidem*, p. 9-10; Autoriteit Financiële Markten (The Netherlands), *Visie op roboadvies: kansen, zorgplicht en aandachtspunten*, 2018, *ibidem*, p. 10.
[44] Autoriteit Financiële Markten (The Netherlands), *Visie op roboadvies: kansen, zorgplicht en aandachtspunten*, 2018, *ibidem*, p. 15-16.
[45] ESMA, *Guidelines on Certain Aspects of the MiFID II Suitability Requirements*, 2018, *ibidem*, p. 13-14.

uncertainty[46], not only avoids that one single question is misinterpreted by the client (and therefore his risk-appetite is misjudged), it also allows to check for inconsistencies. In case of such inconsistencies, further information needs to be obtained until the investment firm can be sure of the client's risk profile. In this regard, ESMA suggests that investment firms can incorporate into the questionnaire features to alert clients when their responses appear internally inconsistent and to suggest them to reconsider such responses. Alternatively systems can be used that automatically flag apparently inconsistent information provided by a client for review or follow-up by the firm[47]. In any case, if the investor's risk profile does not match with the financial instruments offered in robo-advice, no advice can be given. Simply adjusting the risk profile is not an option.

Finally, detailed information on the client's financial situation must be obtained, including information on the investor's income, regular financial commitments, assets, investments and real property[48]. A client can understand the risks involved and be prepared to take these risks, but if his financial situation does not allow him bear the losses that may occur, instruments that may lead to such losses cannot be advised. Although investment firms can generally rely on the fact that the information communicated by the client is correct, the algorithm must be programmed in a way that it would detect information that is not plausible[49]. In other words, clear errors and unlikely answers must be detected by the algorithm, just as a human advisor would notice these. For example, when an investor with limited income indicates that he/she is able to save a relatively high amount monthly (and thus overestimates his possibility for saving), the algorithm should indicate that such information is inconsistent.

When the relation is ongoing, information will have to be updated regularly. The investment firm must explain how this will be done.

17. According to Article 25(6) MiFID II, investment firms, when providing investment advice, must before the transaction is made, provide the client with a *statement on suitability* in a durable medium specifying the advice given and how that advice meets the preferences, objectives and other characteristics of the retail client. The report must, amongst others, include an outline of the advice given and explain how the recommendation is suitable for the retail client (art. 54 (12) MiFID II DelReg.). The suitability report can be send to the investor (e.g. by e-mail), but can also be made available to the client in a secured area of the firm's website, specifically dedicated to that client[50]. However, in such situation it is necessary that the client receives a notification (via email or through any other means of communication) of the availability of the document on the website[51]. In case of portfolio management, the robo-advisor needs to provide periodic reports about the portfolio development.

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[46] ESMA, *Guidelines on Certain Aspects of the MiFID II Suitability Requirements*, 2018, *ibidem*, p. 14.

[47] ESMA, *Guidelines on Certain Aspects of the MiFID II Suitability Requirements*, 2018, *ibidem*, p. 10.

[48] Art. 54 MIFID II DelReg. Surprisingly, there seem to be platforms that do not ask about the investor's financial situation (Better Finance, *Are Robo-advisors sufficiently intelligent to provide suitable advice to individual investors?*, 2021, *ibidem*, p. 25.

[49] Autoriteit Financiële Markten (The Netherlands), *Visie op roboadvies: kansen, zorgplicht en aandachtspunten*, 2018, *ibidem*, p.11; P. Maume, *Robo-advisors. How do they fit in the existing EU regulatory framework, in particular with regard to investor protection?*, *ibidem*, p. 29.

[50] ESMA, *Mifid II Supervisory briefing: Suitability*, 2018, https://www.esma.europa.eu/sites/default/files/library/esma35-43-1206_mifid_ii_supervisory_briefing_on_suitability.pdf.

[51] Cfr. ECJ 25 January 2017, C-375/15, *BAWAG*, ECLI:EU:C:2017:38.

The risk exists that (unexperienced) investors misinterpret the advice or are overly reliant on it, in particular when there is no (possible) intervention of a human advisor[52]. In order to ensure that the advice is well understood by the investor, the comprehensibility of the advice provided is essential. Investment firms should check the comprehensibility of the advice provided in advance through surveys and in this context use the possibilities offered by modern technology as much as possible. For example investment firms may use personalized visuals, illustrating the exact content of the advice and its impact on the investor's personal situation[53].

