

AUTORITATEA DE SUPRAVEGHERE FINANCIARĂ



Interpretation of the Force of Innovation, Disruption and Transformation Digitalization in Financial Sector or about DIGITAL R(EVOLUTION)

> in fact about CHANGE

Călin Rangu

Director, Authority of Financial Supervision

Vice-president InsurTech Task Force,

**EIOPA-European Insurance and Occupational Pensions Authority** 



## Do we like the change?





The rest of us have to adapt and accept the only thing that is constant in life



- Changes in business, in technology, in behaviors etc.
- > The technology changes the business, behaviors etc.
- ➤ Are we changing the technology or is the technology changing us?



# Who likes tech changes?



- Customers, they have needs for better services
- **Digital customers**, more and more eager technology consumers
- The **companies** themselves, partially, for sustainable competitive advantage need
- **IT staff or tech companies**, where the focus is on technology, and less on technology as a real business factor



# But...what for?



- **Personal well-being** the goal of finance, to assure prosperity and development
- **Customer satisfaction** for a better and qualitative experience
- Financial inclusion more people to have access and lower prices
- **Cost reduction** automate, standardization
- **Profit increase** business enabler
- Market share distribution channels, customer satisfaction
- For compliance– Solvency II, IDD, MiFid, PRIPs etc.



### Opportunities and challenges







Challenges for financial companies



### **Today's challenges for financial leaders**:

- Regulations,
- Market, and
- Technology

We will speak about information technology innovations. But....

"Prediction is very difficult, especially about the future."



### What does tech change?





# What does tech inspire?





New business models + Greater risk to disruption + Cybersecurity +

Increased complexity +

New threats +

ROMÂNIA

Many unknowns







*Curios* 

The bottom line:

We live in exciting times

Let's embrace it and Have Fun

### Is the customer willing?

ROMÂNIA

AUTORITE





Source: Accenture, The Digital Insurer / Accenture Consumer-Driven Innovation Survey

# ANIA Digital world... part of the world of risks?

ROMÂNIA

AUTORITAL



FX Interest Style Market Regulatory Cost Volatility Litigation Credit Strategy Management Structure Operations Netting Roque Trading Character Systemic Pricing Reputation Brand AL Management **Risk Appetite** Credit Spread Low Probability-Liquidity **Priority Setting** High Impact Losses Intrusion Proportionality **Business Volume** Counterparty Globalisation New Business Commodity **Team Departures** Transparence Cross Border Competition Insider Legislation **Balance Sheet Structure** Custody Refinancing Innovation Complexity Capital Allocation **Risk Culture** Know-How Legal Segmentation Collateral Public Relations 100 Risks Communication Settlement War Court Decisions in Financial Services Systems Large Exposures IT Capital Access Revenues Catastrophe Product Timing Infrastructure Shutdown Partnerships-Alliances Bridge Finance Social Unrest **Financial Models** Centralisation-Decentralisation Concentration Know Your Client MIS **Risk Control** Critical Size Hackers Staff / Team Change Management Channels / Internet **Risk Capacity** Motivation Compliance Syndication Cadence of Change **Emerging Markets** Future Commitments Supervisory Event Risks Data Integrity Deal Breakup Theft / Crimes/ Fraud Flexibility Take-Over **Risk Ratings** Project Political Value Proposition Initiatives Overload Insurance Control Environment Outsourcing Control Procedures © H.-U. Doerig, 1998 Documentation



# More risks due to digital revolution ...a new focus on operational risks





Cyber-threats... the real and global issue of the future



### Whether or not stakeholders inside?









"20 years from now, labor demand for lots of skill sets will be substantially lower.

I don't think people have that in their mental model"

Bill Gates, The American Enterprise Institute Economic Think Tank, 2014



### **Digital Transformation**



The insurers' operating model needs to be adapted to bring technology closer to the business.





