17 March 2017

AFG's answer to the ESAs' discussion paper on the use of Big Data by Financial Institutions

1 *Do you agree with the above description of the Big Data phenomenon? If not, please explain why. Please also mention whether you consider that other characteristics are relevant to understanding the use of Big Data.*

The Big Data phenomenon is well described in the document. It gradually penetrates the Asset Management industry. Probably Big Data and its techniques are more used to funds' assets than their liabilities: the capture, storage and use of funds' liabilities data are still underdeveloped (see question 12).

2 *Which financial products/activities are (likely to be) the most impacted by the use of Big Data and which type of entities (e.g. large, small, traditional financial institutions, Fintechs, etc.) are making more use of Big Data technologies? In light of ESAs' objective to contribute to the stability and effectiveness of the financial system, to prevent regulatory arbitrage, do you consider that there is a level playing field between financial institutions using Big Data processes and those not using them (e.g. because they do not have access to data or the (IT) resources needed to implement Big Data processes) or between established financial institutions and potential new entrants (e.g. Fintechs) using Big Data processes? Please explain.*

The portfolio management of financial assets is naturally a great consumer of information:

- information on the financial markets: quotations, volumes, interest ...
- economic information: macroeconomic statistics, company accounts, central bank decisions ...
- information of any type that could have an impact on the economy and markets: political decisions or declarations, election results, weather ...
- information on investment supports: characteristics of the supports in the first place, but also information on the underlying assets (i.e.: fund positions, securitization portfolios and underlying derivatives)

The ability to collect, and process this information, to translate them into market anticipation, to select the instruments and to take positions while respecting the constraints of an investor, are at the heart of the management companies' offer.

The gathering of information is simplified today by aggregators' offer development. They provide all of these information on a dedicated workstation or in the form of flow that can be integrated into the information system. They multiply investments to collect information, to historicize it and to rebroadcast it on demand.

For their exploitation, these last years have been marked by the multiplication of quantitative models. More or less sophisticated, they generally use the available figures.

Some examples:

- macroeconomic models that aim to define optimal asset allocation on the basis of available statistics at asset classes, countries, institutional or sector level. These models are widely used by global macro managers.
- price analysis and market volume models, which aim to predict changes in the absolute way, on an instrument, or in a relative way, between several instruments (for example, these models are used by long/short or arbitrage fund managers).
- analysis models of order book that aim to predict orders on a given security and over a short period of time. These models are now able to integrate news in real time (for example, these models are used by "Trader High Frequency").
- risk calculation models that aim to establish maximum loss envelopes based on historical or simulation.

While most models are designed for systematic or quantitative management systems, some types of order routing systems are used by managers as decision support aids or by order routing systems.

In addition, the distribution activity, within the Asset Management companies, can leverage Big Data across the distribution value chain to better understand the end customer behaviour, in relation to the products that the industry is offering. The element of challenge here is that those data are fragmented across a number of different actors, such as retail banks, wealth managers, pension schemes, life insurance companies, etc. As a result, the usage of Big Data is relatively limited as of today, compared to other industries where e-commerce is prevalent, but the capability to gather Big Data though the distribution chain will be in the future a key element for the Asset Management industry product evolution.

Big Data can also give to the Asset Management industry new opportunities for revenue generation: new business models, such as robot-advisors, can leverage Big Data to include them in prescriptive analytics. Such new type of Asset management may have a technology advantage over traditional institutions.

3 Do you offer/are you considering using Big Data tools as part of your business model? If so, please briefly describe: i) what type of entity you are, e.g., long established, start-up, a product provider, an intermediary; ii) the service you provide; iii) the nature of your clients; iv) your business model; v) whether the Big Data tools/strategy were developed by an external company or internally and whether you have related agreements with other entities (including non-financial entities); vi) what are the types of data used (personal, anonymised, user data, statistical data etc.) sources of data; and vii) the size of your Big Data related activity and/or forecast activity (e.g. to what extent are business decisions already taken on the basis of Big Data analysis; what other business actions could be based on Big Data in the future)?

AFG, as a professional association, cannot answer this question.

However, AFG sensitizes its members, through a working group dedicated to Big Data (the value of using big data and its regulatory implications). Indeed, they are not always aware of the data patrimony they have.

Data patrimony of an asset management company is made up of its own data (which is internally housed or owned by third parties) and also all data free or paying that it can acquire on the market (social networks).

Thus, it can retrieve data from the following partners:

- Custodians provide details of subscription/redemption flows and assets held by their clients.
- Funds' centralizers send details of the collection on a daily basis. This data may be more or less complete depending on of the orders marking quality put in place.
- The Registrar Transfer Agent and the Prime Transfer Agent (in Luxembourg) are able to transmit details of the collection and outstanding amounts of funds' clients.
- Central Securities Depositories, such as Euroclear France, provide positions by affiliates.
- Distributors send depositary certificates - taking back their positions in the funds - to the management companies in order to receive their retrocessions. Distributors are also in possession of details on the flows and positions of clients they intermediate.