18. Although the use of algorithms to provide investment advice and portfolio management can offer substantial benefits (e.g. take the emotions out of investment and eliminate human error), the fact that investment advice is provided by an algorithm also creates specific risks. First, the algorithm might not be fit for purpose and unable to perform a state-of-the-art suitability assessment, meaning that it is unable to provide suitable investment advice on the basis of the information obtained through the questionnaire (or any other information available to it). Also, the algorithm might not be able to adapt to unusual cases or unexpected answers, resulting in unsuitable advice. Finally, the use of a flawed, outdated (or even compromised) algorithm may affect many investors simultaneously, not only creating losses for individual investors but possibly leading to market imbalances[54].

19. ESMA has come up with some specific supporting guidelines in the form of organizational requirements to mitigate these risks as much as possible[55]. In order to ensure the consistency of the suitability assessment conducted through automated tools, firms must regularly monitor and test the algorithms that underpin the suitability of the transactions recommended or undertaken on behalf of their clients. First, when programming the algorithm, investment firms (and the firms they use for the definition of the algorithm) must establish an appropriate system-design documentation that clearly sets out the purpose, scope and design of the algorithm. Decision trees or decision rules must be a part of this documentation, where relevant. Also, firms must have a documented test strategy that explains the scope of testing of algorithms, which must include test plans, test cases, test results, defect resolution and final test results. A good practice during the initial phase may consist in making the advice, provided by the algorithm only accessible after a physical advisor has checked whether the advice is suitable[56].

Further, in the operational phase firms must have in place adequate resources to monitor and supervise the performance of algorithms through an adequate and timely review of the advice provided. They must have in place appropriate policies and procedures for managing changes to an algorithm, as well as security arrangements to monitor and prevent unauthorized access to the algorithm. Also, investment firms offering robo-advisory services must have in place policies and procedures enabling them to detect any error within the algorithm and deal with it appropriately, including, suspending the provision of advice if that error is likely to result in an unsuitable advice or a beach of regulation[57].

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[52] P. Maume, *Robo-advisors. How do they fit in the existing EU regulatory framework, in particular with regard to investor protection?, ibidem*, p. 28-29.

[53] Autoriteit Financiële Markten (The Netherlands), *Visie op roboadvies: kansen, zorgplicht en aandachtspunten*, 2018, *ibidem*, p. 18.

[54] P. Maume, *Robo-advisors. How do they fit in the existing EU regulatory framework, in particular with regard to investor protection?, ibidem*, p. 11.

[55] ESMA, *Guidelines on Certain Aspects of the MiFID II Suitability Requirements, ibidem*, 2018, p. 23.

[56] Autoriteit Financiële Markten, *Visie op roboadvies, ibidem*, p. 21-22.

[57] ESMA, *Guidelines on Certain Aspects of the MiFID II Suitability Requirements*, 2018, *ibidem*, p. 23.

In order to make all of this possible investment firms must ensure that the staff involved has an appropriate level of understanding of the technology and algorithms used to provide advice (and in particular are able to understand the rationale, risks and rules behind the algorithms underpinning the digital advice) and are able to understand and review the digital advice generated by the algorithms[58].

20. Every year Better Finance tests the suitability of the investment advice provided by robo-advisory platforms on the basis of two different profiles with a different investment horizon and a different risk profile (the millennial and the baby-boomer). Although some platforms score high on suitability, the analysis also suggests some shortcomings. First, it is remarkable that the recommended equity exposure (and the risk associated with it) ranges widely between platforms for exactly the same investor (in 2020 between 9% and 95% !)[59]. Although it is normal that different investment advisors do not conclude to exactly the same exposure for identic profiles, one could at least expect that advise on equity exposure would always be between a certain range for identical investor profiles. Secondly, the 2021 report mentions a platform that provided exactly the same equity allocation for the two different profiles (with a different attitude towards risk)[60]. Finally, European platforms seem to be rather prudent with regard to "aggressive" risk profiles[61], resulting in a (too) low exposure to equity for high-risk profiles.

