Trend Monitor 2022

4 November 2021

Introduction

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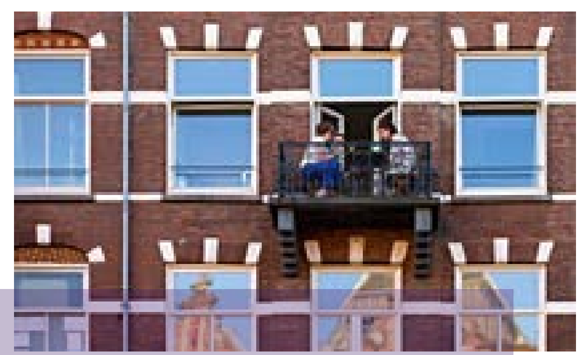

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Introduction

In the Trend Monitor, the AFM describes the important trends and related risks in the financial sector. The Trend Monitor offers context, in-depth analysis and explains the links between relevant subjects of supervision. Early identification and understanding of changes in the sector contributes to an effective, forward-looking and preventive approach to supervision, thus fulfilling the AFM's mission to promote fair and transparent financial markets and contribute to sustainable financial prosperity.

The Trend Monitor addresses developments in areas such as the macroeconomy, digitalisation and sustainability. Based on these identified trends, we describe the key issues in our supervision and indicate potential solutions where we can.

A new feature in this edition of the Trend Monitor concerns the risk maps for the four areas of the AFM's supervision, shown in section 2. The risk maps show the key risks in each area of supervision and how they interact with the trends in section 1. The conduct of execution-only investors also receives special attention in this edition (section 3).

Agenda 2022

The Trend Monitor contributes to defining the supervisory priorities of the AFM. The practical implications of these trends and risks for the supervisory activities of the AFM will be detailed in the Agenda 2022, which will be published in early 2022.

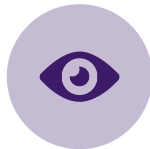
Summary

Hoofdstuk 1: Trends

Each year, the AFM conducts an analysis of trends that affect its supervision.
These trends are described briefly below.

Macroeconomic climate

The coronavirus crisis appears to have peaked, but the pace of the economic recovery is still uncertain. The financial markets are nonetheless optimistic, as shown by high stock valuations. The recent rise in inflation forecasts could however lead to some tempering of sentiment. The search for yield continues, driven by still low and in some cases even negative interest rates. This has increased the prices of more risky assets.



Among private citizens, the effect of low interest rates can be seen in the sharp increase in the number of investors.

This raises an issue requiring attention, because in their search for alternatives to saving, retail investors may move into investment products without making a proper assessment of the risk involved.

Low interest rates make it more attractive for businesses to take on debt. In addition, higher stock valuations and increased credit are making the financial markets more vulnerable to overvaluation and sudden market shocks. And in turn, to the creation of risks to financial stability.

Lastly, this lengthy period of low interest rates is becoming an item of attention with respect to the profitability and solidity of financial institutions, especially insurers. Their returns on investments are still low, while their long-term liabilities are increasing. This can also create tensions with respect to exercising due care in the customer's interest and designing a sustainable business model.

Housing, employment and pensions

The housing market in the Netherlands is still overheating. The rental market features a long-term mismatch between supply and demand. High house prices and the large debts that are taken on when purchasing a property mean that households are vulnerable to setbacks. First-time buyers in particular are seemingly prepared to go to great lengths to be able to buy that coveted first home. This raises the risk that they will take on more debt that is appropriate. It is important that lending standards are carefully applied in order to avoid a situation in which households get into too much debt.

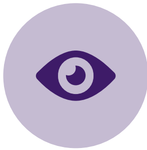
The high degree of flexibility in the Dutch labour market is a threat to the income security of a large group of working people. And these flexible workers especially have been hit hard by the coronavirus crisis. This underlines the need for households to retain sufficient financial reserves to be able to withstand economic shocks.

In the new pensions system, scheme members will bear greater personal responsibility. This new system, on which agreement was reached in the summer of 2020 and will come into effect by 2027 at the latest, will consist of defined contribution schemes mostly featuring variable benefits. This could significantly affect the amount of pension income. The transition to the new system in the coming years will be an extensive and complicated process. The vulnerable financial position of the pension funds means that the transition to the new system will even more challenging.

Digitalisation

For both traditional financial parties and newcomers to the market, data are increasingly at the heart of the business process. Data are an important tool for improving service and profitability. But the increasing usage of data also poses risks. The concerns include ensuring high quality of data and the legitimate and careful handling of personal information. Data security and the robustness of IT infrastructure against cyber attacks require continuous attention. The trend of outsourcing of digital business processes means that financial enterprises have become more vulnerable to breakdowns at their service providers.

The importance of big techs (companies such as Google, Facebook, Apple and Amazon) for the financial sector is increasing. The technological solutions provided by the big techs offer convenience, but there are also hidden risks. For investors and consumers, the security of client data requires continuous attention. In addition, there are concentration risks, for instance because the use of cloud services by financial institutions leaves them dependent on a few platforms provided by the big techs. There is still no regulation to address these risks in a structured manner. The trend of outsourcing of digital business processes means that financial institutions are more exposed to incidents at their service providers. This also affects investors and consumers.



Investing in crypto assets is taking off in a big way. But these investments are risky, among other things due to the huge volatility of valuation. European regulation is being prepared in response to the turbulent development of the crypto market in the form of the Markets in Crypto-Assets Regulation (MiCAR), which will set obligations for both issuers of crypto assets and crypto service providers.

Internationalisation

The AFM's regulatory framework is largely established at an international level. There are several important European legislative processes planned for 2022, for which the AFM will contribute input through ESMA and other channels. Moreover, supervisory convergence as a next step in European cooperation is increasingly influencing our activities. Now that digitalisation is allowing market parties to operate easily in several Member States and markets are increasingly moving across borders, supervisory convergence is becoming a more pressing issue.

Many new companies subject to supervision have moved to the Netherlands as a result of Brexit. Most of them operate in the capital markets, such as large trading platforms, proprietary traders, benchmark parties and investment fund managers. The Netherlands has now become one of the main European centres for trading in equities. Due also to the increasingly international character of the Dutch equity trading platforms, other kinds of financial products are now also traded in Amsterdam, such as SPACs (Special Purpose Acquisition Companies) and derivatives, such as CO2 emission rights.

In addition, the financial services market is increasingly operating on an international basis. This can be seen for example in the large number of foreign financial services providers offering their services in the Netherlands by means of a European passport. This brings benefits, such as increased diversity of supply, but also disadvantages, such as an increase in the number of malicious providers. This increases the need for closer cooperation with foreign supervisory authorities.

Sustainability

Climate targets will largely set the social agenda in the decades to come. The efforts to reduce the CO2 intensity of our economy could lead to stranded assets for example, and have negative effects on our prosperity. The financial sector will have to respond to this by properly discounting these effects in their assets and funding models. Business reporting will also have to deal with more far-reaching requirements with respect to sustainability information.

Financial enterprises have an important part to play in the sustainability transition, by mobilising capital for sustainable investments and making decisions based on aspects of sustainability in companies' business operations.

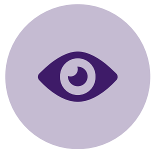
This creates potential conflicts of interest. Financial enterprises are increasingly being called to account regarding their role in the sustainability transition.

Under existing regulation, parties have to provide transparency regarding their sustainability goals. At the same time however, legislation and regulation is not yet crystallised. Sustainability definitions and reporting standards are still in development. In the meantime, the flow of new capital into sustainable investments is increasing rapidly.

This growth involves increased attention to the risk of greenwashing, raising the concern that higher expectations regarding the sustainability of investments are not being satisfied.

Integrity

Money laundering and other financial crime harm the integrity of the financial and economic system. Governments and citizens are concerned about this type of crime. Confidence in the financial sector may also be damaged if businesses, consciously or unconsciously, become involved in malicious practices. Financial institutions have an important gatekeeping role



in preventing criminals from bringing illegal assets into the financial system or using the financial system for their illegal activities.

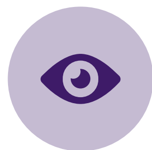
The supervisory landscape

'Less market, more government'. Both the politicians and the public are increasingly supporting this notion. Increasing public expectations with regard to solving social problems by an active government may translate into similar expectations by parties in the financial sector and the vigour with which supervisors deal with abuses.

One sector undergoing change is the audit sector. The report from the Committee on the Future of the Audit Sector includes recommendations aimed at long-term high-quality service provision, thereby justifying regained confidence from stakeholders. Some of these recommendations were incorporated into a parliamentary bill that was put up for consultation in the summer of 2021.

The new pensions system and the new supervisory duties this will entail have significant consequences for the AFM's supervision, and will involve an expansion of the AFM's tasks. For example, the new Pensions Act sets new duties for the AFM with respect to supervision of the establishment of the risk preference of the scheme member population and introduces requirements for guidance on making choices.

Markets are increasingly moving across borders, which is leading to greater supervisory coordination in Europe. This applies both to the capital markets, which have always been internationally linked, and to the provision of financial services and the consumer markets. This will mean greater European influence on the priorities of the national supervisors.



Chapter 2: Risk maps

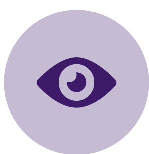
The risk maps in section 2 give an overview of the key risks in each area of supervision, and show how the developments described in section 1, such as low interest rates, digitalisation and the sustainability transition, affect risks in the four supervisory areas for the AFM: financial services, capital markets, asset management and financial reporting and audit firms. Certain risks in each supervisory area are explained in more detail below, but for the full overview, please refer to section 2.

The risk map for **financial services** highlights the pensions transition, among other things. This system change requires a complex and significant transition that will affect millions of households. There is also attention to how the macroeconomic conditions and digitalisation are affecting retail investment. The risk map highlights concerns of possible price corrections in much higher stock markets, the ever-increasing accessibility of investment products, including high-risk products, and the fertile breeding ground for investment fraud. We also mention difficulty in accessing financial services, including a comment on the findings of a survey of the relationship of Dutch citizens with a migrant background with the provision of financial services.

For the **capital markets**, increasing digitalisation and internationalisation are key risk drivers. Special attention is devoted to the efficient operation of markets, that are under pressure from growing trading outside the traditional platforms, which can lead to loss of general transparency regarding prices and transactions. Inadequate data quality and accessibility to data for market participants constitute a further risk, as a result of which the market is not fully or not accurately informed of features such as the nature, valuation or price of a financial product. We also look at the risk of market disruption due to trading algorithms and the role that social media can play as a coordinating platform for market manipulation.

In the area of **asset management**, the strategic repositioning of parties calls for attention. Especially smaller asset managers face a challenge in dealing with this effectively. In addition, we consider the risks associated with outsourcing of tasks. If the chain becomes longer and interdependencies increase, this can mean that a controlled and ethical business operation is less assured. We then provide a detailed explanation of how the increased demand for sustainable financial products is affecting the sector, and how a lack of standardised and reliable data on sustainability performance is increasing the risk of greenwashing.

For the **audit firms**, much effort is being devoted to the change process aimed at strengthening the structure of the sector and its supervision. Special attention is paid to developments that are reducing the relevance of traditional financial reporting and auditing. These include changes to the information needed by end users and new, digital possibilities for reporting. We also look at the increasing attention to fraud throughout the reporting chain. One new area that is rapidly becoming more relevant is the reporting and auditing of non-financial information (including information on sustainability). New rules and standards are being developed for this, that will require guidance with respect to proper application.



Chapter 3: Behaviour of execution-only investors

The number of Dutch people investing has sharply increased in the past two years. This is due to factors such as low interest rates and the ease with which consumers can get started with investing. Most investors opt for an execution-only service, meaning that they are personally responsible for their transactions and their portfolio. The AFM has carried out a survey among retail investors in the execution-only channel. The findings of this survey are described below. For a full account of the survey, see section 3.

In this publication, we offer insight into various features of these investors, such as age, gender and invested capital. The survey also provides insight into their reported behaviour, such as transaction volume and degree of diversification. For example, we found that almost one third of the investors make regular deposits. This reduces the risk that they purchase their entire portfolio at a market peak, and thus improves the risk-return ratio of their portfolio.

In this study, the AFM focused on suboptimal behaviour by investors. From various academic studies, we know that investment decisions are not always taken wisely. Investors are, for instance, inclined to trade too much and thus incur unnecessary costs, they often do not sufficiently diversify their investments across various instruments or geographical regions, or they invest in unnecessarily risky products. This suboptimal behaviour worsens the result for investors, due to higher costs or more risk in the portfolio than needed.

The survey showed that 32% of the investors display suboptimal behaviour. This can be a problem if there is a strong possibility that they will need the money, either now or in the future. This may be because they have only a small reserve, or because they are investing with a goal for which they will be dependent on their invested capital in the future. Around 12% of the investors were highly likely to need their capital and also displayed suboptimal behaviour. We consider this group to be vulnerable, as their suboptimal behaviour could threaten their financial prosperity.

In this survey, the AFM did not consider the causes of this behaviour. In 2022, the AFM will review the extent to which investment firms influence investor behaviour, what effect this has and where improvements can be made to improve the prospect of sustainable financial prosperity for their clients.

01 Trends

The coronavirus crisis appears to have peaked. After a lengthy period in which society and the economy were gripped by lockdowns, the vaccination campaigns are producing results. Although not all the restrictive measures have yet been reversed, we seem to be definitively on the road to recovery. So far, the economic damage looks to be less severe than expected during the worst moments of the crisis. The economic recovery now under way in the Netherlands is expected to continue in 2022.[1] The extensive support measures from the government have played an important in limiting the economic harm. Due to a good starting position and the

[1] CPB. 'Macro Economische Verkenning 2022', September 2021.

sizeable crisis measures, the global financial system has so far proved to be robust enough to withstand the effects of the pandemic.

Financial institutions have continued to play their part so far, and lending to businesses and households has remained at a decent level. While the outlook is positive, there is much uncertainty regarding the future course of the economy.

The coronavirus crisis will result in permanent changes in financial services. The most relevant development is the acceleration in digitalisation due to the lockdowns, and especially the growth of working from home online and the associated accelerated transition to online service provision. For the financial sector and our supervision, this acceleration means that issues connected with cyber security and protection of privacy have become even more important. Another tangible manifestation of this development is the acceleration in the closure of bank branches last year, which raised public concerns regarding the accessibility and inclusivity of the financial sector.

In the light of this wider social context, this section describes trends that affect the AFM's supervision. This section begins with a with a description of several macro-level developments with respect to the economy, housing, employment and pensions (sections 1.1 and 1.2). We then turn to three trends that are rapidly changing the financial sector: digitalisation (1.3), internationalisation (1.4) and sustainability (1.5). Section 1.6 looks at a theme of great public interest: the integrity of the financial sector. Section 1.7 considers how these trends affect the AFM's position in the wider supervisory landscape.

1.1 Macroeconomic climate

Although the coronavirus crisis appears to have peaked, the pace of the economic recovery is still uncertain. The spread of the coronavirus among the global population and the ensuing lockdown measures have slowed the real economy across the globe. In 2020, this led to a contraction of 6.3% in GDP in the eurozone[2] with the Dutch economy shrinking by 3.8%.[3] For many countries, including the Netherlands, this was the most severe economic contraction since the Second World War. However, the contraction was relatively limited due to the provision of financial support measures by governments and intervention by the central banks. Nonetheless, it is still not certain how great the economic shock will be after the financial support from the government, for instance for the self-employed, is removed and the deferral of payments granted by the banks comes to an end. Currently, the CPB is estimating that GDP in the Netherlands will grow by 3.9% in 2021 and 3.5% in 2022. [4]

The financial markets have been optimistic regarding the economic recovery for some considerable time already, but the recent increase in inflation forecasts has dampened sentiment. In March 2020, when the far-reaching effects of the coronavirus were visible worldwide, share prices fell heavily and volatility in the global stock markets reached record levels.[5] This dip in market sentiment was short-lived, due to intervention by the central banks and governments. Investor sentiment recovered and risk appetite increased rapidly, leading to rising stock valuations. The stock markets have been in an uptrend since the spring of 2020 and have reached record levels (see figure 1, left-hand chart).

2 Europese Commissie, Eurostat.
3 Centraal Bureau voor de Statistiek.
4 CPB. 'Macro Economische Verkenning 2022', september 2021.
5 Op 23 september 2021 sloot de Amsterdamse beursindex AEX voor het eerst in zijn bestaan boven de 800 punten. Dit in groot contrast met de stand van 389,60 die de AEX op 16 maart 2020 noteerde, als dieptepunt van de coronacrisis.

The boost to the economy provided by the central banks and governments and the recent economic recovery have however stoked inflation expectations. This has led to some tempering of investor sentiment. Risk-free interest rates have also risen slightly around the world (see figure 1, right-hand chart). Nonetheless, the real financial conditions are still accommodative. Other factors that could negatively affect sentiment include the sharp rise in energy prices and uncertainty regarding the potential global knock-on effects of weaknesses in the Chinese economy. If higher energy prices turn out to be a permanent phenomenon, this will also affect the real economy.

Due to the accommodative financial conditions, the search for yield is continuing and prices of more risky assets are rising. In recent decades, interest rates, both nominal and real, have been in a global downtrend and reached levels below zero. This development is caused by structural factors, such as increased savings and lower potential growth, as well as the -expansionary monetary policy of the ECB, among others. This combination of a lengthy period of low interest rates and an -expansionary monetary policy by the central banks has encouraged the search for yield. As a result, in recent years investors have built portfolios with higher expected returns and risk, leading to high valuations for both stocks and corporate bonds.

Section 3 looks at how the search for yield has affected retail investors using the execution-only channel.

Low interest rates make it more attractive for businesses and households to take on debt. The coronavirus crisis has accelerated the growth of the global debt mountain even further. During the crisis, governments launched huge support packages and banks were encouraged to lend to businesses and consumers.

Global government debt has accordingly risen from 84% of GDP in 2019 to a forecast of 99% this year.[6] The Dutch government has also issued at least €37 billion in stimulative measures and Dutch government debt has increased from 48% of GDP at the start of 2020 to 57% of GDP at the end of the year. The support has reduced the shock for the business sector, but here, too, debt has increased substantially.[7]

Higher stock market valuations, credit growth and higher debt leverage make the financial markets more vulnerable to shocks, which could pose a risk to financial stability. The increased risk appetite among investors has contributed to possible overvaluation in various asset classes.[8] Asset prices could therefore decline significantly if there is a turn in sentiment in the markets. Disappointing economic developments or higher inflation could cause such a turn in sentiment. Currently, investors appear to be accounting for a scenario of rising inflation, as the combination of a nascent economic recovery and an accommodative monetary policy from the central banks could lead to an overheating of the (global) economy. While inflation in the US and the eurozone is indeed rising, most economists predict that this will be temporary. The development of inflation will be one of the determining factors for decisions by the central banks regarding the 'tapering' of their stimulative measures and eventually a tightening of monetary policy.

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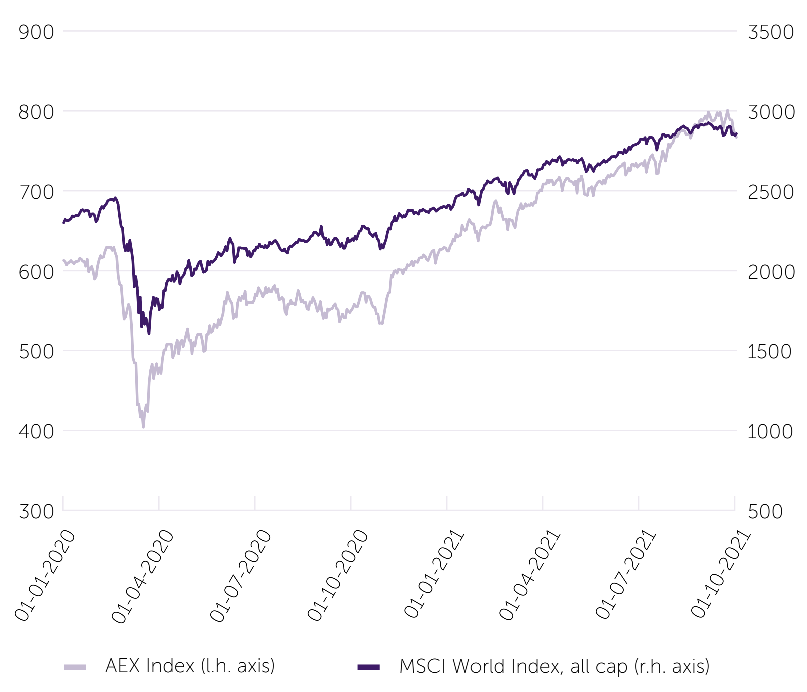
6 IMF. 'Fiscal Monitor', April 2021.
7 DNB. 'Overzicht Financiële Stabiliteit – voorjaar 2021', May 2021.
8 Federal Reserve. 'Financial Stability Report', May 2021.