These data sources are redundant, heterogeneous, and often incomplete: information on the same client can, for example, come from both the centralizer and the client's custodian. Hence the need to put in place a liabilities management tool that is intended to store, manage and supplement data (for example by calculating estimated positions and making them useable via reporting and visualization tools).

4 If you are a consumer or a consumer organisation, do you witness any of the uses of Big Data? In what fields?

5 Do you consider there are (non-regulatory) barriers preventing you (or which could prevent you in the future) from collecting and processing data? Are there barriers preventing you from offering/developing Big Data tools in the banking, insurance and securities sectors? If so, which barriers?

In theory, there are few barriers, but a high step in terms of culture, managerial will, problem identification for some players in asset management.

Moreover, obtaining the data (or appropriation of its own data patrimony) and the expertise of big data are important issues among asset management players.

6 Do you agree with the above short, non-exhaustive, presentation of some of the main applicable requirements? If not, please explain why. Please also mention whether you consider that other legal requirements are essential and should be mentioned.

The AFG generally agrees with the presentation.

7 Do you consider any of these regulatory requirements as unjustified barriers preventing you from using Big Data technologies? If so, please explain why. Please also explain whether you consider that further regulation (including soft law/guidance, etc. and insofar as it falls within the scope/remit of the ESAs) should be introduced to facilitate the use of Big Data technologies.

The last few years have seen many regulations concerning data: collection, protection of personal data, suitability with the customer's interest, …

However, adaptation to these regulations is costly and contributes to pushing the asset management industry to seek economies of scale and thus consolidate.

8 Do you consider the potential benefits for consumers and respectively financial institutions to be accurately described? Have you observed any of them in practice? If so, please provide examples. If not, please explain whether you are aware of any barriers that may prevent the above potential benefits from materialising?

The Asset Management companies will use the Big Data primarily for their own benefit and the usage of Big Data could increase the quality of the industry products and improve the interaction with customers and the customer experience.

9 Do you agree with the description of the risks identified for consumers and respectively financial institutions? Have you observed any of these risks (including other risks that you are aware of) causing detriment to consumers and respectively financial institutions? If so, in what way? If not, please explain why. Please also mention whether certain risks for consumers and financial institutions have not manifested yet but have the potential of developing in the future and hence need to be closely monitored by Supervisory Authorities.

The main risks mentioned in the document are risks linked to the fact that customers identified by Big Data as unprofitable or too risky would be discarded and therefore not served properly.

In Asset Management, the main risks are following:

- Opaque use of data, particularly on the asset side, which does not allow the necessary explanation and good communication to the client (information asymmetry);
- A "marketing" segmentation of clients that is too efficient and too precise (micro-segmentation) that would limit the choice that would be offered to them.

10 Is the regulatory framework adequately addressing the risks mentioned above? Bearing in mind the constant evolution of technologies/IT developments and that some of the above mentioned regulatory requirements are not specific to the financial services sector (e.g. GDPR), do you think further regulation is needed to preserve the rights of consumers of financial services in a Big Data context? Please explain why.

Regulation give a level of protection to consumers. However, as the technology evolves rapidly, a continuous review process has to be conducted to ensure that the level of protection remains adequate.

11 Do you agree that Big Data will have implications on the availability and affordability of financial products and services for some consumers? How could regulatory/supervisory authorities assist those consumers having difficulties to access financial services products?

No implications identified in the Asset Management industry.

12 Do you believe that Big Data processes may enable financial institutions to predict more accurately (and act accordingly) the behavior of consumers (e.g. predicting which consumers are more likely to shop around, or to lodge a complaint or to accept claims settlement offers) and could therefore compromise the overarching obligations of financial institutions to treat their customers in a fair manner? Please explain your response.

The data are scattered in the asset management company, and for some not exploited. The use of Big Data technologies over all of these heterogeneous data will enable to provide a complete view on the customer.

In this way, companies can improve their marketing management, refine and make more efficient their multi-channel campaigns, improve the customer experience and thus increase customer loyalty and win new customers

The crossing and exploitation of data from the web is also an opportunity for companies to adapt to customers' new generations, such as "millenials", who expect services adapted to their needs and not online availability of a simple product catalog.

The combination of these data also makes it possible to measure the reactions of fund holders to the fund's over/under performance relative to the benchmark.

The consolidation of all the data related to the funds' liabilities makes it possible to model the customers' behaviour, and thus to anticipate and manage the liquidity risk of these funds. These models make it possible to adapt liquidity stress tests to the reality of behaviours.

13 Do you agree that Big Data increases the exposure of financial institutions to cyber risks? If yes, what type of measures has your institution adopted or is going to adopt to prevent such risks? What could supervisory/regulatory authorities do in this area?

Being the Big Data an asset, there is an expoxure to cyber risk. The Asset Management industry can learn from incident in other industries which are more advanced in the usage of Big Data, where data have been stolen and resold or re-cycled on official and unofficial markets. The focus on cyber security should be enforced.

14 Would you see merit in prohibiting the use of Big Data for certain types of financial products and or services, or certain types of customers, or in any other circumstances?

The Big Data is a general phenomenon linked to the technologies improvement crossing with a number of data in very rapid expansion. AFG have not identified any constraints on the use of these technologies, apart from the need to preserve the interest of clients.

