

The Consumer Voice in Europe


BIG DATA & FINANCIAL SERVICES

BEUC response to ESAs consultation



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Why it matters to consumers

Financial firms increasingly use big data, for various purposes like marketing, price-setting and personalisation of financial offers. While this evolution comes with some potential benefits for consumers, such as better targeted offers, it also triggers huge questions on privacy, fairness, and exclusion.

Summary

The use of big data analytics is set to profoundly affect the value chain of all financial products and activities. While firms invest heavily in digital technology, the amount of consumer data flowing through the economy increases at unprecedented speed.

Across sectors (banking, insurance & asset management) we expect increasing personalisation of offers, tailored marketing and the proliferation of new types of services and products. In particular, we expect sweeping changes in underwriting and claims handling in the non-life insurance area, in creditworthiness assessments and in the payments landscape.

While this evolution comes with some potential benefits for consumers, such as better targeted offers, it also triggers huge questions on privacy, fairness, and exclusion.

Therefore, it is crucial that regulators assess what big data analytics can and should do for the benefit of consumers in finance, but also seriously consider the risks it brings.

Concretely, we call upon the ESAs for investigating whether there are types of data, used in financial services which:

- require greater disclosure and/or clearer approval (explicit consent) from the consumer;
- act against the interest of consumers and the wider society;
- should not be collected, nor processed for e.g. pricing or marketing purposes, from an ethical point of view.

In this respect, we call for specific guidance on how the principles coined by the General Data Protection Regulation (GDPR) should be implemented in retail finance.

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 understand the use of Big Data.

The big data phenomenon is captured well in the [discussion paper](#)

However, one should be cautious with the assumption made in point 7, suggesting that there is an active demand from consumer for new types of services incurring the use of big data in financial services.

There is a big difference between the situation where a consumer makes an informed choice to use a service which uses personal data such as telematics (e.g. in car insurance) and where they are unaware that it is being used, either because the firm is collecting this through social media or because it was through 'tick box' permission.

Most consumers have no idea of the vast implications of big data, even if they give their consent

On another critical note, we challenge the notion made in point 15 that "barriers" to data access for firms could lead to higher prices for consumers, poorer quality of products etc. This suggests a built-in bias towards the use of more data, while one could also argue that those same "barriers" protect consumers from detriment such as that which can arise from some types of price discrimination.

Overall, the new data economy can offer opportunities to consumers, but then they need to get real value when their data is exploited. Therefore, it is important to consider the benefits and the potential harm from use of data and ensure appropriate consumer protections are in place to reduce the risk of harm. This condition is especially crucial in the sector of financial services, where the risks of discrimination and misuse of personal data are very high.

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 to implement big data processes) or between financial institutions or potential new entrants (e.g. Fintechs) using big data processes? Please, explain.

The use of big data analytics is set to profoundly affect the value chain of all financial products and activities. While firms invest heavily in digital technology, the amount of consumer data flowing through the economy increases at unprecedented speed.

Across sectors (banking, insurance & asset management) we expect increasing personalisation of offers, tailored marketing and the proliferation of new types of services (e.g. peer-to-peer lending, telematics insurance). In particular, we expect sweeping changes in underwriting and claims handling in the non-life insurance area, in

creditworthiness assessments and in the payments landscape. Next to this, developments around the 'Internet of Things' will increase the interactions between finance and a range of other sectors such as energy, housing, telecom and health.

Large financial entities and fintech companies will have an advantage over smaller entities in the initial use of big data processes, which could lead to issues of competition. However, in the light of promoting stability and effectiveness, the foremost question ESAs will need to address is what types of data are needed and ethically, what should be permitted to be used within financial services, instead of purely focussing on the mere access to data.

- 3. Do you offer/are you considering using big data tools as part of your business models? 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, used data, statistical data, etc; 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)**

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- 4. If you are a consumer or consumer organization, do you witness any of the uses of big data? In what fields?**

As pointed out in the related EBA consultation¹ on innovative uses of consumer data, data is considered as the new gold by both traditional financial companies and new technology players. Consumer data stemming from on-line behaviour, geolocation tools, electronic payments and wearables is fuelling a gold rush, which is already impacting consumer's daily financial lives. A telling example is banks requesting access to data stored on a consumers' mobile phone (like contacts, pictures) to install a mobile banking app. Financial providers are also pushing consumers to share their financial transaction data, by bundling such consent with products like payment cards.

We find the most concrete examples of truly new services in the insurance & credit areas.

"Pay as you drive" (telematics) car insurances and, to a lesser extent, "pay as you live" health insurances (where consumer's behaviour is tracked and rewarded through wearable devices) are increasingly promoted and sold. The use of big data in lending practices and its questionable impact on creditworthiness assessments has been described thoroughly in the EBA consultation referred to above.