Figure 1. Strong rally in share prices and modest rise in 10-year government bond yields.



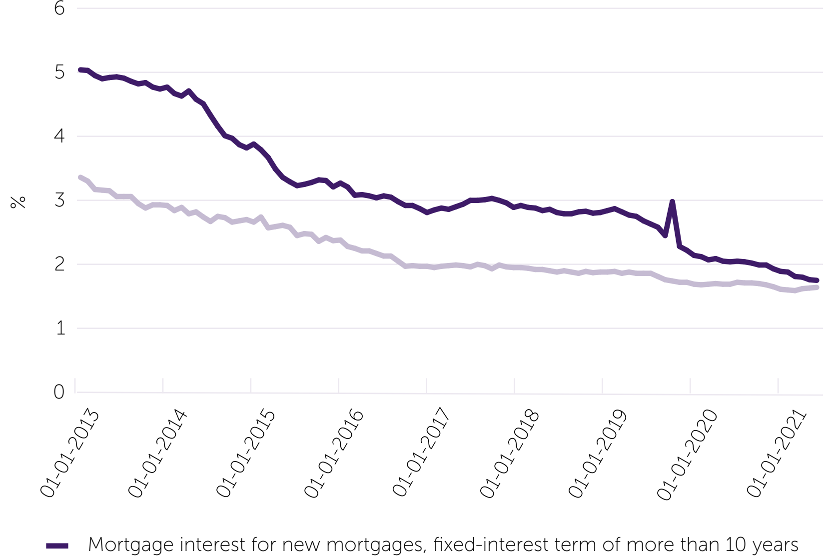
Source: Macrobond, processed by the AFM.

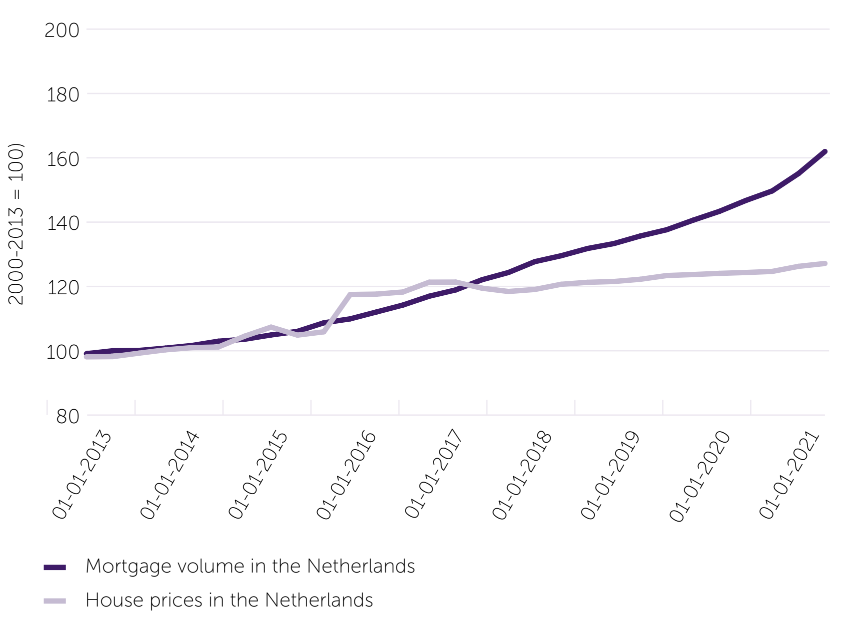
Lastly, the lengthy period of low interest rates is pressuring the profitability and solidity of financial institutions. On the liability side, pension funds and insurers are experiencing an increase in their long-term obligations, as the present value of their liabilities is calculated at ever lower interest rates. On the asset side, the continuing low level of interest rates means that their investment returns (on bonds) are still low, making it more difficult for them to meet their obligations. For the banks, low interest rates mean it is more difficult to make money from lending. On the funding side, using deposits is expensive because the banks are receiving a negative interest rate on their 'surplus' credit balances from the ECB. The banks are increasingly passing this cost on to their customers, in the form of no or even negative interest on deposits held by businesses and customers at the banks.

1.2 Housing, employment and pensions

The housing market in the Netherlands is overheated. In the third quarter of 2021, the price of existing owner-occupied homes in the Netherlands was on average 19% higher than a year previously. The average sale price for an existing home rose to €419,000.[9] The fact that the housing market has experienced little or no negative effect due to the global recession caused by the coronavirus crisis is due to a combination of factors.tDemand for housing is structurally strong due to the growing population (and within this, growth in the number of households as well), while efforts to increase production of new-build homes are hindered by issues such as the nitrogen problem. Especially in the big cities, we are seeing a reduction in owner-occupiers due to private investors buying properties for the buy-to-let market. Although this does not reduce the number of homes, this inflow of investment certainly boosts demand. This is further encouraged by historically low mortgage interest rates and tax facilities (such as the zero rate for transfer tax for young house buyers and the widening of the gift tax exemption for the purchase of a home. This combination of demand and supply factors inevitably results in rapidly increasing house prices (Figure 2).

Figure 2. Historically low mortgage rates and strongly rising house prices.





Source: CBS, DNB, Macrobond.

[9] NVM. 'Hectiek op koopwoningmarkt houdt aan', September 2021.

The overheated market poses risks for consumers. High house prices and the large debts that are taken on mean that households are vulnerable to setbacks. They have after all taken on a long-term financial obligation lasting 30 years in most cases. High debt and interest obligations limit financial and other freedom of movement if needs change. And also cause serious financial problems in case of unemployment, occupational disability or the end of a relationship.

Not even 10 years ago, house prices in the Netherlands fell by more than 20 per cent, leading to serious difficulties for people who were forced to move and still retained a residual debt.

It is important that lending standards are applied carefully, in order to avoid a situation in which households become over-indebted. First-time buyers in particular are seemingly prepared to go to great lengths to be able to buy that coveted first home. This raises the risk that they will take on more debt than is appropriate. Research by the AFM into the borrowing behaviour of first-time buyers shows that a large number of them have taken on a mortgage that is higher than really appropriate. Between 20 and 40 per cent have mortgages that strictly speaking are in excess of an appropriate level according to the statutory standards. The amounts borrowed in excess of the standards range from €50,000 to €70,000. This is partly because student debt is regularly ignored in the calculation of the mortgage amount, and also due to accumulated other borrowing.[10] The AFM attaches a high priority to careful observance of the lending standards, but this is not enough to bring the housing market into balance. Structural solutions are needed, such as more construction and a reduction in subsidies. Stimulative measures, such as the zero rate for transfer tax for young house buyers and the widening of the gift tax exemption for the purchase of a home, also need to be critically reviewed. Schemes that allow first-time buyers to borrow more may sound appealing, but they are actually counter-productive.

If the housing supply remains the same, house prices can only rise further. The housing market will thus become even less accessible for first-time buyers and they will be forced to get deeper into debt.

The labour market in the Netherlands has a high proportion of flexible employment, which leads to less security of income. In the past 10 years, the Netherlands has been one of the fastest-growing countries in the EU in terms of the proportion of both people on flexible employment contracts and self-employed workers, also known as flexible workers. In total, they account for more than a third - 34% - of the total working population in the Netherlands.[11] This group has less security of income, and also in many cases accrues less pension than workers on permanent contracts. Flexible workers also tend more often to be underinsured. For example, self-employed people often do not have an occupational disability insurance. Reforming the labour market is expected to be an important theme for the new government administration. The deal struck in June 2021 between the employers and the trade unions, which is part of a recommendation from the Social-Economic Council (Sociaal-Economische Raad, SER) and will significantly limit flexible working, is a first move in this direction. The AFM is following this discussion with interest, also on the basis of its mission with regard to sustainable financial prosperity. A coronavirus crisis stress test conducted by the AFM and the CPB last year emphasised the need for households to hold sufficient financial reserves to be able to withstand economic shocks.[12]

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10 AFM. 'Occasional paper: Koopstarters op de woningmarkt', September 2021.
11 CBS. 'Dossier Flexwerkers' and 'Dossier ZZP'.
12 CPB and AFM. 'Stresstest huishoudens', September 2020.

In the new pension system, the risks will be borne more explicitly by scheme members. This new system, which was agreed in the summer of 2020 and will come into effect by 2027 at the latest, will consist of defined contribution schemes mostly featuring variable benefits.

This system change could significantly affect the development of pensions. For the sake of confidence in the pensions system, it is in any case important that the decision-making and the communication on the effects of the transition on the pensions of scheme members is balanced and transparent. The transition to the new system in the coming years will be an extensive and complicated process, in which the sector will bear important responsibilities and the AFM will be given new supervisory duties (see section 1.7). The still vulnerable financial position of the pension funds will make the transition to the new system even more challenging.[13]

Need for products that cover loss of income risk and enable citizens to take more ownership of capital accumulation will increase. Developments in the labour market and the pensions system are contributing to citizens having to take greater responsibility for securing their income and providing for their retirement. This is leading to greater demand for products and services that enable citizens to insure against risks to their income,[14] to take more ownership of their capital accumulation and to have free access to their capital. The low level of liquid capital accumulation by many Dutch households is a relevant issue here.[15] Most of their assets are tied up, as pension entitlements are only released when a person retires. The equity in property is slightly more accessible, but in most cases this requires the sale of one's home, increasing the mortgage or moving to a cheaper property. This may mean that a household is unable to use its assets to compensate for loss of income in the event of unemployment or disability.

1.3 Digitalisation

In the financial sector, data have become an important production factor, raising issues in connection with data quality and data security. The generation, processing and use of data is playing a crucial role in the digital transformation of our society. The financial sector is definitely part of this trend. Both traditional financial parties and newcomers to the sector are striving to put the increasing possibilities of data usage at the heart of their business processes in order to improve their service provision and profitability. But the increasing usage of data also poses risks. The concerns include ensuring high quality of data and the legitimate and careful handling of personal information in accordance with the standards of the General Data Protection Regulation (GDPR). One phenomenon that is becoming increasingly common is the application of advanced data analysis for personalised pricing. One debatable example of this is the so-called 'loyalty penalty', which has appeared in the British insurance sector. British insurers are conducting data analysis to identify the customers who will not move to another insurer when their policy comes to an end. These customers are then faced with the heaviest increases in premiums. An AFM study of personalised pricing did not reveal any indications of this practice happening in the Dutch insurance sector.[16]

The use of advanced technologies such as artificial intelligence and blockchain is increasing in the financial sector. Besides more data being

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[13] DNB. 'Overzicht Financiële Stabiliteit – voorjaar 2021', mei 2021.

[14] Hierbij past de kanttekening dat het gros van de Nederlanders nog steeds hun basiszekerheid geborgd weet in het traditionele stelsel van verzekeren en pensioenopbouw (denk aan: AOW, WIA, verplicht tweede pijler pensioen). De grotere keuzevrijheid en -behoefte speelt vooral voor specifieke groepen, zoals zzp'ers.

[15] CPB. 'Sturen naar vermogen: De vermogensopbouw bezien vanuit de levensloop', mei 2021.

[16] AFM. 'Personaliseren van prijs en voorwaarden in de verzekeringssector', juni 2021.

produced, collected and analysed, the technologies being used for this purpose are becoming more advanced.

For example, financial institutions are increasingly using artificial intelligence, or AI. This presents opportunities, as consumers can be served more effectively. One example of this is preventing excessive borrowing by consumers through the use of AI in the provision of consumer loans. The customer's transaction data enables a better assessment of how much credit a consumer can afford. But the use of AI in the financial sector also involves risks, for instance when it is not clear how an AI model arrives at a particular result. In addition, an AI model may (intentionally or otherwise) discriminate when data are incomplete or if the programming of a (self-learning) algorithm is not carried out with sufficient care. It is thus important that financial institutions have adequate control measures in place to mitigate the risks of algorithm analyses and so they can always explain the results of their AI models.[17] Another fundamental development addressed in detail in the 2021 Trend Monitor[18] is the investment in blockchain technology by both established and new market participants. This is a technology that offers potential for smarter and more efficient ways of processing transactions and data storage, for example for trading platforms.

Increasing possibilities for sharing financial data for third parties. A legislative proposal for open finance is expected to be presented in 2022[19], with retention of EU standards for issues such as data protection. Whereas PSD2[20] only allowed for the sharing of transaction data with third parties, the open finance initiative of the European Commission intends to allow other financial customer data to be shared with third parties (or made accessible to third parties). This should give financial and other institutions more opportunities to more effectively offer products and services to their customers. There is also a European legislative proposal expected next year on data applications: the Data Act. This legislation will also most likely affect the financial sector.

The big techs are developing new activities in financial services. The activities of the big techs in financial services were initially limited to payments, but are expanding (at a global level) into lending, insurance, savings and investment products. Until a few years ago, the big techs were developing their activities in this area mainly in emerging markets, usually beginning with payments services and then moving into lending and insurance.[21] The services offered by the big techs in the Netherlands are so far limited to payments. Apply Pay, for example, has started partnerships with several Dutch banks. With their large customer bases, powerful brands and huge financial reserves, it is likely that the big techs will be able to quickly win themselves a place in other areas of financial services.

The revenue models of the big techs vary and partly determine the nature of the services offered. The big techs are often referred to as a single entity, but the backgrounds of these companies vary significantly in terms of their respective revenue models.

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17 AFM. 'Personaliseren van prijs en voorwaarden in de verzekeringssector', June 2021.
18 AFM. 'Trend Monitor 2021', November 2020.
19 The legislation is an extension of the Commission's Digital Finance Package, which includes a Digital Finance Strategy. he Digital Finance Strategy is intended to make the EU rules for financial services fit for the digital age.
20 PSD2 is European legislation on payments traffic by consumers and businesses. It was adopted in the Netherlands in February 2019. Among other things, it means that banks are obliged to give third parties access to your account if you give your permission for this.
21 BIS. 'BigTech and the changing structure of financial intermediation', BIS Working Papers No 779', 2019.

One of them was originally an e-commerce business (Amazon), others earn the majority of their revenue from advertising (Google, Facebook) and still others started with the sale of physical or software products (Apple and Microsoft). These various backgrounds will partly determine the areas in which the big techs will be able to expand their services in the financial sector. Amazon for example will be well placed to assess the creditworthiness of consumers and SMEs on the basis of the data generated on its platform, which could provide a good base for offering loans to SMEs and consumers. With a product-based revenue model such as that of Apple, the motivation in relation to financial services seems to be to link the widest possible range of services (exclusively or otherwise) to its own products such as the iPhone (e.g. Apple Pay).

One of the risks arising from the close interrelationship between the big techs and the business processes of traditional financial institutions is concentration risk. The big techs have an important intermediary position in the digitalisation process occurring in the financial sector. For instance, the applications provided by Dutch banks and insurers are only available on the Android (Google) and iOS (Apple) operating systems, payments via smartphone are enabled by Apple Pay, and three of the five big techs (Amazon, Microsoft and Google) offer cloud solutions specifically designed for financial services. The technological solutions provided by the big techs offer convenience, but they also involve risks. From the perspective of consumers, security of customer data requires continuous attention. In addition, there are concentration risks, for instance because the use of cloud services by financial institutions make them dependent on a few platforms provided by the big techs.

These risks are currently not addressed in a structural way by regulation. Competition regulation for example focuses mainly on the abuse of market power by large platforms, and to a lesser extent on preventing concentration of platforms.

Apart from limited regulation on data sharing (such as PSD2), the existing regulation makes it difficult for citizens to determine which organisations have access to their personal data. The creation of a more level playing field for access to personal data would be desirable, by giving consumers real control over their personal data and the question of who should have access to these data.[22] Along with DNB, the AFM sees a need for relevant regulations to be amended.

Easy to use investment apps and social media are contributing to the growing popularity of investing. A range of apps now make it possible to invest using a mobile telephone with a few clicks. The downside of this new convenience is that these continuously available apps sometimes tempt investors to effect many transactions or take on a lot of risk, for example through 'gamification'. Another new and growing phenomenon is the influence of social media on investment behaviour. Influencers, also known as 'finfluencers', encourage investors to get involved, sometimes by holding out the prospect of easy profits. The behaviour of investors in the execution-only channel is addressed in further detail in section 3. Not only traditional investments, but also crypto-assets are benefiting from an increasing (speculative) urge to invest (see box 1).

[22] In a recent report, DNB has recently warned of the growing power of the big techs in the financial system, arguing for amendment of regulation to address the new risks and more European supervision and cooperation between the various supervisory authorities.
See: DNB. 'Veranderend landschap, veranderend toezicht. Ontwikkelingen in de relatie tussen BigTechs en financiële instellingen', June 2021.

Box 1 Regulation for the crypto market is on the way

Speculation in crypto assets is taking off in a big way. In addition to traditional investing, speculation in crypto assets has become popular, driven among other things by the low interest received on savings. Cryptos are now attracting interest from professional parties as well as consumers. The popular cryptos include Bitcoin, Ethereum and Cardano. A study by the AFM to be published later this year shows that consumers generally invest a relatively limited amount of a few hundred euros. There are however exceptional cases in which people invest a couple of thousand euros in cryptos.

Investing in cryptos is risky, in part because of the high volatility of valuation. The prices of cryptos are affected by publicity, as well as other factors. Last year for example, the price of Bitcoin was significantly affected by statements from Elon Musk from the car manufacturer Tesla.[23] This high sensitivity to publicity makes the crypto market attractive for what are known as 'pump and dump' strategies. 'Pump and dump' is a form of price manipulation in which positive publicity, possibly from influencers on social media, is first used to orchestrate a price rally (pump) so as to quickly get rid of the cryptos at a higher price (dump). Investors drawn in to this move end up with a loss.

Since cryptos do not usually qualify as a financial instrument, pump and dump activities involving cryptos are not subject to supervision by the AFM.

European policymakers are preparing regulation for the crypto market in response to the turbulent development of this market. This concerns the Markets in Crypto-Assets Regulation (MiCAR), which will set obligations for both issuers of crypto assets and crypto service providers.[24] The European Commission proposal (published in September 2020) is designed to make full use of the application possibilities of blockchain technology, which forms the basis for the issue of and trading in crypto assets, while also addressing the related risks. The AFM questions whether the risks will be adequately addressed. The proposal is a compromise between mitigation of risk and proportional market regulation. The result would appear to be rules that are more lenient for parties such as crypto asset service providers than those applying to investment firms. For example, there is no framework regarding a duty of care and product development. These rules are extremely important to mitigate the risk that a customer purchases a service or product that is not appropriate to their needs. In addition, major parts of the supervision, including of market abuse, are placed at Member State level. This does not help effectiveness, as we are dealing with an international and turbulent market that needs supervision at at least a European level.

23 Volkskrant.nl. '38 procent koersverlies in één week? Wat is er gebeurd met de bitcoin?', May 2021.

24 The general outline of the proposed regulation is as follows. MiCAR will set obligations for both issuers and service providers of crypto assets. Issuers of crypto assets will have to publish information documents (known as white papers) that contain mandatory disclosures, with exemptions for small offerings and offers aimed at qualified investors as defined in the Prospectus Regulation. Additional requirements for an issuer concern: obligations to set up a legal entity, capital requirements, requirements for the custody of assets, rules governing communication with holders of crypto assets, conflicts of interest and cyber security. For crypto service providers, the requirements relate to: custody and administration of crypto assets on behalf of third parties, the operation of trading platforms for crypto assets, and the exchange of crypto assets for fiat currency and other crypto assets. The proposal also includes rules for safeguarding market integrity. Since MiCAR is only a proposal at this stage, its final content may change.

Additional control measures are needed for the dependence of trading platforms on IT and the use of trading algorithms. Digitalisation has made trading platforms IT-driven to a great extent. This means that other requirements for the operational reliability of these platforms come into play. The platforms have to be able to withstand cyber attacks, possess back-up facilities and able to deal with a rapid increase in transaction volume (as occurred during the coronavirus shocks in 2020). The AFM supervises these requirements, also by testing the quality of hardware and software systems and checking that the organisation of the platforms meets all the statutory requirements, including the availability of sufficient qualified personnel and the existence of robust protocols in case of incidents. A second consequence of digitalisation is that trading these days involves the use of trading algorithms: more than three quarters (78%) of the transactions on Euronext Amsterdam are generated by these algorithms. Uncontrolled trading algorithms can be a threat to the stability of the capital markets. This was shown by what is referred to as the 'flash crash' in the United States on 6 May 2010, when the Dow Jones Index underwent an extreme fluctuation that was difficult to explain. The AFM wants institutions to be aware of the risks and potential effects of incidents relating to trading with algorithms. To prevent possible market disruptions, it is important that trading firms thoroughly test their algorithms before taking them into operation. Traders and platforms that use algorithm trading in their IT strategy also need to take measures against cyber attacks.[25]

Increasing digitalisation in the financial sector also increases the risk of cyber crime. Cyber attacks are a growing problem. These attacks often involve ransomware, whereby businesses are forced to pay to regain access to their IT infrastructure, sometimes combined with the theft of (confidential) information and blackmail with the threat of making this information public.