**IT Delivery** 

Governance

**Project Portfolio Management** 

**Financial Management** 

**People & Organisation** 

Sourcing



### Data and Analytics in Digital Transformation



#### Successful digital transformation needs to be underpinned by robust data and advanced analytics





### Impact of Digital on Product Distribution



Digital capabilities have become a critical "hygiene" factor as customer expectations are turning towards a fully digital customer journey.

Digital Strategy		Customer Journey	D	istribution C	hannels		
BUILD	]		🏛 BA	🛉 🛉 DtC	<b>க் F2F</b>	iii EB	
CONNECTED	Develop a multichannel digital customer experience	AWARENESS					
CHANNELS		CONSIDERATION					
DEVELOP CUSTOMER INSIGHTS	Transform data into an asset to be leverage by Digital processes	VALUE PROPOSITION					
		INTENTION					
ENABLE PROCESSES AND SYSTEMS	Establish a stable landscape of core systems and processes to support the customer journey	SALES					
		CUSTOMER RELATIONSHIP					
ENGAGE WITH CUSTOMERS	Deliver an authentic engagement by personalizing customer experiences	CUSTOMER SERVICE					
Level of digital enablement Moderate Significant Critical							

Source: Deloitte, "Digitalization in Insurance", EIET CONFERENCE 2015



ROMÂNIA

DE SUPRAVEGHER

AUTORITA



Digital enablement will drive business growth, but has to be equally applied to the entire customer journey as opposed to fragmented capabilities.





#### Ex: Big Data impacts all stages of the insurance value chain



#### Product design and development

Usage-based
insurance products
(e.g. car telematics
or health wearables)
Tailor-made
product and services
New products:
cyber insurance
products

#### Pricing and underwriting

- •Enhanced risk assessments
- •New claims drivers and predictive models
- New non-risk based pricing techniques

#### Sales and distribution

- Automated advice
- Disintermediation of sales processes
- Increased frequency and customer
- interaction

Gamification

#### Post-sale services and assistance

- •Smartphone applications
- •24/7 service, accessible form any location
- Chat boxes and artificial agents

D

•Geolocation and personalised warnings in case of flood, storm, hail, etc.

#### Claims management

- Enhanced fraud analytics
- Accurate information about the accident and its dynamics (e.g. photos, geolocation etc.)
- Picture recognition (e.g. car damage or facial recognition) and automated loss adjusting



### The impact of transformation on innovation in 2025



- IBM Institute for Business Value published a study proposing for 2025 four possible futures:
- 1. A **"the swarm economy**," self-organizing and intelligent distributed systems, strongly compartmentalized and localized risk
- 2. A "**central intelligence**," risk prediction becomes highly specialized as expert systems augment humans to optimize sales, service and claims decisions
- 3. An **"Internet of Everything**," instrumented systems place high emphasis on risk measurement, management and feedback
- 4. A "**survival of the fastest**," cognition and edge data become an arms race, with deep investment competitors building insurmountable leads.
- Other specialists are speaking about
- 1. A move to **the real Big Data processors** (Google, Amazon, Microsoft etc) for **manufacturing or distribution**
- 2. To have a gradual but **clear evolution**, **without revolution**



Swarm intelligence



- A collective behavior of many independent, decentralized, selforganized systems.
- Enable distributed decision-making.
- From **blanket coverage to micro-services bundled**.
- Distribution of insurance would be much more embedded in dayto-day life.
- Automation of decision-making means that **liability would shift from individuals to manufacturers or service providers**.



### Central intelligence



- System complexity may remain centralized for security reasons.
- Pull data in centrally and provide complex judgments, advice and decisions
- The key advantage of this future is the ability for **deep decision-making**.
- Insurers could manage or interface with data hubs to act as agents on customers' behalf.

- Information access would be the premier driver of business success
- They could manage both individual device and systemic risks.
- Insurance becomes a "guardian angel" based on day-to-day observation.
- Insurers could also offer **advisory and incentive plans**.
- The ability to offer advice customers becomes critical for risk management.



