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EUROPEAN INSURANCE
AND OCCUPATIONAL PENSIONS AUTHORITY

Big Data, Retail Risk Indicators and Consumer Trends Report

EIOPA Insurance & Reinsurance Stakeholder Group meeting
Frankfurt, 15 February 2017

Section 1

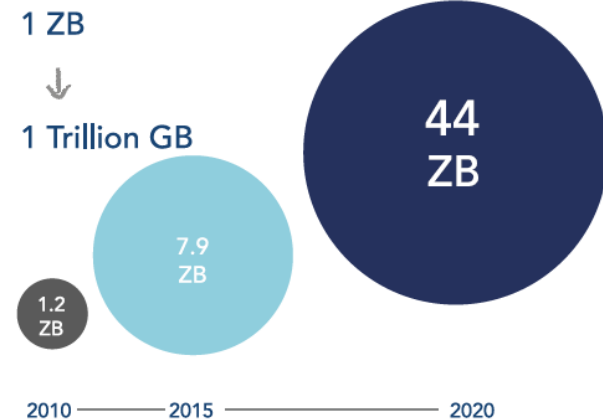
The use of Big Data by financial institutions



What is Big Data?

- Financial institutions have **always used data analytics**
- The **availability of data** has exponentially increased (e.g. Social Media, Internet of Things, etc.)
- The **capacity to store and process data** has also multiplied (e.g. cloud computing, powerful IT processors, more accurate algorithms etc.)
- **Cross-sectorial phenomenon:** e.g. credit card information in the banking sector, telematics in insurance and high frequency trading in the securities sector
- Some talk about a **third industrial revolution** driven by digital data, computation and automation
- **European Commission's Communication on Data Driven Economy:** *Big Data refers to large amounts of different types of data produced with high velocity from a high number of various types of sources processed by powerful IT tools to make predictions*

Active Growth of Global Data
zettabyte



Source: CSC, IDC.

- **Horizontal legislation:**

- Directive on Electronic Communications and Privacy, Directive on Distance Marketing of Financial Services, Directive on Security of Network and Information Systems, Anti Money Laundering Directive, etc.

- **EU Data Protection Regulation:**

- Consent and awareness
- Portability
- Right to be forgotten

- **Financial services legislation :**

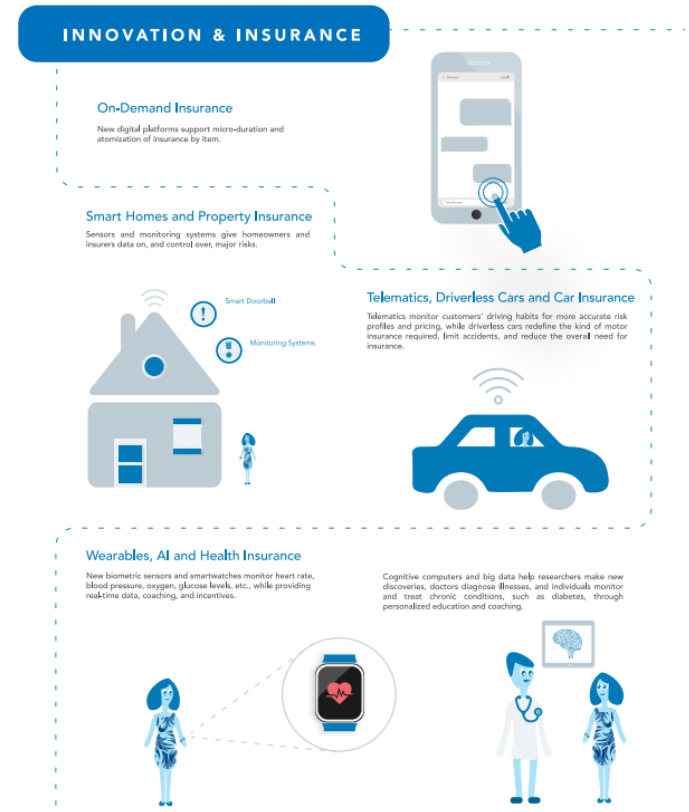
- Technology neutral
- IDD, MiFID, UCITS, AIFMD, PSD2, MCD :
 - acting honestly, fairly and professional in accordance with the best interests of the customer;
 - Product governance rules



