Guidance on the duty of care in (semi)automated portfolio management

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The Dutch Authority for the Financial Markets

The AFM is committed to promoting fair and transparent financial markets.

As an independent market conduct authority, we contribute to a sustainable financial system and prosperity in the Netherlands.

Management summary

Growing technological possibilities, the low interest-rate environment and the need for consumers to accumulate capital are leading to new investment concepts such as (semi-)automated portfolio management (SAP). The AFM conducted an exploratory review of SAP in the Dutch financial markets in 2017 and decided to issue guidance and clarification regarding fulfilment of the duty of care in SAP. In this management summary, the AFM explains its view of SAP, the main observations from the exploratory review and what the AFM expects from market parties regarding the development and offering of SAP to retail investors.

What is the AFM's view of (semi-)automated portfolio management?

The AFM generally welcomes innovation in financial services, including SAP, as long as the requirements of the duty of care are met. SAP can make portfolio management accessible to a larger group of retail investors, due for instance to the lower minimum initial investment and the (generally) lower costs of the service compared to traditional portfolio management. In addition, SAP offers a good alternative for investors currently using execution-only services[1] for whom this type of service is not suitable. Investors using SAP have a higher level of protection in comparison to execution-only investors and receive more guidance during the course of the service.

What are the AFM's main observations?

- **The AFM notes that market parties are encountering grey areas with respect to meeting their duty of care in SAP.**
  These grey areas relate to various aspects of the SAP service, for instance in relation to the client onboarding and the obligation to update client information. In traditional portfolio management, these aspects are the responsibility of the physical portfolio manager.
- **The AFM sees room for improvement of SAP.**
  As yet, the online possibilities available for replacing the physical portfolio manager and increasing the quality of the service are not being adequately used. For example, simply reproducing a traditional questionnaire used by a portfolio manager in an intake interview in digital form does not usually lead to an adequate online client onboarding.

What does the AFM expect of market parties in the development and offering of SAP to retail investors?

- **Market parties should develop algorithms and online tools with results that primarily serve the customer's interests.**
  Algorithms need to be programmed so that an investment solution that is suitable for the customer is selected. For instance, an algorithm that always selects the proposition or products that are most profitable for the portfolio manager

[1] The term execution only in this guidance is used both with regard to appropriateness and execution only services.

regardless of the input provided by the customer during the client onboarding is not in the customer's interest.

- **Market parties should use algorithms and online tools only if they are able to supervise them effectively.**
  As a result of the greater dependence on automation, systems (including algorithms and online tools) need to be developed, tested and maintained with care. The involvement of various specialist disciplines is essential for this, as this is the only way to ensure quality.
- **Market parties should use a smart questionnaire in the client onboarding.**
  A smart questionnaire among other things involves the following:
    - Control and check questions to ensure that conflicting or unclear answers from a customer are noted and followed up.
    - Exit questions to keep out potential customer of an investment solution that is not suitable.
    - Personalised questions, so that the customer becomes more involved. For example, by responding to previous answers and the customer's personal situation.
- **Market parties should have a properly developed policy with regarding to updating client information.**
  The updating policy should include how the information is updated and what actions and consequences ensue if the customer fails to update their information. Customers should also have the possibility of notifying changes to their situation.
- **Market parties should make optimal use of the possibilities of digital communication.**
  Here we are referring to the use of interactive figures or modules to support customers in choosing a fitting investment service and also during the provision of the portfolio management service.
- **The AFM expects market parties to use external sources.**
  The use of objective external sources such as a salary specification, tax return or pension statement in the client onboarding process can lead to more reliable customer information and therefore to a suitable offer. This can also make the client onboarding easier for the customer.
- **Consider using a quantitative method for establishing risk tolerance.**
  The important benefits of a quantitative method are (i) the possibility of observing inconsistencies in the customer's responses, and (ii) the possibility of allocating an absolute risk tolerance to a customer.
- **Market parties using client data and behavioural insights in acquisition and sales should also apply this expertise in the interests of the customer.**
  The quality of the service, for example in the client onboarding and updating of client information, can be increased by using client data and the insights used by market parties in acquisition and sale. Market parties can for instance use relevant client data such as log in, surfing and click behaviour if this leads to improving the quality of the service and does not contravene legislation and regulation.

In conclusion

With this guidance, the AFM provides further clarification on the fulfilment of the duty of care in the provision of online investment services and in particular for SAP. With this guidance, the AFM also wishes to accommodate innovation that is in the interests of customers. The AFM expects market parties to follow this guidance so that they can fulfil their duty of care and increase the quality of their portfolio management

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1 Introduction

Growing technological possibilities, the low interest-rate environment and consumers' need to accumulate capital are leading to new investment concepts such as (semi)automated portfolio management (SAP). In this guidance[2][1], SAP refers to individual portfolio management that is fully or partially automated[3].

SAP can make portfolio management accessible to a larger group of investors, due to the lower minimum initial investment and the (generally) lower costs of the service compared to traditional portfolio management. SAP therefore offers a good alternative for investors currently using execution-only services but for whom this type of service[4] is actually not suitable. Investors using SAP have a higher level of protection in comparison to execution-only investors and receive more guidance during the course of the service. SAP also offers an alternative to investment advice, since advice is becoming less accessible for clients with limited capital to invest.[5] SAP can meet this need. For these reasons, the AFM welcomes the development of SAP concepts, as long as the relevant provisions governing the duty of care are observed.

1.1 Rationale for this guidance

The AFM announced that it would be monitoring the development of SAP in its Activities Calendar for 2017. The AFM has studied publications, held discussions with market parties and looked at practical examples for this purpose. From this, it appears that market parties are still faced with some uncertainty regarding the fulfilment of their duty of care with respect to SAP. The AFM also notes that the quality of these financial services can and must improve. For instance, the AFM has noted that the suitability assessment carried out at various SAP providers does not meet the requirements of the duty of care. Too often, the AFM sees that some elements of the suitability assessment are properly designed, but that this does not apply to the process as a whole. For suitable financial services to be provided, the entire suitability assessment process needs to be of high quality. These observations have led to our decision to provide guidance and clarity to the market.

1.2 Aim of this guidance

This guidance provides direction and clarity regarding the fulfilment of the duty of care in the provision of SAP by market parties to retail investors.[6] By providing additional clarity, the AFM aims to respond to market parties and accommodate innovation in the client’s interests.

