

INSURTECH

**DISCUSSION PAPER ON THE
(RE)INSURANCE VALUE CHAIN
AND NEW BUSINESS MODELS
ARISING FROM DIGITALISATION**

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RESPONDING TO THIS DISCUSSION PAPER

EIOPA welcomes comments on the ‘Discussion paper on the (re)insurance value chain and new business models arising from digitalisation’.

Comments are most helpful if they:

- ▶ respond to the question stated, where applicable;
- ▶ contain a clear rationale; and
- ▶ describe any alternatives EIOPA should consider.

Please send your comments to EIOPA **by 7 September 2020** responding to the questions in the survey provided at the following link:

https://ec.europa.eu/eusurvey/runner/EIOPA_fragmentation_new_businessmodels

Contributions not provided using the survey or submitted after the deadline will not be processed and therefore considered as they were not submitted.

PUBLICATION OF RESPONSES

Contributions received will be published on EIOPA’s public website unless you request otherwise in the respective field in the template for comments. A standard confidentiality statement in an email message will not be treated as a request for non-disclosure.

Please note that EIOPA is subject to Regulation (EC) No 1049/2001 regarding public access to documents and EIOPA’s rules on public access to documents.

Contributions will be made available at the end of the public consultation period.

Data protection

Please note that personal contact details (such as name of individuals, email addresses and phone numbers) will not be published. They will only be used to request clarifications if necessary on the information supplied.

EIOPA, as a European Authority, will process any personal data in line with Regulation (EU) 2018/17253 on the protection of the individuals with regards to the processing of personal data by the Union institutions and bodies and on the free movement of such data. More information on data protection can be found at <https://eiopa.europa.eu/> under the heading ‘Legal notice’.

CONSULTATION QUESTIONS

1. Do you have any preliminary remark or general comment regarding the topic of (re)insurance value chain and new business models arising from digitalisation?
2. Please describe your own co-operation/collaboration respectively with insurance companies/intermediaries/ InsurTech companies, BigTech companies, platform providers. Please describe risks and benefits you see on this co-operation/collaboration.
3. What additional issues do you consider relevant for supervisors to understand increased fragmentation and complexity of the market as well as new business models?

4. In addition to those described in this chapter and in Annex 1, do you see other co-operation/collaboration models (e.g. outsourcing, co-operations, joint ventures) between insurance companies/intermediaries and third parties (e.g. InsurTech companies, BigTech companies, platform providers) to implement and/or enhance the use of innovative technologies that might be worth to look at further from supervisory perspective?
5. In addition to those stated in chapter 3, are there any other business models that can be seen as related to the fragmentation of the value chain that might be worth to look at further from supervisory perspective?
6. How do you define insurance platforms and insurance ecosystems? Do you distinguish between those two developments/definitions? If so, how?
7. Do you see additional examples of national developments in insurance platforms and ecosystems that are not mentioned in this chapter but which might be relevant from consumer/supervisory perspective? Please explain.
8. If you are an insurance company/intermediary, are you planning to build your own platform/ecosystem or to co-operate with other platforms/ecosystems? Please explain.
9. Are there any other aspects related to platforms/ecosystems that are not covered in this chapter but are important from consumer/market/supervisory perspective?
10. In addition to those covered in this chapter, what related risks and benefits do you see regarding insurance platforms/ecosystems?
11. Do you consider that changes in existing regulation or further rules (including soft law/guidance) should be introduced both to facilitate platforms/ecosystems and to adequately cover new emerging risks?
12. Are there other aspects related to on-demand insurance that should be considered from both consumer, market and supervisory perspective?
13. Are there other aspects related to instant/push insurance that should be considered from both consumer, market and supervisory perspective?
14. Are there other aspects related to preventive services in insurance that should be considered from both consumer, market and supervisory perspective?
15. Do you consider the potential benefits for consumers and for the industry to be accurately described?
16. Do you agree with the description of the risks identified for consumers and for the industry?
17. Is the regulatory framework adequately addressing the risks mentioned above? Do you think further regulation is needed? Please explain why.
18. What are the greatest future challenges in the fragmentation of the value chain including the emergence of insurance platforms and ecosystems?
19. This Discussion paper refers to some areas for further work meant to mitigate some of the risks and providing supervisors better tools to tackle with the increased fragmentation (see Executive summary in page 5). Are other measures and tools needed? If so, what are they and what they should cover (e.g. to ensure compliance with conduct and organisational regulatory requirements; data and consumer protection; better supervisory oversight capabilities; better information about new developments).
20. What additional tools could support supervisors to understand increased fragmentation and complexity of the markets as well as new business models?
21. Are there any other comments you would like to convey on the topic? In particular, are there other relevant issues that are not covered by this Discussion Paper?

EXECUTIVE SUMMARY

Technology continues to evolve, bringing new opportunities, social change and new expectations for consumers. In response, insurance undertakings and intermediaries (hereinafter *insurance undertakings*) continue to develop and revise their business models, often in increased co-operation with third parties (e.g. BigTech companies and start-ups), bringing both beneficial innovation and a new set of emerging risks that have to be taken into account.

Among broader trends influencing business models relevant are changes in value-chain and group structures; increased outsourcing of multiple functions and processes and enhanced use of third party services; insurance platforms and ecosystems.

Use of third-party services and outsourcing is nothing new in the insurance sector. However, technological developments are arguably increasing the extent and ways by which insurers rely on third-parties within the insurance value chain.

EIOPA has found increasing complexity in how insurance is being manufactured and distributed, with new kinds of distributors and products emerging that can challenge existing supervisory and regulatory practices. A key challenge seems to be the emergence of platforms and ecosystems, that can significantly disrupt existing manufacturing and distribution. There is also growing involvement of third parties with new forms of outsourcing.

These changes in firms' reliance on outsourcing and third parties bring potential benefits and opportunities. They are expected to transform the way products and services are provided with benefits for consumers (in terms of products and services that are better targeted to consumers' needs, of a better quality or that are more cost-effective) and insurance undertakings (for instance in terms of more efficient processes and decision-making or better fraud detection and management of risks).

However, it may also create new conduct and prudential risks and amplify or relocate significantly old risks (e.g. operational risk, Information and Communication Technology (ICT) risks, security, governance, and reputational risks, consumer protection). It can also lead to legal and compliance issues (e.g. data protection and compliance with outsourcing rules and regulatory perimeter issues). The widespread use of third party providers can also lead to concentration risk if a large number of undertakings become dependent on a small number of dominant outsourced or third party service providers.

