Financial Services Consumer Panel
AN INDEPENDENT VOICE FOR CONSUMERS OF FINANCIAL SERVICES

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Dear Sir/Madam,

This is the Financial Services Consumer Panel's response to the Joint Committee 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.

We agree with the Joint Committee's description. While financial institutions have always used data, the type and sources of data as well as the use and type of data analytics tools is growing rapidly.

It is important not to conflate different sorts of data: those for which a consumer has given consent to a third party to use; data which is collected from public sources; and data which has been gained with consent but then packaged up and sold on (which may not have been expected by the person granting consent). There are different consumer risks and rights in each case, which the ESAs should take into account.

The use of Big Data can deliver benefits for consumers, but there are also risks. Broadly, these include financial exclusion, data governance and consumer consent, algorithms operating in a 'black box' and a lack of scrutiny and accountability of Big Data practices. Consumers may also be at risk from breaches to the provisions of General Data Protection Regulation (GDPR) either because it is impossible for a consumer to trace where their data have been used, or because firms are not sufficiently supervised or enforced against. Consumers may also be at risk from breaches to the provisions of GDPR either because it is impossible for a consumer to trace where their data have been used, or because firms are not sufficiently supervised or enforced against.

The use of data by financial institutions should be directed towards providing better products and superior quality services for consumers. This will not happen without regulatory intervention.

The paper is silent on firms whose business model revolves solely around the use and application of data. Regulators should address how these firms, such as Google Analytics, interact with financial services firms and consumers and the risks and opportunities they pose.

There should be clearer governance to regulate how Big Data analytics develop and how their quality can be assured. Data analytics is a developing science with a lot of room for experimentation and development.

The paper also poses ethical questions about the use of personal data in financial services. We recommend the ESAs give thought to the need for an ethics committee within supervisory authorities and also whether ethics committees should be required in all firms using Big Data with a requirement to report to their supervisory authority any new or unusual findings.

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.**

We believe that EU member states' supervisory authorities should have their own Big Data resource to supervise firms, or the use of Big Data by firms in the member state should be prohibited until such time as they do. Regulators must keep pace with the changes in firms located in their constituencies.

Please see further detail in our response to Question 4.

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)23; 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)?**

Not applicable

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

Payments
Ownership of data in the payments sector, where there can be several parties in a transaction at one time, needs to be clarified. For example, a payment online involves at least three parties: the payer, the payee and the bank (assuming they use the same bank). With the introduction of payment account services and payment initiation services the chain is likely to become longer. There should be more clarity as to which party in the chain owns what part of the data.

Ideally, consumers should own their data and be able to 'plug it in' to a provider of their choice and 'unplug' it at will. There is a growing privacy industry that allows this in the financial services sector, for instance, Personal Data Stores, which are developing ways of holding personal data for clients but not being able to access that data themselves. However, there is no publicly available infrastructure to enable the storage and control of data. The ESAs should give consideration to whether such a neutral, not for profit

infrastructure should be developed which is accessible to all as part of a healthy data-driven ecosystem.

Alternatively, the ESAs should ensure that Personal Data Stores have the necessary access to data types so that people can use them instead of banks, which are the default 'data store'. The ESAs should also consider what constitutes a genuine Personal Data Store, that is, one that puts the user in control of their data, versus an aggregator that helps the user develop an online profile but may use personal data in unexpected ways (e.g. aggregate and sell on).

Investment Advice and Sales
Big Data technology is at the centre of how firms offering online investment advice operate. While this may bring some benefits to consumer there are also risks. A recent Panel position paper indicates that, despite rules already being in place to protect consumers in this sector, there are serious shortcomings that can lead to poor consumer outcomes. Poor practice relating to transparency, clarity and consistency mean some firms are not treating their customers fairly and are failing to meet their needs.

In fact, many consumers are not getting regulated advice at all, but an online journey that looks like advice but ends in the consumer buying a product 'execution only', which means their protection is much reduced. Our research shows that consumers do not understand the difference between advice and guidance, and whether they are protected or not.