Financial institutions are also targets of cyber attacks. These can potentially lead to disruption of trading and payments systems, and also the theft of sensitive information on clients or the financial position of a business may have serious consequences. The coronavirus crisis has given an additional impulse to cyber threats, because financial institutions have been forced to adopt large-scale working from home, often under high time pressure, and are thereby more dependent on IT systems.

The trend of outsourcing of digital business processes means that financial institutions are more exposed to disruptions at their service providers. In the financial sector as well, we are seeing that digital business processes are more often performed by third parties (see also the note on the big techs above). This presents opportunities for improving business operation, as specialist technology companies are better able to perform certain tasks such as cyber security at lower cost. But on the other hand, this can lead to concentration risk if a small number of service providers work for a large number of financial institutions. As a result, a cyber attack on one service provider can affect a large number of financial institutions. Cyber criminals accordingly frequently seek to access the systems of financial institutions by using these third parties as a springboard.

The security of data and IT infrastructure against cyber attacks requires continuous investment in resilience. Financial institutions and their service providers must be able to demonstrate that their information security is up to standard and regularly test the degree of their cyber resilience. In 2016, DNB set up the Threat Intelligence Based Ethical Red Teaming (TIBER) together with institutions in the financial core infrastructure. In this TIBER programme, the participating institutions engage specialist businesses to conduct controlled attacks on the critical systems of financial institutions on the basis of the most current threat information. These tests have shown that the cyber resilience of financial institutions is generally in good shape.

[25] AFM. 'Algorithmic trading – governance and controls', April 2021.

But the tests also provide insight into the damage that cyber attacks can potentially inflict, including the breakdown of essential functions, loss of (highly) confidential information, financial loss or market manipulation. The AFM started participating in the TIBER programme this year and the AFM will also have a number of companies 'ethically' hacked.

Digitalisation could reduce the inclusivity of the financial sector. If financial services are only available online, this entails the risk that some vulnerable groups are left behind or excluded from access to these services. These may be older people who may have more limited digital skills, or the less literate, who benefit particularly from physical customer contact. In the introduction to this section, we noted that the coronavirus lockdowns have caused an acceleration in the transition to the provision of services online, and therefore highlighted the issue of accessibility and inclusivity of the financial sector as an item of attention.

1.4 Internationalisering

Due to Brexit, the Netherlands has become one of the major trading centres for shares in Europe, and new products are also being traded here. As a result of Brexit, many new companies subject to supervision have located in the Netherlands. Most of them operate in the capital markets, such as large trading platforms, proprietary traders, benchmark parties and investment firms.

Brexit has also caused a major shift of trading, especially in shares. In total, seven new large trading platforms have established themselves in the Netherlands as a result of Brexit. Two of them focus mainly on trading in shares (CBOE and Turquoise) and four on trading in bonds (Tradeweb, Bloomberg, MarketAxess, CME). Euronext Amsterdam, CBOE and Turquoise now represent around 30% of European trading in shares (including the United Kingdom). Formerly, Dutch platforms accounted for between 5% and 10%. In August 2021, Amsterdam was the largest trading centre in Europe with average daily turnover of €8.32 billion, ahead of London with €7.63 billion.[26] In part due to the increasingly international character of the Dutch equity trading platforms, other kinds of financial products are now also being traded in Amsterdam, including the arrival of SPACs (Special Purpose Acquisition Companies)[27] and trading in derivative instruments such as the European CO2 emission rights and currency derivatives. The uninterrupted functioning of these trading platforms is important for efficient trading and financial stability. As a result of the increasing importance of Amsterdam as a European trading centre, the AFM has scaled up its activities in this area.

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[26] Bloomberg. 'Amsterdam Is Back Ahead of London as Europe's Top Trading Hub', September 2021.
[27] The arrival of SPACs in Amsterdam is also driven by the search for yield among investors. Attracted by the potential return of SPACs, investors are prepared to take on risk without knowing the investee company beforehand.

Retail investors are looking for stock markets outside the Netherlands, meaning they are also susceptible to international investment hypes. Whereas previously international trading involved professional and institutional investors, both small and larger retail investors are becoming increasingly active in the international capital markets. Social media ensures that investment hypes can be spread rapidly around the world, also influencing Dutch investors. An event that illustrates this development is the participation of Dutch retail investors in the US investment hype surrounding the shares of GameStop at the end of January 2021,[28] in which approximately 25,000 retail investors in the Netherlands participated. Various Dutch investment firms restricted trading in GameStop shares at the time, due to exceptional price volatility.[29] Although the GameStop case could perhaps be seen as a perfect storm, the chance of a similar situation occurring again is quite feasible (possibly involving other markets and other financial instruments). There are actually a number of underlying factors at play that are structural in nature. Such as digitalisation (investing via apps) and the associated easy access for small investors and the already mentioned influence of social media.

Internationalisation is also visible in the market for financial services. The growing integration of the single market within the European Economic Area is supporting the increasingly international character of the market for financial services.

The number of foreign financial service providers offering their services in the Netherlands by means of a European passport is steadily growing. On balance, this increase in the supply and diversity of providers is beneficial to clients and society in general. There are however malicious investment platforms offering risky investments. These providers misleadingly dangle the prospect of high returns, while in reality they have no interest in whether their customers actually make any money. This mainly concerns investing in CfDs (Contracts for Difference).[30] The number of notifications received by the AFM regarding foreign investment parties offering CfDs has risen from 29 in 2018 to 156 in 2019 and to 260 in 2020.[31]

There is an increase in online brokers operating across borders with a revenue model based on payment for order flow (PFOF), which potentially may work against the customer's interests. PFOF, frequently used by what are known as zero commission brokers, is the practice whereby an investment firm receives commission in exchange for transmitting its client orders to these commission-paying party or parties. PFOF provides an undesirable incentive for the broker to select the party that pays the highest commission rather than the party best placed to execute the client orders. Along with ESMA[32], the AFM sees a risk that clients of PFOF brokers will be structurally disadvantaged in their order execution, as the broker may not go to the trading venue with the best prices and the lowest costs of execution.

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[28] A note on the GameStop case: an internet investment forum (WallStreetBets) called on retail investors to buy GameStop shares to force large hedge funds that had taken short positions in the computer games stock out of the market. This was successful, in the sense that the stock indeed rallied and some hedge funds were faced with sizeable losses. The severe price shocks in GameStop shares that ensued however also led to losses for small investors who had invested and high margin calls for small investors trading in derivatives.

[29] AFM. 'Geen onwettigheden, wel meer transparantie gewenst bij handelsbeperkende maatregelen beleggingsondernemingen', March 2021.

[30] A CfD (Contract for Difference) is a private agreement in which you agree to settle the difference between the current price of (for instance) stocks, currencies or commodities and the price at the time when the contract is entered into. CfDs can be extremely risky, especially for trading with leverage. Leverage allows you to trade with more money than you actually put up. In effect, you are speculating with borrowed money. This increases the risk. Furthermore, leverage can mean you lose more than your original investment and will have to repay a residual debt to the provider. Restrictions have applied in the Netherlands to the marketing of CfDs to non-professional clients since 2019.

[31] AFM. 'Signalenmonitor tweede helft 2020' March 2021.

[32] ESMA. 'ESMA warns firms and investors about risks arising from payment for order flow', July 2021.

1.5 Sustainability

Climate targets will largely set the social agenda in the decades to come. The sixth climate report[33] of the UN climate panel IPCC (Intergovernmental Panel on Climate Change) published in August underlines the scale of the climate problem and raised the priority of this issue on the political and social agenda. The report states a serious warning that the target agreed in the Paris climate accord of restricting the rise in temperature to 1.5 degrees Celsius by 2030 is probably already no longer attainable. This urgency is reflected in the EU's objective of climate neutrality by 2050 in its Green Deal. Achievement of national and international climate targets will also be an important consideration for long-term policy by the new Dutch government that has yet to be formed. The financial sector also recognises the need for action, and has committed to the national climate agreement. This commitment should be reflected in concrete action plans in 2022.[34] Indeed, the climate goals are part of the broader effort to improve the sustainability of our society. This concerns not only climate and environmental objectives (Environment), but also social objectives (Social) and objectives relating to good governance (Governance), collectively known as ESG.

Climate risks involve radical choices for society, with far-reaching economic effects. The effort to reduce the CO2 intensity of our economy will be associated with a shift in investment flows (which will create stranded assets), negative consequences for our prosperity and material pressure on government finances.[35] On the other hand, if we do not take sufficiently radical action, we will have to prepare for a future in which climate-related disasters occur more frequently, leading to severe economic harm (see also table 1 in box 2).[36]

Adequate pricing of CO2 emissions is crucial for the business case for green investments. Making the economy sustainable will involve a huge financial commitment. In the energy sector alone, an estimated annual commitment of €1600 and €3800 billion will be needed worldwide to meet the 1.50C target in the Paris Agreement. The majority of these climate investments will have to come from private parties. The financial incentives for this are however still insufficient, mostly because an adequate pricing of emissions is still lacking.[37] Proposals for improved emissions pricing are therefore an important part of the European Green Deal.[38] The AFM also has a role to play in the pricing of emissions. The (secondary) market for CO2 emission rights (the ICE Endex) moved from London to Amsterdam on 7 June 2021, and is thus now subject to supervision by the AFM. Daily trading in CO2 emission rights in this market amounts to €1 billion. With this new responsibility, the AFM can contribute to correct pricing of CO2 emissions by ensuring that trading in emission rights is ethical, is conducted on a robust platform with disciplined traders and high-quality data reporting.

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33 IPCC. 'Sixth Assessment Report', August 2021.
34 Klimaatakkoord.nl. 'Commitment van de financiële sector', July 2019.
35 PIIE. 'Policy Brief 21-20: Climate policy is macroeconomic policy, and the implications will be significant', August 2021.
36 Europese Commissie. 'Climate change impacts and adaptation in Europe; JRC PESETA IV final report', 2020.
37 DNB. 'De financiering van transitie', 2021.
38 Among other things, the European wants to increase the number of sectors that have to pay for CO2 emission rights through the European emissions trading system (ETS). The number of emission rights will also have to be reduced, so that they become scarcer and therefore more expensive.

Risks associated with sustainability pose serious challenges for financial institutions. Climate change involves both physical and transition risks for the sector. Physical risks concern the increasing likelihood of natural disasters such as floods and forest fires. We experienced this ourselves in Europe this summer. The increasing damage from natural disasters raises important issues, especially for the insurance sector. It could for instance lead to changes in coverage and premiums, and some forms of climate-related damage may become uninsurable for consumers and businesses (box 2). Then there are also risks associated with the transition: changing regulation or investor preference could lead to rapid loss of value for CO_2-intensive companies. For financial stability, it is important that these risks are properly priced and not underestimated, for example in the valuation of fossil-fuel operations.[39] Financial institutions are facing the challenge of adequately pricing and including sustainability risks in their investment allocation in their own decision-making, policy and investments, and reporting transparently on this (see also below in this section).

Box 2 Insurability of climate-related damage

Climate change will probably lead to an increase in the frequency and scale of natural disasters. These disasters have significant economic impact, consisting first of all of the direct, initial damage to homes, infrastructure and crops, and secondly of the economic output lost in the months or years needed for recovery.[40] Without mitigation or adaptation measures, the annual damage in a scenario of 1.5°C warming in 2050 could be twice as large (table 1).

Tabel 1. Estimated annual damage in EU and UK of climate-related disasters without mitigation or adaptation measures (in € x million).

EU and UK	Base value (1981-2010)	2050	
		1.5°C warming	2°C warming
Storm	4,594	6,829	6,913
Drought	9,048	12,354	15,475
Flooding (rivers)	7,809	15,609	21,268
Flooding (sea)	1,400	10,900	14,100
Total	**22.851**	**45.692**	**57,756**

Source: EIOPA[41]

[39] For an explanation, see for example: BIS. 'The green swan – Central banking and financial stability in the age of climate change', 2020.
[40] EIOPA. 'Climate change, catastrophes and the macroeconomic benefits of insurance', 2021.
[41] EIOPA. 'Climate change, catastrophes and the macroeconomic benefits of insurance', 2021.

Insurance can be important in mitigating the economic impact of increasing risks of damage. The estimates from EIOPA show that there is a currently a significant gap in the extent to which insurance offers cover for natural disasters. Only 56% of the damage caused by meteorological events (such as hurricanes and wind spouts) is currently insured in Europe. The cover for hydrological events (such as floods and landslides) is even lower at 28%, and for climatological events (such as extreme heat, drought and forest fires) it is only 7%. For the Netherlands, the EIOPA analysis in particular reveals a gap between the risk of flood damage and the cover for this from insurance.[42]

To the extent that damage from natural disasters is insured, insurers will be increasingly aware of the greater risk of loss that they are exposed to as a result of climate change. To compensate for this rising cost of claims, insurers will logically have to either raise their premiums or reduce the cover for these losses. The AFM has studied the extent to which the cover provided by insurance products has already changed due to climate change.[43] This shows that the changes in conditions due to the increase in climate-related claims are so far limited.

Some climate-related damage is uninsurable. This is in line with the EIOPA figures shown above. The AFM study shows that subsidence (damage to foundations) and collapse are not insurable in home insurance, while damage from ground water is only covered by home insurance offered by one single insurer.

Damage caused by flooding other than exclusively due to precipitation is almost uninsurable under either home or household contents insurance. Flooding caused by the failure of primary flood defences (this concerns defences roughly along the North Sea, the Maas and Rhine rivers and all branches) is completely uninsurable. These are all types of damage that are more likely to occur as a result of climate change, and they have the potential to cause huge losses for consumers (in case of damage to foundations, this could affect between 800,000 and 1 million homes, with an average cost per home of €64,000).[44]

The question is whether consumers are sufficiently aware that some climate-related changes are not currently insured, and that the damage caused by climate change will increase in the future. This could lead to a situation in which a consumer incorrectly believes they are well protected against risks associated with climate change and therefore invests less in preventive measures or takes on too much debt, as a result of which they have no capacity to fund remedial measures if unexpected damage occurs.

This then raises the question of how this growing cost of damage can be addressed. The government and the sector have to search for a solution to this issue together. Various possible solutions are feasible. One of the possibilities is further specification of the role of the statutory possibilities for compensation from the government in addressing the cost of the damage. Another option would be for cover for damage (or participation in an insurance scheme) to be made mandatory, as is the case for flood insurance in other countries.

[42] Estimates based on 'EIOPA pilot dashboard on insurance protection gap for natural catastrophes' in: EIOPA. 'Climate change, catastrophes and the macroeconomic benefits of insurance', 2021.
[43] AFM. 'De invloed van klimaatverandering op schadeverzekering', Oktober 2021.
[44] Ecorys. 'Economische schade door droogte in 2018', November 2019.

Finally, an international reinsurance could perhaps have a role to play in insuring against damage. In any case, it is important that the government and the sector consider collectively which damage is or is not covered and that this is made clear to consumers.

Social pressure on financial institutions to improve sustainability is increasing. The financial sector makes economic activity possible through finance and investment, and therefore has a determining role in how quickly the transition to a sustainable economy can be realised. This can be effected through several channels. The first channel concerns the fundamental rerouting of investment flows. This means that a fund or large investor invests only in businesses with good sustainability performance and excludes (for instance) CO_2-intensive businesses from funding. Engagement is a second channel. This means that an investor invests specifically in companies where they see possibilities for improving sustainability performance. The company is motivated to improve the sustainability of its business operation through activist shareholdership. Driven partly by the desire for more sustainability among their members, it appears that the pension funds are increasingly appearing to opt for an exclusion strategy.[45] Another development concerns the attempt by social organisations to compel the achievement of climate goals by the government and businesses through the courts. In a case against Shell, brought by Friends of the Earth Netherlands (Milieudefensie), the court ruled that businesses also have an independent responsibility to contribute to the realisation of climate goals. The ruling stated that by 2030, Shell is obliged in its group policy to reduce the CO2 emissions of the Shell Group, its suppliers and customers to net 45% of the level in 2019. Shell has stated it will appeal against this ruling.

The flow of capital into sustainable investments is increasing rapidly. Driven by increased public interest in the issue, the market for sustainable investments is growing rapidly. Assets invested in ESG funds in the EU rose by 20% in the first half of 2021, to a total of €1.5 trillion. The net capital inflow into ESG equity funds in the same period of €71 billion was larger than the €69 billion placed in funds without ESG characteristics. The EU market for sustainable bonds also grew strongly in the first half of 2021 (+41%) to a total market value of €888 billion.[46] Green bonds are the largest category in this market, accounting for €581 billion of the total of €888 billion. Europe is the world's largest market for green bonds, with a share of more than 53% in the global market.[47] This high level of popularity means that the valuations of sustainable investments are high. The Bank for International Settlements (BIS) has recently expressed a concern that rapidly rising valuations are increasing the risk of a market bubble.[48]

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[45] One illustration is the decision by the PME pension fund to be the first large pension fund to no longer invest in the oil and gas industry and invest instead in renewable energy.

[46] In the issuance of green bonds, there may be an incentive in the form of a 'greenium', the phenomenon that the coupon interest for green bonds is on average lower than for regular bonds. (See for example: Löffler et al, 2021., Eurasian Economic Review 11, 2021).

[47] ESMA. 'Report on trends, Risks and Vulnerabilities', September 2021.

[48] BIS. 'Quarterly Review', September 2021.

New regulation should lead to better information on the sustainability performance of financial products. Without reliable and comparable information, there is a risk of 'greenwashing' (the unjustified description of products as 'sustainable').

Good information on sustainability is also essential for the pricing of sustainability risks and therefore also for the limiting of sustainability risks for the economy and the financial system. For this reason, a great deal of new European and other legislation is in preparation that will set requirements for the information provided in relation to sustainable financial products.

The route map for this is the Sustainable Finance Strategy of the European Commission. This strategy[49] was published in July 2021 and is an extension of the EU Action Plan for Financing Sustainable Growth launched in 2018. Among other things, the new regulation concerns disclosure by financial institutions (the SFDR Directive already in effect), a common taxonomy that clarifies which activities are classified as sustainable and rules for sustainability benchmarks. In addition, there are changes to existing regulations such as MiFID II, UCITS and AIFMD relating to sustainability obligations in the provision of financial services. Also, with its revision of the Non-Financial Reporting Directive (NFRD), the European Commission is working on further tightening of the non-financial reporting requirements for insurers, banks and listed companies. The proposal for new regulation in this area, the Corporate Sustainability Reporting Directive (CSRD) proposal, was published in April 2021.[50] The position paper 'The AFM and sustainability' explains the AFM's general expectations with respect to market participants in the context of the new regulation.[51] The supervision of the provision of information is the central focus here, along with attention to how and by whom assurance is provided with respect to this information.

ESG ratings are an important factor in investment decisions, partly because standards are still in development. An ESG rating gives information on a company's performance on the environment, social policy and governance. ESG ratings are usually compiled by rating agencies on the basis of a combination of publicly available information, surveys and assessments by analysts. Investment funds with a sustainability objective are usually based on ESG ratings, for instance by compiling a fund or index with the companies with the best ESG scores in a sector. The quality and reliability of these sustainability ratings are therefore crucial. In practice, we see that there are various methods used to compile sustainability ratings, and moreover these are based on sustainability data that are not always consistent, comparable or reliable. Greater transparency is therefore needed on the formation of ESG ratings and other sustainability data. In a joint position paper, the AFM and its French counterpart the AMF have put forward a number of proposals for legally establishing this at European level.[52]

Supervisors are focusing on the risk of 'greenwashing'. The rapid increase in sustainable investing has also increased the risk of greenwashing. This concerns a situation in which financial institutions raise expectations that client money will be invested sustainably, while in practice there is little actual impact on CO2 emissions (for example). This greenwashing is an increasing concern for supervisors. At the end of August, it was announced that both the US supervisory authority the SEC and its German counterpart BaFin were investigating possibly illegal practices relating to sustainability

[49] Europese Commissie. 'Strategy for financing the transition to a sustainable economy', juli 2021.
[50] Europese Commissie. 'Voorstel CSRD', april 2021.
[51] AFM. 'Position paper AFM en duurzaamheid', juni 2020.
[52] AFM en AMF. 'Position Paper: Call for a European Regulation for the provision of ESG data, ratings, and related services', December 2020.

claims at DWS, the asset management arm of Deutsche Bank. The AFM also pays special attention to provision of correct information by asset managers on sustainability risks and the sustainability characteristics of funds (see also box 5 in section 2).[53]

1.6 Integrity

The investment market is susceptible to malicious conduct that can cause significant harm to consumers. This is due to a combination of factors. The first factor is the search for yield, which in combination with easy access due to increased digitalisation means that mostly inexperienced groups of people are easier to reach and to persuade. Secondly, there is the rise of 'finfluencers', who post investment recommendations, offers or training courses on social media (in some cases illegally and unethically). The third factor is that malicious providers intentionally use a less regulated environment (outside the Netherlands) to make money at the expense of investors.