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[2] Overview of AFM guidelines (in Dutch): https://www.afm.nl/nl-nl/professionals/onderwerpen/leidraden-bu

[3] See 1.4.3 for a more detailed definition of this term.

[4] Reference to the type of service in this guidance concerns the type of investment services (portfolio management, investment advice appropriateness or execution-only), including sub types of these services, such as online of physical.

[5] Several banks have migrated their advice clients with limited capital to invest to portfolio management services or execution only services, as they no longer offer investment advice to these clients.

[6] Reference in this guidance to retail investors concerns non-professional investors as defined in Section 1:1 Wft (Wet op Financieel Toezicht, Financial Supervision Act). This guidance refers mainly to clients or consumers, by which we mean (potential) non-professional investors.

The AFM expects investment firms[7] to use this guidance to improve the quality of their portfolio management.

For the preparation of this guidance the statutory framework and interpretations at European level is followed. This guidance takes account of the changes as a result of the introduction of the Markets in Financial Instruments Directive II (MiFID II)[8]. This guidance is also based on the ESMA suitability guidelines.

In its previous guidance De klant in beeld (only in Dutch), the AFM explained what good investment advice and portfolio management should look like. In addition, in its Handboek Online Dienstverlening (only in Dutch) the AFM explains how the client's interests can be given a central priority in the provision of online financial services. The principles of this guidance and the 'Handboek' remain in full force.

1.3 Target group for this guidance

This guidance is intended for market parties that offer or are considering to offer SAP to retail investors. By market parties, the AFM refers to investment firms and banks, but also managers of collective investment schemes and/or managers of UCITS. Reference in this guidance to investment firms thus includes this entire group. The guidance is also relevant for (unregulated) suppliers of technology that is used for the provision of SAP.

While this guidance concerns the duty of care in the provision of SAP, some of the interpretations in this guidance also apply in the context of more traditional portfolio management and other financial services offered wholly or partially in automated form, such as (semi)automated investment advice.

1.4 Basic principles

1.4.1 The regulation on the duty of care is technique-neutral

The existing regulation makes no distinction between traditional portfolio management and SAP; the regulation applies, whatever techniques are used. The AFM accordingly takes as its basic principle that for the interpretation of the duty of care, the current standards for investor protection for traditional portfolio management also apply to the provision of SAP.

In this guidance, the AFM addresses a number of elements, such as the specific opportunities and risks applying to SAP[9], as a result of which another interpretation of the duty of care could be justified.[10] This guidance therefore does not provide an exhaustive description of the duty of care

[7] Investment firm as defined in 4.1 of MiFID II (DIRECTIVE 2014/65/EU).
[8] Directive 2014/65/EU of the European Parliament and the Council of 15 May 2014 on markets for financial instruments and amending Directives 2002/92/EC and 2011/61/EU, OJEU L 173, p. 349-496.
[9] The AFM monitors the growth of automated systems, including algorithms in financial services and provides additional guidance where necessary.
[10] ESMA endorses this in the suitability guidelines, in which the guidelines for the provision of automated services are further elaborated.

provisions that apply to SAP.

1.4.2 Use of market examples in this guidance

To make its guidance more useful in practice, the AFM has used examples we have observed in the market. These are intended for illustrative purposes only and in some cases are a simplified version of reality. It is important that investment firms study the extent to which an example listed actually leads to a good outcome for the client in the specific context of the services they provide. This guidance also contains several examples to give priority to the client's interests by using behavioural insights and current (and yet to be developed) technologies.

1.4.3 Definitions

Terms such as 'portfolio management', 'SAP' and 'duty of care' are frequently used in this guidance. The AFM defines these terms as follows:

Portfolio management is the discretionary management, conducted in the pursuit of a profession or business, other than as a manager of a collective investment scheme or a UCITS, of financial instruments belonging to a person or of funds belonging to this person that are available for investment in financial instruments pursuant to instructions issued by this person or the management of individual capital.[11] If you have doubts as to whether your service qualifies as portfolio management, the AFM refers you to its Leidraad kwalificatie innovatieve dienstverlening (only in Dutch).

The term **SAP** is not defined in the Wft. The element that distinguishes SAP from traditional portfolio management is the degree of human involvement in the provision of the service. SAP is defined by the AFM as individual portfolio management that is wholly or partially automated. This could entail the automated conduct of the client due diligence process, the client onboarding, the investment process, client contact or the entire service.

Duty of care is a term that is used in both civil and public law to indicate that a contractor has an obligation to treat their client with care and act in their interest. The statutory obligations applying to the provision of an investment service depend on the investment service offered (portfolio management, investment advice or execution-only).

When referring to duty of care, in this guidance the AFM refers to the statutory duty of care (as defined for example in Articles 4:90, 4:20 and 4:23 Wft), the ensuring of compliance with the duty of care in the organisation and the duty of care over and above the statutory requirement.

[11] This definition is taken from Section 1:1 Wft.

1.5 Composition of this guidance

In preparing this guidance, the AFM has used generally available literature, publications and discussions with market parties in and outside the Netherlands, interest groups, academics, IT companies and supervisory authorities in and outside the Netherlands.

Chapter 2 explains the main preconditions for the design of a business model when offering SAP.

Chapter 3 deals with the determination of target groups for SAP.

Chapter 4 illustrates the duty of care of an investment firm with respect to the various steps in the customer journey.

Chapter 5 presents a number of final remarks.

Lastly, the **Appendix** presents an overview of the main rules with respect to the duty of care in the customer journey.

2 An adequate design of the business model is needed for proper fulfilment of the duty of care

Like traditional portfolio managers, investment firms offering SAP need to design their business model so that their service is provided in an sound and prudent management. Among other things, this means that they must take adequate measures to combat issues such as conflicts of interest and fraud and they must comply with the suitability requirements. An adequate design of the business model is a precondition for proper fulfilment of the duty of care. The minimum requirements for the business model are stated in the Wft, the Market Conduct Supervision (Financial Institutions) Decree (Besluit Gedragstoezicht financiële ondernemingen Wft, or 'BGfo') and the delegated MiFID II Regulation[12]. Certain elements are further elaborated in the ESMA suitability guidelines, among others. In this section, the AFM addresses in more detail the items of attention that are specifically relevant to the management of firms offering SAP.