¹ http://www.beuc.eu/publications/beuc-x-2016-091_fal_beuc_response_-_innovative_uses_of_consumer_data_in_fs.pdf

Firms selling consumer data (e.g. banks selling payment data²) is another, questionable, practice we witness and a good reminder of how big data could be monetised without tangible consumer benefits.

- 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 sector? If so, which barriers?**

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- 6. Do you agree with the above short description, 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 the applicable requirements.

Additionally, we would like to point out that broader fundamental rights and anti-discrimination legislation could come into play when using big data analytics. Exemplary is the prohibition to discriminate based on gender, following the Test-Achat case³.

- 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.**

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POTENTIAL BENEFITS AND RISKS FOR CONSUMERS AND FINANCIAL INSTITUTIONS

- 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?**

In general, the potential benefits for consumers and financial institutions are well described. However, the extent to which they will materialise remains uncertain. While tailored insurance policies and more personalised premiums could reduce the cost for low-risk policy holders, first experiences **in pay-as-you-drive (PAYD) policies provide mixed results.**

² <https://www.bloomberg.com/news/articles/2014-03-10/ing-plan-to-share-customer-payment-data-spurs-privacy-concerns>

³ <http://curia.europa.eu/juris/celex.jsf?celex=62009CJ0236&lang1=en&type=TEXT&ancre=>

Research⁴ from our Dutch member Consumentenbond found that:

- PAYD premiums are substantially higher than traditional car insurance premiums but can be lowered through adopting exemplary driving practices, resulting in rebates of up to 35%;
- Average consumers with fair driving practices are mostly better off with a traditional insurance;
- Consumer with a higher risk profile (younger or older drivers) can be sometimes better off with a PAYD insurance but firms are restricting this effect by setting age limits;
- The criteria for calculating rebates remain vague and hard to comprehend – one insurer even used gamification criteria (whereby the rebate was partly based on how the policy holder drove in comparison with other policy holders);
- Privacy concerns loom and insurers also collected data which was not necessary for the calculation of the premium.

Average consumers with fair driving practices are mostly better off with a traditional insurance

One additional benefit of the use of big data which is not mentioned is its **usage by supervisory authorities**. Algorithms could be e.g. designed to test other algorithms for bias, discrimination, or other principles. ESMA could use big data analytics to better track the net returns and performance of long-term investment products.

Finally, we would like to flag the concept of “**open banking**”⁵ whereby open API’s (Application Programme Interfaces) have the potential to provide consumer interesting services e.g. in personal financial management. As with big data, this comes both with opportunities and pitfalls for consumers.

9. 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 settlements offers) and 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 increasing use of big data analytics, including very sensitive data on consumer’s everyday lives, poses several fundamental risks to consumers and society. While the ESAs have done excellent ground work we would like to highlight some of them.

⁴ <https://www.consumentenbond.nl/binaries/content/assets/cbhippowsite/gidsen/geldgids/2016/nummer-7--november/gg201611p20-rijstijlverzekeringen.pdf>

⁵ <http://newcityagenda.co.uk/wp-content/uploads/2017/01/Open-Banking-Print-Ready-A4.pdf>

- **Exclusion risk:** in the insurance area, the **individualisation of risk profiles** is bound to have fundamental implications for the principle of solidarity and risk pooling, potentially affecting badly more vulnerable consumers. Consumers with higher risk profiles (e.g. in health insurance area) might face unacceptably high premiums for basic insurance policies or may find themselves unable to find coverage⁶.

Dutch consumer group Consumentenbond has already received complaints⁷ from consumers barred from obtaining an insurance policy, often based on questionable data such as having a “bad” postal code.

- **The cost of privacy:** the possible discrimination of privacy-minded consumers, unwilling to give private information (e.g. geolocation, using wearables tracking your fitness data and/or medical parameters) at the expense of higher premiums or credit rates. Leading insurance executives seem to be keen on establishing the “no wearables = no health insurance principle”⁸, which is very worrying.
- **Disparate impact of big data:** millions of data points might suggest interesting correlations between consumer’s behavior (e.g. their spending habits, on-line behavior, geolocation) and expected outcomes (e.g. risk of defaulting credit, risk of driving badly) **but correlation does not mean causality.**

The power of algorithms, with all built-in human biases, in predicting concrete consumer outcomes, is therefore always limited. Research has confirmed that, in the credit area, there is no link between number of defaults or arrears and the amount of data points used in the creditworthiness assessment⁹.

Conversely, **price discrimination** looms around the corner. In the US, one credit card company admitted to consider individual consumers, who were using their cards for marriage counseling or therapy, to have a bigger credit risk based on its experiences with other consumers and their repayment histories¹⁰.