Algorithms can also pose systemic risks in this area. A recent paper from a UK investment firm suggests that robo-advice firms are potentially storing up large liabilities if their algorithms fail further down the line[1]. Another industry paper highlights the practical issues that robo-advice firms need to consider and plan for, including processes for temporarily suspending algorithm-driven advice if, for example, there are unexpected changes to legislation that require algorithms to be modified[2].

Insurance
Insurers' increased use of Big Data to inform risk and pricing strategies may improve access for some groups of consumers while restricting it for others. The use of individualised micro risk assessments means that some people are likely not to be served at all. Others will pay much higher premiums. Conversely, some consumers, for instance some young drivers or elderly travellers, should pay lower premiums than they do now because their individual risk is lower than that of their peer 'risk group'.

In time, increasingly individualised risk assessments could have a significant impact on risk pooling and individual premiums. A reduction in risk pooling would fundamentally alter the structure of the insurance industry.

The level of transparency in risk profiling is another issue of concern. It is unclear now how firms assess risk and it is impossible for individuals to know if they are getting value for money as a consequence. If firms use algorithms to assess risk, consumers cannot check the methodology, or correct their own behaviour or attributes to improve their 'score'.

Credit
Some firms use consumer transaction data to build transparent credit score-cards, which can help consumers with thin credit files to access credit when they were previously excluded.

A key characteristic of Big Data is that very wide and varied types of data are used collectively. Some firms are reported to use 15,000 data points in their credit scoring

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[1] SCM Direct (2016). Fintech Folly: the sense and sensibilities of UK robo-advice https://scmdirect.com/press-and-videos#block-views-resources-scm-research-tab

[2] Storey, A. (2016). How to monitor robo-advice https://www.linkedin.com/pulse/how-monitor-robo-advice-andrew-storey

algorithm[3]. This makes it even more difficult to give consumers an indication of the reason if they are declined for credit. There is also a question mark over how relevant all this data might be and whether it can be justified under data protection legislation.

Given the above, the Panel strongly believes that the use of Big Data for calculating credit scores should be subject to the consumer's explicit consent and consumers should be able to choose the types of data they are willing to have included in their credit assessment. This would help them know that data is collated from different sources and give them control over what they would be happy to share.

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?

Consumer organisations do not have Big Data capabilities to challenge market participants on their own assessment of firms' 'evidence'.

Furthermore, consumer organisations and members state authorities should be encouraged to consider how Big data projects could help identify patterns, like for instance, those associated with financial difficulty and test earlier interventions or solutions. They also need strategies for advocating for the consumer in a data driven economy[4].

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.

We agree with all the consumer protection regulations highlighted in the document. However, these are only useful where they are effectively supervised and enforced against.

Consumers remain at risk from bad practices if the supervisory and enforcement elements are not well designed and implemented. For example, in the UK, StepChange Debt Charity reported last year that 59% of a sample of 2,044 surveyed had received at least one call in the last 12 months from a high cost credit firm or a fee-charging debt company and 8% received a call more than once a day. StepChange also found that a third of a sample of its own clients – i.e. people already in serious debt - received calls offering them high cost credit every week. On average 1 in 8 had taken out extra high cost credit as a result[5]. According to StepChange, one of the root causes of the problem was the 'ease with which firms can collect, use and share people's personal data for marketing purposes'. This shows the importance of a 'watertight' regulatory framework.

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.

Not applicable

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

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[3] King, J. (2014). 'IMF World Bank: Credit scoring – friends, followers and settling scores' in The Banker, October
4 Money and Mental Health Institute, 2016, Busting the Banks Open
[5]https://www.stepchange.org/Mediacentre/Pressreleases/Overhalfofadultsnuisancecallsfinancialproducts.aspx

aware of any barriers that may prevent the above potential benefits from materialising?