D. Information requirements

21. Investor protection legislation further focusses on the provision of information to (potential) clients. Basically, the idea is that clients that are well informed, should be able to make informed investment decisions. According to article 24 (3) MiFID II all information addressed by investment firms to clients and potential client must be fair, clear and not misleading. More specifically, information must be provided with regard to the investment firm and its services, the financial instruments and proposed investment strategies, execution venues and all costs and related charges (art. 24 (4) MiFID II)[62]. All the information must be provided in a comprehensible form in such a manner that clients or potential clients are reasonably able to understand the nature and risks of the investment service and of the specific type of financial instrument that is being offered (art. 24 (5) MiFID II).

22. First, robo-advisors must explain to potential clients what exactly the robo-advisory services they offer entail. First, clients must be informed on the exact degree and extent of human involvement in the advising process[63]. Secondly, robo-advisors must provide information on the kind of data which the algorithm takes into account when providing investment advice (e.g. only information provided through the online questionnaires or also other information), as well as information on the type of financial instruments that are included in the advice. Since for the moment robo-advisory services are

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[58] ESMA, *Guidelines on Certain Aspects of the MiFID II Suitability Requirements*, 2018, *ibidem*, p. 27-28

[59] Better Finance, *Robo-Advice: Can Consumers Trust Robots?*, 2020, *ibidem*, p. 7). In 2021 the range varied between 30 to 94% (Better Finance, *Are robo-advisors sufficiently intelligent to provide suitable advice to individual investors?*, 2021, *ibidem*, p.28).

[60] Better Finance, *Are robo-advisors sufficiently intelligent to provide suitable advice to individual investors?*, 2021, *ibidem*, p. 30.

[61] Better Finance, *Are robo-advisors sufficiently intelligent to provide suitable advice to individual investors?*, 2021, *ibidem*, p.28.

[62] Articles 44-50 of MiFID II DelReg describe into detail which information must be provided, as well as which requirements must be met in this regard.

[63] Reference can also be made to article 13 and 14 GDPR that determine the information that must be provided to the data subject when personal data are collected. Both articles include the obligation to provide information on the existence of automated decision-making.

often limited to ETF's, clients must be made aware that, contrary to what is the case in traditional investment advice, the advice is restricted to a very limited range of financial instruments. Finally, robo-advisors must stress that they use an approach which is solely number-based, and therefore only rely on mathematical models[64]. All this information is essential in order to avoid that clients overestimate the services offered by the robo-advisor.

23. For most investors, information on costs, risks and potential return is essential in order to be able to make an informed investment decision. As far as *costs* are concerned, most robo-advisors provide a simple and easy understandable fee structure, generally consisting of a combination of a management fee and an average of the underlying fund fees. Whereas some provide the information in a dedicated section of their website, others disclose these costs in the investment advice breakdown. Robo-advisors generally score well when it comes to transparency on the fees they charge: only with regard to the degree of clarity and the presentation of fees there seems to be room for improvement[65]. Results regarding the transparency of *risk* are less reassuring. Research shows that some platforms do not clearly disclose the risk level of the advised strategy / risk level of the portfolio. Moreover, not all platforms clearly display a warning that the investment may lose value. Equally problematic is the focus on future performance scenarios. MiFID determines that where information on future performances is provided investment firms must satisfy with several requirements, including the obligation to use scenarios in different market conditions (optimistic and pessimistic) and a prominent warning that such forecast are not a reliable indicator of future performances (art. 44 (6) MiFID II DelReg). There seem to be two problems in this regard: 1) performance forecasts / expected returns vary widely for the same investor profiles (potentially because some platform exaggerate or overestimate returns for commercial purposes) and therefore have the potential of being misleading for investors[66] and 2) warnings on the unreliability of future performances are sometimes left out, or presented through vague, formulations or not clearly visible[67].

24. Investment firms providing investment advice (such as robo-advisors) must also inform the (potential) client whether or not the advice is provided on an independent basis and whether the investment firm will provide the client with a periodic assessment of the suitability of the financial instruments recommended to that client (art. 52 MiFID II DelReg). According to a study of Better Finance, robo-advisors usually provide investment advice on an independent basis, but do not always meet the obligation to mention they do so and / or the obligation to mention that this prohibits them to receive and retain inducements[68].