2.1 Careful development and management of automated systems

It is very important that an automated system that is used for the provision of financial services to clients is developed, tested and subsequently maintained with care. A wrongly programmed system for portfolio management can have far-reaching consequences for the quality of the service and as a result may have negative financial consequences for clients.

The system development and its maintenance must meet the standards reflecting the duty of care and the generally accepted norms for IT management such as COBIT 5[13] and ISO 27001/27002.[14] These generally accepted IT norms are not discussed further in this guidance.

2.1.1 Use the client's interests as the starting points in the design of the system

One benefit of automated portfolio management is that any human influence towards particular portfolios or personal preferences in individual client contacts can be prevented.[15] If investment decisions are made on the basis of pre-programmed algorithms, the design of these algorithms should take the client's interests as the starting point.[16]

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[12] Delegated regulation (EU) 2017/565 MiFID II of 25 April 2016.
[13] Control Objectives for Information and Related Technology (COBIT) is a framework for the design of IT governance and the associated IT organisation and IT architecture.
[14] This is an international standardisation norm of the International Standardisation Organisation (ISO) for information security for various types of organisations, such as businesses, government bodies and not-for-profit organisations.
[15] Both investors and portfolio managers make use of heuristics (whether consciously or not), and their decisions are influenced by biases that may lead to unintended outcomes. Examples of this are the confirmation bias (attaching more value and attention to information that confirms one's own opinion), or a preference for shares from one's own country that a portfolio manager wants to include in the portfolio (home bias).
[16] See also paragraph 3.2 'Stuur uw klant niet' and paragraph 3.3 'Pas 'nudging' zorgvuldig toe' in the Handboek Online Dienstverlening (only in Dutch).

Programming algorithms in such a way as to select the proposition or products that are most profitable for the portfolio manager regardless of the information provided by the client during the onboarding is not in the client's interests.

2.1.2 Involve various specialisms in the design fase

The design of automated investment services such as SAP needs to involve people with various specialisms and competences covering areas such as financial models, investing, regulation and compliance. If this is not the case, there is a risk that the results will be systematically sub-standard or even harmful for the financial position of clients.

Even after implementation of the automated system, these various specialisms have a role in the monitoring of the system operation and the identification of necessary adjustments (for example, due to changes in legislation and regulation, changes in products or on the basis of the findings from monitoring the system operation).

The above moreover means that the knowledge and competences of people not involved in client contact at the firm has to be safeguarded and that this is not only relevant for those who are involved in client contact.[17]

2.1.3 Test automated systems regularly

For automated investment services such as SAP, it is important that investment firms regularly test the automated systems (in accordance with the requirements of the ESMA suitability guidelines)[18] against generally recognised norms for IT management.[19] The test procedure has to include the involvement of experts in the fields of investment services, risk management and compliance in the user acceptance tests. These experts also need to be involved in the 'go/no go' decision before the algorithm is taken into operation.

2.1.4 Continuous monitoring of system operation

An investment firm needs to have a policy describing how the automated systems operate, how they are monitored, how errors identified in the algorithm are dealt with and how they are corrected.[20] The frequency and depth of the monitoring should be determined on the basis of both the complexity and the dependency on the algorithms used. When an algorithm is modified, it is important that the date of and the reason for the modification are properly documented, as well as that previous versions of the algorithm in use are archived.[21]

In addition, the documentation should include an audit trail allowing for the tracing of which clients have been served and when, and which version of the algorithm was used. This will enable an investment firm to identify specific transactions and clients if it emerges that a specific version

[17] Guideline 11 of the ESMA suitability guidelines.
[18] Guideline 8 of the ESMA suitability guidelines.
[19] As established for example in COBIT 5.
[20] Guideline 8 of the ESMA suitability guidelines.
[21] Guideline 8 of the ESMA suitability guidelines.

of an algorithm contains an error and has led to sub-standard results. Furthermore, the SAP provider must have a process that comes into operation if an error is identified in an algorithm. Should such a situation occur, the provider must also determine the impact and scale of the identified error, inform clients adequately and compensate them if necessary.

2.1.5 The compliance function is independent and effective

For SAP, the compliance function has a specific nature, because due to the multi-disciplinary material involved in the use of automated systems, such as algorithms, its internal audits may be more complex than for traditional portfolio management. Knowledge and understanding of the services, the products offered and the algorithms used are preconditions for the compliance function. As stated above, compliance plays an important role in the testing and monitoring of the quality of the automated system and the underlying algorithms. To fulfil this role satisfactorily, the compliance function must be sufficiently independent and effective.[22]

2.1.6 Cautiousness is required when applying self-learning algorithms

An investment firm that uses or proposes to use self-learning algorithms within SAP must be in a position to effectively supervise the operation and quality of the algorithms and the outcomes of the algorithms. If this is not possible, the use of (self-learning) algorithms within SAP is not desirable from the point of view of the client's interests.

2.2 Outsourcing to third parties

The law offers investment firms the option of outsourcing to third parties. The outsourcing may involve IT, order execution or compliance, for example. Outsourcing does not discharge the investment firm (the provider of the SAP concept) from its responsibility for the quality of the performance of tasks that are outsourced. The outsourcing of system development also requires the availability of sufficient knowledge and expertise at the investment firm, so that there is understanding of the operation, risks and rules behind the automated systems at the investment firm. The involvement of relevant specialisms in the formulation of the design, definition of changes, and the testing and acceptance of (adjusted) systems is also important when tasks are outsourced.

The outsourcing agreements must therefore be properly documented and the investment firm must ensure that these are observed. The investment firm should also contractually establish the right of audit.

In cases where the investment firm engages an external compliance service (for example, to evaluate the operation of algorithms), it is desirable that the relevant knowledge and expertise is also available at the investment firm, or that this is transferred.

[22] See Article 22 of the Delegated Regulation (EU) 2017/565 MiFID II of 25 April 2016.

2.3 Careful recording of client data presents opportunities

An investment firm has to record a lot of information.[23] If the SAP service is highly automated, the recording of relevant client information can be designed to be more efficient than with traditional portfolio management. The initial intake will usually be digital and will therefore be recorded directly. Subsequent changes to the client information, such as those effected due to regular updating, can easily be added to the file. Careful recording requires that previous data, such as the initial client (onboarding) information and client profile, are saved.

The files must show the steps that have been followed. This audit trail can be used for analytical purposes and provide insight to clients regarding the specific actions taken in the past. This could include, for example, the recording of the client's responses to the online client onboarding that form the basis for the risk profile or the investment portfolio, or changes in the client's investment objectives or risk tolerance.