Impact on quality of processes and services

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- Better / **innovative products and services**
- Consumers have **greater insight into and control** over their financial situation
- Improved regulatory compliance (“**regtech**”)
- **New players** (e.g. Fintech / InsurTech firms)
- Possible **flaws** in the functioning of Big Data tools / algorithms



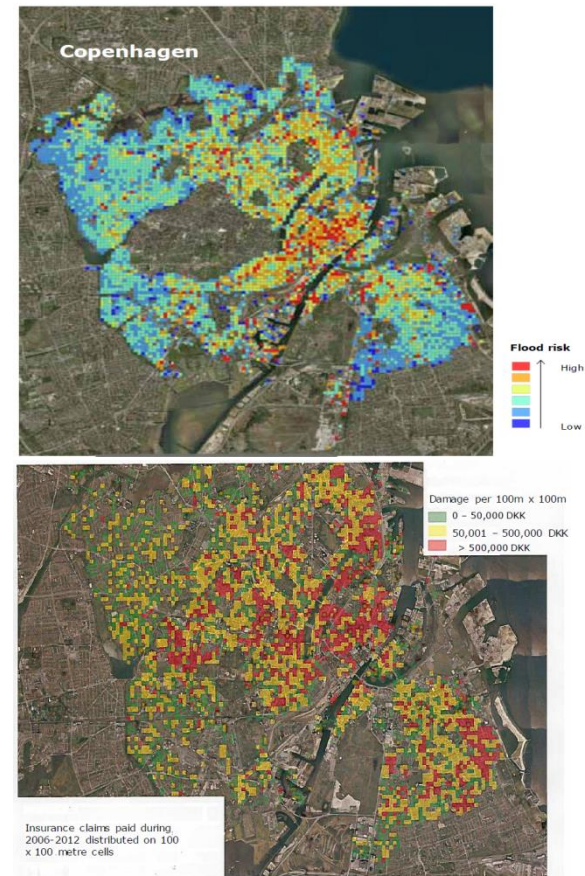
Source: Institute of International Finance

Benefits and risks linked to more granular segmentations



- Big Data enables more **risk-based pricing**
- **Risks of exclusion / access to financial products** for some consumers (and vice versa)
- More **personalised products and services**, adapted to consumer's needs and demands
- **Reduced comparability** of (individualised) products
- **'Price optimisation'** cause possible discrimination issues where brand loyalty, inertia or ability to pay more is exploited

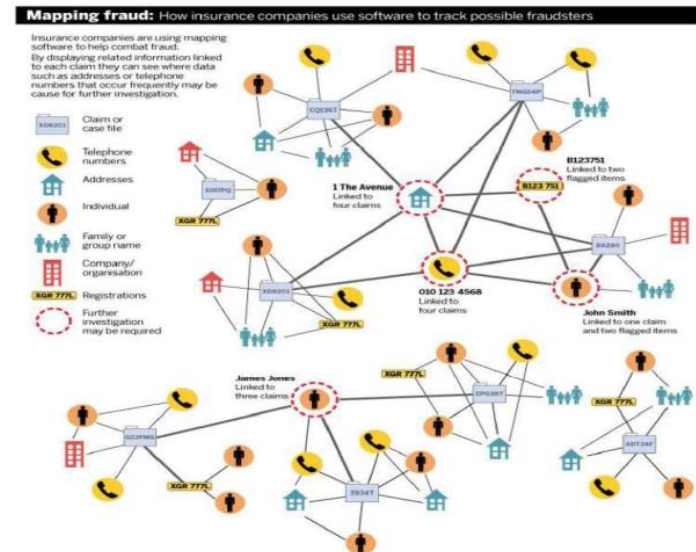
Flood claims map and flood risk map of Copenhagen, Denmark



Source: Danish Insurance Association

Impact on revenues

- **Internal efficiencies** → Lower costs derived from digitalized processes
- **More stable client base** → enable firms to engage better, directly (i.e. disintermediation) and more often with consumers
- Improved **fraud prevention**
- **Budget** and **human capital** challenges
- Impact on **complaints handling / claims settlement practices** → could algorithms predict consumers more likely to lodge a complaint or accept claim settlement offers?



Source: IVASS

Reputational, legal and cybersecurity issues

- **Reputational risks** and issues around customer confidence in the use of personal information could emerge.
- **Increasing exposure to cyber risk:** Financial institutions handle sensitive personal information (e.g. health insurance)
- Risks related to **liability allocation / outsourcing:** several actors may be involved in the data collection, aggregation, storage, analysis or usage



Key opportunities and challenges

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Addresses information asymmetry/transparency

Empowerment

Better customer experience

Personalised products based on own behaviour

Enhanced competition: reduced prices

Incentives to healthy / safe lifestyles

Opportunities for consumers

Challenges for consumers

Data protection issues

Who owns the data?