### Internet of Everything



- **Collecting and sharing data**
- Data may be shared, but it would be shared between devices or between local hubs, with little public access
- Insurance would become more group-sales oriented, potentially via the providers and distributors of interconnected devices
- Negotiated access to data would be a precondition for the provision of risk services

- Products that bundle data access would earn better rates and more profitable risks.
- Insurers will need to manage regulatory and discriminatory practice issues.
- Insurers become inspectors and start providing more microproduct watch-over services
- Products could shift **from blanket to conditional coverage**.
- Gamification of risk-reducing behaviors and coaching applications, risk feedback as a social incentive to improve driving or health habits.



### Survival of the fastest



- A continuation of today's environment, with no technology gaining widespread acceptance.
- **Preferred data partne**rships.
- Move to a utility industry model, relying on the range and flexibility of their distribution networks.
- InsurTechs would go into hype curve mode.
- Companies would remain incented to drive ecosystem partnerships directly.

- To **move to maintenance-as-a-service** models
- Insurers that can micro segment would have an advantage
- Products would expand toward insurance bundled with high-value products, insurance-as-a-service and insurance at point-of-risk.
- **Distribution would become king**, and the ability to bake insurance into other value chains and **develop ecosystems** would become a primary differentiator.



### Disruptive Forces managed by FinTech Task Teams at financial authorities level



EIOPA and more national authorities set-up FinTech teams to manage **topics** as:

- Cyber Risks: to better understand the risks, and the cyber impact
- new opportunities and challenges that cyber risks imply for the sector
- a sectorial vulnerabilities analysis
- potential build-up of risks and consumer protection
- mitigations and extended active dialogue

- Big Data: review of the use, seeking to gather empirical evidence on the use of Big Data in areas such as pricing, underwriting, claims management, sales and/or marketing
- the benefits and potential risks to fair treatment of consumers
- assessing the boundaries of potential ethical and privacy issues arising from enhanced consumer profiling techniques and more granular risk assessments
- the impact of Big Data on the availability and affordability of insurance for consumers



### FinTech Task Forces (2)



- Convergence on supervision of algorithms
- to assess the design and use of algorithms to determine how the functioning of increasingly complex analytical IT tools and processes (e.g. artificial intelligence or machine learning) can be best supervised and/or communicated to consumers.
- Distributed ledger technology (DLT) / Blockchain:
- explore the benefits and risks arising from the use of block-chain and smart contracts for financial companies and consumers,

 assessing possible regulatory barriers preventing the deployment of this innovation.



### FinTech Task Forces (3)



- New value chain and business models:
- supervisory challenges arising from the new business models and the possible fragmentation of the value chain.
- the increasing collaboration between financial companies and non-regulated firms (data vendors or cloud computing service providers).

➢ Innovation Hub:

• to develop a **European Innovation Hub**.

 a structured framework where NCAs and FinTech firms would regularly exchange experiences and provide guidance



### FinTech Task Forces (4)



- ➢ **RegTech**: the impact in the context of regulatory monitoring, reporting and compliance
- assessing how Big Data and other innovative dataanalytical tools could be used for supervisory purposes in order to capitalize on the new datareporting requirements

 Collaboration with start-ups and other entities could be considered in order to benefit from their data analysis capabilities.

- Mapping supervisory approaches to FinTech establishing efficient and effective supervisory
   practices.
- how the principle of proportionality is being applied in practice specifically in the area of financial innovation (e.g. regarding FinTech start-ups such as P2P insurers)

identifying possible regulatory barriers to financial innovation



### Digital developments



Comparison websites	Automated advice	Artificial intelligence	Aggregators
Apps	Blockchain (DLT)	Robots	RegTechs
Internet of Things (IoT)	Telematics	Social media	Big data
InsurTechs	P2P	Cloud computing	Cyber risk and security

Source: Insurance Europe