2.4 Cyber security and protection of client data is crucial

The protection and correct processing of client data are also part of a sound and prudent management. As with any online service, cyber security, including the protection of privacy-sensitive data, is crucial for the functioning of an SAP service and client confidence in this service. Robust security measures need to be in place to safeguard (client) data and the reliability and availability of the system. When determining the necessary measures, the generally accepted information security frameworks such as ISO 27001[24] and NIST CSF[25] can be used.

[23] See Section 35 and 35.0a BGfo and guideline 12 of the ESMA suitability guidelines.
[24] This is the international standardisation norm of the International Standardisation Organisation (ISO) for information security for various types of organisations, such as businesses, government bodies and not-for-profit organisations.
[25] The US National Institute of Standards and Technology Cyber Security Framework (NIST CSF) includes guidelines for an effective design of computer security within organisations for preventing, detecting and responding to cyber attacks.

3 Determination of target group and SAP

In Chapter 2, we noted that a properly designed business model is a precondition for adequate fulfilment of the duty of care in practice. With the arrival of MiFID II, it is now an explicit requirement for investment firms that the determination of their target group should be embedded in their business model.[26] This chapter deals with a number of requirements that are relevant to SAP.[27]

3.1 Ensure that the SAP concept suits the target group for the products

An investment firm determines the target group for the products it wishes to distribute. If an investment firm is considering the distribution of products via SAP, it must also assess whether the SAP concept is fitting for the identified target group for these products.

Correspondence of SAP concepts with previously identified target groups: an example

The AFM sees in the market that some investment firms have identified specific target groups and have developed various SAP concepts for these groups that meet the service needs and features of these groups. A (prospective) client can, for example, choose the proposition that is specifically designed for clients wishing to invest for their pension or for (the education of their grand) children. For example, for self-employed persons investing for their pension a special pension proposition can be developed that takes account of the fluctuations in income of this group and focuses on the long term, for which an appropriate investment policy is then formulated. This can for instance feature automatic reduction of risk in the portfolio as the intended retirement date approaches.

3.2 Determination of the target group does not affect the need for the suitability assessment

The AFM wishes to stress that the obligation to determine the target group and the related distribution strategy is not the same as the obligation to carry out the suitability assessment at individual level for each client on the basis of their financial position, investment objectives, risk tolerance, knowledge and experience (see 4.2).[28] These two obligations exist side by side.

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[26] See among others Section 4:14 Wft, Sections 32-32c BGfo and the ESMA guidelines on product governance requirements of 2 June 2017

[27] This section does not aim to provide an exhaustive list of the requirements applying to product development and distribution (product oversight governance, or POG) that apply with the introduction of MiFID II. It is thus important for investment firms offering SAP to be aware of all the relevant POG rules arising from MiFID II (level 1 and level 2) and the ESMA guidelines on product governance requirements of 2 June 2017 in which the requirements for matters including the target group determination and the distribution strategy are explained in more detail.

[28] See also guideline 33 of the ESMA guidelines on MiFID II product governance requirements.

3.3 Regular evaluation of the target group and distribution is required

Besides determination of the target group, firms must conduct a regular evaluation, or when there is reason to do so, of whether the products offered and services provided are still fitting for the target group and the distribution strategy.[29] An investment firm will adjust the target group or the distribution strategy as necessary so that only clients who belong to the target group are accepted.

The AFM notes that 'regtech' parties are appearing that specialise in the collection, processing and analysis of relevant client data. They offer investment firms efficient solutions for carrying out their duty of care, including the target group determination, in a proper manner. This reduces the risk of (prospective) clients investing in unsuitable products. Data analyses can also be used more widely, for example for the monitoring of (un)desirable results for groups of clients or for the improvement of the client onboarding.

Evaluation and possible adjustment of the distribution strategy: an example

A client states that they wish to place a sum of EUR 40,000 with an SAP provider. This sum is 80% of their freely investable capital. After one month, prices have risen somewhat and the client decides to withdraw EUR 30,000. Another month later, they place EUR 30,000 under management again. The investment firm identifies this entry and exit behaviour of the client. The investment firm contacts the client to establish the reasons for this. Perhaps the client is attempting to time the market on their own? The investment firm then uses this individual client signal also for evaluation at the level of its distribution strategy: the investment firm checks whether this behaviour is occurring more frequently among its clients. The investment firm may, for example, adjust its distribution strategy depending on the findings.

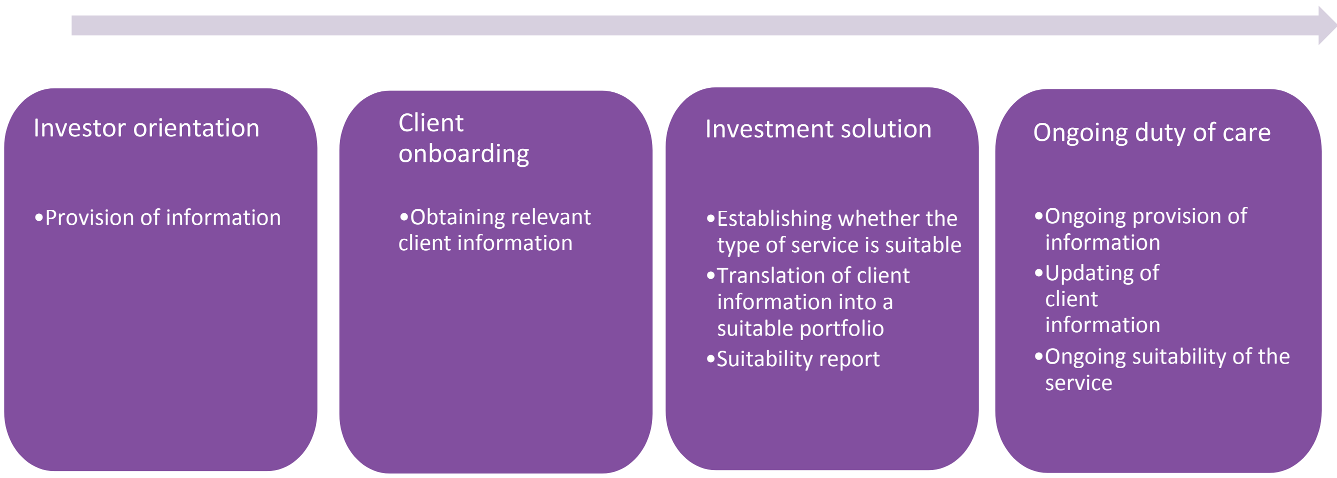
[29] See Section 32(b) (8) BGfo.