This process is facilitated by digital platforms and social media that make it easy to reach new target groups with little investment experience (see also section 1.4). In many cases, this involves investments with very high risk, of which the provider makes little or no mention. These providers also frequently apply aggressive trading practices. The AFM's supervision of integrity on this part of the investment market consists, in addition to enforcement procedures, of public warning campaigns to raise awareness of the trading practices used by dubious parties. The AFM is not able in all cases to take enforcement action itself against foreign companies operating in the Netherlands by means of a European passport. If it receives signals regarding such a company, it can certainly conduct an investigation.

Depending on the service or activity provided and the type of offence, the AFM will if appropriate consider whether it can take enforcement action itself or bring an actual or suspected offence to the attention of another competent supervisory authority.

Money laundering harms the integrity of the financial-economic system and affects the broader social issue of undermining. Undermining refers to all forms of crime that blur the boundary between legitimate business, including the financial sector, and the underworld. Many illegal activities cannot occur without use of legal services such as transport, storage, licences, accommodation, and also financial services. These financial services often concern the concealment of the criminal origin of funds: money laundering. Among other things, money laundering enables criminals to use the proceeds of crime to finance new criminal activities. It also makes it possible to use assets acquired through crime to obtain positions in bona fide companies.[54] Lastly, the facilitation of money laundering harms the integrity of the financial-economic system: confidence in the financial sector can be damaged if financial enterprises are involved in rogue activities, whether intentionally or otherwise.

Financial institutions have a gatekeeping role. Financial enterprises have an important function in the prevention of money laundering, financing of terrorism and other forms of financial or economic crime. They have a gatekeeping role in preventing criminals from bringing illegal assets into the financial system or using the financial system for their illegal activities. For these gatekeepers, such as audit firms, adequate control of integrity risks is

[53] AFM. 'Beleggingsfondsen kunnen beleggers beter informeren over duurzaamheid', September 2021.
[54] Letter to the House of Representatives. '3e voortgangsrapportage plan van aanpak witwassen', December 2020.

important to prevent involvement in criminal conduct, such as tax or other fraud or corruption.

In view of this gatekeeping and monitoring role, it is important that companies subject to supervision in the Netherlands and the Caribbean Netherlands comply with relevant legislation and regulation.[55] The AFM supervises this.

The fight against money laundering is a hot topic in society. Money laundering scandals at ING and other banks elsewhere in Europe (such as Danske Bank), and also the recently announced criminal investigation at ABN AMRO, has made the occurrence of money laundering in the financial system visible to a wider public. Partly due to such events, the fight against money laundering and other forms of financial-economic crime has become a prominent issue on the political agenda. In recent years, the AFM has intensified its supervision aimed at combating the use of the financial sector for criminal purposes, and this continues to be an area of attention.

1.7 The supervisory landscape

Supervision is developing within a trend towards 'more government'. Across virtually the entire political spectrum, there are calls for a stronger role for the state compared to the market ('less market, more government'). In practical terms, this is reflected in calls for a higher minimum wage and strengthening the position of flexible workers.

The government also has to demonstrably take the lead in the transition to a sustainable economy to avert the climate crisis and solve the issue of the shortage of affordable homes. Increasing public expectations with regard to solving social problems by an active government may translate into similar expectations regarding desirable behaviour by parties in the financial sector and the vigour with which supervisors have to deal with abuses.

Supervision of audit firms

The audit sector and its supervision are in the middle of a change process. Several reports, including from the AFM itself, have noted that the audit sector features negative incentives that are an obstacle to the safeguarding of the high quality of statutory audits.[56] Various recommendations have accordingly been put forward for reforming the sector, some of which were included in a parliamentary bill put up for consultation in the summer of 2021. The AFM is also involved in this change process, and will become responsible for the supervision of more than 260 non-PIE audit firms from 1 January 2022. This transfer of the conduct of this supervision to the AFM will have a significant impact on how the AFM structures its supervision of audit firms. Changes are currently ongoing at the AFM to prepare for this new responsibility.

[55] This involves the Dutch Financial Supervision Act (Wet op het financieel toezicht, Wft), the Dutch Sanctions Act (Sanctiewet 1977, Sw), the Dutch Money Laundering and Terrorist Financing (Prevention) Act (Wet ter voorkoming van witwassen en financieren van terrorisme, Wwft) and the Dutch Money Laundering and Terrorist Financing (Prevention) Act for the BES Islands (Wet ter voorkoming van witwassen en financieren van terrorisme BES, Wwft BES). Under the Dutch Audit Firms (Supervision) Act (Wet toezicht accountantsorganisaties, Wta), the AFM also supervises integrity at audit firms.

[56] See among others reports from the CTA (2020), the MCA (2020) and the AFM (2018).

Consequences for supervision from the new pensions system

The new pensions system and the new supervisory duties this will entail have significant consequences for the AFM's supervision. Agreement was reached on further development of the Pensions Agreement on 22 June 2020. The Ministry of Social Affairs and Employment (SZW) then began work on drafting the new Pensions Act. This transition to the new pensions system is unprecedented in scale: it affects the vast majority of Dutch citizens and a large group of government organisations and financial institutions. It will also involve an expansion of the AFM's tasks. For example, the new Pensions Act sets new duties for the AFM with respect to supervision of the establishment of the risk preference of the scheme member population and introduces requirements for guidance on making choices. According to the most recent schedule communicated by the Minister, the new Pensions Act will come into effect not later than 1 January 2023, and the transition period is then likely to last until 1 January 2027. The transition to the new system and the new tasks involved have consequences for the expertise, structure and capacity of the AFM's supervision. The AFM started preparing for this new supervision on 1 March 2021 in order to be ready in good time.

Data-driven supervision and cooperation in relation to data protection

The AFM's supervision is becoming more data-driven and this requires new legislation. The increasing use of data in the financial sector means that the working practices of institutions are changing rapidly. Institutions possess large quantities of data and use these data in their service concepts, for example by designing algorithms and building artificial intelligence applications based on data.

The AFM's supervision has to become more data-driven in order to respond more effectively to an increasingly digitalised financial sector and the large quantities of data held by financial institutions as a result. The current legal basis for the AFM's ability to request information originates from a time when such far-reaching digitalisation at financial institutions did not exist. This legal basis is not adequate for all the areas of supervision covered by the AFM for it to request data for its data-driven supervision on a regular basis. In its 2021 legislative letter to the Minister of Finance, the AFM called for attention to this issue in order to strengthen its data position.[57] A change to the supervisory legislation will in any case have to be accompanied by strict safeguards, such as adequate data protection and consideration of the regulatory pressure on market participants that will have to deliver these data.

The increase in the processing of financial data means that closer cooperation between financial and data protection supervisors is needed. The generation and processing of (personal) financial data are taking an increasingly central role in the business models of financial enterprises. It is a logical consequence of this increase in the storage and processing of personal data in the financial sector that there will be an overlap between financial supervision and the supervision of data protection. The basis for this cooperation has been laid in the Payment Services Directive II (PSD2). The upcoming move towards open finance will further increase the importance of this cooperation. Apart from PSD2, neither European nor national regulation currently provides an adequate basis for structuring this closer cooperation. The AFM would support the notion that the open finance initiatives of the European Commission should create a proper basis for the exchange of confidential information between financial and data protection supervisors.

[57] AFM. 'AFM Wetgevingsbrief 2021', March 2021.

Supervision is becoming more international

With numerous regulations and directives, the European Commission (EC) is addressing several priorities on its regulatory agenda. . Some of these priorities affect the financial sector and the AFM's supervision. In the coming years, the AFM will have to deal with new regulation on digitalisation (see section 1.3), sustainability (see section 1.5), and integrity. In reaction to several money laundering scandals (see section 1.6), the EC published a package of measures in July 2021 to strengthen the fragmented supervision of money laundering and the financing of terrorism.[58] Among other things, this package includes a proposal to set up an EU authority for combating money laundering. The EC also aims to improve the capital markets with its plans for the Capital Markets Union, including a focus on greater transparency in corporate information and better facilitation of investment in equity instruments.[59] In addition, the EC has announced that it will present a Retail Investment Strategy in 2022 that will include a broad consideration of the current protective provisions in MiFID, PRIIPS, UCITS and the IDD, partly in the light of digitalisation and the associated increase in provision of services across borders. Through its input into organisations such as ESMA, EIOPA and EBA, the AFM actively works to protect Dutch (supervisory) interests in the European discussions of this wide range of new regulation.

Markets are increasingly moving across borders, which is leading to greater supervisory coordination in Europe. This applies both to the capital markets, which have always been internationally linked, and to the provision of financial services and the consumer markets. First of all, this is driven by the potential offered by digitalisation, and secondly by the increasing harmonisation of regulation.

This means that supervisory issues and solutions will also become more international. However, supervision of the financial markets is still mainly organised on a national basis. To address cross-border problems in a more coordinated way, the EU has developed mechanisms within sectoral regulation in which powers will be shared between national supervisors (the 'home' supervisor as the licensing authority and the 'host' supervisor in the country in which a product or service is provided). The result of this is that the priorities of the national supervisors are increasingly subject to influence at European level.

Brexit has changed the structure of the Dutch capital market, and this is reflected in the AFM's input in European policy discussions. Brexit has led to the relocation of parties that previously held a licence in the United Kingdom. Most of the relocation to the Netherlands concerns trading platforms. New legislation and regulation has to take account of the specific features of the structure of the capital market in the Netherlands, that has changed as a result of Brexit. Few countries in the EU have a similar market structure. This is reflected in a proactive stance by the AFM with regard to timely input of the view of the Netherlands in European discussions of the capital markets. The AFM provides this input in concert with the Ministry of Finance, DNB and market participants where appropriate.

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[58] European Commission.'https://ec.europa.eu/commission/presscorner/detail/en/ip_21_3690'.

[59] For greater transparency of corporate information and better facilitation of investment in equity instruments, the EC is considering exchange regulations, long-term investment funds (ELTIFs) and the prudential framework for insurers (Solvency II) and banks (Basel 3 and securitisation).

02

Risk maps

The AFM's supervision is a risk-based. Risk is a central theme in our thoughts and actions. A risk is a set of developments, circumstances and behaviour in the market that could lead to an undesirable outcome. In other words, an outcome that could harm or damage our mission. Risk-based supervision is one of the ways in which the AFM has organised its supervision, in addition to initial supervision and ongoing supervision.

This edition of the Trend Monitor introduces risk maps for the four areas of the AFM's supervision. The risk maps are a means of translating developments in the AFM's external environment into specific risks for its supervision. The risk maps thus give an overview of the key risks in each area of supervision. The practical implications of these risks for the supervisory activities of

the AFM will be detailed in the Agenda 2022. The Agenda 2022 will also go into greater detail regarding ongoing and initial supervision.

The risk maps are a snapshot, and are not intended to give an exhaustive overview of all risks. They represent the risks as the AFM sees them at this time, but they will of course evolve, as the environment in which the financial sector and the AFM operate is continually changing. Developments from the analysis of the current situation (section 1) such as sustainability, increasing outsourcing in the context of digitalisation, growing cyber crime and concerns regarding privacy and integrity are the most relevant risk drivers for all the areas of our supervision. Nonetheless, they do not necessarily appear in each risk map. This is due to the decision to only explicitly state risks associated with these developments in the supervisory areas where they pose the greatest risk.

The risk descriptions include the various elements of the risk in question - developments, causes and undesirable outcomes. Each risk is also assigned a summarising key word. The 'drivers' and the 'materiality' of the risk are stated in separate columns:

- Drivers are the principal developments and causes, and are linked to the trends mentioned in section 1.
- • Materiality describes the scale of the risk. Four levels are distinguished: very high (●), high (●), increased (●) and low (●). The direction of the arrow indicates the expectation that the risk is increasing (↗), is stable (➔) or decreasing (↘).

In each case, one specific risk is explained in a separate box in each supervisory area.

Many of the developments described may also lead to desirable outcomes. The risk maps focus on undesirable outcomes. As a supervisor, this is of course what we are most interested in. However, many of the developments described may indeed lead to desirable outcomes. The pensions transition is aimed at achieving a more future-proof pensions system, with more room for personal wishes. Digitalisation is making it easier and quicker to arrange financial affairs. By investing more, in principle households are increasing their potential for accumulating larger financial assets over time. The addition of non-financial information in annual reports and ESG indicators in prospectuses means that these documents now provide greater insight. We are aware of this, and in our supervisory approach we always strive to avoid unnecessarily burying the positive elements of a development in our efforts to address the negative aspects.

2.1 Risk map for financial services

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. In the market for financial services, this means that our role is more protective than in the capital markets. Many consumers find it difficult to make financial decisions, such as buying a house or saving for later on. Poor decisions - such as entering into a long or unsuitable contract, borrowing too much or taking no action when in special management - have very negative consequences for the financial well-being of households.

The economy is recovering, but the situation for households is still uncertain. The financial well-being of households can never be taken for granted, but with the experience of the coronavirus pandemic and the increasingly visible effects of climate change, we are now in an unprecedented situation. This economic and social uncertainty has not led to downward price corrections. On the contrary, the combination of low interest rates and scarcity - the search for yield and the tightness in the housing market - have contributed to higher prices for housing, the stock markets and other assets.

Low interest rates are affecting the financial well-being of households. Low interest rates are driving prices higher, and therefore increasing the risks of bubble formation and excessive borrowing, and are making pensions, (profit-sharing) insurances and savings less profitable for households. We are devoting attention to these five issues. Pensions and lending always take priority, because of their significant impact on the financial well-being of households and the seriousness of market failures (knowledge and information differences and limited ability to learn). The upcoming pensions transition and the borrowing behaviour of households underline the continuing importance of these issues for our supervision. The potential for bubble formation has a direct effect (through investments) and an indirect effect on the financial well-being of households.

Another issue is how a negative savings rate affects the savings and investment behaviour of households, and the offering of alternatives to saving by the banks.

Easy access and service convenience come at a cost. Financial decisions have serious consequences for households, and decisions need to be properly considered. This calls for a critical attitude and reflection.

In the digital environment, it is becoming easier to create a frictionless environment in which consumers are motivated by subtle 'nudges'. You can arrange insurance and settle your claim with your phone if you need to. You can make online purchases at any time of day, and choose to pay later. Or, convinced by success stories from like-minded people and finfluencers, invest on a whim in the hype of the day. Households can experience the added value of this convenience on a daily basis. But there is also a risk here. It's so convenient that it becomes too easy: the lack of friction means that there is not enough critical reflection.

Not everyone experiences access to financial services as easy or equal. Our concern is that some groups of households are not able to find their way, for example due to limited skills (digital illiteracy in combination with a lack of physical branches nearby) or language barriers (see box 3). In addition, some customers are effectively excluded due to personalised pricing by insurers. Some forms of uninsurability are also linked to climate change (see box 2 in section 1). For instance, insurance against subsidence is no longer possible, even though this is becoming an increasingly frequent problem. We also see that the protected environment created by legislation, such as for asset management or financial advice, can be experienced as a barrier. Price-driven consumers may prefer an execution-only service instead of advice, even though an advisory service would be more appropriate for them. These various forms of inaccessibility can make some groups of households more vulnerable.

The international market dynamic does not always lead to outcomes that are in the customer's interests. The principle behind a European market and international competition is that this contributes to households' financial well-being. This principle however does not always hold for financial services. We see this for example among internationally operating brokers who, in their effort to boost trading volume, offer incentives to retail investors to execute many transactions. They do this by competing fiercely on the basis of zero commission and apparently offering a low-cost service. But high trading volume is certainly not always in the interests of a retail investor. This risk, that competition does not lead to outcomes that are in the customer's interests, makes it important to systematically analyse the extent to which the features of a particular market and the nature of competition within that market contribute to or indeed harm the customer's interests. The limitations of national supervision in an international market and the resulting weak control over cross-border operators are also a factor. Other sectors in which the current international market dynamic may also be to the detriment of the customer's interests, also driven very much by low interest rates, are life and non-life insurance.

Sustainability is a challenge, and greenwashing is a focus of attention. Financial institutions are facing a new challenge in dealing with the consequences of climate change, climate policy and other sustainability goals. Sustainability is prominent on the political agenda, and is one of the interests that institutions have to consider. The other interests are those of employees, shareholders and customers. Sustainability requires a change of direction on the part of institutions: from banks and insurers to pension funds and collective investment schemes. The question is whether the greater focus on sustainability will go hand in hand with profitability and putting customers first, or whether the focus on those other interests will outweigh the focus on sustainability. Greenwashing in the offering of sustainable financial products is a focus of attention: institutions may market products based on the perception of sustainability without their proposition making any actual contribution to sustainability. This is the case for instance with investment products. Issues relating to definition and transparency on the supply side and a 'green bias' on the demand side are also contributing factors.

A breeding ground for growth in investment fraud is in place. Money laundering is one of the links between the underworld and the financial sector. In addition, investment fraud that aims to harm households is an example of an integrity problem. Low interest rates and the search for yield, the inflow of new investors and the ability to trade easily online mean that the preconditions for investment fraud are very much in place.

Risk map for financial services

#	Key words	Specific risk	Drivers	Importance
1	**The pensions transition**	a. The pension scheme does not match the risks that the scheme members are able and willing to bear. b. Unrealistic expectations are raised regarding the new pensions system and the pensions of the scheme members because the information is not correct, clear, timely or balanced. c. The pension scheme and the choices made in this respect are not explainable.	• Legislation • A more flexible labour market • From collective to individual • Low interest rates	high, increase
2	**Excessive lending**	The high level of private debt (in mortgages and consumer credit) is making households vulnerable to changes in personal circumstances or an interest-rate shock. Small business owners, flexible workers and others affected by the coronavirus crisis and seeing their position deteriorate may be tempted to look for alternative sources of funding such as pay-day loans, buy now pay later (hire purchase) and forms of private lease. The risks associated with convenience, accessibility and the market dynamic are also especially active in the lending market.	• Low interest rates • Overheated housing market • The coronavirus crisis • Digitalisation • Legislation (lending standards)	very high, stable
3	**Price corrections**	Heavy and lengthy declines in the stock market due to bubbles bursting cause financial losses and loss of confidence. New retail investors with portfolios that are not well-diversified and who have known mostly good times are especially vulnerable.	• Low interest rates, search for yield, monetary policy • The coronavirus crisis • Hypes and finfluencers • New investors	high, increase
4	**Disappointing life benefit**	For policyholders, continuing low interest rates mean that their final capital is lower (or much lower) than they expected and the purchase of a product in the payment phase is more expensive. Low interest rates erode the position of insurers, prompting them to take measures that may not be in the interests of their customers.	• Low interest rates	high, stable

LEGENDS

- very high
- high
- increased
- low

- increase
- stable
- decrease

Risk map for financial services

#	Key words	Specific risk	Drivers	Importance
5	**Alternatives to savings**	In response to low and in some cases negative savings rates, the banks are offering higher returns with apparently safe investment alternatives such as guarantee products, which customers looking for a return of some kind do not evaluate properly. Consumers themselves are looking for alternatives to savings and purchasing investment products without assessing the risk correctly.	• Low interest rates	verhoogd, toename
6	**Service convenience**	There is concern that services are becoming so convenient and frictionless that customers do not adequately pause for thought and comparison when making material financial decisions. For example, young adults that are speculating in exotic instruments such as cryptos and SPACs through the execution-only channel. Also, the new digital distribution concepts such as automated advice supported by algorithms and dynamic pricing. Then there is the adjustment of product conditions without sufficient explanation of the consequences for customers.	• Digitalisation • Internationalisation • Finfluencers and hypes	verhoogd, toename
7	**Accessibility**	Accessibility is a precondition for fair financial markets. Access to financial services can be difficult (for older people, migrants, or the digitally illiterate), limited (due to uninsurability), or imbalanced (more difficulty accessing asset management compared to execution-only).	• Social and economic circumstances • Digitalisation, AI and algorithms • Legislation	verhoogd, gelijkblijvend
8	**Market dynamic**	Market dynamics do not always lead to outcomes that are in the customer's interest. Customers may not be able to accurately assess the quality of financial products and services. Providers offering a better price/quality ratio are not always rewarded for doing so, and may be forced to compete in areas other than the customer's interest. For example, brokers who work on increasing transaction turnover and searching for more volume compete fiercely on the basis of zero commission and the appearance of being 'low-cost'.	• Legislation • Digitalisation • Innovation and admission • Continuous pressure on turnover, margins and costs	verhoogd, gelijkblijvend

LEGENDA

- zeer hoog
- hoog
- verhoogd
- laag

- toename
- gelijkblijvend
- afname

Risk map for financial services

#	Key words	Specific risk	Drivers	Importance
9	Greenwashing	Institutions market products on based on a perception of sustainability, without their proposition making any real contribution in this respect. This occurs mainly with investment products and pensions plans. Definition and transparency issues are contributing factors.	• Sustainability • Legislation	
10	Investment fraud	Parties in the investment market that evade our regular supervision display malicious behaviour and harm investors with misleading investment recommendations and fraudulent investments in instruments such as CfDs or cryptos. Social media can be used to approach large numbers of investors internationally.	• Internationalisation • Low interest rates • Popularity of inde-pendent investing • Social media (hypes)	

Box 3 A survey of Dutch citizens with a migrant background: financial vulnerability and relationship with financial services

Why this survey?