In this context, a possible fragmentation of the insurance value chain could occur, including, most pertinently, a potential for a reduced regulatory and supervisory 'grip' on the relevant activities in the value chain, or ways in which the 'lengthening' of the value chain 'stresses' existing regulatory and supervisory oversight.

As a consequence, supervision requires more attention to different companies involved throughout the value chain that must be supervised or at least identified and overseen efficiently and effectively. Supervisors are also challenged to improve their information gathering, knowledge, experience, skillset and resources for controlling new models and technologies, keeping up with the rapid changes.

At the same time, specific effort is needed so that diverging supervisory outcomes between NCAs are avoided, particularly considering how InsurTech¹ developments can often have a cross-border/cross-sector impact.

EIOPA is aiming to get a better picture on possible fragmentation of the EU insurance value chain and supervisory challenges related to that. This Discussion Paper is a first step scrutinising the situation with the aim to support supervisors in the challenges arising from the new business models and the possible fragmentation of the (re-)insurance value chain as a result of new technologies, business models and actors entering the insurance market. In this regard, EIOPA possible areas for further work include:

1. More specific analysis of possible regulatory responses to third parties in the value chain.² This could include exploring ways of getting better overview on market developments involving third parties active in the insurance value chain, including understanding ownership structures, partnership agreements and new forms of outsourcing in order to assess who actually underwrites the risk and where risks are concentrated.
2. A follow-up study focusing on the impact of platforms and ecosystems and their practical supervision (licensing, outsourcing, consumer protection, product oversight and governance rules), including the application of the EU law and possible gaps.
3. Adapting disclosures and advice requirements to the digital world, based on an assessment of customers' capabilities and new behaviour patterns and ways of providing information and advice.
4. Further analyse broader measures that might underpin sound digital markets in insurance and insurance-related data, e.g. Open Insurance.

EIOPA is expecting from interested parties their views on:

- ▶ whether they agree with view of the risks and benefits, and;
- ▶ whether they have any comments or additional proposals on proposed solutions/next steps.

Specific questions are asked at the end of each chapter.

EIOPA will assess the feedback to this Discussion Paper in order to better understand the phenomenon and plan useful next steps. EIOPA will work further on this together with NCAs on supervisory responses to further support supervisors and supervisory convergence while maintaining a strong and open dialogue with the market and other stakeholders.

1 InsurTech refers to 'technology-enabled innovation in insurance that could result in new business models, applications, processes or products with an associated material effect on the provision of insurance products and services'.

2 This work should also take into account the outcome of the European Commission public consultation on a digital operational resilience framework for financial services, and possible next steps. https://ec.europa.eu/info/law/better-regulation/initiatives/financial-services-digital-resilience-2019/public-consultation_en

1. INTRODUCTION

1.1 BACKGROUND AND RATIONALE

Digitalisation has an impact across all steps of the value chain in the insurance and pension sectors' products and services. This takes many forms – for instance, through the emergence of start-ups, often in co-operation agreements with incumbent undertakings, as well as the increasing relevance into the insurance and pensions value chains of technology firms including BigTech companies³ and platform providers. These important aspects of digital transformation are the focal points of this Discussion Paper.

Relying on third-party services and particularly outsourcing is nothing new in the insurance sector. This has been subject to EU regulatory requirements and supervisory expectations for a long time. However, technological developments are arguably increasing the extent and ways by which insurers rely on third-parties within the insurance value chain. Indeed, insurers and intermediaries are increasingly relying on technology provided by third parties (e.g. IT, cloud computing) for digital transformation.

This could be done either through classical outsourcing or through other co-operation forms. In the latter case it might not always be clear if those co-operation agreements fall explicitly under the definition of 'outsourcing' as stated in the Solvency II Directive⁴. However, those co-operation models might still be crucial from supervisory perspective and hence more clarity in this question might be needed. Some examples include the sharing of data with third parties, including through application programming interfaces (APIs); the purchase of third party hardware or software e.g. 'off the shelf' AI/ML

models or Internet of Things (IoT) devices such as car black boxes; and the use of comparison websites and aggregators by insurance firms.

These changes in firms' reliance on outsourcing and third parties bring potential benefits and opportunities. They are expected to transform the way products and services are provided with benefits for consumers (in terms of products and services that are better targeted to consumers' needs, of a better quality or that are more cost-effective) and insurance undertakings (for instance in terms of more efficient processes and decision-making or better fraud detection and management of risks).

However, it may also create new conduct and prudential risks and amplify or relocate significantly old risks (e.g. operational risk, ICT risks, security, governance, and reputational risks, consumer protection). It can also lead to legal and compliance issues (e.g. data protection and compliance with outsourcing rules and regulatory perimeter issues).

The widespread use of third party providers can also lead to concentration risk if a large number of undertakings and intermediaries become dependent on a small number of dominant outsourced or third party service providers. This can impair financial stability in case of major problems or failure of a partner. As some outsourcing partners or third party providers (e.g. cloud providers and BigTech companies) are globally active, the concentration risks and other risks (e.g. risks related to personal data) further increase.

Supervisors will need to understand, engage and supervise technology-driven undertakings with different entity structures and approaches to consumer related risk. Some of those entities may not have experience of financial services regulation

³ BigTech refers to large established technology companies

⁴ Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking-up and pursuit of the

business of Insurance and Reinsurance (Solvency II) (OJ L 335, 17.12.2009, p.1)

(e.g. start-ups, and BigTech companies), some might even choose a specific business model to avoid or to reduce applicable regulation. Their awareness, risk culture and ability to comply with regulatory requirements may differ significantly to that of traditional undertakings, active in the regulated financial sector. Supervisors have also to take into account the changes that could result in the nature or size of financial institutions, their interactions and position of power with technology providers and the possible displacement of risks between different actors, risk concentrations and systemic relevance as well as the occurrence of conflict of interests.

Current regulation seeks, apart from a certain InsurTech context, to address the management of these general risks e.g. through the Solvency II Directive, the Insurance Distribution Directive⁵ (IDD), the General Data Protection Regulation⁶ and the Regulation on free flow of non-personal data⁷, going further than just formal outsourcing agreements.

Some of the issues are also covered under different EIOPA work streams. For example, EIOPA has published guidelines on cloud outsourcing⁸ as well as consulting on ICT security guidelines, which address and mitigate some of the risks. In response to requests made by the European Commission, in April 2019 the European Supervisory Authorities (ESAs)

also published Joint Advice on the need for legislative improvements relating to ICT risk management requirements in the EU financial sector, where the ESAs i.a. suggested that a legislative solution for an appropriate oversight framework to monitor the activities of critical third party service providers should be considered.⁹ Additionally, EIOPA is working on principles of Digital Ethics.¹⁰

However, from a broader supervisory perspective it can be asked what is the most efficient risk-based approach for supervisors to get oversight of an insurer's reliance on third parties and on the evolution of the insurance value-chain, and what are the implications of different outsourcing/co-operation models (e.g. where consumer relationships are originated and managed by technological platforms) both from conduct and prudential perspectives.