4 The duty of care in the client journey

This chapter deals with the duty of care of investment firms in the context of the customer journey[30]. The Wft[31] contains what is known as an overarching norm for the duty of care. Briefly, this norm states that when offering an investment service such as SAP an investment firm must promote the interests of its (prospective) clients in a fair and professional manner.[32] In addition to this overarching norm, the duty of care is also elaborated in specific rules governing the provision of information and the suitability assessment.

In this chapter, the AFM discusses elements of the duty of care relevant to SAP. To make this chapter more accessible, the relevant statutory provisions are listed in an overview in the **appendix**.

Figure 1. customer journey



4.1 Investor orientation

The first phase of the client journey concerns the orientation of the (prospective) client with respect to the SAP concept. Advertisements and the provision of information play an important role here.

4.1.1 Inform consumers regarding the investment service

All the information, that is both the information an investment firm is required to provide and non-mandatory information such as advertisements, must be correct, clear and not misleading.[33] It is important that the consumer is informed regarding the substance and scope of the service before

[30] When the AFM refers to the term 'customer journey' in other documents the interpretation of this term may differ from that used in this guidance.
[31] Section 4:90 (1) Wft.
[32] *Parliamentary Papers II* 2006-2007, 31 086, no. 3, p. 133.

[33] Section 4:19 (2) Wft.

they become a client. For example, consumers must be aware that SAP entails individual portfolio management, what portfolio management is and what the mutual rights and obligations are.[34] In its explanation of portfolio management, the investment firm can state that portfolio management relate to the medium to long term objectives and that this is definitely not an execution-only service.

4.1.2 Offer assistance in choosing a type of investment service

Especially when an investment firm offers several types of investment service, it is good to support consumers in selecting the service that is right for them. This is especially relevant if the firm offers both an execution-only service and portfolio management.

An investment firm can for example have consumers go through an online selection module. Using statements or questions, or a combination thereof, the online module will reveal the service that the consumer needs and a potential solution for capital accumulation. These potential solutions do not necessarily all have to be offered by the investment firm itself. In practice, this means there may be consumers whose results show that this investment firm cannot meet their service needs. The AFM stresses that an online selection module must be structured primarily in the interests of the client and not solely on the basis of commercial considerations in order to lead the client to take the services or products that are most profitable for the portfolio manager.

4.1.3 Online communication presents opportunities for improving information for the client

The provision of online services presents numerous opportunities for presenting information in an accessible form in an app or on a website with the help of interactive graphics, online simulations or search instructions. The firm can also highlight certain information by using pop-ups. The provision of information on mobile devices with smaller screens in an adequately accessible and balanced form is more challenging. Examples of this are explanations or small print with respect to forecast returns or figures showing growth scenarios.[35]

With SAP it is particularly important that the information is clear and comprehensible to the client without additional explanation, when there is little or no possibility of contact with qualified staff. The investment firm can design its information properly by testing in advance whether the information will be read and understood.[36] In addition, the ongoing provision of information must be adequate. This can be achieved by continually testing which communication channel is most suitable for clients and works best for the investment firm’s purpose in providing the information.

[34] The mutual rights and obligations in relation to the service must be included in a client agreement (Section 4:89 (1) Wft).
[35] See also guideline 1 of the ESMA suitability guidelines.
[36] For example, presenting legal texts such as product conditions or fee structures in comprehensible language.

4.1.4 Use behavioural insights, aggregate client data and methods of persuasion to serve the client's best interest

The investment firm can improve the quality of the service by using client data and consumer behavioural insights also used by market parties in acquisition and sale. Market parties can for instance use relevant client data such as log in, surfing and click behaviour if this improves the quality of the service and does not contravene legislation and regulation. The AFM expects that if firms use client data and behavioural insights for online acquisition and sale, they will also apply these data and persuasion techniques to prioritise the client's interests. This applies to the client onboarding or the determination of the target group, but also to contacting clients to update their information.

The AFM sees more opportunities for improving the online provision of information:

- One example concerns consumer surveys, both before a concept goes live and on a regular basis. Test your information for comprehensibility and accessibility with clients, for instance through user questions. See whether your clients draw the correct conclusions on the basis of the information provided.
- Take account of typical consumer behaviour or the behaviour of a specific target group when designing the SAP concept, the user applications and the distribution channels. Certain objectivised assumptions of a specific target group as described in Dienstverlening op Maat (only in Dutch) may be of assistance here.
- By presenting information in smaller amounts to (prospective) clients, you can help them process the information. This can also be useful when presenting information on mobile devices with smaller screens.
- Providing information online makes it possible to layer the information. If a (prospective) client needs more information or explanation, they can go to the next layer of information.

4.2 Client onboarding

During the client onboarding, an investment firm obtains information from the client in order to establish whether the type of service provided is suitable for them. An investment firm is obligated to obtain information on the client concerning their financial position, investment objective, risk tolerance, knowledge and experience to the extent reasonably relevant for the portfolio management.[37]

The AFM has already listed the information to be obtained in previous publications. For this, see section 4 of the guidance De klant in beeld (only in Dutch). Elements of the suitability assessment

[37] An investment firm must inform clients and prospective clients regarding the importance of the suitability assessment. In addition, an investment firm can include a link in its information to a web page (only in Dutch) where the AFM explains to consumers why an investment firm has to obtain and update certain client information. The AFM expects investment firms to be able to inform (prospective) clients in this respect.

are also described in more detail in the Delegated MiFID II Regulation and the ESMA suitability guidelines. The following deals with the elements that need to be considered with reference to SAP.

4.2.1 The amount of information to be obtained is proportionate

An investment firm must obtain sufficient relevant client information to be able to construct a suitable portfolio for the client in question. The principle of proportionality gives an investment firm the flexibility to adjust the amount of different information that has to be obtained to factors such as the products and services that it offers. For example, in case of more complicated client situations or when investing in complex products, the proportionality principle means that the investment firm has to request more information.[38]

On the basis of the information obtained, an investment firm must in any case be able to establish that the transaction that is taken in the context of the portfolio management service meets the following criteria:

a) The transaction must meet the investment objectives of the client in question, including the client’s risk tolerance.
b) The transaction must be such that the client is financially able to bear any related investment risks consistent with his investment objectives.
c) The transaction must be such that the client has the necessary experience and knowledge in order to understand the risks involved in the transaction or in the management of his portfolio.