The population of the Netherlands will undergo radical changes in the coming decades. Growing diversity as a result of the proportion of Dutch citizens with a migrant background is a significant demographic development. This development will affect many areas of society, but how it will work out in practice is still largely uncertain. In its role as a conduct supervisor, the AFM is considering - and calls for attention to - social developments of this kind and trends that may affect the AFM's mission, also if the impact of this may not become manifest until sometime in the future. On the basis of its mission, the AFM strives to contribute to sustainable prosperity in the Netherlands. The AFM's supervision of financial services accordingly focuses specifically on protecting consumers, especially those in (financially) vulnerable positions. In this context, the AFM has conducted a survey of the financial vulnerability of Dutch citizens with a migrant background and their relationship with the provision of financial services.[1] The survey was based on the available literature, discussions with external parties and data on the use of financial products and services by Dutch citizens with a migrant background.[2] This box offers some initial insight into the findings of this survey.

How large is the group of Dutch citizens with a migrant background?

Dutch citizens with a migrant background currently account for around 24% of the total population. This proportion is set to increase substantially in the coming years. In 2050, it is estimated that approximately one third of Dutch citizens will have a migrant background. This increase will be mostly due to the increased number of non-Western migrants.[3] This group is moreover highly heterogeneous.

How financially vulnerable is this group?

Both the available literature and data sources indicate that Dutch citizens with a migrant background, and particularly a non-Western background, are on average more financially vulnerable than Dutch citizens without a migrant background. Dutch citizens with a migrant background are on average less highly educated and have a weaker position in the labour market. They are also on average more financially vulnerable because they own fewer assets, have a lower income and less security of income (see tables 2 and 3). In addition, many first generation migrants have a poor provision for retirement due to a state retirement (AOW) pension gap (see table 4). This is because many of them have come to the Netherlands at a later age and have not accrued AOW pension over a long period. Moreover, limited use is made of income support for people who have reached state pension age (Aanvullende Inkomensvoorziening Ouderen, AIO), especially by non-Western migrants. In 2018, it is estimated that there were a total of 19,300 Dutch

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[1] Hierbij hanteren wij de CBS-definitie van migranten: een Nederlander met een migratieachtergrond is een persoon van wie tenminste één van de ouders in het buitenland is geboren. Eerste-generatie-migrant: persoon is zelf in het buitenland geboren, tweede-generatie-migrant: persoon is in Nederland geboren.
[2] Externe partijen: migrantenorganisaties, Nederlanders met een migratieachtergrond, overheidsinstanties, universiteiten en financiële instellingen.
[3] CBS. 'Verkenning Bevolking 2050: meer inwoners met een migratieachtergrond', 2020.

citizens who (potentially) were entitled to AIO, but did not use it. 56% of these people came from a non-Western migrant background[4]

What is the role of financial services in this?

Based on the available sources, there is as yet no (statistical) evidence for the situation in the Netherlands showing that Dutch citizens with a migrant background actually experience limited access to financial services and products and that this is therefore a significant factor contributing to financial vulnerability. Nonetheless, there are several - often anecdotal - items of attention coming to the fore in the relationship between Dutch citizens with a migrant background and financial services. There are a number of factors that potentially limit access by people with a migrant background to the financial sector. These limitations may lie both on the supply side (the financial institutions) and on the demand side (people with a migrant background).

First of all, Dutch financial institutions (banks, insurers and pension funds) generally appear not to have developed a specific policy with regard to protecting or activating Dutch citizens with a migrant background. One important reason for this is that on the basis of the General Data Protection Regulation, financial institutions are not permitted to register the ethnic background of their customers. Dutch citizens with a migrant background may also appear relatively rarely on the radar of financial institutions, possibly due to less confidence in institutions and language barriers.

From the demand side, the potential language barrier that may be experienced by Dutch citizens with a migrant background, in combination with limited financial and digital knowledge and skills in some cases, may play a role. Communication and provision of information by financial services providers appear to be mainly in Dutch (and sometimes in certain digital channels in English).

For instance, the information provided on products, contracts and advisory interviews. This may mean that Dutch citizens with a migrant background experience a barrier when looking to purchase financial products. This barrier may also apply to Dutch citizens without a migrant background, for instance in cases of low financial and other literacy. This problem appears to become worse as products and the related provision of information become more complex, and in cases where problems arise (payments in arrears, collection agencies, etc.), the information provided obviously becomes more formal and more legalistic. Communication in multiple languages is also not necessarily seen as the solution to this problem: use of simpler language and greater use of visualisations are frequently mentioned as a potential improvement.

Statutory provisions for information provision lead to information that may be too complicated for this group, and therefore may be counter-productive. These provisions are designed to ensure that financial services providers provide complete and detailed information to consumers. For consumers with less financial or general literacy however, it may be more effective to keep information as simple and straightforward as possible and, as mentioned above, to replace text with visualisations.

It may be the case that Dutch citizens with a migrant background are more likely to seek a solution in alternative sources of finance outside the traditional Dutch financial sector. For example, Dutch

[4] CBS. 'Recht en gebruik Aanvullende Inkomensvoorziening Ouderen (AIO)', 2017 en 2018.

citizens with a migrant background use remittances, whereby they transfer money from the Netherlands to family or friends in their home countries.

If the costs of these transactions rise, it is possible that some Dutch citizens with a migrant background will either not send this money or use informal or unregulated channels to do so.[5] This last possibility of course involves the risk of exorbitant rates being charged, which could increase financial vulnerability.

It is also clear that many Dutch citizens with a non-Western migrant background require financial products in accordance with Islamic practice for religious reasons. While there is indeed a demand for example for Islamic mortgages in the Netherlands, partly due to tax restrictions these products are expensive in comparison to a conventional mortgage. Due to the absence of interest, an Islamic mortgage does not give the possibility of deducting mortgage interest from tax and transfer tax has to be paid twice.[6] As a result, these products have not yet taken off in the Netherlands.

How to progress?

Greater awareness and a public debate about the issue of the potential for financial vulnerability among Dutch citizens with a migrant background in relation to financial services would seem to be desirable. Financial institutions could consider further how they can serve this group in the future, taking account of the inherent limitations of privacy legislation, for example. For policymakers and supervisors, it would appear that greater and more substantiated insight and understanding is needed, for instance through further research into the financial vulnerability of this group and its relationship with formal and informal financial services. The AFM will carry out further study of this issue. It would also appear to be useful to obtain insight into possibly unintended counter-productive elements for Dutch citizens with less financial and general literacy in current legislation and regulation, such as the information and transparency requirements already mentioned.

5 See also: House of Representatives of the States General, motion by Member Bouali on reducing the transaction costs of remittances in the Netherlands, December 2020.

6 The potential and restrictions were already identified in a collective study by the AFM and DNB in 2008; Islamic Finance and supervision: exploratory analysis, B. Verhoef, S. Azahaf and W. Bijkerk. In 2021, these restrictions still apply.

Tabel 2. Dutch citizens with a migrant background more frequently in debt restructuring.

Number of people (per 1000) in debt restructuring	
Dutch	2
Middle/Eastern EU	2
Moroccan	4
Turkish	5
Surinamese	6
Netherlands Antilles	8

Source: KIS district monitor (www.kis-wijkmonitor.nl).

Tabel 3. Lower income and security of income for Dutch citizens with a migrant background.

% persons with low/structurally low income (2019)	At least 1 year	Four years or more
Dutch	3.7	1.4
Western migrant background	7.3	3.0
non-Western migrant background	19.9	9.8

Source: CBS.'Low and structurally low personal income; personal characteristics' (cbs.nl).

Tabel 4. Mainly older people with a non-Western migrant background below the poverty line.

Older people below the poverty line (%)	
Dutch	2.5%
Western migrant background	6.6%
non-Western migrant background	40.4%

Source: SEO Economic Research. 'Income position of elderly', 2017.

2.2 Risk map for the capital markets

Efficiently operating capital markets are an important element in fair and transparent financial markets. Our supervision of the capital markets aims to ensure a robust infrastructure and ethical trading Problems in the capital markets are not always immediately visible, but may affect large groups of consumers in the form of less return on their investments, higher interest rates on loans or because they are not able to access finance when they need it. Our supervision of the capital markets is based on the systemic perspective: this does not only concern protection of the professional and other participants in this market; it is also about the central function in the financial market that companies subject to supervision play and on which many other participants depend. Efficient operation of the platforms is important for financial stability.

Much trading in shares now takes place outside public multilateral markets. This development started with the introduction of MiFID. Since that time, securities no longer have to be traded exclusively on the issuing platform, and platforms and bilateral execution venues compete for order flow. This development and the related risks, such as loss of general transparency with respect to prices and the existence of client capture, are discussed in more detail in box 4.

Investors are moving into new, highly volatile and/or dubious financial investment products as a result of the search for yield. These include cryptos, crypto derivatives and SPACs (Special Purpose Acquisition Companies). For cryptos, it is difficult to establish the underlying value of such a product, and there is a higher likelihood of fraud. The risks and uncertainties may increase further if people invest in crypto derivatives, which are even more difficult to understand.

Section 1 (box 1) discusses the forthcoming European regulation for cryptos. Another new investment form is the SPAC. This is a company without business activities that issues an International Public Offering (IPO) to raise capital and then purchase all or part of a non-listed company in the relatively near term. Because SPACs do not know in advance which company they are going to acquire and do not have any business activities at the time of the IPO, they are also referred to as 'shell companies' or 'blank cheque companies'. SPACs still have to meet transparency and information requirements, however these apply at different times than for other listed companies. For example, for a SPAC a prospectus is first approved that gives all the information on the SPAC itself, but not yet on the company to be acquired by the SPAC. This information is not published until this company has been found. We supervise the provision of this information. SPACs therefore still have to meet transparency requirements, but in a different way. The AFM considers SPACs to be highly complex products and believes that these are products suitable for only a limited number of investors. If these products are sold outside their target market, this may lead to foreseeable disappointments for clients.

In the area of digitalisation and technology, the use of trading and other algorithms is the dominant feature. Algorithms are appearing in increasingly complex forms, as a result of which the underlying structure of an algorithm, and also connections between algorithms, cannot always be properly identified. Proprietary traders use trading algorithms that can influence the volatility of certain assets and market liquidity, and can produce an unexpected effect that can disrupt the market. It is also not clear whether proprietary traders are always aware of the effect of the algorithms they have created on the integrity and robustness of the market.

Data quality and the accessibility of data are frequently not adequate for market participants and market supervision. Data form input for trading houses, platforms and other market participants. However, there is a risk that the market has incomplete or incorrect information on a financial product itself, or on the market, the current valuation or the price of a financial product. This obscures market information for both investors and supervisors.

Social media can be used as a new coordinating platform for market manipulation. Market manipulation is a known risk in the capital markets, but recently it has appeared in a different form. Social media makes it possible to massively spread information (or disinformation), based on a particular ideology or an attempt to make a profit. The strategy used for this, known as pump and dump, involves recommendation of a stock in order to increase demand and value, followed by selling at a higher price with a large profit. Acting on this basis may be a form of market manipulation. The obvious recent case of this involved GameStop (see also the explanation in section 1.4).

Risk map for the capital markets

#	Key words	Specific risk	Drivers	Importance
1	**Efficient market operation**	Efficient market operation is under pressure from the growing trade outside the major price-setting platforms (growth of synthetic ETFs, trading in dark pools/systematic internalisers). This may lead to loss of general transparency on prices and transactions, and the creation of client capture.	• Digitalisation • Legislation	very high, stable
2	**Data quality**	Data quality and the accessibility of data for market participants are lacking, so that the market has incomplete or incorrect information on i) a product (do investors know what they are investing in?), and ii) the market, current prices and product valuation.	• Digitalisation	very high, increase
3	**Algorithms**	Increasing usage of ever more advanced and self-learning algorithms by proprietary traders can disrupt the market unexpectedly and in a manner that is difficult to estimate. This may affect the volatility of certain assets or market liquidity, or lead to crashes.	• Digitalisation	high, stable
4	**Post-Brexit**	The relationship between the capital markets in the UK and the EU has changed as a result of Brexit. Part of the trading infrastructure has relocated to the EU, but part has remained in the UK. Institutional relationships have also changed with respect to regulation and supervision. This can lead to an ineffective approach to cross-border issues and therefore also to risks, for example in derivatives clearing. The interrelationship of the markets requires cooperation, but this is less automatic than it used to be.	• EU regulation • Internationalisation	high, decrease
5	**Market manipulation through social media**	Social media offer influencers and activists an (international) platform whereby they can massively spread information and disinformation, either for their own profit or for ideological reasons, using a pump and dump strategy. Acting on this basis may constitute market manipulation.	• Social media • Digitalisation • The coronavirus crisis	increased, increase

LEGENDS

- very high
- high
- increased
- low

- increase
- stable
- decrease

Risk map for the capital markets

#	Key words	Specific risk	Drivers	Importance
6	New investment products	Investors are exposed to new investment products that are highly complex, such as SPACs. Or, to investment products that are highly volatile and for which the underlying value is difficult to establish or lacking in some cases, and which involve a greater risk of fraud. These include cryptos and crypto derivatives.	• Low interest rates • Social media (hypes) • Digitalisation • Internationalisation	increased, increase

LEGENDS

- very high
- high
- increased
- low

- increase
- stable
- decrease

Highlighted risk: 'Efficient market operation'

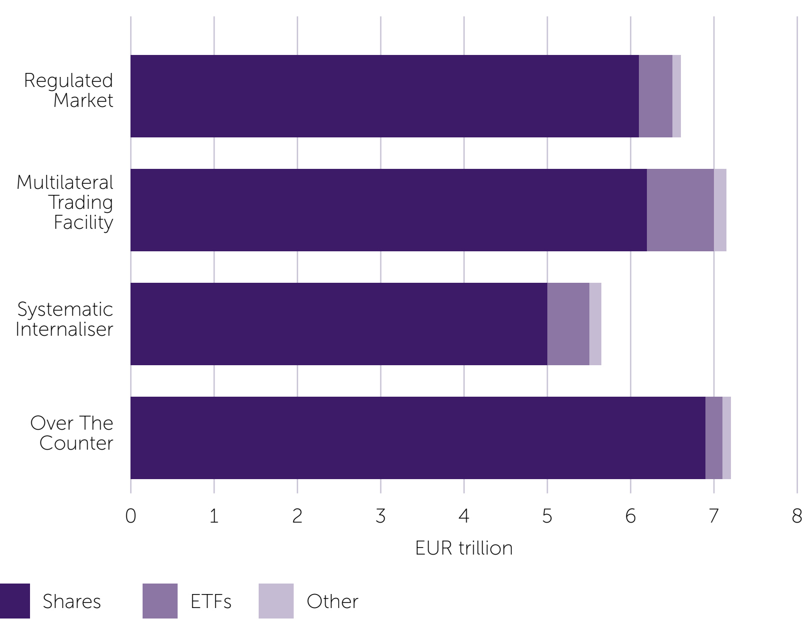
Box 4 Efficient market operation: quality of public multilateral markets

In its role as a market supervisor, the AFM strives to achieve efficiently operating capital markets that feature best execution. The features of such an 'ideal market' include that many small buyers and sellers trade with each other on a single central exchange, where all market parties have equal access to all information on prices and transactions, and can execute their own transactions quickly and at low cost without this leading to substantial price movements (volatility). Best execution means that brokers execute the orders of their clients on the best possible conditions.

Such an ideal market does not exist in reality, but share trading has been traditionally the closest approximation. Shares are after all one of the most standardised financial instruments. One Philips share is identical to another Philips share. This means that shares are fully exchangeable. Such standardised instruments do not exist or exist only to a limited extent in the fixed-income markets for example, which are much more heterogeneous. The homogeneous nature of shares is one of the reasons that shares could more often be traded on a single dominant trading platform (such as the Amsterdam stock exchange in the Netherlands), which helped transparent price formation. When the underlying securities are more heterogeneous, the contracts are more specific or transaction volumes are larger, there are more advantages in trading outside a single exchange.

Nonetheless, much trading in shares now takes place outside public multilateral markets. Figure 3 shows that roughly a quarter of trading is conducted over the counter (OTC, or bilaterally). A large proportion of trading also occurs through systematic internalisers (SI), with the banks using their own trading departments to act as the counterparty in the execution of client orders. The multilateral trading facilities (alternative exchanges) are now larger in terms of trading volume than the traditional public stock exchanges.

Figure 3. Annual equity trading volumes per instrument and type of market.



Source: ESMA Annual Statistical Report on EU securities markets, ESMA-50-165-1355, 2020, p. 19. Based on sources: FIRDS, FITRS, ESMA.

Regulation and advances in technology have encouraged greater competition between trading platforms and lower transaction costs. Regulation and advances in technology have encouraged greater competition between trading platforms and lower transaction costs. After the (national) securities exchanges started to work on the basis of a profit motive at the end of the 1990s, their dominant position became increasingly problematic. The European MiFID regulation accordingly introduced the possibility of also trading shares on alternative markets (MTFs). Developments in ICT made it possible for the sector to innovate rapidly. The expectation of lower trading costs arose from this. These days, investors pay far less for a transaction than they did 20 years ago. MiFID has thus turned out to be a positive development towards more efficient capital markets.

As a result, specialist parties have also been given more room to provide specific services. Large buyers and sellers, whose orders cause large movements in prices, have an interest in operating more discreetly. And some client wishes are so specific and non-recurring that they cannot be met with the standard instruments that are traded on the exchange. Regulation and technology have provided room for (new) providers to meet these client requirements on niche platforms.

The downside of this development is the loss of general transparency regarding prices and transactions. The expectation that technological developments would lead to a public consolidated tape (CT) has not materialised. A CT would have to provide investors with a consolidated overview of all the various prices on the various exchanges. Instead, we have private consolidated tapes, and digitalisation has led to the development of what are called broker crossing networks, where supply and demand are brought together on an OTC basis.

Briefly then, a growing number of customised instruments and (closed) trading platforms make it increasingly difficult to compare the offerings on the various platforms, which is to the detriment of efficient market operation.

A second risk has arisen in the form of client capture. In a situation where transparency and openness is lacking, investors can be disadvantaged by client capture practices, whereby clients are 'captured' in bubbles or niches by trading platforms through a strong focus on advanced marketing and concealed pricing. The relatively high marketing costs are then recouped through high profits on trades with the platform's own clients. This is a form of systematic internalisation. Once they are in the network, it becomes increasingly difficult for an investor to compare the offering with the various products of other platforms, which may tempt the provider to recommend its own high-margin customised products to clients instead of standard investment instruments with lower costs. This poses a threat to best execution.

The objective of efficient market operation is searching for a balance between competition and innovation, and equally accessible information. There are signals suggesting that increasing specialisation and decentralisation in the trading of shares and other securities are threatening to disrupt this balance, although not all the research shows the same picture.[7] In this (European) debate, the AFM argues for open and transparent markets. This reflects the direction currently developed in MiFID2 regarding the encouragement of transparency and competitive markets with open access. This statutory requirement for transparency applies to both product comparison, including provisions for prospectuses and marketing, and the quality of order execution in the secondary market.

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[7] Oxera. European Equity Liquidity Landscape. 26 May 2021.