EIOPA is further scrutinising the situation with the aim to support **supervisors in the challenges arising from the new business models and the possible fragmentation of the (re-)insurance value chain** as a result of new technologies, business models and actors entering the insurance market.

This Discussion Paper is a **first step** in this work. It is based on a survey conducted in Q3 2019 amongst NCAs¹¹ of changes in the value chain. In addition to

5 Directive (EU) 2016/97 of the European Parliament and of the Council of 20 January 2016 on insurance distribution (OJ L 26, 2.2.2016, p. 19–59)

6 Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (OJ L 119, 4.5.2016, p. 1).

7 Regulation (EU) 2018/1807 of the European Parliament and of the Council of 14 November 2018 on a framework for the free flow of non-personal data in the European Union (OJ L 303, 28.11.2018, p. 59–68).

8 https://www.eiopa.europa.eu/content/guidelines-outsourcing-cloud-service-providers_en

9 <https://eiopa.europa.eu/Pages/News/ESAs-publish-Joint-Advice-on-Information-and-Communication-Technology-risk-management-and-cybersecurity-.aspx>

10 https://www.eiopa.europa.eu/content/eiopa-establishes-consultative-expert-group-digital-ethics-insurance_en

11 The survey aimed to gather information on more commonly observed co-operation models between insurance undertakings and third parties (InsurTech companies, BigTech companies and insurance platforms/ecosystems), and risks and benefits related for consumers, industry (including incumbent companies) and for NCAs throughout the insurance value chain. NCAs were

the NCA survey some practical case studies were conducted on concrete business models that can be seen as related to the fragmentation of the value chain:

- ▶ insurance platforms and ecosystems;
- ▶ on-demand insurance;
- ▶ instant insurance;
- ▶ preventive services.

This Discussion Paper aims to give an overview of the findings of this exercise and indicate possible next steps. Furthermore, it seeks to gather additional input from the market and other stakeholders.

A closer attention to issues highlighted in this Discussion Paper could also improve NCAs' analysis and actions and provide input for improving risk

management and strategic planning for market participants.

1.2 LEGAL BASE

Article 1(6) of the Regulation establishing EIOPA (Regulation (EU) No 1094/2010)¹² requires EIOPA to contribute to promoting a sound, effective and consistent level of regulation and supervision, ensuring the integrity, transparency, efficiency and orderly functioning of financial markets, preventing regulatory arbitrage and promoting equal competition. In addition, Article 9(2) requires EIOPA to monitor new and existing financial activities. The above is key motivation underpinning EIOPA's work on InsurTech.

encouraged to provide information on models that are seen as most used and/or have arguably most influence on consumers and supervisors. This could include models where technology companies are seen as 'owners' of the consumer relationship and the insurer's control is reduced. This could also include models where most of the activities are outsourced/managed by third parties, and the insurance company only acts as 'license provider'.

¹² Regulation (EU) No 1094/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Insurance and Occupational Pensions Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/79/EC (OJ L 331, 15.12.2010, p. 48).

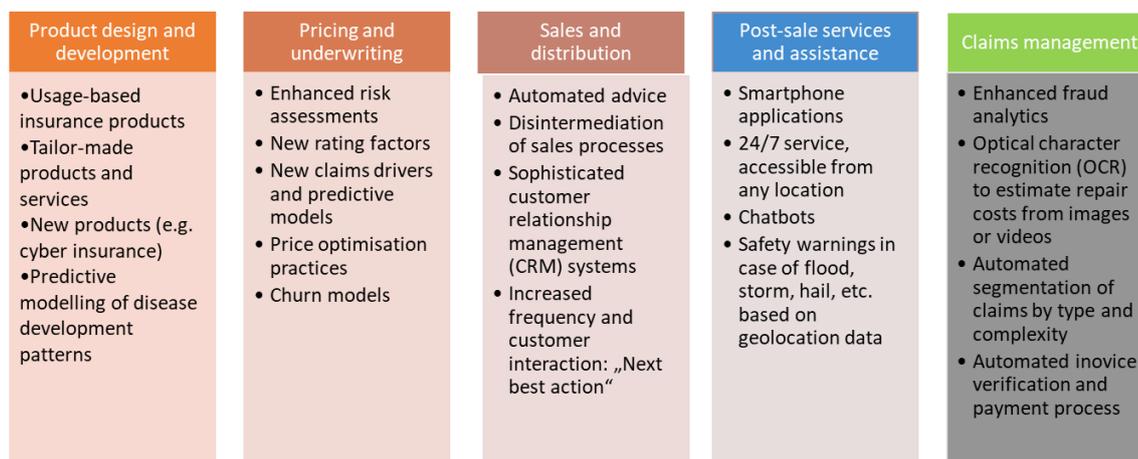
2. INCREASED FRAGMENTATION OF THE VALUE CHAIN

The main types of innovations/enabling technologies that have a potential impact on the insurance value chain are *inter alia* IoT, telematics, Big Data Analytics (BDA), Artificial Intelligence (AI), Machine Learning (ML), chatbots and robo-advice, Distributed Ledger Technology (DLT), smart contracts, peer-to-peer (P2P) insurance, on-demand insurance and cloud computing.

These technologies and product types can be provided through different business models. Some

trends can be seen as the emergence of new business models in themselves (e.g. P2P insurance; telematics; on-demand products). Others are more of enablers (e.g. cloud computing). There are also broader trends influencing business models, e.g. changes in value-chain and group structures; increased outsourcing of multiple functions and processes and enhanced use of third party services; insurance platforms and ecosystems.

Figure 1: Insurance value chain



Source: EIOPA

Use of third-party services and outsourcing is nothing new in the insurance sector. However, technological developments are arguably increasing the extent and ways by which insurers rely on third parties within the insurance value chain.

Additionally, there is a trend for the emergence of co-operation models where the insurance value chain (e.g. product design, pricing, client interaction and claims management) is originated, managed and controlled by technological platforms or other third parties. This raises a number of potential risk that

other firms outside the insurance regulatory perimeter take a predominant position with significant impact on insurance business including insurance distribution.