It is the use that must be regulated, not the technology in itself.

15 Do you agree that Big Data may reduce the capacity of consumers to compare between financial products/services? Please explain your response.

One of the risks of Big Data and notably of Artificial Intelligence is the opacity of the algorithm (or "reasoning"). However, financial and asset management services should be able to explain to the end

customer the financial product offered to them and to contextualize the decisions: transparency on the management processes allows the client to compare and choose among the different financial products and services offered.

16 How do you believe that Big Data could impact the provision of advice to consumers of financial products? Please explain your response.

Big data could be used in conjunction with robot-advisory to provide consumer advice or other forms of automated investing techniques.

17 How do you believe Big Data tools will impact the implementation of product governance requirements? Please explain your response.

Big Data can enhance the fund product governance process by giving a more detailed representation of the target market. On the fund manufacturing side, Big Data are the opportunity to gather more information on investors, and on the distribution side it would allow there to have more details on the customer base, requirements and expectations.

18 How do you believe Big Data tools will impact know-your-customer processes? Please explain your response.

The Big Data tools are effective to better know their customers and manage the regulatory requirements: the KYC (Know Your Client) procedure is cumbersome and time-consuming for sales and compliance teams. Moreover, it ends up upsetting the large customers who are being asked the same questions by their many providers of investment services, among which the asset management companies.

Some RegTech offer a service to provide the legal documentation of major investor clients and can, at the same time, perform the due diligence on anti-money laundering on behalf of the asset management companies.

The form template KYC developed by the AFG in conjunction with AF2i and AFTE must be integrated by these suppliers: investors will be able to fill it in once and for all and then leave it to the provider to distribute the updates. Some players, like Thomson Reuters and Swift, have launched a mutual platform of KYC online registries which collects information in a single tool that can be shared by all financial institutions. Reuter already manages 10,000 KYC.

19 What are key success factors for a Big Data strategy (i.e. the adaptation of the business model/plan towards Big data driven technologies and methods)?

The key success factor is to develop a business strategy to the data management which includes big data, and consider in that context the value of data as an asset (for example selling tools to Clients or use it to lower the risk of the Asset Management company).

20 What are the greatest future challenges in the development and implementation of Big Data strategies?

New technology will have to combine with the existing structure, hence requiring a refactoring of legacy systems which can be costly and complex. Another important challenge is to manage the cybersecurity in the context of the asset management industry where the type of data processed are highly sensitive and cyber breaches can have serious consequences.

21 This Discussion paper refers to a number of measures and tools meant to ensure compliance with conduct and organisational regulatory requirements as well as data and consumer protection rules in the context of big data analytics. Are other measures and tools needed? If so, what are they and what they should cover?

22 How do you see the development of artificial intelligence or blockchain technology in connection with Big Data processes?

The blockchain makes it possible to do without intermediation and to establish a secure information between two parties. The system identifies:

- Validity of flows;
- The Decentralized Ledger Platform (DLP);
- Records transaction details block by block.

At this stage, a public blockchain for the redemption/subscription management would allow a very broad access to this technology: we could imagine that a fund or an asset management company could directly use this technology and their investors. Asset management companies and investors could join directly in this system without necessarily being required to go through a custodian.

This system would overcome the current opposition between the CSD model (France) and the TA model (Luxembourg), and have a transverse and homogeneous organization regardless of the jurisdiction of the fund, asset management company or investor ...

The advantages for an asset management company:

- it could have detailed and consistent information on the funds' liabilities without having recourse to the centralizer or the custodian;
- This would allow to imagine a multitude of services for the benefit of its investors and customers since they are known and traced.

Issues to be addressed before using the blockchain:

- As the information in the blockchain is anonymized, it will be necessary to provide identification keys to reassign the events history to the legal entities concerned.
- The information exchanged in the blockchain must be, at a minimum, standardized or even normalized to be exploitable, even over a long period (a multitude of standards would prevent economies of scale).

- In order to ensure that securities account keeping via blockchain has a satisfactory level of security, the law should recognize the terms of registration and retention (for the moment, attempts in this direction have been postponed, but the recognition of the use of the blockchain as a "shared electronic recording device allowing the authentication of operations" for the "minibons" constitutes a progress).

The cost and transformation time of the subscription/redemption process can be high (we can see how long it took to implement the orders marking, even though it is a simply information to add). The return on investment of this transformation is not simple to calculate for an asset management company because the financial gains are essentially made up of savings on the settlement/delivery processes in the custodians and the issuing account keepers.

For some twenty years, the French asset management companies have delegated or even abandoned the infrastructure projects (outsourcing middle-office or even computing, ...). Conversely, banks, that have already invested heavily in infrastructure of settlement deliveries and account keeping, are already investing in R&D on using the blockchain:

- they feel threatened about the existence of the "trusted third party" notion;
- the blockchain is a source of operation economy if it allows to dispense with CCPs and settlement systems, both current and future.

23 Are there any other comments you would like to convey on the topic of use of Big Data by financial institutions? In particular, are there other relevant issues that are not covered by this Discussion Paper?