2.3 Risk map for asset management

Het toezichtgebied assetmanagement geeft invulling aan de AFM-missie door toezicht te houden op een duurzaam bedrijfsmodel van vermogensbeheerders en zorgvuldige behandeling van cliënten. Het AFM-toezicht beschermt beleggers en consumenten die direct of indirect geld hebben ondergebracht bij vermogensbeheerders. Deze beleggen (vooral) pensioenpremies van grote Nederlandse pensioenfondsen en spaargelden van consumenten op de kapitaalmarkten. Ons toezicht draagt bij aan het borgen van beleggersbelangen.

Asset management parties are repositioning, and one of the consequences of this is consolidation. The asset management world is changing, due, among other reasons, to increased scale and margin pressure, the growth of (online) passive (index) investing, increasing legislation and regulation, and issues related to outsourcing. Collectively, these changes are creating a need for individual asset management parties to reposition themselves in order to ensure their continuity. Stopping, increasing scale (competing on cost or through acquisition) and specialisation are the main strategic options.

Especially smaller asset managers face a challenge in dealing with this effectively. This may make it more difficult to manage assets in accordance with investor expectations. One of the consequences of this repositioning is a trend towards consolidation. While consolidation may contribute to strengthening the market going forward, it will also reduce the number of players in the market. In that sense, consumer choice will be diminished. In addition to a declining number of very large players with a broad offering, we still see room for specialist parties, but also that the middle segment is coming under pressure. Furthermore, we have seen a trend that asset managers focusing on the professional market are (re)orienting towards the fiduciary model and the potential impact of the pensions transition for their fiduciary and other services.

The search for yield is leading to increased investment in illiquid assets. This is because illiquid assets, all other things being equal, carry a higher risk premium. However, there is a risk that these illiquid assets are not correctly valued, as a result of which buyers and sellers execute transactions at different prices, or have limited ability to effect transactions because of market illiquidity. One specific example is the coronavirus crisis, which has led to huge uncertainty regarding the valuation of illiquid assets such as commercial real estate.

Technological developments such as artificial intelligence (AI) and cyber crime call for careful control. The use of AI and the application of trading algorithms requires careful control on the part of asset management parties, and transparency towards investors with regard to AI-driven investment strategies. As entities, asset management parties are vulnerable to cyber attacks and may not be sufficiently robust to withstand incidents, which may damage confidence in and even the continuity of the asset management party concerned.

Outsourcing, if not adequately controlled, can lead to risks in the supply chain and/or in business-critical processes. Outsourcing is becoming increasingly important in the asset management sector. Besides investment administration and IT, the outsourcing of activities requiring a licence such as portfolio management and asset management is also increasing. Reasons for outsourcing may include operational complexity, cost savings and/or a focus on differentiating activities. Outsourcing may mean that a controlled and ethical business operation is less assured, since the supply chain becomes longer and interdependencies increase. As a result, in-house knowledge of outsourced processes at the host organisation declines.
For the 'Brexit parties', portfolio management is usually outsourced to the original British affiliated manager. The international nature of outsourcing of these regulated tasks means that supervision cannot be maintained without cooperation between national and international supervisors. Finally, a party

may encounter issues relating to integrity if a third party in the supply chain to which part of the business is outsourced fails to act with integrity.

There is increased demand from investors for financial products that follow the principles of sustainability. The expectation is that an offering with more sustainability features will win over less sustainable competition. The growing demand for sustainable investments and the rapid development of European standards for sustainable investments may lead to insufficient supply of investments that meet all the new requirements. This could cause prices of sustainable investments that meet the standards to rise, or that asset managers turn to more risky 'sustainable' investments. The risk is that not all the providers will be able to keep up with this sustainability trend, in both their product offering and the integration of this trend in their business operation.

The lack of reliable data for measuring sustainability performance may contribute to greenwashing. If sustainability criteria are not sufficiently clear and standardised in a market, it is difficult for investors to evaluate the extent to which a financial product is actually sustainable. The information asymmetry between provider and client makes greenwashing possible, as a result of which investors will purchase financial products that are not as sustainable as they think.

The combating of money laundering, the financing of terrorism and offences against the Sanctions Act involves a waterbed effect. Dealing with one channel through which these transactions are affected can lead to greater pressure in the other channels. Now that the banks have further developed their gatekeeping role, there is a possibility that the risk of money laundering will shift to investment firms and investment fund managers.

Risk map for asset management

#	Key words	Specific risk	Drivers	Importance
1	**Strategy of market participants**	The changing environment - involving scale and margin pressure, the rise of (online) passive investing, increasing legislation and regulation and outsourcing issues - is forcing individual asset management (AM) parties to reposition themselves strategically to ensure their continuity. It is particularly challenging for the smaller AM parties to deal with this effectively, and it can complicate the management of assets in accordance with investor expectations.	• Margin pressure • Growth of passive investing • Digitalisation • Outsourcing	🟠 ↗
2	**Sustainability**	The increasing attention to sustainability makes it more attractive to buy and sell sustainable assets. This means that asset managers need to be transparent regarding the sustainability criteria that they apply. The information asymmetry between provider and client makes greenwashing a possibility. This means that while sustainability criteria may apparently be met, in practice the impact is limited.	• Sustainability	🟡 ↗
3	**Valuation of assets**	Outliers may occur in the valuation of assets, and as a result, direct or indirect losses can be sustained by the current party, the buyer or the seller. This can for example happen with: 1. the valuation of illiquid assets (infrastructure, SME loans, etc.) 2. net asset value calculation (swing pricing, costs) 3. illiquid and volatile markets 4. *stranded assets*	• Asset/liability mismatch • Low interest rates • Revaluation of real estate (coronavirus crisis) • Sustainability	🟠 ↗
4	**Interest-rate shocks in the derivatives markets**	Derivatives portfolios used for the hedging of interest-rate risk are exposed to liquidity risk. Derivatives portfolios will be faced with high margin calls if interest rates rise, for example due to market stress. It is important that fund managers have adequate liquidity to meet these margin obligations.	• Interest-rate developments • Hedge derivatives • Asset/liability mismatch	🟡 ↗
5	**Business operation and outsourcing**	Disruption to business operation if controls are not in place or not of sufficient quality, and/or do not correspond to the scale and complexity of the AM business. Outsourcing is becoming increasingly important in the AM sector. There can be an outsourcing risk because institutions subject to supervision are not applying (or not effectively applying) controls such as quality monitoring, policy and due diligence, so that the stability and continuity of the service provision by asset managers comes under threat.	• Digitalisation • Outsourcing • Internationalisation	🟡 →

LEGENDS

- 🔴 very high
- 🟠 high
- 🟡 increased
- 🟢 low

- ↗ increase
- → stable
- ↘ decrease

Risk map for asset management

#	Key words	Specific risk	Drivers	Importance
6	Technology	The use of artificial intelligence (AI) and trading and other algorithms calls for transparency towards investors. Flash crashes may also threaten the liquidity of asset managers and lead to uncontrolled losses. As entities, AM parties are vulnerable to cyber attacks and may not be sufficiently robust to withstand incidents, which may damage confidence in and even the continuity of the AM party concerned.	• Digitalisation	increased, increase
7	Money laundering	Money laundering may occur through investment firms and fund managers, partly because other gatekeepers (such as the banks) have introduced stronger barriers (the waterbed effect). Political and social attention to observance of the gatekeeping function is still extant, partly due to the (international) money-laundering scandals in recent years, as well as the visibility of undermining criminal activity.	• Legislation • Internationalisation	increased, increase

LEGENDS

- very high
- high
- increased
- low

- increase
- stable
- decrease

Highlighted risk: 'Sustainability'

Box 5 The transition to a sustainable asset management sector

Demand for sustainable investments is increasing rapidly. For example, Morningstar stated on the basis of its own data that there was a worldwide record inflow into sustainable funds in the first quarter of this year, with assets invested increasing by 19%.[8] Europe accounted for nearly 80% of this total worldwide inflow. Although inflow in the second quarter of 2021 was less according to Morningstar, total assets invested continued to grow. Morningstar states that around $2,244 billion is currently invested in more than 4,900 sustainable funds worldwide.[9]

This transition to a sustainable asset management sector poses significant challenges for asset managers and supervisors. Asset managers will have to make their offerings more sustainable to meet this rapidly growing demand. Based on a survey of Dutch asset managers and investment funds, the AFM has established that more than half of these funds do not include sustainable features yet. In addition, asset managers will have to integrate sustainability in their business operations and services and devote due care and attention to the information they provide to investors with regard to sustainability risks and features. The supervisors in turn will have to oversee that this transition proceeds in the right direction, and that asset managers make the changes needed to continue to comply with fast-changing legislation in good time.

Legislation and regulation therefore has an important role in this transition. Firstly, existing regulation will be changed. MiFID II, UCITS and the AIFMD will be amended with respect to the integration of sustainability in the business operations and service provision of asset managers. Secondly, new legislation and regulation will be introduced. For example, the Sustainable Finance Disclosure Regulation (SFDR)[10] entered into force on 10 March 2021. This regulation contains new requirements for the provision of information on sustainability (ESG factors) in the financial sector, aimed at providing investors with greater insight into sustainability risks and making the sustainability of financial products more comparable. Although this legislation still has to be developed in what are called regulatory technical standards (RTS), under the SFDR financial market participants already have to provide detailed information on the sustainability risks and features of the products they offer.

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8 Morningstar. 'Recordinstroom in duurzame fondsen in eerste kwartaal', May 2021.
9 Morningstar. 'Instroom in duurzame fondsen vertraagt in tweede kwartaal', July 2021.
10 EU Regulation 2019/2088 on sustainability-related disclosures in the financial services sector.

The AFM sees room for improvement in the provision of sustainability-related information by investment funds. The AFM has assessed the sustainability-related disclosures of 48 funds classified as sustainable in their prospectuses.[11] Based on these disclosures, the AFM has established that the information provided under the SFDR requirements is still too general in most cases. This makes it difficult for investors to obtain insight into the sustainability risks, features and investment objectives of the fund in which they invest, or intend to invest. In addition, the sustainable objective is usually formulated in broad terms, apparently providing room for non-sustainable investments by the fund as well. Based on the disclosures provided, the AFM accordingly questions the classification of a significant number of funds as 'sustainable', especially for funds with a stated objective of investing in sustainability.

The AFM understands that fund managers are awaiting the approval of technical standards (RTS), but already expects them to improve the information they provide. Investors after all rely heavily on this information when choosing products that meet their preferences with respect to sustainability. If this information does not provide sufficient insight for investors, there is a risk of greenwashing. The AFM will accordingly continue to monitor whether fund managers improve their sustainability-related disclosures in the coming period. In addition, the AFM will devote attention to other sustainability-related issues relating to asset managers, such as the EU taxonomy, the amendments to MiFID II, UCITS and the AIFMD and the integration of sustainability risks in their business operation.

[11] AFM. 'Beleggingsfondsen kunnen beleggers beter informeren over duurzaamheid', September 2021.

2.4 Risk map for financial reporting and audit firms

Consistent and correct information for market participants is a crucial requirement for fair and transparent financial markets. The AFM therefore supervises financial and non-financial reporting and the auditing of this reporting by audit firms. The operation of this chain is essential for the availability of correct information in the market. An audited institution reports on its financial and non-financial performance, and the auditor provides assurance with their audit opinion. If things go wrong in this chain, this can lead to a lack of information, incorrect information or less confidence in this information among end users, for whom this information is a basis for their investment decisions. This can lead to poor investment decisions, or in extreme cases, to financial losses due to fraud in financial or non-financial reporting.

The audit sector and its supervision are in a process of change. The audit sector and the supervision thereof are undergoing a change process. Coordinators have been appointed to drive observance of the recommendations made in the CTA and MCA reports. Additionally, a parliamentary bill with measures designed to permanently increase the quality of statutory audits was debated in the summer of 2021. The risks identified in the risk map should be viewed in the context of this change process. The audit sector is also dealing with changes described in the situation analysis and in this section. This combination means that attention in this sector has to be divided across several simultaneous changes.

The changes in the sector will significantly affect how this risk map develops. The risks identified by the AFM may change in the coming period, especially for the non-PIE audit firms. The AFM is currently preparing for its direct supervision of this segment that will begin in January 2022. As the AFM obtains more insight into this market, it will have a better understanding of the risks and will be able to give a better indication of where it will focus its attention in the future.

2021 has been an unusual year for financial and non-financial reporting and auditing, due to the coronavirus crisis. Many companies have seen huge fluctuations in their staffing and revenue as a result of changes in the coronavirus measures (due to both the measures relating to personal contact and those providing financial support). For example, this makes it complicated to value assets for which the value depends on the degree of use. Economic pressure in combination with greater uncertainty regarding the figures also means there is an increased risk of fraud.

Digitalisation is changing the nature of an audited entity, and reporting and auditing have to adjust to this. A more digitalised business operation enables real-time reporting and makes data available in addition to the formal reporting that offers insight into a company's performance. We are also seeing increasing importance of intangible assets (such as intellectual property), which can be difficult to value in financial terms. These changes and additional possibilities for reporting are reducing the relevance of traditional reporting and auditing in the longer term.

The audit firms are also changing as a result of digitalisation. As in other sectors, technology and data are widely used in the audit sector, and by audit firms for the performance of audit procedures. This may benefit the quality of an audit, but it also raises issues regarding the reliability of such methods, control of the IT environment and exposure to cyber crime.

Non-financial reporting is becoming increasingly important. Current legislation and regulation focuses on the reliability of financial reporting. However, other factors are increasingly becoming involved in the valuation of a company's performance, most obviously non-financial performance. Investors believe a company's sustainability performance is an important factor, and this aspect has become an important part of establishing a company's value in the long term.

In response to these changes, new rules and standards are being developed to establish a desirable direction. Much legislation is either in preparation or already in effect with the aim of standardising reporting and therefore making this more useful for end users, particularly with reference to non-financial information. Other initiatives concern the use of standards to enable digital reporting (XBRL) and ongoing changes in international reporting standards. Although these changes are intended to make reporting more reliable and relevant, they also involve a risk of incorrect application. The AFM accordingly devotes attention to this in its supervision.

The involvement of audit firms in integrity incidents at their audit clients is a continuing cause for concern. This risk is partly due to the favourable tax conditions in the Netherlands, which are attractive for businesses with limited substance and/or greater integrity risks. The risk of integrity incidents is most obvious when a serious incident occurs, such as that involving Wirecard in Germany last year.

The AFM notes that there is increased attention to this at the audit firms. This may lead to a situation in which clients with a higher integrity risk will be more likely to be refused by the larger audit firms and consequently resort to a smaller audit firm. The AFM will devote extra attention to this, also now that the non-PIE segment will come under direct AFM supervision

Risk map for financial reporting and audit firms

#	Key words	Specific risk	Drivers	Importance
1	New reporting requirements	The combination of new initiatives (international reporting standards (IFRS), XBRL, non-financial information) and developments in the longer term (real-time reporting, connectivity of reporting) will (temporarily) increase the likelihood of errors in financial and non-financial reporting, with limited negative effects for end users and market confidence.	• Margin pressure • Growth of passive investing • Digitalisation • Outsourcing	increased, increase
2	Fraud at companies	Increased likelihood of isolated, major fraud in financial and non-financial reporting due to economic pressure (coronavirus crisis, reduced government support) and uncertainty. This could cause direct losses for investors and have a negative spillover effect on the operation of the financial markets. At the same time, there is greater attention to fraud and lack of continuity in the reporting chain.	• Economic development	high, increase
3	Relevance and scope of reporting and auditing	Increasing importance of non-financial information (sustainability), intangible assets, APM, ICS, cyber risk, etc., on which reporting is not mandatory or standardised. This changes the information position of investors, shareholders and creditors. In addition, other channels for obtaining information on a company are emerging. The scope of reporting and auditing has to widen in order to continue to meet the need for information of investors.	• Legislation • Digitalisation • Sustainability	high, increase
4	Market structure	The structure of the audit sector is such that there may be negative incentives that are an obstacle to the permanent safeguarding of high quality statutory audits. The coordinators appointed by the Minister of Finance are currently experimenting with alternative market structures. We cannot say how this will develop at this time.	• Legislation • Market structure	very high, stable
5	Control of business operation	The audit firms are increasingly using technology and data to monitor the quality of their statutory audits and in the performance of audits themselves. The reliability of these data, the controls of these new techniques and the control of the IT environment by the audit firms is not assured. The increased use of such tools and the increase in complexity requires specific expertise. If this is not available, there is a risk that technology will not be used correctly.	• Digitalisation	increased, increase

LEGENDS

- very high
- high
- increased
- low

- increase
- stable
- decrease

Risk map for financial reporting and audit firms

#	Key words	Specific risk	Drivers	Importance
6	Integrity	Integrity incidents at audit firms, such as involvement in corruption at audit clients, due among other things to internationalisation and the tax conditions for businesses in the Netherlands, which are attractive for audit clients with higher integrity risks. At the same time, there is increased attention to this at the audit firms, so that these more high-risk companies are moving away from the larger audit firms to smaller firms.	• Legislation • Market development	high, decrease

LEGENDS

- very high
- high
- increased
- low

- increasee
- stable
- decrease

Highlighted risk: 'Relevance and scope of reporting and auditing'

Box 6 Relevance of financial reporting and auditing

The way in which a business creates value is changing. Value creation is becoming a broader term, and now includes ecological and social value as well as economic value. In the 'new' economy, there is greater attention to a company's footprint and software, patents and research are increasingly becoming part of a company's core activities. As a result, sustainability performance and intangible assets such as intellectual property are becoming increasingly prominent in the valuation of a company's performance. New risks are also becoming more relevant, such as sustainability and cyber incidents.

End users now require broader information, which is affecting corporate reporting. Traditionally, reporting has always focused on (hard) financial figures, but issues such as sustainability performance and intellectual property are difficult to value in financial terms. A traditional set of financial statements may therefore no longer be sufficient for the needs of end users. Firstly, we are seeing that financial reporting is being supplemented with non-financial information. Secondly, in addition to financial reporting, we are seeing additional forms of reporting, such as separate reports on specific sustainability (or other ESG) performance, cyber security or continuity risks.

This wider scope of reporting is also associated with risks, mainly in connection with the quality, comparability and cohesion of information. The reporting of non-financial information is still developing. Currently, there are not always standards, meaning that there may be variations in the availability, quality and comparability of information. For example, in relation to sustainability there are various definitions in use and variations in how (and the extent to which) companies report on this issue. This can make it difficult to determine the value of a company and compare it with other companies. There is also often no link between the financial and the non-financial information, as a result of which the annual report may become a collection of separate reports with no cohesion and no overview of the company's overall performance. Extensive legislation is on the way aiming to standardise reporting in several areas (including sustainability) and thus make it more useful for end users.

Besides the broader content of reporting, technological development is also affecting how reports are prepared and how statutory audits are conducted. An increasingly digitalised business operation enables other kinds of reporting, such as real-time reporting and the publication of data offering insight into a company's performance. Digital possibilities offer auditors the opportunity of structuring their audits of annual reports more efficiently and effectively, for instance through the use of data analysis. Because of digitalisation, there are however other sources of information for end users besides the formal reporting that offer insight into a company's performance, such sentiment on social media or satellite images of parking lots to see how many customers are visiting a supermarket.

Distributed ledgers, the technology underlying blockchain, may also be used. This in theory offers end users verified data without the intermediation of a verifying party.

Changes in reporting also pose a challenge to statutory audits by auditors. Like reporting, a statutory audit still focuses mainly on financial performance. The broadening of reporting and the technological changes in the manner of reporting are also having an effect on statutory audits. The purpose of and audience for an audit are becoming broader, and auditors may have to do more work with respect to non-financial information and IT controls. These shifts are also happening against the background of the existing challenges, such as increasing audit quality and devoting more attention to fraud and continuity risks. This creates room for new specialist areas within auditing, but is also a challenge for the sector. The question is whether an audit firm is the right party to give assurance for issues such as CO2emissions or use of raw materials. It may be the case that other specialist parties will be better able to give assurance with respect to non-financial performance or IT issues.

03

Investment behaviour of execution-only investors

The AFM has carried out a survey among retail investors in the execution-only channel. This offers insight into various features of these investors, such as age, gender and assets invested. In addition, we have obtained greater insight into the behaviour that they report. The survey shows that around 32% of execution-only investors display suboptimal behaviour, in the form of inadequate diversification or excessive trading. Around 12% of the investors display suboptimal behaviour while there is a high chance that they need the assets due to limited buffers or a future investment objective for which they will need the assets they are investing. This means that their suboptimal behaviour could threaten the financial prosperity of these investors.

3.1 Introduction

Our world is rapidly changing as a result of technological developments. Who would thought 15 years ago that we would be able to update and access all the news, messages, sporting performances and financial affairs in a pocket-sized device? And that all of us would be able to view clips from fellow consumers telling us which day cream, bicycle or financial product we should buy? These developments have affected many sectors, including the investment sector. Not only the companies involved in this sector, but also the consumers who use their services. Convenience has increased through the use of websites and apps, reducing barriers to purchasing these services.