The three primary drivers of fragmentation are:

1. Technology firms (outside the traditional insurance landscape) demonstrating that certain processes within the insurance value chain can be carried out cheaper, more efficiently and more effectively with new technologies;

2. Customers increasingly purchasing and interacting with businesses via digital ecosystems / platforms (increased digitalisation of consumer interactions), where insurance may only be an ancillary offering a wider service or product purchase (new and complex tying and bundling practices);
3. The offering of insurance policies is complemented with the provision of other ancillary services to consumers (e.g. different risk-preventive/additional services such as geolocation in case of a car stolen or assistance in health insurance contracts). In some cases the policy is a part of a complex bundle of products and services of which the insurance could be a minor component.

If not properly implemented and managed, co-operation models with third parties can make it harder for insurance undertakings to exercise effective control, oversight and governance of consumer outcomes, but also for supervisors to have full oversight of the value chain. It could also lead potentially to concentration and operational risks that might not always be apparent. Moreover, the extensive use of third parties can give rise to a number of conduct and prudential issues.

Some underlying risks for supervisors associated with the fragmentation of the insurance value chain include:

- ▶ increased bundling of services and provision of insurance (e.g. when insurance is included in the price at point of sale);
- ▶ oversight concerns due to longer and more complex insurance value chains;

- ▶ risks that critical activities are moving beyond the regulatory perimeter;
- ▶ shift in market powers and structure;
- ▶ concentration risk;
- ▶ competition issues, including 'lock-in' effect;
- ▶ threat to the viability of traditional business models;
- ▶ strategic risk;
- ▶ ICT, cyber, operational resilience, outsourcing, legal, compliance and reputational risks and other operational risks (which might not be apparent);
- ▶ the need to develop supervisory skills set to understand and oversee the aforementioned developments and changes and to properly respond to them.

From consumer side it could also include the risks of:

- ▶ data privacy and portability;
- ▶ new and possibly not apparent sources for conflict of interest;
- ▶ inappropriate advice;
- ▶ difficulty for consumers to understand who the risk carrier actually is;
- ▶ increased over- or underinsurance risk;
- ▶ financial exclusion;
- ▶ ethical issues.

Some of those risks are not new (although they can be amplified due to digitalisation) and can be captured by the existing supervisory processes. Some are (partly) touched under other EIOPA work streams.¹³ Some risks might need new or revised approaches, while considering also possible benefits.

In general, NCAs collect limited information on most common InsurTech collaboration/co-operation models, usually through industry outreach and rarely maintaining a formal register.¹⁴ However, the

13 E.g. EIOPA has published [Cloud Outsourcing Guidelines](#) and is consulting on [Guidelines on ICT governance](#). EIOPA is also working on digital ethics in insurance.

14 Solvency II Article 49(3) states that insurance and reinsurance undertakings shall, in a timely manner, notify the supervisory

authorities prior to the outsourcing of critical or important functions or activities as well as of any subsequent material developments with respect to those functions or activities. However, this only covers critical and important outsourcing and not other co-operation and ownership models. In practice, it is often also not collected in a structured way (e.g. in one dedicated database).

available information varies and some NCAs have quite detailed overview of market developments.

Some NCAs noted that there are no specific co-operation models in their view due to the market being at the beginning of the development. Often insurance companies are developing these processes in-house/independently. Co-operation based on outsourcing contracts and sub-delegation (also within the group) seems to be the main development observed in many countries.

The types of functions being outsourced range from day-to-day business activities to compliance processing tasks. Insurance undertakings are for example contracting external providers to help them comply with Know Your Customer (KYC) requirements, instead of dedicating internal resources to these tasks. Co-operation with innovative distributors seems to be also popular.

Additionally, NCAs pointed out different co-operation/collaboration models, such as direct strategic co-operation and partnerships between insurers and InsurTech companies, commercial contacts, as well as strategic investments. There seem to be also models where insurance products are bundled with retail products and other financial services¹⁵, which in itself is not a new phenomenon but could be seen amplified by InsurTech developments.¹⁶ Other forms of co-operation, such as joint ventures, or co-operation between insurers and BigTech companies are rather limited.

Ownership models are also on the rise in terms of InsurTech companies. In some Member States cases

can be observed where insurers have acquired a stake in an InsurTech company. Furthermore, cross ownerships have also been mentioned, where investors which already own (parts of) insurance undertakings also finance InsurTech start-ups.

More detailed overview of examples of co-operation across the insurance value chain can be found in Annex 1.

15 E.g. there is co-operation between retail, banking and insurance when expensive products are sold: you get the loan, the product and the relevant Insurance at the time of procurement.

16 E.g. companies focusing on white label plug-and-play solutions that can be easily integrated through APIs to any retail business.

QUESTIONS TO STAKEHOLDERS

1. Do you have any preliminary remark or general comment regarding the topic of (re)insurance value chain and new business models arising from digitalisation?
2. Please describe your own co-operation/collaboration respectively with insurance companies/intermediaries/ InsurTech companies, BigTech companies, platform providers. Please describe risks and benefits you see on this co-operation/collaboration.
3. What additional issues do you consider relevant for supervisors to understand increased fragmentation and complexity of the market as well as new business models?
4. In addition to those described in this chapter and in Annex 1, do you see other co-operation/collaboration models (e.g. outsourcing, co-operations, joint ventures) between insurance companies/intermediaries and third parties (e.g. InsurTech companies, BigTech companies, platform providers) to implement and/or enhance the use of innovative technologies that might be worth to look at further from supervisory perspective?
5. In addition to those stated in chapter 3, are there any other business models that can be seen as related to the fragmentation of the value chain that might be worth to look at further from supervisory perspective?

3. CASE STUDIES

As one part of the exercise, EIOPA staff and volunteering NCAs conducted case studies on concrete business models that can be seen as related to the fragmentation of the value chain. The list of case studies is not exhaustive. However, the aim was to start to explore potential issues (and benefits) in a much more concrete fashion. This chapter gives an overview of the case studies and views exchanged on them.

3.1 INSURANCE PLATFORMS AND ECOSYSTEMS

There has been general rapid growth of digital platforms and ecosystems in recent times.