25. In the past, it has already been emphasized that the information requirements in MiFID led to an information overload, and therefore investors are generally not able / willing to process all the information obtained. ESMA stresses that this risk might even be higher in an online environment with limited assistance and limited / no communication with a human advisor[69]. However, ESMA recently

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[64] P. Maume, *Robo-advisors. How do they fit in the existing EU regulatory framework, in particular with regard to investor protection?*, *ibidem*, p. 13. On the contrary, human advisors can follow up on rumors and apply forecasts about the future performance of certain markets and industries.

[65] Better Finance, *Are robo-advisors sufficiently intelligent to provide suitable advice to individual investors?*, 2021, *ibidem*, p. 32-33 and 37.

[66] Better Finance, *Are robo-advisors sufficiently intelligent to provide suitable advice to individual investors?*, 2021, *ibidem*, p. 29-31.

[67] Better Finance, *Are robo-advisors sufficiently intelligent to provide suitable advice to individual investors?*, 2021, *ibidem*, p. 36.

[68] Better Finance, *Robo-Advice: Can Consumers Trust Robots?*, 2020, *ibidem*, p. 6.

[69] ESMA, *Final Report on the European Commission mandate on certain aspects relating to retail investor protection*, 2022, *ibidem*, p. 24.

recognized that digital disclosure can also help to improve the provision of information and avoid information overload, in particular through the use of layering techniques[70]. When using layering techniques, a distinction must be made between information that is essential for the targeted group of investors and information that is less essential to them. Whereas, a first layer must only contain vital information, subsequent layers can go into more specific information. Websites using layering techniques should be designed in a way that it is almost impossible to miss key information. Further, the sites must be easy to navigate and must allow investors to download the essential information. When designing such a site, insights from behavioral economics can be used, in order to understand what works for the average investor of the targeted group.

E. Enforcement

26. Investment firms providing robo-advisory services are liable for the violation of the inform your customer rule and the know your customer rule in exactly the same way as other investment firms, providing investment advice and / or portfolio management through human advisors. The mere fact that certain activities, including the definition and monitoring of the algorithm used for the suitability assessment, are sometimes outsourced has no impact on this finding (at least not theoretically), since the investment firm remains fully liable for all shortcomings in outsourced activities. It has been argued that the opacity of the robo-advisory process makes it much harder to hold investment firms providing robo-advice liable[71]. However, this statement is (and needs to be) nuanced.

27. As far as public enforcement is concerned, financial supervisors have an important role to play. First, they have to check the information available on the robo-advisor's website / app in order to ensure transparency and, where appropriate, take action against misleading information (e.g. information exaggerating possible returns, information minimizing risks, …) and against the omission or unclear presentation of information required by law. Secondly, supervisors must verify whether sufficient and clear questionnaires are used which on the one hand prevent that financial instruments are advised whose risks are not understood by the investor and on the other hand enable the robo-advisor to perform a proper suitability test. Finally, supervisors must test the algorithm itself as to ensure that the investment advice it provides is suitable (taking into account the investor's financial situation, as well as his investment objectives). In order to enable the supervisor to evaluate the algorithm, the supervisor must have access to the algorithm and to the details of the decision-making process. According to article 69 (2) MiFID II national supervisors must have the power to access any document or other data in any form which the authority considers could be relevant for the performance of its duties and receive or take a copy of it.

28. Equally important in my opinion is that investors suffering damages – either because they were not duly informed, misled or because the advice given was not suitable – have the possibility to receive compensation from the investment firm. Since private law remedies for the violation of the rules of conduct in MiFID II are not harmonized, MiFID II leaves it upon the Member States to determine if and to what extent the investor can hold the investment firm liable because of their violation[72].

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[70] ESMA, *Final Report on the European Commission mandate on certain aspects relating to retail investor protection*, 2022, *ibidem*, p. 25-28.
[71] P. Maume, *Robo-advisors. How do they fit in the existing EU regulatory framework, in particular with regard to investor protection?, ibidem*, p. 30.
[72] Cfr. ECJ 30 May 2013, C-604/11, *Genil*, ECLI:EU:C:2013:344.

