Frankfurt am Main,
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BVI[1] Position on IOSCO's Consultation Report on the use of artificial intelligence and machine learning by market intermediaries and asset managers

The use of artificial intelligence (AI) and machine learning (ML) in asset management bears great potential. An increasing degree of automation of processes and interfaces has been common practice in the asset management industry for decades and is described with the keywords 'business process automation' (BPA) or 'robotic process automation' (RPA). RPA aims to automate even more complex process steps along the value chain in the asset management industry. An example of this would be a standardised online client check and initial advice in the securities business, possibly using language programmes. The use of AI is a major issue in the financial sector, as these technologies will bring about a profound change in society and the economy. AI goes beyond BPA and RPA by combining the use of large or increasingly available, but often unstructured and internal and/or external data sets with the improved possibilities for using these data. Through a combination of analytics and mass available data, new insights are to be gained that would not be possible with traditional research methods.

The German supervisory authority BaFin was one of the first supervisors to analyse the challenges and implications for supervision and regulation of financial services in its report[2] 'Big Data meets artificial intelligence'. BaFin concludes that big data and AI bring about a profound change and enable innovation, successful implementations can spread rapidly, and supervision and regulation must address innovative developments early. The report already highlights supervisory and regulatory implications.

We therefore welcome the work of IOSCO to propose guidance to assist supervisory authorities in providing appropriate regulatory frameworks to supervise market intermediaries and asset managers that utilise AI and ML. This will lead to a common understanding and an alignment of current different practices in avoiding regulatory arbitrage. However, the use of innovative technologies such as AI must be compatible with supervisory law. Prudential law must be designed in such a way that it does not prevent meaningful innovations with benefits for investors and the financial market. On this note, we recommend that additional requirements be carefully examined and internationally coordinated as we see the risk that different regions will be regulated to varying degrees.

Regarding the specific questions raised in the Consultation Paper, we would make the following remarks:

Definition

Question 1: Do you agree with the proposed definition of AI and ML?

To a large extent, we agree with the proposed definition of AI and ML. However, we see the need to clarify the definition of AI as follows:

[1] BVI represents the interests of the German fund industry at national and international level. The association promotes sensible regulation of the fund business as well as fair competition vis-à-vis policy makers and regulators. Asset Managers act as trustees in the sole interest of the investor and are subject to strict regulation. Funds match funding investors and the capital demands of companies and governments, thus fulfilling an important macro-economic function. BVI's 114 members manage assets more than 3 trillion euros for retail investors, insurance companies, pension and retirement schemes, banks, churches and foundations. With a share of 23%, Germany represents the largest fund market in the EU. BVI's ID number in the EU Transparency Register is 96816064173-47. For more information, please visit www.bvi.de/en.

[2] https://www.bafin.de/SharedDocs/Downloads/EN/dl_bdai_studie_en.pdf?__blob=publicationFile&v=11.

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According to the consultation paper, AI can be understood as a combination of mass data, sufficient computing resources and ML, which can accomplish simple, repetitive tasks, or can be more sophisticated and, to some degree, self-learn and perform autonomously, based on a system that mimics human cognitive skills or human capabilities. The reference to 'some degree' implies that, by definition, an AI does not have to act completely autonomously, but can represent a hybrid process chain involving both AI and humans. We believe that it is necessary to clarify up to what kind of 'some degree' a self-learn and automatic performance should apply. If the final decision or the process sovereignty lies with the human operator, AI could be only an additional tool in supporting to provide certain services.

Moreover, the classification of AI applications should not be based on the function as such but rather its contribution to f the value chain within the company. A chatbot, for example, could be highly critical if it is used as the primary medium for clients contact and for concluding contracts. Other areas of application of a chatbot could in turn be completely uncritical.

Risks and Challenges

Question 2: Do you see any risks or challenges around AI and ML which are not mentioned in the report?

In general, we agree with the described identified potential risks and harms posed using AI and ML. However, it is also important to highlight that these techniques also enable innovation and can make contributions along the entire value chain. The examples in chapter 3 of the report describe how firms are using AI and ML techniques (such as advisory and support services, risk management, client identification and monitoring, selection of trading algorithms) and already show the high impact on the industry. These techniques will also benefit clients in the medium term, particularly in investment advice and client service. AI can, for example, put together tailor-made portfolios depending on the investment objective and horizon, or directly answer repetitive questions from clients in order to provide better services.

Moreover, outsourcing practises as such should not be understood as a potential risk as long as there are objective reasons for delegation (such as optimising of business functions and processes, cost saving, expertise of the delegate in specific markets or access of the delegate to global trading capabilities) and proper and efficient outsourcing processes are in place in understanding the dependency and relationship with the third-party provider (such as due diligence assessments, ongoing outsourcing controlling, necessary expertise and resources to supervise the delegated tasks effectively and manage the challenges associated with the delegation).

Guidance

Question 3: Do you agree that the guidance set out in Chapter 6 of the Consultation Report is appropriate to address the potential risks associated with the general use of AI and ML by market intermediaries and asset managers? If not, please provide details.