Although the understanding of platforms and ecosystems varies and it often seems those terms are used as substitutes it can be said that a platform is the technical infrastructure necessary for multiple participants to connect and interact with each other¹⁷, and create and exchange value.¹⁸ An ecosystem, on the other hand is an interconnected set of services that allows participants to address a broad variety of client needs in one integrated experience. Hence it could be stated that an ecosystem approach goes beyond pure platforms (e.g. it could be cross-industry/cross-sectorial with

17 Platforms often offer APIs to facilitate participation and data sharing.

18 PWC, Fit for growth. How insurers can profit from ecosystems, platforms and connected services, 2019.

[https://pwcplus.de/en/article/217787/fit-for-growth-how-insurers-can-profit-from-ecosystems-platforms-and-connected-services./](https://pwcplus.de/en/article/217787/fit-for-growth-how-insurers-can-profit-from-ecosystems-platforms-and-connected-services/)

the aim to provide full consumer experience rather than isolated products or services).¹⁹

Although the phenomenon is at an emerging state in Europe, the importance of ecosystems in insurance is likely to increase.²⁰ One reason is that the enabling technologies (e.g. cloud computing, APIs, BDA) have matured, with the effect of lowering the costs of co-

ordination and information exchange. The other reason is consumers' expectations, *inter alia* on simplification, consumer centricity and seamless experience.

Consumer ecosystems currently emerging around the world tend to concentrate on needs such as travel, healthcare, housing and mobility sector.²¹

FIGURE 2: EXAMPLE OF ECOSYSTEM



Source: EIOPA Travel Insurance Thematic Review

19 PWC, Fit for growth. How insurers can profit from ecosystems, platforms and connected services, 2019. <https://pwcplus.de/en/article/217787/fit-for-growth-how-insurers-can-profit-from-ecosystems-platforms-and-connected-services/>

20 EIOPA, Consumer Trends Report 2019, 2019. <https://www.eiopa.europa.eu/content/consumer-trends-report-2019>

21 McKinsey, Insurance beyond digital: The rise of ecosystems and platforms, 2018. <https://www.mckinsey.com/industries/financial-services/our-insights/insurance-beyond-digital-the-rise-of-ecosystems-and-platforms>

Platforms and ecosystems also offer an opportunity to insurance companies. Insurers can play multiple roles participating in platforms and ecosystems, either by building their own platforms and ecosystems, or co-operate with the existing ones.²²

Digital platforms such as comparison tools have existed in insurance for many years and play an important role in insurance distribution. The role of comparison websites is expected to continue growing.²³ Additionally, BigTech companies are already providing financial services to their customers and have been starting to take steps to also enter the insurance market through agreements with insurance undertakings, or are otherwise weighing up entrance to the insurance space.²⁴ There could be also insurance undertakings that are transforming to platforms or building their own ecosystems as 'ecosystem orchestrators'.

Platforms do not necessarily need to enter the insurance market as risk carriers. Some insurers might choose to participate in existing platforms or to enter into supplier agreements. In this case, insurers have to integrate with platforms and create interfaces at different stages of the insurance value chain. For example, a platform may use its data to perform risk selection and classification, offering suppliers pre-packaged bundles of risk.

Non-insurance platforms could offer the option 'click here' to add insurance services as an add-on to other

online purchases. The increase in online distribution is expected to be further boosted as BigTech companies play an increasing role. Companies in other sectors with a distribution network and a large pool of clients (e.g. supermarket chains, travel companies, flight companies) are also potential contenders to entering the insurance market as intermediaries. Due to their financial and technological capacity, large scale, trusted reputation, brand recognition and access to a large client base and personal data, they have the potential to be a disrupter for the insurance industry.²⁵

New entrants may operate as business originators and aggregators, rather than operating as conventional insurance intermediaries or undertakings. They are in a position to leverage their large customer base and market power to drive down premiums. In addition, they may also be able to set the terms of the distribution agreements with insurance undertakings by setting upfront their commission rates when putting up their 'distribution business' for tender among competing insurance undertakings. While for consumers the price might be cheaper, it could arguably also incentivise to compete only on price and not on service quality.²⁶

From the insurer's perspective, platforms and ecosystems offer traditional insurers opportunities to use advanced analytics to evolve and expand their business models. It could provide an opportunity to

22 See in general, The Geneva Association, *Virtual Competition: Online Platforms, Consumer Outcomes and Competition in Insurance*, 2018 <https://www.genevaassociation.org/research-topics/digitalization/virtual-competition-online-platforms-consumer-outcomes-and>; Swiss Re Institute, *Digital ecosystems: extending the boundaries of value creation in insurance*, 2019 <https://www.swissre.com/institute/research/topics-and-risk-dialogues/digital-and-technology/Digital-ecosystems.html>

23 EIOPA, *Consumer Trends Report 2019*, 2019. <https://www.eiopa.europa.eu/content/consumer-trends-report-2019>

24 BIS Annual Economic Report 2019. III. Big tech in finance: opportunities and risks, Bank for International Settlements, 2019. <https://www.bis.org/publ/arpdf/ar2019e3.htm>

25 See also EIOPA, *Thematic Review on Consumer Protection Issues in Travel Insurance*, 2019. https://www.eiopa.europa.eu/content/consumer-protection-issues-travel-insurance_en

26 EIOPA, *Thematic Review on Consumer Protection Issues in Travel Insurance*, 2019. https://www.eiopa.europa.eu/content/consumer-protection-issues-travel-insurance_en

differentiate themselves in the market, for example by providing new types of value-added services alongside insurance cover²⁷ (e.g. considering safety measures such as connected-home solutions or wearables). The personal-mobility ecosystem for instance offers a range of opportunities to expand into areas such as vehicle purchase or renting and maintenance management, ride-sharing, carpooling, traffic management, vehicle connectivity, and parking.²⁸

Insurance platforms and ecosystems are on the rise in Europe, although the phenomenon is still at a nascent and emerging state.²⁹ Some examples include dedicated insurance contracts being offered by various providers in the (online or offline) purchase process for items such as optical glasses, bookings for flights and hotels, rental cars, and postal packages as well as home electronics (e.g. electronic shop chains can offer an extended warranty/insurance, e.g. on smartphones or computers). E-marketplaces and sharing economy companies could most naturally enter the insurance market.

The entering of BigTech companies to the insurance market seems to still be at emerging state. Three NCAs indicated they see BigTech companies entering the insurance market in their jurisdiction. NCAs who did not see those developments stated that this is primarily because of the small market size or niche language or because of competitive pressure.

27 It is important to note that Article 18(1)a of the Solvency II Directive states that Member State shall require every undertaking for which authorisation is sought in regard to insurance undertakings, to limit their objects to the business of insurance and operations arising directly therefrom, to the exclusion of all other commercial business.