The Panel recognises the benefits that the use of information by financial services firms can deliver for consumers. However, the extent to which they will materialize remains uncertain.

Costs and access

We do not believe that cost efficiency gains for financial institutions will be automatically passed on to consumers in the form of lower prices, as competition is not effective in most financial services markets. Although marketing costs may be reduced for financial institutions there will be marketing costs for the new intermediaries ('aggregators') that will help consumers interpret data and compare products[6]. An increasing number of price comparison intermediaries can increase costs for consumers[7]. Moreover, aggregators may lead to conflicts of interest, particularly if they are remunerated through commission-based business models[8].

Big Data methodology in credit

It is not clear whether the supposed benefits of firms being able to use consumers' data (including social media) to assess creditworthiness outweigh the potential risks to the consumer. There is no accepted methodology for impartial assessment of data derived from social media. It is therefore important to monitor this development carefully so that vulnerable people are not exploited and firms lend responsibly. The Panel does not agree that social media data would necessarily increase product quality for consumers but it could increase access to some products.

Fraud and crime

Data could be used more effectively to reduce fraud and financial crime and improve the identification and authentication process for consumers.

However, there are also potential risks, including the risk that consumers could be wrongfully accused of fraud and find themselves systematically 'locked out' and excluded from essential financial products with little recourse to appeal.

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.**

Yes.

The report also mentions ethical considerations. We would highlight that in China they have taken a policy decision to use Big Data to assign citizens a score based on their political, commercial, social and legal 'credit' [9]. This may be an extreme example. However, the Commission and relevant regulatory authorities need to guard against the possibility that decisions taken in isolation of a holistic view of the market could lead to personal freedom being constrained.

For a more detailed description of consumer risks across various sectors please see our response to question 4.

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[6] http://www.thisismoney.co.uk/money/bills/article-2933401/Energy-price-comparison-sites-spend-110m-annoying-adverts.html

[7] http://www2.warwick.ac.uk/fac/soc/economics/research/workingpapers/2015/twerp_1056b_ronayne.pdf

[8] http://www.dotecon.com/assets/images/crmain.pdf

[9] http://www.independent.co.uk/news/world/asia/china-surveillance-big-data-score-censorship-a7375221.html

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.

The current regulatory framework, especially the General Data Protection Regulation, sets out good principles to address the risks stemming from Big Data. However, the increasing complexity of Big Data analytics and its effect on market outcomes will require further clarification in the specific area of financial services.

Further, the paper is completely silent on the Supervision and Enforcement of a framework for Big Data. This is clearly important because without a transparent and robust approach to supervising firms' use of data and an appropriate deterrent for misuse any new rules or guidance will be worthless.

It is not clear whether consumers have a right of redress against firms making use of inaccurate or misleading data. The creator and submitter of the data may not be a financial services firm and may therefore be outside the jurisdiction of the regulator and the relevant ADR scheme. The EBA could explore making the user of data liable for any inaccuracies. This would encourage firms to check the quality of the data they use.

In research by Which?[10], 81 volunteers ordered statutory reports from all three UK credit reference agencies. A third found a problem on their file that they disputed. In addition, a third of participants found the information full of jargon and confusing to understand, despite a legal requirement that statutory reports should be given in plain English (Data Protection Act 1998, s158 (5)).

A study in the USA by the National Consumer Law Center found that 20 per cent of traditional credit reports contain errors, with around a quarter of these errors reducing credit scores. New-style Big Data credit scoring has also been shown to be inaccurate. Again drawing on US research, people found it hard to get their data, the reports were not comprehensive and over two-thirds of them contained inaccuracies which 'ranged from the mundane—a wrong e-mail address or incorrect phone number—to seriously flawed'.[11]

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?