Measure 1: Governance and responsibilities

We share IOSCO's view that a documented internal governance framework should be in place and proportionality should be considered in implementing internal governance processes. We also agree that it should be the overall responsibility of the senior management how to designate a responsible senior individual with appropriate skills and knowledge in signing off on initial deployment and substantial

updates of the technology. However, it should be clarified that such a designated senior individual could also be part of the senior management. Depending on the size, activities provided and organisational structure, there are entities that may not have the resources to designate a senior individual which is not part of the senior management. In our view, it is important that anyone is responsible at all and has enough knowledge irrespective in which business unit the individual is active. This applies even more as IA models are developed not only by data experts but also with the involvement of experienced financial experts. An interdisciplinary approach could be helpful. Similarly, we consider it important for supervisors to have staff with appropriate skills and knowledge of both theoretical and practical nature in order to ensure efficient and effective supervision.

Moreover, we support the idea that there should be documentation of the algorithms beyond a mere rule-based scheme. This is necessary for further development of the technology but should already be sufficiently regulated. AI applications sometimes make decisions based on several million data points, i.e. although the original algorithm can be documented, the characteristics depend on the data used to train the algorithm. A simple rule-based description how decisions are made for which reason is then no longer possible (this is also obvious, if this were possible, a simple rule-based system could be used).

Measure 2: Development, testing, and ongoing monitoring of AI and ML techniques
We agree that firms should adequately test and monitor the algorithms to validate the results of an AI and ML technique on a continuous basis. However, we also see the need that a new product process is in place to understand how the respective models have been developed. Each company must understand the business activities it conducts, also in using AI or ML based products or models. The new product process should be based on the result of the analysis of the risk content of these business activities. The concept must outline the main consequences for the management of risks. Questions arise regarding the approach for instance: has the model been developed by using numerous models that have been let loose on a problem until a supposed solution was found, or is it based on a scientifically sound approach based on in- and out-of-sample periods? What does ‘behaving as expected in stressed and unstressed market conditions’ mean? Is it about adherence to the predicted performance and risk parameters? We believe that further clarification is necessary.

Regulatory compliance should be reviewed outside the actual AI/ML application, either before defining the task, as a secondary condition to be met during the development or in the adequacy of the output. This could be the task of the internal control functions such as compliance/risk management function or internal auditors.

Measure 3: Knowledge and skills required by firms’ staff
We agree that firms should have adequate skills, expertise and experience to develop, test, deploy, monitor and oversee the controls over the AI and ML the firm utilises. However, understanding the interferences of complex algorithms is considered nearly impossible for control functions such as compliance or risk management functions. However, it will be possible to understand the basic functioning of an algorithm, the suitability of the algorithm for the task at hand, the robustness of an algorithm in relation to the input data and model architecture for instance.

Moreover, conducting due diligence on any third-party provider is not the task of the control functions in the asset management area. This is the task of the management company at all, regularly executed by the legal department or units responsible for outsourcing or operational business activities. The Compliance and risk management functions should be involved in the preparation of the risk analysis in using third-party providers. However, the proposed measure should be amended, that compliance and risk management functions should not conduct due diligence on any third-party provider.

Measure 4: Outsourcing and operational resilience
Strict outsourcing requirements already apply in the asset management industry. Therefore, we fully support the approach that firms need to understand their reliance and manage their relationship with third-party providers, including monitoring their performance and conduction oversight. However, we would like to propose to clarify that the term 'sanctions for poor performance' of the third-party provider can only involve contractual sanctions knowing under contract law such as the termination of the contract due to faulty services. In this context, it should be clarified what 'poor performance' should mean. Third-party services could be provided in fulfilling all duties of the contract but not with the expected outcome of performance (such as a higher return). This could also lead to a 'poor performance', but that should not be part of a sanction regime. This is more a business strategic decision to continue the use of the third-party service provider.

Measure 5: Transparency and disclosure
We support a meaningful disclosure and information to investors and clients around their use of AI an ML algorithms that impact their outcomes.

Measure 6: Systems and controls
We agree that firms should have appropriate controls in place to ensure that the data that the performance of the ML and AI is dependent on is of enough quality to prevent biases and enough broad for a well-founded application AI and ML. However, the required data used are usually provided by third parties which are not part of the financial sector or supervised by authorities. Experience shows that the data contains many errors and inconsistencies. Therefore, the company using the data should either obtain a statement from the data providers about the quality assurance of the raw data supplied and/or demonstrate a data cleaning or data checking step when using the data. The data models used by the user should show a reasonable relationship between the number and frequency of input factors, model complexity and the number of forecasts made.

Disclosure of Information

Question 4: Do you disclose information to customers / clients on the use of AI and ML?
If yes, please indicate what kind of information is disclosed.

We do not have any specific comments.

Question 5: What factors do you need to take into account when considering the appropriate level of information that should be disclosed to clients (including prospective clients) and other relevant stakeholders around the firm's use of AI and ML algorithms?

We do not have a specific list of factors. It could be helpful to disclose to investors or clients the fact that AI or ML is used by the company in providing services (including a short description of the function) and, if any, the relevant risk involved. However, regarding the disclosure of information on the applied technology, methodologies, algorithms, it is of utmost importance to ensure that no legitimate economic interests of the respective companies are affect. This pertains to competition-relevant business secrets or intellectual property rights.

Proportionality

Question 6: How do you consider and apply proportionality to your systems and controls over the use of AI and ML?

In general, a principle-based approach applies. It is important that it must be left to the management companies to decide, within the framework of the minimum requirements to be complied with, which concrete design of the internal governance system is appropriate for. There could be no ‘one-size-fits-all’ approach in place. Hence, the use of the proportionality principle depends on the nature, scope, complexity and risk content of their activities in using AI and ML.

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