28 McKinsey, Insurance beyond digital: The rise of ecosystems and platforms, January 2018.

<https://www.mckinsey.com/industries/financial-services/our-insights/insurance-beyond-digital-the-rise-of-ecosystems-and-platforms>

29 See also examples in EIOPA, *Consumer Trends Report 2019*, 2019. <https://www.eiopa.europa.eu/content/consumer-trends-report-2019>

BOX 1: SPECIFIC EXAMPLES OF NATIONAL DEVELOPMENTS IN INSURANCE PLATFORMS AND ECOSYSTEMS

In Belgium one large bank-insurer strongly believes in ecosystems and is developing one in the field of jobs about the house (e.g. cleaning, modifications). Some insurers are part of a bank-insurance group where an app can integrate the insurance in the banking app (as well as services from third parties such as public transport).

In Germany there is one private health insurer offering tele medicine to consumers. There are also indications that some insurers are aiming at creating ecosystems.

In the Netherlands, although the number of insurance policies is still limited, there are several car-sharing platforms offering coverage and there is also a peer-to-peer alarm platform, through which insurance is also sold, to minimise robberies and burglary.

In Austria, insurers have shown interest in expanding their pre-sales process through online platforms allowing for cross-selling.

In Czech Republic two insurance undertakings have reported that they are actively engaging with e-commerce platforms to offer travel insurance. The offer of payment protection insurance is also being explored. A few other insurance undertakings have begun activities to become part of a digital ecosystem.

In Poland, although nascent, digital ecosystems are developing where motor insurance is being sold through a global positioning system (GPS) application.

In Finland, where the NCA has been having discussions with insurers about their role in ecosystems and relevant legal limits, including the need to ensure that the various parties' roles and responsibilities are clear, some insurance undertakings are cooperating with platforms that help self-employed people charge for relevant work.

In Latvia an airline company is offering travel insurance as side product when the customer purchases the flight ticket.

In many countries, car companies are offering complimentary white-label motor insurance, for example to protect against minor damage or accidental and malicious damage to tyres and alloys. They also offer an extended warranty to protect consumers against sudden or unexpected repair bills.

Source: EIOPA InsurTech Task Force questionnaire on fragmentation of the value chain and new business models and EIOPA Consumer Trends Report 2019

QUESTIONS TO STAKEHOLDERS

6. How do you define insurance platforms and insurance ecosystems? Do you distinguish between those two developments/definitions? If so, how?

7. Do you see additional examples of national developments in insurance platforms and ecosystems that are not mentioned in this chapter but which might be relevant from consumer/supervisory perspective? Please explain.

8. If you are an insurance company/intermediary, are you planning to build your own platform/ecosystem or to co-operate with other platforms/ecosystems? Please explain.

9. Are there any other aspects related to platforms/ecosystems that are not covered in this chapter but are important from consumer/market/supervisory perspective?
10. In addition to those covered in this chapter, what related risks and benefits do you see regarding insurance platforms/ecosystems?
11. Do you consider that changes in existing regulation or further rules (including soft law/guidance) should be introduced both to facilitate platforms/ecosystems and to adequately cover new emerging risks?

3.2 ON-DEMAND INSURANCE

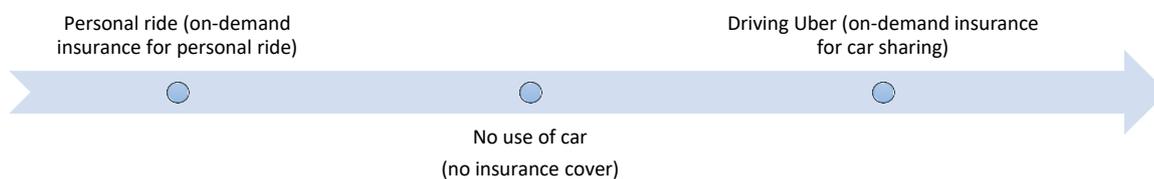
On-demand insurance is insurance cover tied to the actual time spent 'on risk' (e.g. kilometres driven) rather than the policy being 'live' for an extended period of time (e.g. 1 year). It allows consumers to purchase insurance coverage e.g. via their smartphone or computer without directly interacting with an intermediary or an undertaking, usually when the asset requiring coverage is in use and at risk.

Its current development could be seen as being enabled by technological innovation, reducing the

cost of monitoring policyholder activity (e.g. IoT devices, telematics). However, it is still a small market.³⁰

Most frequent application of on-demand insurance are for vehicles (car, scooter, van, bicycle), consumer goods (e.g. electronics), travel, and public liability (generally to those in lower risk occupations (e.g. babysitters)).

FIGURE 3: ON-DEMAND INSURANCE



Source: EIOPA

From a consumer perspective, it could be more cost effective for those needing coverage for a short period of time. It might be also fairer on consumer and undertaking, especially if used in conjunction with telematics. Arguably, brand strength and/or

customer experience/interaction focus of InsurTech firms is another reason why consumers might want to use 'on-demand' insurance.

In the UK³¹, most, if not all, of the leading 'on-demand' InsurTech firms are intermediaries rather

30 The current level of penetration of usage-based/on-demand insurance in Europe is still low; from the 222 insurance firms that participated in the Thematic Review on Big Data Analytics in Motor and Health Insurance, only 15% of the European motor insurance firms currently offer some kind of usage based product. See EIOPA, Big Data Analytics in Motor and Health Insurance: A Thematic Review, 2019.

https://www.eiopa.europa.eu/content/big-data-analytics-motor-and-health-insurance_en

31 The survey on which this Discussion Note is based was carried out in 2019, when the UK was still a Member of the EU, and it is the reason why the document still mentions developments observed in the UK.

than risk carriers. The same is also mostly true for the German insurance market, with very few exceptions. They have collaborated with leading European (re)insurers and some less well-known domestic insurers that retain the insurance risk. This is because of insurance's high barriers to entry e.g. capital, data, underwriting capabilities, regulatory costs.

Some incumbent undertakings also sell these products *directly* to customers, although this does not appear to be widespread or mainstream among insurance undertakings in the EU yet.

Cost-effectiveness of cover could be a key advantage of these products. However, when annualised, a daily motor insurance policy in the UK was approximately 50% more expensive over a 'working year' versus the average premium of an annual motor insurance policy.

The channel and conditions used to purchase on-demand products might prove a barrier to growth. Specifically, how can undertakings selling 'on-demand' insurance avoid inconveniencing customers used to making a single transaction for an annual insurance policy. A popular approach is the integration of an on-demand policy alongside an existing app's system, whereby cover is automatically activated once a customer begins driving. Some firms are also testing a 'subscription' approach where a periodic fee is paid to have access to insurance.

On-demand products are mostly seen in motor insurance, travel insurance and for employees in the gig economy³² as well as for personal belongings.