4.2.2 The design of the online client onboarding leads to reliable information being obtained

In a SAP concept with little or no client contact, it may be difficult to obtain client information of sufficient quality and to translate this into a suitable investment portfolio.[39] An investment firm must design its client onboarding so that reliable information is obtained. To obtain an effective perception of the client, the questions need to be unambiguously and not contain multiple elements. The questions must also be formulated so that sufficiently specific answers are obtained. An investment firm must also ensure that inconsistencies or strange answers are recognised. This can be achieved by the use of exit, control and check questions and making connections between the answers given. Simply converting a questionnaire used by a portfolio manager into a digital questionnaire without human interaction and without further adjustments will usually not lead to adequate client onboarding.

An investment firm also needs to have policy and procedures in place that state the actions the firm will take if the information from the client is incomplete or contradictory. This may involve asking additional questions or contacting the client in order to put further questions. An

[38] Guideline 3 of the ESMA suitability guidelines.
[39] Article 54 (1) of the Delegated Regulation (EU) 2017/565 MiFID II of 25 April 2016 explicitly states that an investment firm remains responsible for the suitability assessment when automated systems are used.

investment firm may also decide not to offer the SAP concept in question because it cannot be established whether the SAP concept and the products offered are suitable for the client.

Investment firms must also have a policy in which they designate in advance the complicated client situations that require a further suitability assessment.[40] A complicated client situation could for instance be a legal entity, or a group of two or more natural persons. An investment firm must design its SAP concept so that this is taken account of in the suitability assessment, or it must ensure that these clients cannot invest through this SAP concept.[41]

Examples of online questionnaire designs identified by the AFM:

- Questions in questionnaires are tested for quality and comprehensibility by means of consumer surveys.
- A good online questionnaire uses exit, control and check questions and makes connections between the answers given.
    - Use control questions to ensure that the client has sufficiently understood the question and check that the answers given are consistent. For instance, by asking the same question in various ways and seeing whether the answers the client gives are consistent.
    - Asking filter questions can help to exclude clients that do not fall within the target group as much as possible. Clients with a more complicated client situation can then be directed to concepts that correspond better to their service needs, even in cases where the products and service are relatively simple and transparent. In practice, the AFM has seen technology that can identify clients who are not financially able or prepared to sustain any losses on their investments. These potential clients are not able to use the concept, for instance because the potential client is unemployed or he wants or needs to invest too defensively in a low interest-rate environment.
    - A built-in flagging or warning system can detect inconsistencies in the answers and notify these to the firm. If the answers are not consistent, the client will have to be contacted for further guidance. This may also lead to the conclusion that the concept is not suitable for the client in question.
- The questionnaire is personalised so that the client feels more engaged. For example, by responding to previous answers and the client's personal situation. This could include referring to the person by name, or using amounts that the client has entered in calculations to make abstract financial information more tangible for him and make a connection with his personal situation.
- If the client has questions while completing the questionnaire, it is a good idea to offer them a simple option to ask questions using a chat function or by telephone.

[40] Article 54 (6) of the Delegated Regulation (EU) 2017/565 MiFID II of 25 April 2016 and Guideline 6 of the ESMA suitability guidelines.

[41] The AFM stresses that even in the case that an investment firm offers only simple and comprehensible products, certain client situations may be sufficiently complicated that the SAP concept in question is not suitable for this group of investors.

4.2.3 Consider using a quantitative method for establishing risk tolerance

With regard to questions on risk tolerance, the AFM recommends that a quantitative questionnaire should be used. While there is no one optimal assessment method, the AFM prefers using quantitative questions on the basis of research and the theoretical advantages of using quantitative assessment methods for risk tolerance.

There has been extensive academic study of the assessment of risk tolerance. The AFM notes that, given the methods currently used in the market, investment firms still make little or no use of these academic insights, even though academic research has produced a wide range of more or less validated methods. There are two basic approaches to establishing risk tolerance:

1. Qualitative questions, usually in the form of multiple choice. For example, the following question based on the DOSPERT method[42]: How likely is it that you will bet one day's income on a horse race? On a scale of 1 to 10.
2. Quantitative questions. For example: You have the following choice: you get €100 for certain, or you gamble on a coin toss whereby you get €200 in the case of heads and nothing (€0) for tails.

An important advantage of the quantitative method is that an absolute risk tolerance can be attributed to a person. This can then be linked to investment risk and therefore to the investment policy, while with the qualitative (more psychological) questions, the risk tolerance is only established relative to other investors.

Action in case of inconsistent answers

It is important to use a method that identifies inconsistencies in the answers so that action can be taken in response to this. There is a range of potential quantitative assessment methods that can be used. The important distinction is that some of these methods can identify inconsistent answers and others do not. The fact that no inconsistent answers are identified does not mean that they are not there. The important benefit of measuring inconsistency in answers is that an identified inconsistency can then be addressed. It may be that the investor has not properly understood the question, or he may have doubts regarding his answers for other reasons. This can be addressed by means of follow-up questions (online), or perhaps by telephone contact or a discussion with the client concerned regarding their risk tolerance.

What are the elements to be included in the design of the assessment of risk tolerance?

The AFM has the following six tips with respect to how the questions should be presented:

1. Use example amounts that are realistic in the context of the client's decision.

[42] The DOSPERT method is an academic validated qualitative method devised by Weber, Blais and Betz. The questions and answers are based on the domain-specific risk-taking scale (DOSPERT). The method assesses the likelihood that people will take actions involving risk.

2. Use a context that relates to the investment objective. Risk tolerance with respect to investing for a pension or for the education of children may be very different (domain dependency).
3. Use average percentages, neither extremely high or low (probability weighting). People are disproportionally influenced by low possibilities and certainty (certainty effect), consumers give excessive weight to both. We therefore recommend using percentages between 40% and 60% in the assessment. So not a likelihood of 1% that the full initial investment will be lost.
4. State amounts as neutrally as possible and use relevant reference points. People take losses more seriously than they do gains (loss aversion). The way in which amounts are presented in terms of gains or losses strongly influences preferences. It is important that amounts are not presented as gains or losses, and that both the upside and downside potential is presented in the assessment.
5. Make sure that accompanying texts are neutrally formulated. The tone of accompanying texts can have a strong influence on how questions are answered. To avoid this, it is important that the risk tolerance assessment is presented in as neutral a way as possible.
6. Keep it short and simple.