Overall, such big data methodologies may hide intentional or unintentional discrimination against protected classes (or vulnerable consumers), generating customer segments that are closely correlated with race, gender, ethnicity, or religion.¹¹

⁶ <https://www.fca.org.uk/publication/consultation/big-data-call-for-inputs.pdf>, p11.

⁷ <https://www.consumentenbond.nl/juridisch-advies/andere-onderwerpen/privacy-data/kredietchecks-bedrijven-screnen-klanten>

⁸ <http://www.swissinfo.ch/eng/business/no-wearable--no-policy- insurers-grapple-with-wearable-big-data--revolution-/41381560>

⁹ [Assessing the impact of credit data on preventing over-indebtedness, contributing to prudential regulation and facilitating access to affordable and quality credit](#), Financial Services User Group.

¹⁰ <https://www.ftc.gov/system/files/documents/reports/big-data-tool-inclusion-or-exclusion-understanding-issues/160106big-data-rpt.pdf>, p9.

¹¹ idem

- **Price optimisation:** big data supports practices whereby firms analyse and incorporate data which are not related to consumer's risk profile or their specific needs and demands. For example, over 50% of large insurers in the US take individual (on line) shopping habits or perceived tolerances for price changes into account when setting premiums for an individual consumer. Such practices, which can result in **consumers with otherwise identical risks paying different prices for the same coverage**, has been banned or restricted in 15 US states¹².

Similar practices could easily be introduced in the asset management and banking sector.

- **Illusion of advice:** spurred by big data analytics offers become more and more personalized. This might give consumers the impression they are getting real advice, with all the regulatory protections attached, while in fact they are just being purely sold financial products.

Recent consumer research¹³ by our UK member the Financial Services Consumer Panel on automated advice platforms in retail investment has shown that consumer awareness of "what type" of on-line service they are receiving is very low.

In general, the very patchy EU framework on financial advice, with different or lacking provisions across sectors, will be challenged even more with the increasing personalisation of offers.

- **Big brother:** the increasing use of big data with "real-time insights into consumer behavior" is the cornerstone of "**surveillance capitalism**" and is potentially very worrying. Imagine consumers' activities being monitored 24/7, recorded and analysed for commercial purposes by financial institutions or third parties.

Big data analytics in finance could be very intrusive in people's personal life and start dictating not only how they drive but also how they eat¹, how many daily steps¹ they need to take and even how they brush their teeth¹. Such **financialisation of consumer's private life** requires urgent societal and ethical consideration

¹² https://www.treasury.gov/initiatives/fio/reports-and-notice/2016_FIO_Consumer_Report.pdf, p6.

¹³ https://www.fscp.org.uk/sites/default/files/final_panel_position_paper_online_investment_and_advice_services.pdf

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 for consumers of financial services in a Big Data context? Please, explain why.

The current regulatory framework, especially the General Data Protection Regulation (GDPR), 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.

Key principles of the GDPR, **which will need further guidance**, include:

- Sensitive data should not be used or shared without consumer's explicit consent and should only be used for **explicit, limited purposes**;
- Firms should not be able to force the consumer to consent, allowing them to share (or sell!) the data with other parties, or to use the data for other services beyond the service they provide;
- It needs to be made clear to the consumer if a financial institution is using data or intends to use data that not has been provided directly by the consumer or that does not come from its direct relationship with the consumer;
- Consumer should always be offered the possibility to challenge a fully automated decision which affects them;
- Data portability: consumers have the right to carry their personal data over to another provider;
- "Legitimate" interests of firms for data collection may not outweigh the interest and rights of consumers.

Next to further guidance, supervisory authorities should be monitoring the potential detriment of the use of big data closely.

Potential policy approaches include **prohibiting the use of certain parameters in big data analytics** which are highly prone to consumer detriment (e.g. certain parameters in health insurance, marital status in car insurance, social media data in credit assessments, parameters triggering price optimisation...).

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?

Big data analytics could have a major negative impact on the access and affordability of insurance products, especially for vulnerable or digitally illiterate consumers. In this context, more specific product and/or price regulation will need to be envisaged (e.g. **restricting the scope of individual risk based pricing in insurance**) by regulatory and supervisory authorities.

More in general, BEUC has previously called for establishing an EU framework for simple, transparent, and cost-effective financial products across the board¹⁴, which was echoed by the European Parliament's Resolution on the Green paper on retail financial services¹⁵. Such a framework could cater also for consumers who are not digitally connected.

12. Do you believe that big data processes may enable financial companies 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 settlements offers) and could therefore compromise the overarching obligations of financial institutions to treat their customers in a fair manner? Please explain your response.

As set out in our response to Q9, big data analytics will provide intermediaries with more behavioural insights of consumers, potentially triggering price optimisation.

There is a clear risk here that intermediaries will only cater for consumers (e.g. price reductions) that are more likely to leave (e.g. based on their on-line behaviour), while inflating prices for more loyal consumers.