32 Gig economy could be defined as a labour market characterized by the prevalence of short-term contracts or freelance work as opposed to permanent jobs.

BOX 2: SPECIFIC EXAMPLES OF NATIONAL DEVELOPMENTS IN ON-DEMAND INSURANCE

Travel insurance

In Romania examples include travel insurance attached to credit cards. The insurance is `activated` the moment a payment is made outside the country. **In Spain** there are products that could be purchased when the customer has arrived at the final destination. **In Finland** it is possible to buy on-demand travel insurance for e.g. only one week. Similar business model is used in **Slovakia** (via SMS).

Gig economy

In the Netherlands, there are examples of on-demand insurance products or other insurance products related to shared cars. **In Belgium** a delivery company offers its riders insurance through an InsurTech and a ride sharing company is insured by a Belgian insurer.

Motor insurance

In Austria the first telematics devices have been introduced which might lead to kilometre-based car insurance tariffs in the future and currently take into account factors such as the location and the time of the day a vehicle is used. One InsurTech company is also offering the technical solutions for implementing an app-based on-demand insurance product and currently co-operating with multiple Austrian insurers.

In Italy the use of black boxes in motor insurance liability is widely spread (22% of policies at the end of 2018). Cars equipped with a black box, in addition to recording accident data and dynamics (mostly for anti-fraud), also monitor and influence the driver's behaviour, leading to tailored 'Pay-As-You-Drive' and 'Pay-How-You-Drive' policies. A leading undertaking in car insurance telematics entered into a research and development collaboration to improve data analytics capabilities and foster product offering, developing behavioural profiling systems and customized car telematics solutions to reward safer drivers.

Personal belongings/home insurance

In Czech Republic an InsurTech platform has developed an application which allows the client to take a photo of the item which he/she wants to insure, e.g. skis for winter holidays, bicycle for summer holidays etc. **In the Netherlands** a rise in on-demand coverage for personal belongings, home and travel insurance has been seen in recent years.

Health insurance

In Spain, consumers can buy on-demand health insurance before a consumer undergoes an operation.

Source: EIOPA InsurTech Task Force questionnaire on fragmentation of the value chain and new business models

QUESTIONS TO STAKEHOLDERS

12. Are there other aspects related to on-demand insurance that should be considered from both consumer, market and supervisory perspective?

3.3 INSTANT INSURANCE

One emerging business model is so called 'instant' or 'push' insurance, which could be seen as a sub-category of on-demand insurance and where a technology provider sets up a platform to combine BDA with the management of contacts with customers, via web or smartphone app, with underwriting of micro-policies and claims settlement. Insurance proposals are linked to information from the app (geolocalisation, payments, etc.) and different cover is provided taking into account the activities, e.g. on the internet. This is also what distinguishes this business model from traditional insurance policy embedded in a purchase, as proposed by the seller, and from traditional on-demand insurance. In the instant insurance model the seller of the good or service might not be directly involved in the process.

Consumers have to give consent in the app to allow it to collect geographic location and other data on customer behavior; this data is fed into a BDA engine to identify the right product for specific and even momentary needs (e.g. non-competitive sports, like in case of skiing accidents if the customer is buying a ski pass, or mobility, against trip delays or cancellation when the client is buying a train or flight ticket).

Products and coverage offered are simple, with low premiums and short time span (max 1 week) easy to understand in the moment by the customer and to manage via the app with automatic settlement in case the damage is detected (usually policies are parametric in nature).

The app does not allow the customers to request pricing of arbitrary cover independently, but only allows policies to be bought that are proposed by the insurer or broker ('push insurance'). The push

mechanism is based on the undertaking's commercial strategy while the customer usually cannot customize the offer other than choosing additional coverage from a preset menu. At the same time, the engagement mechanism, relying on BDA, can be effective at discovering insurance needs that otherwise would go unnoticed by the customer.

From a technology point of view the key is the integration of data from the app with other sources (e.g. government data, weather forecasts or flight schedules and delays) and with the undertaking's systems for pricing, underwriting and claim settlement. The algorithm identifies the customer specific need based on BDA and 'pushes' the policy based on that need. The customer can only confirm or reject the proposal.

Considering supervisory obligations, the provider managing the platform – often registered as a broker – offers the service to different undertakings, under their own brand in the app. The undertaking is ultimately responsible for solvency and customer protection and the platform runs the document handling (e.g. disclosures) and consent / signature collection. Payments are managed by the credit card company or via PayPal and no data is stored in the platform.

According to the agreements between the platform and the undertakings, there are different business models: Business-to-Business/Business-to-Business-to-Consumer when the platform covers all the profiling and operational tasks but the final contact with the customer is run by the undertaking or Business-to-Consumer when the policy is directly sold to the customer via the app managed by the platform.

BOX 3: SPECIFIC EXAMPLES OF NATIONAL DEVELOPMENTS IN INSTANT/PUSH INSURANCE

In the UK, Estonia and Germany some undertakings are claiming to do this through 'push notifying' consumers, when the consumer may wish to purchase travel insurance based on their geolocation (e.g. through mobile app based on mobile broadcast provider changes). Developments are also expected in the near future **in Czech Republic** where an InsurTech platform has been planning to develop an application using geographic location data in order to provide consumers with 'real-time' insurance products, in case he/she is exposed to a dangerous activity/situation (e.g. steep skiing slope in the mountains, locations with high incidents of malaria etc.).

In Italy a platform offers a digital instant policy, activated the same day of the purchase and covering a maximum period of 7 days. The coverage includes roadside assistance, reimbursement of the deductible applied by the car renter in the event of theft or damage of the vehicle, sending a taxi to reach the destination and re-protecting the trip. It allows a refund in case of theft of luggage or reimbursement if the re-issuing of personal documents is needed.

Source: EIOPA InsurTech Task Force questionnaire on fragmentation of the value chain and new business models

QUESTIONS TO STAKEHOLDERS

13. Are there other aspects related to instant/push insurance that should be considered from both consumer, market and supervisory perspective?

3.4 PREVENTIVE SERVICES IN INSURANCE

Digital technologies and increasing access to data provide insurance companies with the possibility to offer different preventive services as an addition to traditional insurance cover.

Such efforts could not just be beneficial for the single policyholder but also the whole economy by

reducing claims and / or their costs. This could result in lower insurance premiums at least for certain products.

EIOPA has looked more in depth at the developments of preventive services in Swedish market (see box 5).

