

Impact of Big Data on financial services (FSUG paper)

COFACE- Families Europe - is a pluralistic organisation, at the heart of civil society, which aims at promoting family policy, solidarity between generations and the interests of children within the European Union. It defines family policy in Europe as being **the family dimension of policies, programmes and initiatives developed at European Union level** («family mainstreaming»).

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The logo for COFACE, featuring the word 'coface' in a stylized, lowercase font. The letters are colored: 'c' is blue, 'o' is green, 'f' is grey, 'a' is red, 'c' is red, and 'e' is yellow.

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Better families, better society

Three interlinked phenomenon

- Big Data: the organization of huge databases.
- Internet of Things and data collection.
- Algorithms and AI: the increased ability to “make sense” of data.

Potential benefits:

- There are lots of potential benefits:
 - Cost savings
 - Security/transparency
 - Speed
 - Faster innovation cycles
 - Increased competition
 - Financial advice/guidance, budget management
 - Over-indebtedness prevention/early warning
 - Customized services
 - Fraud prevention
- But they are **not** automatic: some are double edged sword:
 - Cost savings... for who?
 - Customized services: less comparison, consumer manipulation...

Potential and present risks:

- The end of insurance
 - Individual risk based pricing may price out the most vulnerable and become redundant for the least at risk.
 - Individualized risk assessments will influence users “risk beliefs” and their willingness to pay.
- Algorithms and data treated as being “neutral”
 - Neither algorithms nor data or “magic”. They both have reliability issues. Algorithms simply put in “mathematical” terms human biases/theories and data quality that algorithms work with may be poor or inaccurate.

Potential and present risks:

- **Consumer information**
 - More transparency or information overload? Is it possible to explain algorithms to consumers?
 - Liability: who's responsible if consumers are misinformed? (robo-advice, budget management...)
- **Consumer control**
 - Hard to put in place in practice. (browsing behaviour, data collected via IoT...)
- **Consumer consent**
 - Only a “tick box” exercise?

Potential and present risks:

- Consumer manipulation
 - Targeted advertising
 - Building a “digital CV” (credit trail...)
- From price comparison to dynamic pricing
 - Pricing can be adapted in real time to factors like offer/demand or even data about the user, which can lead to discriminations.
- Customization in the interest of service providers
 - Services tailored to the needs of users or the needs of services? (Google page ranks, advertising...)

Potential and present risks:

- Risk capital investors
 - Using Big Data to provide automated advice to capital investors may be useful, but poses a number of issues: privacy, accuracy/reliability...
- Cybersecurity, scam, fraud
 - Large data repositories, especially sensitive data such as credit card numbers, are a prime target for hackers.
- Consumer as the weakest link
 - Even if consumers have all the “rights”, they might not benefit from them since they are in a vulnerable position in relation to financial service providers: they want to access the product/service.

Potential and present risks:

- Information, transparency and product diversity
 - Choice overload and inability to compare products due to customization will result in difficult decision making.
- Discrimination on political or other grounds
 - Algorithms could also be configured to determine if you are a “good/obedient” citizen (China)

Further risks:

- Prudential risks:
 - These “new” methods of assessing risk in Fintechs have not yet been tested sufficiently (Lending Club, Ether theft)

Recommendations:

- European Commission:
 - To launch a formal process to answer key questions related to Big Data.
 - To set **governance rules/auditing process** for the use of data, algorithms. Governance bodies need to include representatives from a variety of stakeholders including **financial services users**.
 - Extend the mandate of the European Data Protection Board
 - Analyze how GDPR will apply to data use by financial services including Fintechs.
 - Examine various existing practices and see if they could be relevant for use of consumer data by financial service providers: RAPEX, REACH, Regulatory Sandbox (UK)...

Recommendations:

- General considerations:
 - Ownership of data by consumers needs to be translated into practice: consumers could host their own data directly.
 - Initiatives which gives users direct control over algorithms and their data should be encouraged (open source solutions for managing their budget...)
 - Reflection on how consumer information, consumer control and consumer consent can work in practice in the digital space.

Next steps:

- Follow up on EBA paper on consumer data:
 - The Banking Stakeholder Group has formulated an answer in August.
- European Commission's reflection on clarifying the data "necessary for carrying out creditworthiness"

Thank You



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