4.2.4 Additional methods of obtaining information beside an online questionnaire

The quality of the information obtained[43], in addition to the quality of the translation of the information obtained into a suitable portfolio (possibly by means of an algorithm) largely determines whether the chosen investment solution is suitable. A personal interview or a digital questionnaire are not the only ways of obtaining an accurate picture of the client's situation. Access to personal data can further improve the client profile.

This may be through use of the pension overview or a tax return, if the client is prepared to provide this information. These data can be included in the questions or the outcome of the suitability assessment.

On the basis of the revised Payment Services Directive (PSD2)[44], an investment firm can also consider using information on the client's payment behaviour and, by implication, their financial position.[45]

[43] The quality of the information obtained is determined largely by the reliability of the information that the client provides. Article 54 (7) of the Delegated Regulation (EU) 2017/565 MiFID II of 25 April 2016 includes a non-exhaustive list of measures that an investment firm should take in order to obtain reliable information.

[44] Payment Services Directive (EU) 2015/2366.

[45] The AFM notes that innovative concepts are being developed in this area for linking as many external data sources as possible to generate a client profile and monitor the suitability of portfolios in real time.

Use of external sources may lead to more reliable information on the client being obtained, and can enhance the client profile. It is also important that the client is asked to check the data, and the related assumptions. Investment firms must be critical regarding the type of information that is sufficiently objective to be used.[46]

4.3 Investment solution

In this phase, the information obtained is translated into a suitable solution for the client. When arriving at this solution, an investment firm must take account of the principles stated in the ESMA suitability guidelines and section 5 of the guidance De klant in beeld. Various elements of this with respect to SAP are dealt with in more detail below with respect to SAP.

4.3.1 From obtaining information to a portfolio

After having established that the type of service is suitable for the client, an investment firm will translate the information obtained into a portfolio that is suitable for the client. Investment firms must have policy and procedures in place to ensure that clients are linked to suitable investments.[47] If no suitable model portfolio or investments are available, the conclusion has to be that the service is not suitable. Use of a too limited number of model portfolios could not be sufficient for a broad diversity of clients. The client's risk profile should also not be too broad, since it will then lose its value with respect to the identification of suitable investments.[48]

4.3.2 The investment firm establishes the risk profile and constructs the portfolio

In portfolio management, the investment firm is responsible for establishing the risk profile and constructing the portfolio. The nature of this service means that asking the client to assess themselves or make their own choice for a particular risk profile is inappropriate.[49] This also applies to SAP.[50] Asking the client to state which risk profile or portfolio they themselves consider to be suitable is not considered by the AFM to constitute determination of the objective and the risk tolerance. What is possible is that different elements of the risk tolerance are established and a profile is determined by the investment firm on this basis in combination with the other information obtained. This profile can be presented to the client, and the client may have the possibility to choose a different portfolio, as long as this portfolio is also still suitable on the basis of the information obtained. However, the risk profiles should not be too broadly formulated, as explained in section 4.3.1.

[46] See also chapter 3 of the AFM document Dienstverlening op Maat (only in Dutch) .
[47] The investment firm must consistently include all the available information on the client that is relevant for deciding whether an investment is suitable for that client, including the current investment portfolio (and the assets allocation within that portfolio) and all the key features of the investment that are included in the suitability assessment, including all the direct and indirect costs for the client (guideline 8 of the ESMA suitability guidelines).
[48] Guideline 8 of the ESMA suitability guidelines.
[49] See also guideline 4 of the ESMA suitability guidelines.
[50] See Article 54 (1) of the Delegated Regulation (EU) 2017/565 MiFID II of 25 April 2016.

4.3.3 Suitability report

Once the information obtained is translated into a suitable portfolio for the client, the investment firm will provide regular suitability reports to the client. These reports should explain how the investments still reflect the preferences, investment objectives and other characteristics of the client.

4.4 Ongoing duty of care

In this phase, client information is updated and the portfolio manager checks whether the portfolio is still suitable for the client's situation or whether it needs adjustment. Information will also be provided on the costs charged, the returns, the investment decisions and the changes to the information initially provided by the investment firm. During the period of the investment service, the investment firm must take account of the principles stated in chapter 6 of the guidance De klant in beeld (only in Dutch).

4.4.1 Ongoing provision of information

An investment firm has to provide certain information, both prior to and during the provision of the service. The published information should continue to be relevant and up to date, and there are regularly recurring reporting requirements in relation to costs, best execution and the suitability report.

SAP, and online services in general, offer numerous opportunities for making the ongoing provision of information more user-friendly and straightforward. Online tools can assist clients by providing more straightforward continuous information on the feasibility of the investment objective and encourage adjustments, such as making additional payments or reducing monthly withdrawals.

It is in the client's interests that investment firms measure whether clients actually open and read the information and include this in their decision as to whether the information should be brought to the attention of clients again and possibly be presented through a different communication channel.

4.4.2 Formulate a practical updating policy

In an ongoing client relationship such as portfolio management, the suitability assessment should take place on inception and on a regular basis going forward. The information obtained must therefore also be updated regularly so that suitability can be continually assessed.[51]

If personal interviews are not held regularly, it can be difficult to actually update the client information. An investment firm must therefore formulate a policy and procedure for adequately updating relevant client information.[52] This policy must include how the investment firm deals with the updating of client data, which data have to be updated and the frequency with which this

[51] See also guideline 5 of the ESMA suitability guidelines and the guidance De klant in beeld (only in Dutch), section 6.
[52] Article 54 (7) of the Delegated Regulation (EU) 2017/565 MiFID II of 25 April 2016.

has to occur. The policy must also state how the data are updated, what happens to the updated data and what actions and consequences ensue if the client fails to update their data. The investment firm can assess whether the current method of updating is effective and whether there are more effective ways of obtaining up-to-date client information. This concerns for example establishing the logical moments when the client can be expected to respond more readily or the use of various communication channels. Only sending e-mails with a request to update the information will not usually be sufficiently effective.