In Belgium for example, it is accepted that general principles of tort and contract law apply, meaning that the investor will be entitled to a compensation when he can prove that the investment firm breached the general duty of care and that he suffered damages as a result of it. The fact that a rule of conduct has been violated by the investment firm automatically implies a breach of the duty of care[73]. In short, when the website of the robo-advisor contains misleading information or when the advice provided by a robo-advisor - through an algorithm - was unsuitable for that investor (either because not all relevant information was obtained from the investor, or because the algorithm was flawed), the investment firm will be liable. With regard to the situation where the advice provided is unsuitable for the investor, it is important to stress that, in my view, the investor does not have to prove that the algorithm is flawed (which would be very difficult). On the contrary, it is sufficient for the investor to demonstrate that the investment advice provided was not suitable. Damages that can be recovered include the actual losses suffered, as well as the profits lost. Although the Act of 2 August 2002 (relating to the supervision of the financial sector and financial service providers) does not have the objective of determining private liability of investment firms, it states that in case of a violation of certain rules of conduct, including the inform and the know your customer rule, and unless proven otherwise by the investment firm, the transaction (not the damage) concerned is deemed to be the result of the infringement (art. 30*ter*)[74].

29. Traditionally, it is argued that European law in itself does not oblige Member States to entitle investors to compensation. Whereas it is true that MiFID II does not require Member States to provide for civil remedies for a violation of the rules of conduct, the Unfair Commercial Practices Directive[75] as amended by the Modernization Directive[76], in my opinion, does. More specifically, one must take into account that the violation of rules of conduct will often constitute an unfair commercial practice. Even if such a violation does not lead to a prohibited *misleading* practice, violating the rules of conduct will in principle be *contrary to the requirements of professional diligence*. Moreover, violations of rules of conduct are likely to materially distort the economic behaviour of the average consumer. Since the Modernization Directive has entered into force, article 11(a) of the UCPD determines that consumers that were harmed by unfair commercial practices must have access to proportionate and effective remedies, including compensation for damage suffered by the consumer. In other words, MiFID may not directly require Member States to incorporate private remedies, the amended UCPD does it indirectly. Specific civil remedies are not necessary, as long as general principles of tort or contract law make it possible for the investor to receive compensation[77].

IV.   Conclusion

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[73] M. Kruithof, "De privaatrechtelijke werking van de MiFID 2004-Gedragsregels: een analyse van de mate waarin zij de wederzijdse rechten en plichten van dienstverlener en cliënt kunnen aanvullen", *Financiële Regulering in de Kering,* Antwerpen, Intersentia, 2011, 308.

[74] See: T. Van Dyck and L. Denturck, "De burgerlijke sanctie van artikel 30*ter* van Twin Peaks II: De tanden van een papieren tijger", *Bank en Financieel Recht* 2013, 274.

[75] Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market and amending Council Directive 84/450/EEC, Directives 97/7/EC, 98/27/EC and 2002/65/EC of the European Parliament and of the Council and Regulation (EC) No 2006/2004 of the European Parliament and of the Council, *OJ* L 11 June 2005, 149/22.

[76] Directive (EU) 2019/2161 of the European Parliament and of the Council of 27 November 2019 amending Council Directive 93/13/EEC and Directives 98/6/EC, 2005/29/EC and 2011/83/EU of the European Parliament and of the Council as regards the better enforcement and modernisation of Union consumer protection rules, *OJ* L 18 December 2019, 328/7.

[77] Cfr. ECJ 10 June 2021, C-303/20, *Ultimo Portfoilio Investment*, ECLI:EU:C:2021:479.

30. Robo-advise makes investment advice (and portfolio management) cheaper, more accessible and has the advantage of requiring a suitability assessment. This might in particular benefit new and young investors for whom traditional investment advice is too expensive and who would otherwise use online brokers to communicate orders in financial instruments, without the suitability of the latter being assessed. Informing young investors about the existence and costs of robo-advice therefore might contribute to investor protection. However, robo-advice also creates specific risks, resulting from the use of an algorithm and the lack of personal contact. Clearly explaining the concept of robo-advice (in order to avoid investors overestimating the advice), asking clear and sufficient questions (in order to allow a proper suitability assessment), streamlining the information through layering techniques and financial supervisors verifying the information presented and the algorithms used by robo-advisors can all help to reduce the risks specific to robo-advisory services. In case things do go wrong, retail investors suffering damages should be entitled to compensation, as soon as they can prove that the advice given was not suitable (without having to prove that the algorithm was flawed).