Such practices are hard to conciliate with firms' overriding obligations to treat consumers fairly and should come under close regulatory scrutiny. If consistent consumer detriment were to be found, banning or restricting such practices should be considered.

13. Do you agree that big data increases the exposure of financial institutions to cyber risk? 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?

Cybersecurity is vital for consumers in an increasing digitalised society, where fraudsters or intrusive business models can target sensitive and personal information. A US report¹⁶ points out that certain firms can obtain lists of consumers who have Alzheimer's disease to target them with toxic financial products.

¹⁴ http://www.beuc.eu/publications/beuc-x-2016-027_fal_beuc_position_green_paper_financial_services.pdf

¹⁵ <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+REPORT+A8-2016-0294+0+DOC+XML+V0//EN>, point 9

¹⁶ <https://www.ftc.gov/system/files/documents/reports/big-data-tool-inclusion-or-exclusion-understanding-issues/160106big-data-rpt.pdf>, p10.

In similar vein, our UK member Which? recently conducted an undercover investigation¹⁷ into the trading of data, and found that very sensitive information (including financial data) was available to purchase for firms with potentially bad intentions.

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 consumers, or any other circumstances?

As stated before, supervisory authorities should be monitoring the potential detriment of the use of big data closely.

Potential policy approaches include **prohibiting the use of certain parameters in big data analytics** which are highly prone to consumer detriment (e.g. certain parameters in health insurance, marital status in car insurance, social media data in credit assessments, parameters triggering price optimization).

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

There is indeed a risk that increasing personalisation of offers will decrease comparability as different providers could use different datasets and algorithms for similar offers. This could give rise to increasing asymmetry of information to the detriment of consumers, who are already grappling with the complexity of current financial services.

In this regard, algorithms shaping consumer's lives may leave them with an impression of choice, while they are unknowingly nudged into choices that might not be in their best interest.

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 tools (such as automated advice) could help giving consumer access to more tailored and personalised advice¹⁸. **However, there is a thin line between targeted sales & marketing and providing real advice with the corresponding regulatory protections.** This should be kept in mind. An increase in on-line distribution of financial services, assisted by big data analytics, could be further blurring this line.

As set out in our response¹⁹ to an earlier consultation on automation in financial advice, ensuring the quality and supervisory oversight of the algorithms driving consumer's outcomes is crucial.

¹⁷ <http://www.which.co.uk/news/2017/01/how-your-data-could-end-up-in-the-hands-of-scammers-460123/>

¹⁹ http://www.beuc.eu/publications/beuc-x-2016-025_gve_automation_in_financial_advice.pdf

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

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18. How do you believe big data tools will impact know-your-customer processes? Please, explain your response

As regards the EU anti-money laundering rules, BEUC is in favour of harmonising the requirements of the Anti-Money Laundering Directive (AMLD) to achieve its coherent application across Member States, avoid its misuse by financial institutions, and to better protect consumer personal data and privacy.

The available evidence²⁰ suggests that some financial service providers collect information from consumers for commercial purposes, using the AMLD requirements as an argument.

We also remind here that big data neither guarantees for more accurate predictions nor for a better know-your-customer process.

POSSIBLE EVOLUTION OF THE MARKET

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)?

20. What are the greatest future challenges in the development and implementation of big data strategies?

21. This Discussion Paper refers to a number of measures and tools meant to ensure compliance with conduct and organizational 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?

The increasing use of big data tools is set to affect market outcomes substantially in financial services. While consumers could benefit to some extent from big data tools, these come also with tremendous risk.

Supervisory work will therefore need to focus on understanding what big data should and can do, but also what are its limitations. This should enable them in addressing the identified risks, as set out in Q10.

²⁰ See BEUC position, May 2013: <http://www.beuc.eu/publications/2013-00398-01-e.pdf>

BEUC calls upon the ESAs for investigating whether there are types of data, used in financial services which:

- act against the interest of consumers and the wider society;
- require greater disclosure and/or clearer approval (explicit consent) from the consumer;
- should not be collected, nor processed for e.g. pricing or marketing purposes, from an ethical point of view.

In this respect, we call for specific guidance on how the principles coined by the General Data Protection Regulation (GDPR) should be implemented in retail finance.

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

The blockchain technology can help to improve the security and quality of data used in the context of big data analytics. But at the same time, blockchain could be creating undeletable traces of data, which challenges the GDPR framework.

Artificial intelligence can add an extra layer to big data to tackle complex analytical tasks, reinforcing both the potential benefits and risks of big data analytics. Concretely, artificial intelligence might create algorithms, difficult to understand for both their originators and supervisors, that discriminate against vulnerable consumer classes.

ADDITIONAL COMMENTS

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

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