There are other developments that are significantly affecting the investment sector. We already mentioned the low level of interest rates in section 1.1. As a result, the real return on savings products has been negative for a long time. This is also partly responsible for the increase in the number of investors. In the AFM survey, beginning investors (investors who started investing in the past two years) were asked what had been the main or decisive factor that had convinced them to start investing. 76% of them replied that their desire to earn a higher return than they could obtain from their savings had been a major or decisive consideration. 38% said that (potentially) negative interest rates had played a major or decisive role.

Partly due to these circumstances, in our survey we found a strong increase in the number of Dutch investors over the past two years. The number of investing households rose by 11% to 1.6 million between 2019 and 2020, and by 12% to 1.9 million between 2020 and 2021.

Most investors choose to take personal responsibility for their transactions and portfolio. This form of service is known as 'execution-only'. Between 2016 and 2021, the proportion of beginning investors (with up to two years' experience) choosing this form of investment increased from 58% to 66%. These investors do not get any advice from the investment firm or bank in the selection of investments and the composition of their portfolios. Execution-only investing is the most accessible form of investing. The lower costs of this service also make it easier to get involved with a smaller budget. And the service is provided entirely online in most cases.[1]

Box 7 What is execution-only investing?

There are three types of service available to retail investors: execution-only, asset management and investment advice.

With an execution-only service, the client composes their portfolio and makes the decisions regarding their investments. Of the three available types of service, execution-only investors receive the least support and assistance from the investment firm. The client is in control with respect to opening an investment account, their purchase and sale transactions, their investment goal, their investment strategy and following market developments. The advantages of execution-only investing are easy access and low cost. These features make execution-only investing accessible for small amounts of invested assets, which is not usually the case for asset management and investment advice.

In legal terms, there are significant differences between these types of service. With an execution-only service, an investment firm has to assess whether the financial service and product are suitable for the client. Investment firms are obliged to have execution-only investors pass a

[1] See Box 7 for further explanation of what execution-only investing means and the rules for investor protection that apply to this service

suitability test, a questionnaire that establishes the investor's knowledge and experience of investing. For non-complex products, such as shares, a suitability test is not required.[2] If an investment firm assesses that a financial service is not suitable, it must inform the investor accordingly. It is not however required to refuse the investor access to the service after this warning has been given.

For the other two types of service, asset management and investment advice, investment firms have to carry out significantly more detailed procedures. In these cases, the investment firm has to ask the investor for information on (among other things) their investment goal, their risk appetite, their investment horizon and their financial position, as well as their knowledge and experience.[3] Based on this information, the investment firm then recommends a suitable portfolio (investment advice) or manages the assets for the investor (asset management). There is also a continuing obligation, whereby the investment firm is required to continually assess whether the portfolio in question is suitable for the investor. Due to these more onerous requirements, asset management and investment advice are usually more expensive than an execution-only service. See the table below for a list of the differences.

Tabel 6. Legal differences between service types.

	Execution-only	Asset management and investment advice
Investment goal	✗	✓
Investment horizon	✗	✓
Financial position	✗	✓
Risk appetite	✗	✓
Maintenance	✗	✓
Knowledge and experience	✓	✓

The regulations for the protection of independent investors were formulated more than 15 years ago.[4] The market has changed substantially since that time, raising the question of whether the regulation is still up to date at this time and whether investors using the execution-only channel are adequately protected. The first step in answering this question is to obtain good insight into the market.

To obtain insight into the market, the AFM conducted a survey involving 850 execution-only investors. This gave us information on the age, experience, assets invested and investment goals of these investors. In addition, we obtained greater insight into the behaviour that they report. For example, we found that almost one third of these investors make regular deposits. This

[2] Artikel 4:24, vijfde lid Wft geeft een lijst met niet-complexe producten waarbij de passendheidstoets van artikel 4:24, eerste lid, Wft niet hoeft te worden uitgevoerd indien op initiatief van de klant een beleggingsdienst als bedoeld in onderdeel a of b van de definitie van een beleggingsdienst in artikel 1:1 Wft wordt verleend, en voor zover niet tevens sprake is van een nevendienst als bedoeld in onderdeel b van de definitie van nevendienst in artikel 1:1 Wft.

[3] Artikel 4.23 Wft.

[4] Deze regels zijn geïntroduceerd met de introductie van MiFID-regelgeving. Deze regelgeving is in 2007 van kracht geworden, de tekst van de richtlijn is in 2004 vastgesteld. In 2018 is MiFID II van kracht geworden, hierin zijn de regels voor de beleggersbescherming van execution-only-beleggers grotendeels gelijk gebleven.

reduces the risk that they purchase their entire portfolio at a market peak, and thus improves the risk-return ratio of their portfolio.

At the same time, we noted that a large majority of these investors checked the value of their investments weekly or more frequently. Investors tend to overreact to price movements, which can lead to more frequent trading.[5] This is at the expense of return.

In this study, the AFM focused on suboptimal behaviour by investors. From various academic studies, we know that investment decisions are not always taken wisely. Investors are, for instance, inclined to trade too much and thus incur unnecessary costs, they often do not sufficiently diversify their investments across various instruments or geographical regions, or they invest in unnecessarily risky products.[6] This behaviour worsens the result for investors, due to higher costs or more risk in the portfolio than needed. They thus miss out on returns and it is less likely that they will achieve their investment goal. A passive investment in a well-diversified portfolio would give them a higher return at less risk.

The AFM has researched the extent to which investors display suboptimal behaviour due to insufficient diversification, overtrading or investing in risky products. The study showed that 32% of the investors display this kind of behaviour. This can be a problem if there is a strong possibility that they will need the money, either now or in the future. Our conclusion from the study is that approximately 12% of execution-only investors are highly likely to need the money, and that they invest in a suboptimal manner. This section explains how we reached this conclusion, who these investors are and the follow-up actions that the AFM intends to take.

Figuur 4. Which groups of investors do we distinguish in this survey?

[5] Bondt, W.F.M. De & Thaler, R. (1985). Does the Stock Market Overreact? *The Journal of Finance*, 40 (3), 793–805

[6] See Box 8 for more details of various kinds of suboptimal behaviour, the consequences for investors and the possible causes of this behaviour.

Box 8 What suboptimal behaviour do investors display?

For a long time, economic theory assumed that investors make rational decisions and follow a consistent selection process. However, research shows that in most cases, consumer behaviour does not follow this assumption of a rational decision-making process. Consumers go through this process in different sequences, devote little time to it or miss out steps altogether. Most consumer decisions are made intuitively rather than rationally, and they are influenced by factors that would not convince a rational consumer, such as the use of language.

There has been extensive research of the non-rational behaviour displayed by investors. This behaviour worsens a portfolio's risk-return ratio, either because it increases risk or it is to the detriment of return. In this study we focus on three forms of suboptimal behaviour, which we describe below.

Lack of diversification

One of the most common causes of suboptimal results is lack of diversification. People usually invest in companies in their own country, that are near to where they live, or in the company for which they work. They also tend to invest excessively in stocks that stand out, for whatever reason that may be.[7] This poor diversification leads to more risk in the portfolio, as the 'idiosyncratic risk' or 'specific risk' is not spread across the portfolio as a whole. There is no compensation for this risk, so this deteriorates the risk-return ratio.

There may be several causes for this behaviour. Lack of diversification is, for instance, linked to a home bias: investors prefer stocks from their own country or stocks of well-known companies (in the latter case, this is also known as familiarity bias). This gives investors a feeling of security. Overconfidence may also be a cause, the idea that they can predict the market and pick winners.

Excessive trading

Another known behaviour in the literature concerns excessive trading by investors. Executing many transactions increases the total transaction costs, which reduces returns and therefore leads to worse results.[8]

This is due to overconfidence, as well as the urge to gamble and seek thrills.[9] This may also happen because investors are frequently checking the value of their investments.[10] Since people have difficulty with what is called mental accounting[11] and myopic loss aversion[12] it is wiser not to check too often, as this can lead to rash trading, particularly for investors with a longer horizon.[13]

7 Barber, B.M. & Odean, T. (2008). All That Glitters: The Effect of Attention and News on the Buying Behavior of Individual and Institutional Investors. *The Review of Financial Studies*, 21(2), 785-818.
8 Barber, B.M. & Odean, T. (2002). Trading Is Hazardous to Your Wealth: The Common Stock Investment Performance of Individual Investors. *The Journal of Finance*, 55(2), 773-806.
9 Byun, S.J. & Kim, D.H. (2016). Gambling preference and individual equity option returns. *The Journal of Financial Economics*, 122(1), 155-174.
10 The AFM survey shows that 71% of the execution-only investors check the value of their investments at least weekly, and risk-seeking investors do this particularly frequently.
11 This means that people see their money in various ways, depending on the 'mental account' in which they have placed the money concerned.
12 This is based on the idea that the more frequently an investor checks the value of their portfolio, the more likely they are to see a loss and the more sensitive they will become to loss aversion.
13 Gneezy, U. & Potters, J. (1997). An Experiment on Risk Taking and Evaluation Periods. *The Quarterly Journal of Economics*, 112(2), 631-645.

High-risk investments

There are also certain products that by nature are riskier than shares or bonds. These include leveraged products, derivative products, or products in highly volatile markets. The AFM study shows that these products attract a relatively small proportion of retail investors.[14] We qualify cryptos as high-risk, as the exchange rate for these products is extremely volatile, there is no central issuer that can be held responsible if something goes wrong, and there is no deposit guarantee system or other safety net in place.[15] . In trading in CfDs, it appears that between 74% and 89% of retail investors lose money.[16]

The academic research identifies several causes of risk-seeking behaviour, including sensation seeking, emotional intelligence and the perceived importance of money.[17] Research into the propensity of investors to move into cryptos reveals that sensitivity to (short-term) income, personal desire for innovation and estimation of the investment opportunities in the traditional markets influence the decision to invest in this new type of instrument.[18] Investors may also be influenced by the providers of these products, who have a commercial interest in their sale.

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14 Out of all investors, 1% said that they invest in CfDs and 13% that they invest in cryptos or financial instruments with a crypto as the underlying security.

15 These risks are listed in a warning from the AFM, available at: https://www.afm.nl/nl-nl/nieuws/2013/dec/bitcoins.

16 This appears from research by European supervisors, as described in the 'Decree of 18 April 2019, containing restrictions on the marketing, distribution or sale of contracts for difference to non-professional clients in connection with EU Regulation no. 600/2014 of the European Parliament and the Council of 15 May 2014 and the Dutch Financial Supervision Act (Wet op het financieel toezicht) (Restrictions on CFDs).', available at: https://www.afm.nl/~/profmedia/files/onderwerpen/productinterventie/besluit-productinterventie-cfd.pdf?la=nl-NL.

17 Sjöberg, L. & Engelberg, E. (2009). Attitudes to Economic Risk Taking, Sensation Seeking and Values of Business Students Specializing in Finance. *Journal of Behavioral Finance*, 10(1), 33-43.

18 Sun W., Dedahanov A.T., Shin H.Y. & Kim K.S. (2020). Switching intention to crypto-currency market: Factors predisposing some individuals to risky investment. PLoS ONE 15(6): e0234155. https://doi.org/10.1371/journal.pone.0234155

3.2 Who are these execution-only investors?

The survey shows that 65% of retail investors use the execution-only channel.[19] This section gives background information on who these investors are and the behaviour that they display.

What are the characteristics of execution-only investors?
For a long time, there has been a perception that investing is something done by older men. Although most of the execution-only investors are still men (over 70%), all age groups are represented in this group of investors. We also see that younger investors (<35 years) are more likely to choose an execution-only service than older investors.

The survey shows that 24% of the execution-only investors have been investing for less than two years. On average, the investors have 13.5 years of experience with investing.

Most execution-only investors are more highly educated (higher professional education or higher). We also see that most of the investors (58%) stated that their income was 'above average'. This is not to say that all of them invest huge amounts of money. More than 50% of them said that they invest with less than €25,000.

Execution-only investors have various investment goals, with the most common statement being that they invest for wealth retention or capital growth (multiple answers were possible). Around a quarter of them had a specific objective, such as repaying a mortgage, paying for costs of healthcare or a consumer purchase, such as a car.

More than a third of the investors said that the fun of investing was one of the reasons they invest.[20] We see this also in the reasons why investors opted for an execution-only service. 21% said that they had chosen this service because they liked to make investments themselves. The ability to control their investments, having sufficient knowledge and experience and the low costs were other reasons that were frequently cited. All the execution-only investors were asked whether they would like to have professional assistance or support in relation to investing. Only 12% answered this in the affirmative, which also confirms the picture that these investors have chosen this channel because they want to manage their investments themselves.

[19] Some investors use multiple services, so these investors may also use advice or asset management. 62% of the investors said that execution-only was the sole or main service they use to invest.
[20] For more than 12%, this was the only objective.

Figure 5. Age of execution-only investors.

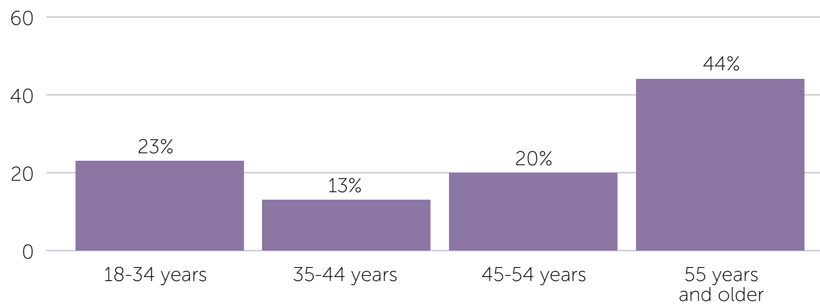


Figure 6. Investment experience of execution-only investors.

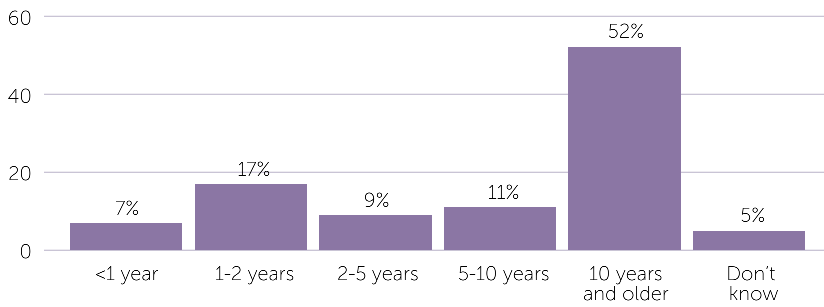


Figure 7. Highest education completed by execution-only investors.

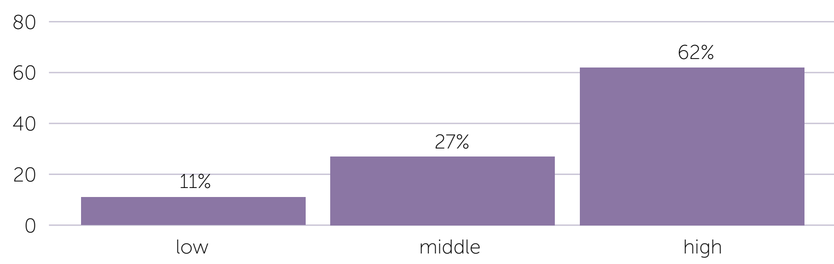


Figure 8.Total value of investments by execution-only investors. This also includes the value of any investments in other channels.

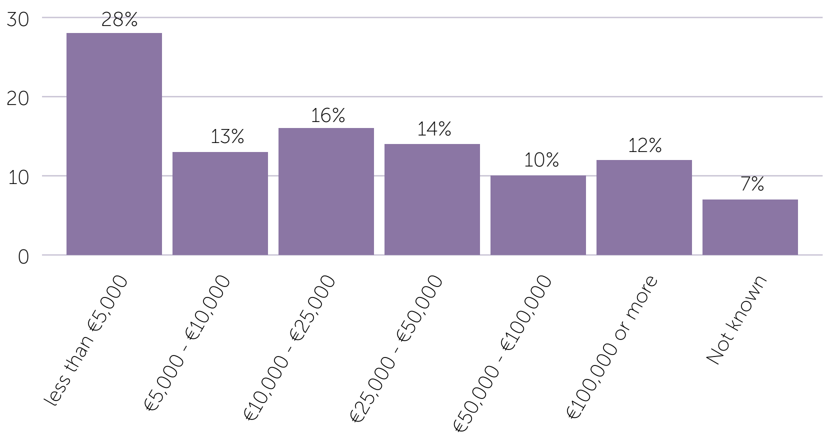
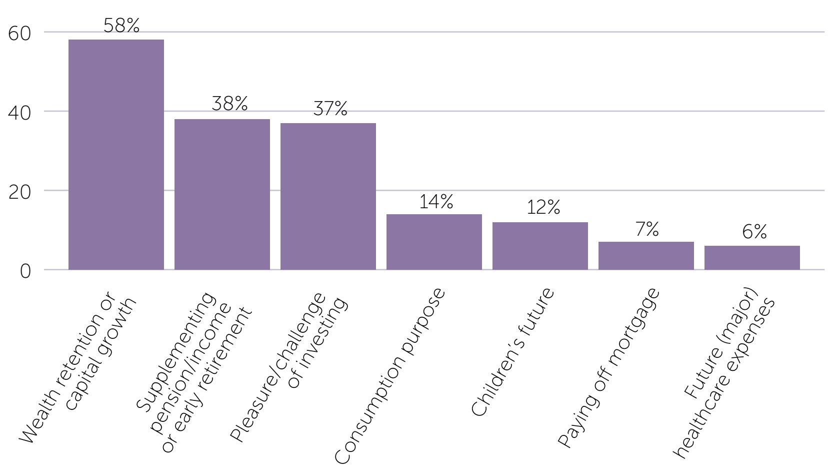


Figure 9. Investment goal of execution-only investors.



What behaviour do execution-only investors display?
Out of all the execution-only investors, 32% said that they make regular deposits into their investment account. Most of them do this once a month. Spreading their purchases over time reduces the likelihood of buying at a market peak, and therefore reduces risk.[21]

Another recommendation from behavioural economics is not to check the value of one's investments too frequently. Investment is something you do for the long term, so in principle there is little point in checking value development from day to day or even week to week. In addition, it is known that investors overreact to price movements,[22] and this can lead to more frequent trading in a portfolio. However, we found that approximately 70% of the investors said that they check the value of their investments at least once a week. We see also that for some of these investors, this does not lead to frequent transactions, as nearly half of them said that they had executed not more than five transactions in the past year. For those investors who execute more than 20 transactions in a year, we see that nearly all of them check the value of their portfolio at least once a week.

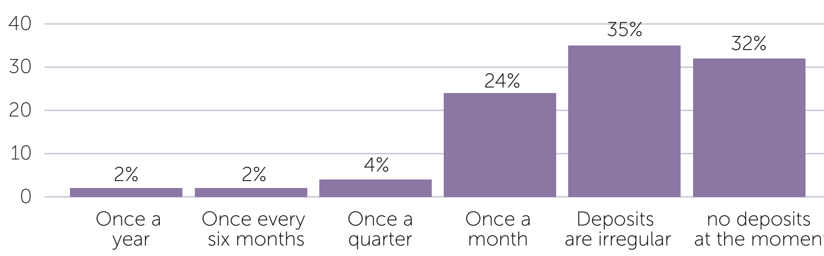
The information sources used by investors for their decisions are highly diverse. Many of them said that they use one or more sources of information provided or published by financial firms or issuers of securities. In addition, we see that 9% of the retail investors in the execution-only channel use social media or influencers as sources of information. 15% of the execution-only investors with not more than two years' experience use social media as a source of information.

The AFM therefore expects this to increase in the coming years, and accordingly this is a development that has the attention of the AFM.

Lastly, investors with not more than two years' experience also stated the considerations that had led them to decide to start investing. The aim of realising a higher return than on a savings account is the reason cited by more than two thirds of the investors. This is a perfectly understandable reason given the current circumstances. But convenience, social influencing, advertising and thrill-seeking were also reasons for consumers to start investing.

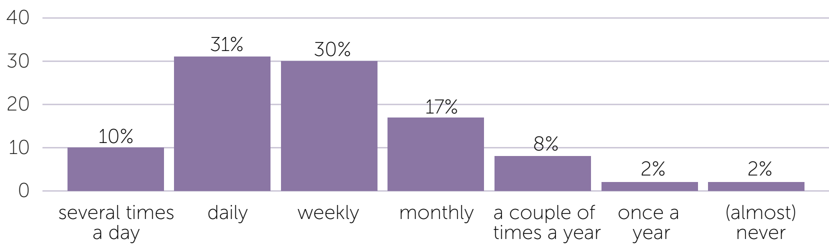
21 In this article, evidence is found that this approach leads to better results in practice than making a one-off investment: Brennan, M.J., Li, F., & Tourous, W.N. (2005). Dollar Cost Averaging. *Review of Finance*, 9(4), 509-535.
22 Bondt, W.F.M. De & Thaler, R. (1985). Does the Stock Market Overreact? *The Journal of Finance*, 40 (3), 793–805.