Exclusion

Non-digital population left behind

Behavioural economics: information overload?

Less comparability of (individualised) products and prices

Enhanced risk assessments

“Regtech”

Targeted and individualised advertising

Improve their customer’s experience

Direct access to customers (disintermediation)

Cost efficiency

Fight against fraud

Opportunities for industry

Challenges for industry

New competitors: defeat or ally?

IT Flaws

Cyber risk

Access to data

Human resources

Legacy issues

Insurance solidarity model to be re-thought?

Joint Committee work



- The Joint Committee is currently **assessing the opportunities and challenges** linked to the use of Big Data by financial institutions
- A **Discussion Note** was published last December. The **consultation closes on 17 March 2017.**
- After **analysing the feedback received from stakeholders** the JC will decide if any action is required
- The objective is to **promote a well-functioning consumer protection framework** while allowing market participants to **harness the benefits that arise from financial innovation.**



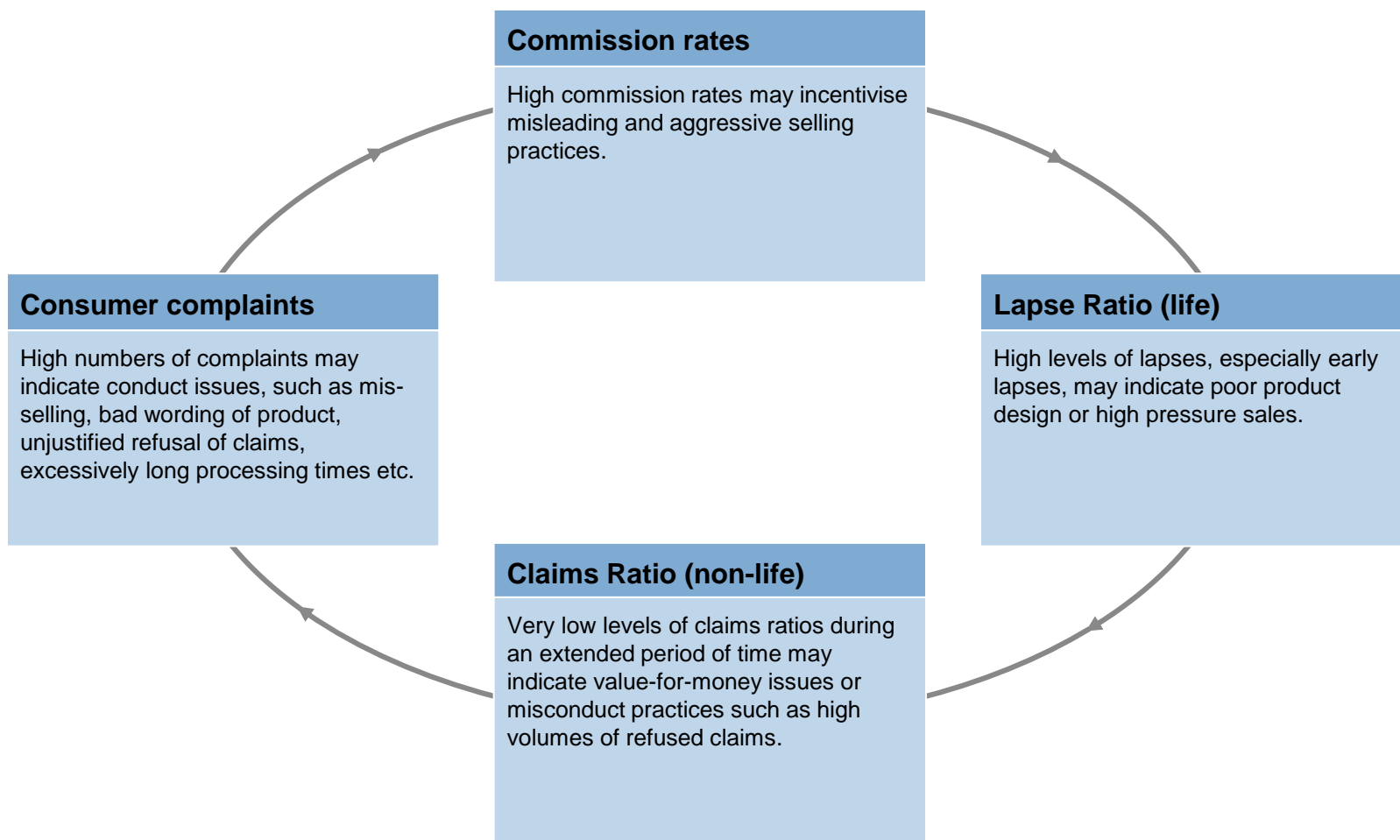


Section 2

Retail Risk Indicators

- **EIOPA Regulation:** *“develop common methodologies (indicators) for assessing the effect of product characteristics and distribution processes on the financial position of institutions and on consumer protection”*
- **Retail Risk Indicators (RRI) methodology** adopted in November 2015, inspired by a position paper of the Actuarial Association of Europe.
- **Objective:** Try to identify potential sources of consumer detriment through the analysis of key indicators.
- **Limitations:**
 - There could be consumer risks that may not be identified by the analysis of RRI
 - RRI may not specifically demonstrate concrete risks, but may provide evidence of potential “areas of interest” which could warrant further in-depth analysis
 - Indicators can be interpreted in different ways and only a joint assessment of all of the indicators may enable the identification of risks for consumers

Retail risk indicators



Retail Risk Indicators Dashboard

Motor Insurance				
Indicator	Consumer protection importance	Total	YoY Trend	Assessment (from a conduct perspective)
Complaints	High		↑	
Gross Written Premiums	High		↓	
Complaints per 1000 contracts	High		↑	
Claims Ratio	High		↓	
Commissions	High		↑	
Combined Ratio	Medium		↓	
Claims still open at the end of the year	High		↔	
Claims rejected	High		↑	
Complaints per 1000 claims	High		↑	
Claims management expenses	Medium		↔	
NCA supervisory and regulatory activity	High		↑	

- In 2017 EIOPA will continue testing the indicators with the use of **Solvency II data**
- Possible next steps:
 - o Include the analysis of some indicators in the **Consumer Trends report.**