The Panel accepts that digitalisation can offer some customers enhanced access, especially where the products or services involved are straightforward, non-complex and readily understood. However, use of online data could lead to discrimination, exclusion, and overplay the impression of consumer empowerment. If Big Data is commonly used in risk assessment, consumers will be forced to create an "online CV" for themselves and actively share data, or risk exclusion from some financial services.

At the same time, the use of data does not always mean consumers are offered products that are suited to their needs at more competitive prices. They may be offered products they find hard to refuse (eg. a loan in a time of need) at a price that exploits them.

The ESAs could help by requiring all supervisory authorities to have a consumer protection objective with a particular emphasis on the ability of vulnerable groups of people to access

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[10] Which? (2014) "Unlocking your credit report" https://press.which.co.uk/whichpressreleases/unlocking-your-credit-report-2/

[11] National Consumer Law Center, 2014: 4

and use services at an affordable price, especially where these services are deemed essential to being included in society.

12. Do you believe that Big Data processes may enable financial institutions to predict more accurately (and act accordingly) the behaviour 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.

Yes. Big Data enables firms to use information about potential and existing customers that is not risk-related to "optimise" the price of their product, by estimating more accurately the price increase an individual consumer will put up with before they switch to a different provider. Similarly, data on individual customers' propensity to shop around could be used to inflate prices for loyal customers.[12]

Financial institutions already rely on consumer inertia to drive their business models – for instance, using low insurance premiums to gain customers but systematically increasing the premium year on year for loyal customers. Given there are already low levels of switching in many financial services markets, optimisation could further reduce value for the consumer and make the regulator's job of promoting competition a lot harder.

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?

Not applicable

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?

There is a strong risk of technology outpacing regulation. The ESAs should ensure supervisory authorities have sufficient knowledge and powers to monitor and enforce against firms if necessary. Without the necessary supervision and enforcement in place we would see merit in prohibiting the use of artificial intelligence or machine learning.

Considering the potential widespread consumer detriment, industry standards should be set high and competent authorities should have the tools to oversee and enforce those standards.

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

Big Data is likely to lead to the delegation of choice by the consumer to an intermediary. As services become more personalised consumers may find it more difficult to make their own comparison. This requires consumers to put more trust in the intermediary and to rely less on their own analysis.

Existing research already shows that people feel disempowered and disqualified from challenging firms. People may appear to 'trust' services, because they continue using them, but feel unease because they are not sure how a firm has made decisions, whether they are

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[12] The issue of price optimisation has already received significant attention in the United States. See for example, Consumer Federation of America & Center for Economic Justice, "Comments on CASTF's Draft Price Optimization White Paper" (June 2015)

right for them, how they can contend them or negotiate their rights without forfeiting the entire service[13].

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

Firms offering online investment advice are making more use of Big Data technologies. We recently published a position paper on this area which can be found here.

While this may improve the provision of advice to consumer of financial products there are also risks. A recent Panel position paper indicates that, despite rules already being in place to protect consumers in this sector, there are serious shortcomings that need to be addressed if consumers are to get good outcomes. Poor practice relating to transparency, clarity and consistency mean some firms are not treating their customers fairly and are failing to meet their needs. In fact, many consumers are not getting regulated advice at all, but an online journey that looks like advice but ends in the consumer buying a product 'execution only', which means their protection is much reduced. Our research shows that consumers do not understand the difference between advice and guidance, and whether they are protected or not.

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

Not applicable

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

Not applicable

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)?

Not applicable

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

The Panel would emphasise that the interests of consumers need to be placed at the heart of the Big Data revolution. Some of the challenges include:

- Ethical and societal implications: establishing workable and fair social norms for the collection, storage, acquiring and usage of consumer data.
- Understanding layers of data and how the consumer can own and control different types of data. Tools to enable the consumer to have control over their own data in a way that actually works for them should be developed as a priority and governed properly. Otherwise there is a risk that regulation will be needed 'after the event'.
- How to protect consumers when much of the existing research shows that 'disclosure models' are not well understood by consumers.
- Prevent discrimination in accessing products and services resulting from consumers' choice not to share their data with service providers.
- Algorithmic accountability: data-driven algorithms now drive decision-making in ways that touch our economic, social and civic lives. In order for this not to lead to consumer detriment, there will need to be a framework in place which allows for transparency throughout the decision-making process. Opening algorithms to public and regulatory