The investment firm may introduce differentiation in its updating policy with respect to the frequency of updating. For example, increasing the frequency of updating for clients with a high risk profile, or clients that heavily depend on their invested assets. Some information, such as income information and/or risk tolerance, can be updated more frequently than other information, such as knowledge and experience. The firm must also monitor that the client information it has is complete and is not out of date.

In addition to the mandatory updating of client data, the client must also be able to notify the investment firm of relevant changes in their situation[53]. The client has to be aware that they are expected to provide this information to the investment firm. For this, it is essential that such information can be easily notified within the SAP concept.

The investment firm has to check whether the portfolio is still suitable for the client or requires adjustment on the basis of the updated client information.

4.4.3 Regular testing of the suitability of the service

An investment firm is well advised to monitor whether the service is still suitable for the client during the provision of the service. In an ongoing client relationship, it should test the suitability at least once a year or more frequently if necessary.[54]

Besides the fact that updated client information may be cause for a reassessment of the suitability, there may also be other indicators. One indication that the client is not receiving the correct service is if they give frequent instructions for entry and exit. This suggests that the SAP service is being used more as a savings account or an execution-only service, and therefore may not (or no longer) be the most suitable service for the client in question. An investment firm can analyse the behaviour of a client to see if the client is using the most suitable service. If it emerges that a relatively large number of clients are not using the most suitable service, the investment firm will need to establish how this has happened. This may for instance involve a review of the information provided on the service and the client onboarding.

Measuring the number of times that the client logs in to their portfolio environment can also be reason for the firm to consider the service provided to the client. This could for example lead to additional questions for the client in the context of the suitability assessment. This may reveal

[53] This may concern for instance life events, such as divorce, loss of employment or death in the family, or other changes affecting how the assets are managed.

[54] Article 54 (13) of the Delegated Regulation (EU) 2017/565 MiFID II of 25 April 2016.

that the client's situation has changed or that the client is not able to cope with price fluctuations in the market.

Another example would be if a client suddenly makes numerous withdrawals that are not consistent with their previously stated objective. How people actually behave is often more revealing than the answers they give to a regular questionnaire. Using such information will give an investment firm a better perception of the client and this can be taken into account with respect to the service provided to that client. It is important that any assumptions made on the basis of data are checked with the client. This is important to ensure that any actions taken by the investment firm, such as moving the client to a higher risk profile, are actually suitable for the client.

5 Conclusion

With this guidance, the AFM aims to provide investment firms with further clarification regarding the fulfilment of their duty of care when offering SAP. Market parties can use this guidance for the (further) development of their existing or new SAP concepts. By providing further clarity, the AFM hopes to accommodate innovation that is in the interest of clients.

The information in this guidance is subject to change, since the market and technological possibilities are developing. Insights may therefore change or be added to as a result of this or due to new regulation.

The AFM launched the InnovationHub together with DNB in 2016. Experts from both organisations work together to inform market parties regarding supervision and the associated regulation of their innovative financial services and products. The AFM offers this support to both new and existing market parties, regardless of whether they are subject to supervision by the AFM or DNB. The AFM is open to questions or signals with respect to supervision and associated regulation relating to innovative financial products and services.

If you have questions regarding the duty of care with respect to SAP or other automated investment services after reading this guidance, you may contact the AFM by e-mail to ondernemersloket@afm.nl.

Appendix: Overview of important regulations regarding the duty of care in the customer journey

Subject	Brief summary	Location of laws and regulations
Investor orientation		
Provision of information	All information, both mandatory and non-mandatory information (such as advertisements) provided by an investment firm must be correct, clear and not misleading. This means for instance that the investment firm formulates the information in language that is comprehensible for the client, that it makes the information sufficiently easy to find and that it provides a similar description of the risks and disadvantages of an investment service or financial instrument as its description of the benefits. The information that has to be provided mandatory is further described in the legislation and regulation.	Articles 44-54 of the Delegated Regulation (EU) 2017/565 MiFID II Articles 4:18a, 4:19, 4:20, 4:22, 4:23 Wft and the elaboration thereof in lower regulation such as Articles 31(g), 52-56, 58 and 58(a) BGfo ESMA Suitability guidelines ESMA MiFID II Q&A Beleidsregel informatieverstrekking (only in Dutch)
Intake, perception and investment solution		
Client classification	Investment firms must qualify clients as retail investors, professional investors or eligible counterparties, with clients in the first category enjoying the highest level of protection and the last category enjoying the lowest level. Clients may also request to be moved from one category to another in order to enjoy a higher (opt down) or lower (opt up) level of protection.	Article 44 of the Delegated Regulation (EU) 2017/565 MiFID II Articles 4:18(a)-4:18(e) Wft Article 49(b) BGfo
Client onboarding	An investment firm is obligated to obtain information in the interests of the client with respect to the client's financial position, knowledge, experience, investment objective and risk tolerance to the extent reasonably relevant to the portfolio management.	Articles 54 and 55 of the Delegated Regulation (EU) 2017/565 MiFID II Article 4:23 Wft

From client profile to suitable investment solution	On the basis of this information, the investment firm must establish whether the investment solution (investment portfolio) meets the investment objectives, including the client's (mental) risk tolerance, is such that the client can financially bear the risks associated with their investment objectives, and such that the client has the experience and knowledge to understand the risks associated with the transaction or the management of their portfolio.	Section 80.0(a) BGfo ESMA suitability guidelines AFM guidance, including the guidance De klant in beeld (only in Dutch)
Ongoing duty of care		
Ongoing provision of information	An investment firm has to provide certain information, both prior to and during the provision of the service. During the duration of an agreement, the client must be kept informed with regard to material changes in the previously provided pre-contractual information (such as the order execution policy). An investment firm must also provide detailed information on a regular basis on matters such as the portfolio, the realised return, the costs and the transactions executed. MiFID II introduces new regularly recurring reporting requirements regarding the total costs of products and services, the quality of order execution (best execution) and the suitability report.	See provision of information Articles 60, 62-66 of the Delegated Regulation (EU) 2017/565 MiFID II
Updating the client profile	The client onboarding is not only required on inception. The client information obtained must be updated in the case of an ongoing client relationship, which is the case with individual portfolio management. Regular updating is essential, and must be carried out at least once a year.	Articles 54 and 55 of the Delegated Regulation (EU) 2017/565 MiFID II Article 4:23 Wft Article 80.0(a) BGfo ESMA suitability guidelines AFM guidance, including the guidance De klant in beeld (only in Dutch)

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