 - o Develop a **questionnaire to collect conduct of business data** (i.e. RRI) on the product level at European level.
 - o Develop a **risk model** based on the RRI which could identify / predict situations of consumer detriment
 - o **Further developed the methodology to produce Retail Risks Dashboards and/or product ratings** and potentially publishing them.



Section 3

Consumer Trends report

Key features of the 5th Consumer Trends report



- Emphasis on **financial innovations and digitalisation**.
- Focuses on **product-related trends**.
- **Occupational and personal pensions** are covered for the second time.
- **The main market developments and financial innovations** for each product category is provided, followed by an **analysis of consumer complaints and relevant NCA consumer protection activities**.
- **Certain themes are subject to a more in-depth analysis:**
 - o The impact of mobile phone applications in insurance;
 - o The use of geo-location technology in household insurance;
 - o How insurers fight against consumer fraud;
 - o The provision of advice when planning for retirement; and
 - o Pension-tracking services in the EU.

- In **the insurance sector**:
 - **Big data** allow the development of more tailored products, but could affect the availability and affordability of insurance for some consumers.
 - **Mobile phone applications** offer the possibility to improve insurers' relationships with their customers.
 - **Fintech/Insurtech firms** are increasingly present in insurance, very frequently via cooperation agreements with established insurers.
 - **New life insurance products with reduced or no guarantees**, sometimes with a high degree of complexity, continue to be introduced into the market.

- In **the pensions sector**:
 - o **Greater choice in the decumulation phase**, and the number of complaints has remained remarkably stable.
 - o Growing interest on **costs and charges** as well on the need to realistically and **fairly inform members about their expected retirement income**.
 - o The **provision of advice** on pension issues is not a widely followed practice in several Member States.
 - o **Digital technologies** are also penetrating the pensions sector: mobile phone apps, robot-advisors and pension calculators

- The IRSG is invited to provide **feedback on the questionnaire attached by 30 April 2017**, which covers the following:
 - o **Product-related trends**
 - o Specific topics:
 - **Regulatory sandboxes**
 - **Insurtech Firms/ start-ups**
 - **New life insurance products**
 - **Telematics in motor, household and health insurance**
 - **Peer-to-peer (P2P) insurance undertakings**
 - **Blockchain and/or smart contracts**
 - **Precision medicine and health insurance**