Figure 10. The extent to which execution-only investors make regular deposits. The investors were also given the option of answering 'don't know', but this was chosen by 0% of the investors.



* The investors were also given the option of answering 'don't know', but this was chosen by 0% of the investors.

Figure 11. Frequency with which execution-only investors check the value of their investments. The investors were also given the option of answering 'don't know', but this was chosen by 0% of the investors.



* The investors were also given the option of answering 'don't know', but this was chosen by 0% of the investors.

Figure12 Number of transactions executed by execution-only investors in the past year.

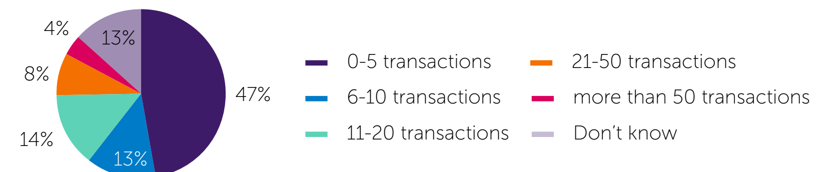


Figure 13. Information sources used by execution-only investors for their investment decisions.

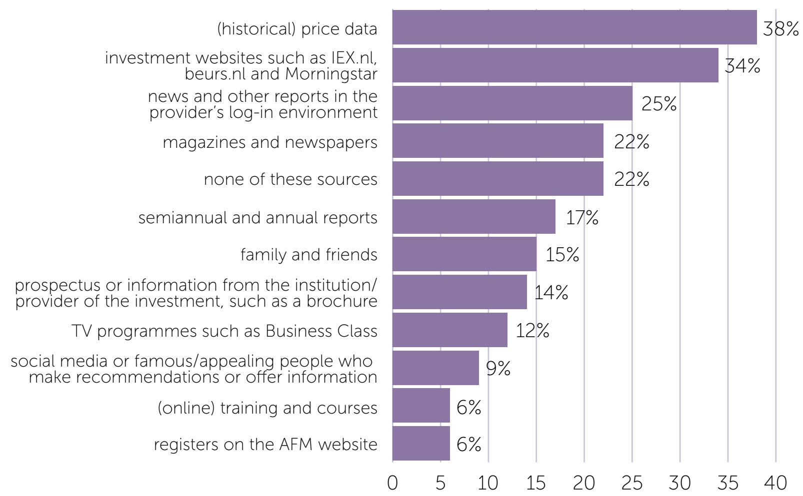
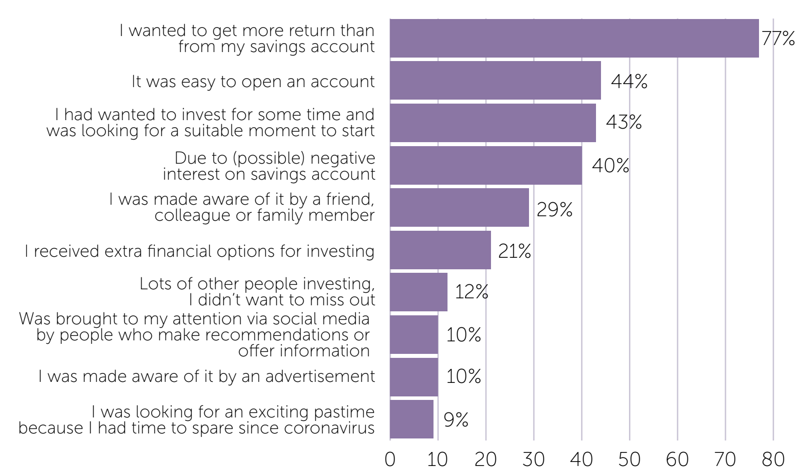


Figure 14. Arguments playing a major or decisive role in the decision to start investing.



3.3 Which investors are exposed to potential loss of financial prosperity?

Investing always involves taking a certain degree of risk. When investing, the higher the risk taken, the higher the expected long-term return needs to be as well. This is the investor's reward for taking the risk. The ratio between risk and return however deteriorates as a result of inadequate diversification, executing many transactions or investing in risky products. The investor's behaviour is suboptimal, and the risk for the investor increases without an increase in the expected return.

The AFM's study shows that the participating investors in the Netherlands display this suboptimal behaviour. This behaviour is not a problem for the financial position of every investor. On the other hand, such behaviour can cause problems for investors that are highly likely to need their capital, either now or in the future. This is most likely to be the case if an investor has little savings or reserves in addition to their investments, or if they need the money later to make ends meet.

From the study, our conclusion is that 12% of the investors in any case display suboptimal behaviour in one or more ways, while it is very likely that they will need the money. In the rest of this section, we refer to these people as 'vulnerable investors', and in the following section we explain how we identified this group.

In reality, the proportion of investors displaying behaviour not appropriate to their financial position may be higher than the 12% stated. This is because we do not have insight into all elements of the behaviour and financial position of all the investors.[23] Some variables were also not calculated for all the investors.

For each part of the study, the investors for whom a statement can be made are indicated. Finally, we had to choose the parameters for classifying the various groups. An investor falling just outside these parameters could be exposed to similar risks. For example, we have posited that an investor investing in 10 or fewer individual stocks is not sufficiently diversified. If an investor has invested in 11 individual stocks they are not included in the group of 'vulnerable investors', but they may be exposed to a similar risk.

Figure 15. 12% of the investors display suboptimal behaviour and are in a financial position such that this is not appropriate.

[23] The investors were not obliged to answer some of the questions (if they did not know, or did not want to say).

Which investors may need the money?
There are situations in which an investor cannot afford any suboptimal investor behaviour, specifically if it is very likely they will need the capital invested, either for expenses in the short term or for an investment goal in the future. We identified a group totalling 36% of the investors for whom it was likely they would need the money. In this section, we refer to these people as 'investors who depend on their capital'. This group includes investors who have little savings or reserves and investors with an investment goal for which they depend on their capital.

Figure 16. 36% of the investors are in a financial position that means they are dependent on the capital they have invested.

Investors with little savings may be highly dependent on their investments if they encounter a financial setback, such as a car or washing machine that breaks down. They will be forced to sell their investments at that time, and this may not be a favourable time to do this. This effect is reinforced by suboptimal behaviour such as excessive trading or inadequate diversification. In the survey, we defined investors with less than €5,000 in savings as investors with a small buffer. This sum of €5,000 is virtually the same as the buffer recommended by Nibud for a couple with no children living at home, with an average income, living in rented accommodation and not owning a car.[24] 12.5% of all the participating execution-only investors in the survey said they had less than €5,000 in savings.

In the survey, beside the level of savings, we identified another group of investors who depend on their invested capital. There are investors who on their own account said that they need the money to make ends meet when they retire. So for these consumers, their investments are not an addition to their pension income enabling them to go on holiday more often, for example. We have also defined consumers who invest in order to repay their mortgages or finance future (major) healthcare as dependent on their invested capital. Suboptimal investment behaviour by these investors may also pose a risk to their financial prosperity. Nearly 30% of the investors said they would need the money for a good life when they retire, or aimed to repay their mortgage or pay for (major) future healthcare expenses.

[24] The minimum buffer can be calculated at https://bufferberekenaar.nibud.nl/#/panel/1.

Which investors display suboptimal behaviour?

Figure 17. 32% of the investors display suboptimal behaviour.

Around a third of the group of execution-only investors reported behaviour that we have defined as suboptimal for the purpose of this survey: insufficient diversification, excessive trading or trading in risky products.

This section looks at these various forms of suboptimal behaviour and how frequently they occur.

Insufficient diversification

If an investor does not diversify adequately in terms of the number of instruments, sectors or geographical regions in which they invest, the risk of their portfolio will increase. Diversification is needed to offset the risk of a price decline in one instrument, sector or region with other instruments in the portfolio with different characteristics and therefore unaffected by the price decline. Diversification is therefore an important tool for reducing portfolio risk. In this survey, we calculated the degree of diversification for investors who invest solely in individual stocks,[25] because we had data for these investors on the number of instruments they hold, the number of sectors in which they invest and the concentration of their investments in the Netherlands.

The survey showed that some of the participating execution-only investors were not sufficiently diversified in terms of number of instruments. We defined insufficient diversification as a portfolio consisting of 10 or less instruments. We see that more than 80% of the investors investing solely in shares and who knew how many instruments were in their portfolio were not sufficiently diversified in terms of instruments.[26]

We also considered the form of suboptimal behaviour involving insufficient diversification across sectors. An investor with investments in three or less sectors was defined as insufficiently diversified. This was the case for more than half of the execution-only investors investing solely in shares.[27]

[25] Approximately 20% of execution-only investors.
[26] This means that 15.3% of the total number of execution-only investors were not sufficiently diversified in terms of instruments.
[27] This means that 11.5% of the total number of execution-only investors were not sufficiently diversified in terms of sectors.

A third means of diversification concerns diversification across regions. Spreading investments across regions reduces the total investment risk, because an investor will be less exposed to market movements in a particular region. Placing an excessive proportion of their investments in their own region or country is a common form of suboptimal behaviour displayed by investors. Such investments have familiar names, and therefore more appealing to the investor. In this study, we defined insufficient diversification across regions as a portfolio in which at least 50% is invested in companies located or listed in the Netherlands. We found that around three quarters of the investors investing solely in shares and who knew the proportion of their total investments in Dutch companies and/or indices fall into this group.[28]

Excessive trading

Excessive trading is another form of suboptimal behaviour. It increases transaction costs and thus reduces return. Excessive trading applies in any case if an investor effects more than 50 transactions in a year. In this context, we have not included investors who regularly make deposits. While this does affect the number of transactions, regular investing is not considered to be harmful behaviour.[29] The smaller the amounts involved in each transaction and the smaller the total portfolio, the more effect many transactions will have on the return. We have accordingly set a limit of 11 transactions or more per year for portfolios amounting to not more than €10,000 (here too, excluding investors who invest by regularly making deposits). According to this definition, 3.4% of execution-only investors trade excessively.

Risky products

All investments involve a degree of risk. Cryptos and Contracts for Difference (CfDs) however have specific features that make them more risky than other products.[30] The AFM has issued numerous warnings to investors regarding these products. We qualify cryptos as high-risk, as the exchange rate for these products is extremely volatile, there is no central issuer that can be held responsible if something goes wrong, and there is no deposit guarantee system or other safety net in place.[31] In trading in CfDs, it appears that between 74% and 89% of retail investors lose money.[32] If investors decide to purchase cryptos or CfDs, these risks mean that they would be well advised not to invest too much of their capital. We have defined investors placing more than 10% of their capital in cryptos, CfDs or products with a crypto as the underlying security as displaying suboptimal behaviour. This was the case for 11.7% of the execution-only investors.

The following table lists the results based on the total population of 850 investors.

[28] This means that 13.7% of the total number of execution-only investors were not sufficiently diversified in terms of regions.

[29] See section 3.2 for details.

[30] This survey focused on the high-risk products of cryptos and CfDs. There are other high-risk products as well, but we were not able to adequately distinguish these products in the responses from the execution-only investors on the basis of this survey.

[31] These risks are listed in a warning from the AFM, available at: https://www.afm.nl/nl-nl/nieuws/2013/dec/bitcoins.

[32] This appears from research by European supervisors, as described in the 'Decree of 18 April 2019, containing restrictions on the marketing, distribution or sale of contracts for difference to non-professional clients in connection with EU Regulation no. 600/2014 of the European Parliament and the Council of 15 May 2014 and the Dutch Financial Supervision Act (Wet op het financieel toezicht) (Restrictions on CFDs).', available at: https://www.afm.nl/~/profmedia/files/onderwerpen/productinterventie/besluit-productinterventie-cfd.pdf?la=nl-NL.

Tabel 5. Percentage of execution-only investors displaying suboptimal behaviour, and the percentage of investors displaying suboptimal behaviour who also depend on their capital.

		% of all execution-only investors	% that also depend on their capital
Suboptimal behaviour		32%	12%
Insufficient diversification	across instruments	15.3%	3.8%
	across sectors	11.5%	2.7%
	across regions	13.7%	4.5%
Excessive trading		3.4%	1.6%
Large investment in high-risk products		11.7%	5.8%

What do we know about the group of vulnerable investors?

As mentioned earlier, such behaviour can cause problems for investors that are highly likely to need their capital, either now or in the future. This is most likely to be the case if an investor has little savings or reserves in addition to their investments, or if they need the money later to make ends meet. We have compared the characteristics of this group of investors with the other group of investors. It should be noted however that the other group may also contain investors who are vulnerable.[33]

The survey shows that there are several differences between the vulnerable investors and the other investors. The vulnerable investors visit investment websites more frequently than the other group, 47% compared to 32%. Social media or well-known/appealing people who make recommendations or offer information on investing are also consulted more often, in 22% of cases for vulnerable investors compare to 7% of the other group. Television programmes such as Businessclass and RTL-Z news, online courses and family and friends are also followed more by the group of vulnerable investors.

One notable finding is that a larger group of vulnerable investors (39%) believes that they can earn a great deal of money by investing. In the non-vulnerable group, only 23% believe this.

One might assume that the vulnerable group consists of young or beginning investors. However, the survey shows that the proportion of investors aged less than 35 years is the same in the vulnerable group as in the other group. We also did not find any difference in the number of years of investment experience. If we compare beginning investors (with up to two years' experience) with more experienced investors, this shows that they display a similar degree of suboptimal behaviour. The ownership of high-risk products is an exception to the above. A higher proportion of beginning investors (18.2%) have portfolios consisting of at least 10% in CfDs, cryptos or products with cryptos as underlying security than among the experienced investors (9.8%).

[33] See Box 9 for further explanation of the research method and the reasons that investors in the 'other group' may be exposed to the same risks as the 'vulnerable investors'.

Box 9 Research methodology
To obtain insight into consumer behaviour, an annual questionnaire has been circulated among investors since 2004 (the Consumentenmonitor Beleggen). Over 1100 investors responded to this questionnaire in August 2021. To obtain detailed insight into execution-only investing, 850 execution-only investors were invited to participate. This means that the number of execution-only investors is overrepresented, which was taken into account.

This survey focused on all consumers who invest through the execution-only channel, regardless of whether they also invest through other channels or which channel was the most important to them. The results were weighted by gender, age and education within the group of execution-only investors so that the results are as representative as possible for execution-only investors aged 18 years or over. The respondents completed an online questionnaire on subjects including their investment behaviour, investment goals and financial situation. This self-reporting is the basis for the survey. While it provides good insight, self-reporting also has limitations. Respondents may for instance (intentionally or otherwise) give incorrect answers due to poor memory.

In this survey, we identify investors who display certain forms of suboptimal behaviour that are not appropriate given their financial situation. This does not mean that other investors are not vulnerable. Sometimes it is not possible to measure certain behaviour or a person's financial position because a respondent does not know the answer to a question: for instance, we are not able to establish whether an investor trades excessively if they do not know how many transactions they effect per year. In addition, not all forms of suboptimal behaviour are identified for all investors: for example, we considered the number of transactions effected only for those investors who do not invest through regular deposits. This of course does not mean that investors investing through regular deposits never trade excessively. Lastly, we had to set boundaries in order to classify different groups. It is quite possible that investors falling just outside these boundaries also display suboptimal behaviour. Due to the setting of these boundaries and also because not all variables are construed for all investors, the results should be seen as a minimum.

3.4 Follow-up

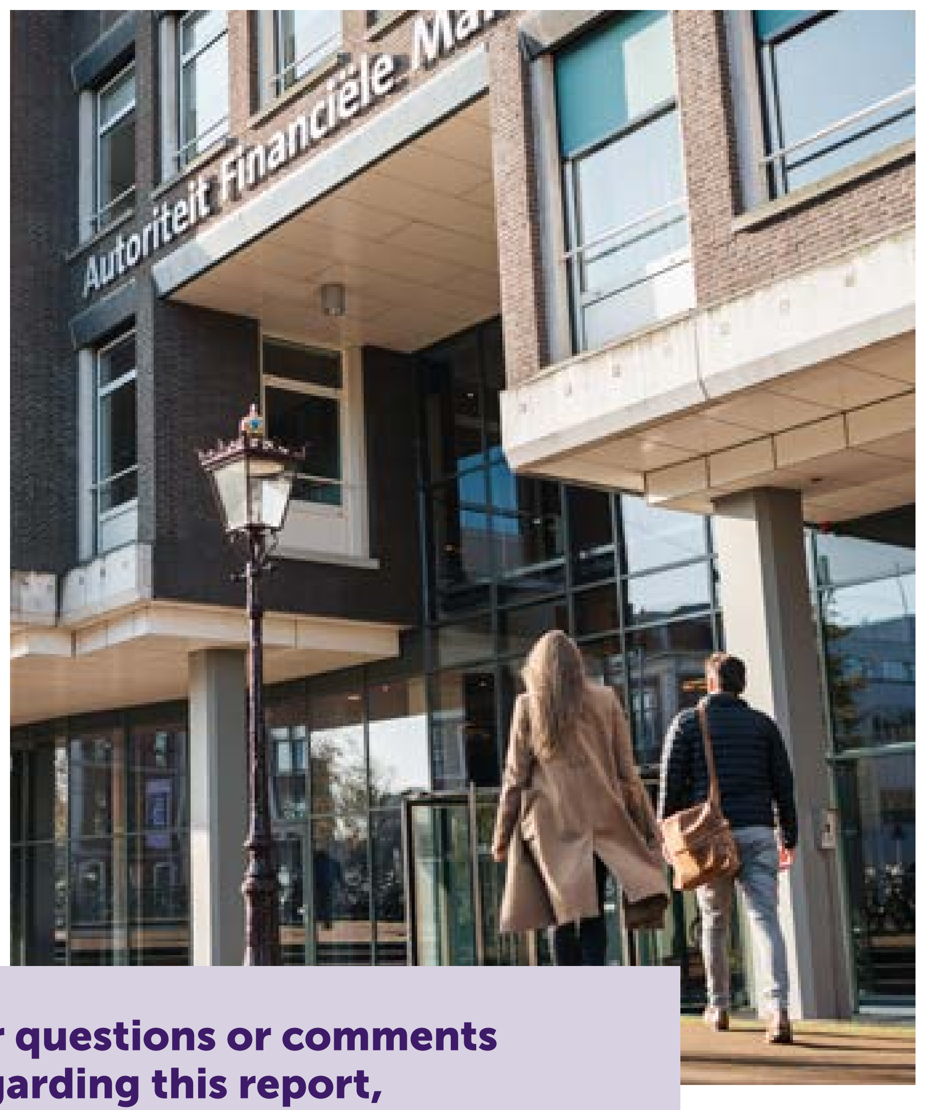
With this survey, the AFM has formed an impression of execution-only investors and their behaviour. It shows that 32% of these investors display suboptimal behaviour, in the form of insufficient diversification, excessive trading, or investing more than 10% of their portfolio in high-risk products. We also looked at those investors who are highly likely to need the capital they have invested. This applies to 36% of the investors. If we combine these two groups, we find that 12% of the investors display suboptimal behaviour and are highly likely to need their capital. The figures stated are minimum levels, as for some investors in the survey we were not able to establish whether they display suboptimal behaviour, or how likely they were to need their capital. The group of vulnerable investors make more use of social media as a source of information for their investments. It also emerged that a relatively large number of the investors in this group believe that they can earn a lot of money by investing (39%, compared to 23% of the other investors).

The AFM did not consider the causes of this behaviour in the survey. Research into these causes is a subsequent step. Only then will we be able to assess the extent to which the protection of execution-only investors is adequate.

The causes of investor behaviour may lie in the investor themselves, but they may also be prompted to adopt this behaviour by external factors, for instance the investment firm at which the investor has their account and effects their transactions.

In 2022, the AFM will follow-up on this issue and review the extent to which investment firms influence investor behaviour, what effect this has and where improvements can be made to improve the prospect of sustainable financial prosperity for their clients.

As stated in section 1.7, international coordination of supervision is becoming increasingly important. The AFM will present the findings of both this study and its follow-up in its international relations. The insights gained will thus contribute to the formulation of policy.



For questions or comments regarding this report,
Send an e-mail to redactie@afm.nl

The Dutch Authority for the Financial Markets
Vijzelgracht 50, 1017 HS Amsterdam

Telephone
020 797 20 00

www.afm.nl

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