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[13] Citizens Advice, Personal Data Empowerment, 2015

scrutiny could enable people to monitor, audit and criticise how those systems are functioning.
- Regulation, supervision and enforcement: the existing legislative framework may allow loopholes or gaps that will negatively impact consumer protection. Regulators need to have sufficient resource and capability to keep up with developments in this sector.

In light of the above, we would invite the ESAs to consider the following:

- The need for a neutral, not for profit, infrastructure that enables people to store their data in a safe place and consent to share it with others in a controlled way
- Learning from the health sector, the ESAs could set up an ethics committee to assess and advise on the ethical implications of Big Data and changes in the financial services market
- Where firms use Big Data, ethics should be incorporated into the governance structure and decision making, overseen by an ethics committee (reporting to the company's board), which is held to account by a separate independent user-focussed Panel (funded by the firm) which has recourse to the regulator if it is not satisfied with the decisions taken to guard privacy and freedom
- Undertaking further research on the impact of Big Data on the provision of products and services and publish an annual report monitoring developments including reference to negative unintended consequences and how these will be mitigated
- Proper investment in 'regtech' and the ability to supervise and enforce against GDPR and other relevant regulations effectively and promptly

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?

There needs to be clearer governance to regulate how Big Data analytics develop and how their quality can be assured. Data analytics is a developing science with a lot of room for experimentation and development. There is a risk of placing undue weight on the output of algorithms that are subsequently found to be faulty, for example, some of Google's early attempts to predict the spread of the flu virus[14]. Algorithms are set up and 'trained' by humans with their own commercial objectives and natural human biases. This can affect the quality of algorithms or the use to which they are put.

Algorithms can also pose systemic risks. A recent paper from a UK investment firm suggests that robo-advice firms are potentially storing up large liabilities if their algorithms fail further down the line[15]. Another industry paper highlights the practical issues that robo-advice firms need to consider and plan for, including processes for temporarily suspending algorithm-driven advice if, for example, there are surprise changes to legislation that require algorithms to be modified[16].

It is unclear how firms will be able to explain to consumers the decisions that have been made using complicated algorithms and machine learning. The ESAs should test with consumers what is likely to be the most effective way of communicating these messages meaningfully.

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

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[14] http://www.wired.com/2015/10/can-learn-epic-failure-google-flu-trends/

[15] SCM Direct (2016). Fintech Folly: the sense and sensibilities of UK robo-advice https://scmdirect.com/press-and-videos#block-views-resources-scm-research-tab

[16] Storey, A. (2016). How to monitor robo-advice https://www.linkedin.com/pulse/how-monitor-robo-advice-andrew-storey

We see the potential for artificial intelligence to exploit the benefits of Big Data further. However, the risks of algorithms operating in a 'black box' or the unintended consequences of machine learning are not well understood and should not be underestimated.

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?

The benefits of Big Data rely primarily on consumers sharing their data. However, there is little onus on banks and other financial institutions to offer commensurate exposure to data on the quality of their products and services. There is a vast amount of 'hidden' information that consumers may find helpful in making informed choices about financial products. Because this information is not currently available it makes it very difficult for consumers to affect market power or take more responsibility in the market. The balance of power is too firmly in favour of firms and further opening up access to consumer data exacerbates this. Firms should be required to provide much more detailed information about their products in order to re-balance the asymmetry of power and increase competition in the market.

This will be particularly important as technology allows services to develop which will in effect, assess the market for a consumer. Availability of data to enable good assessments will be necessary and technology will provide the capacity for all data to be considered in a way which is not currently possible with the limitations of a comparison table or human processing capability.