BOX 4: PREVENTIVE SERVICES IN THE SWEDISH MARKET

1. House insurance: Moisture sensors to detect and warn about leakage, bad water piping and/or growth environment for fungi. Installation leads to premium reduction.
2. Car insurance: Premium determined by driving habits (frequent or not) and driving pattern (aggressive or not). Device is plugged into cars diagnostics outlet and connected to smartphone app via Bluetooth.
3. Health insurance (people without preconditions): Smart watches or bracelets monitor heartbeat (and other parameters via smartphone). Premium reduction if used.
4. Health insurance (people with preconditions): Smart watches capture lifestyle data and help patients manage their condition/disease. ML/AI used to detect risk conditions. Premium reduction if used.
5. AI used for clinical analysis to prevent malpractice claims.

The common denominator for the cases above is that new participants (vendors) enter into the product development, design and pricing phases with new technology and/or services.

In cases 1 and 2, hardware is sold, supported and managed by a third party.

In case 1, an alarm or signal is triggered, either at the vendor's or in the home. Customers can also monitor indicators themselves.

In case 2, data is shared with insurer to determine premium. Customers can also monitor the parameters determining the premium.

In cases 3 and 4, a wearable is sold and managed by a third party. It is not evident if and how data is shared with the insurer.

In all the cases the third party has the potential to utilize the gathered data as a basis for other business, i.e. offerings to other industries than insurance: construction, automotive, health application, medical industry, etc.

There are also cases without apparent association with insurance loss prevention but where such affiliation can be inferred – or to some extent expected:

1. AI used for pattern recognition in payments of social security, both to prevent fraud and to ensure correct payments.
2. Weather analysis for risk assessment.

Source: EIOPA InsurTech Task Force questionnaire on fragmentation of the value chain and new business models

Preventive services in other EU countries seem to be offered mostly in the areas of motor, home, and health/life insurance, and through making use of connected devices/IoT.

BOX 5: OTHER NATIONAL DEVELOPMENTS

Motor insurance

In **Norway**, some companies offer 'black-boxes' in cars for monitoring/logging driving behaviour/patterns and in **Belgium**, several insurers offer personalised advice to improve the driving pattern by analysing data. An InsurTech, a subsidiary of a Belgian insurer, also offers a health report of the car based on its usage. In **Slovakia** there are some examples of evaluation of driving patterns - prudence, riskiness and attention. Some insurers on the **Austrian** market have already launched telematics-based car insurance products, where calm driving habits are rewarded with lower premiums. In some countries, driving patterns appear to be a sensitive issue, so the insurance hasn't quite taken off.

Life/health insurance

In **Italy**, some insurance groups are investing in synergies with start-ups in the digital health sector, providing an increasing number of ancillary services to health insurance policies purchasers (e.g. prevention or wellness-oriented services, phone or video call consultation with general practitioners, keeping digital medical records, managing personal data and medical reports and facilitating the access to a network of clinics offering special arrangements to insurance clients, timely intervention when needed, on the basis of the continuing monitoring of vital signs). Digital devices (e.g. wearable electronic bracelets) could also be required in order to obtain a reduction in the premium at policy renewal, on the basis of the health status (such as blood pressure and glucose level) and healthy behaviours.

Home insurance

In **Iceland** there is at least one undertaking looking into providing home security services at the moment. The system would include 'smart' leak sensors, smoke alarms which might influence premium levels. In contrast, in **Norway**, water detectors for detecting water leaks have been around for a number of years. In **Czech Republic** an incumbent insurance undertaking has been providing in-house moisture sensors and security incident sensors connected to a smart phone application, which gives notifications and alerts in case of incidents. One undertaking in **Austria** has integrated a weather and storm-warning system into their mobile applications. This gives customers early warning when their insured assets are threatened by environmental conditions and is intended to give them time to take damage-limiting measures in advance.

Source: EIOPA InsurTech Task Force questionnaire on fragmentation of the value chain and new business models

QUESTIONS TO STAKEHOLDERS

14. Are there other aspects related to preventive services in insurance that should be considered from both consumer, market and supervisory perspective?

4. RISKS AND BENEFITS FOR CONSUMERS AND FOR THE INDUSTRY

EIOPA has looked at potential innovation-related risks and benefits through its different work streams.³³ Figure 4 gives an overview of benefits and risks stemming from fragmentation of the value chain both for consumers and for the industry. Most of the risks identified are not new. However, the increased use of third parties, fragmentation of the value chain and digitalization in general can be seen as an amplifier of these risks.

FIGURE 4: RISKS AND BENEFITS STEMMING FROM FRAGMENTATION OF THE VALUE CHAIN FOR CONSUMERS AND FOR THE INDUSTRY

	Benefits	Risks
Consumers	<ul style="list-style-type: none"> ▶ Co-operation of incumbent undertakings with third parties allows the use of new technology in order to adopt more sophisticated pricing approaches (e.g. using new parameters like day-to-day behaviour of the insured) and do better risk assessment (e.g. the use of improved predictive models) <ul style="list-style-type: none"> ○ More accurate and targeted pricing models ○ Lower prices ○ Premiums are a more accurate reflection of an insured's underlying risk. ▶ The quality of services and user experience is improving for consumers <ul style="list-style-type: none"> ○ Easier and 24/7 access to products through mobile applications, websites and chatbots ○ Insurance-as-a-service allows frictionless experience for the customer ▶ Availability of new and more individualised/tailor-made products and services better reflecting actual risk profile ▶ The possibility of covering new risks (e.g. cyber risk; gig economy workers) improving inclusion ▶ Better and cheaper access to advise could increase financial inclusion ▶ Increased competition ▶ Possibly reduced damage through preventive measures 	<ul style="list-style-type: none"> ▶ Increased IT-risks/cyber-risks (cyber attacks, loss of personal data) ▶ Not always clear for the consumer what additional financial services/products they sign up for or the strict scope of the insurance coverage ▶ Data protection and privacy <ul style="list-style-type: none"> ○ Due to long value chains it might be difficult to estimate by whom and how consumers' data is processed ▶ Lack of transparency <ul style="list-style-type: none"> ○ more difficult to recognize all companies involved in the value chain ▶ Discrimination/financial exclusion <ul style="list-style-type: none"> ○ high risk consumers may suffer from higher premiums due to the better segmentation of risk ○ Increasingly accurate pricing could reduce the level of risk pooling and lead to the highest risk individuals becoming effectively uninsurable ▶ The risks associated with the use of robo-advisors (e.g. possible errors and/or functional limitations in the design of the algorithms that underpin the automated advice tools) ▶ Focus on price instead of coverage <ul style="list-style-type: none"> ○ the cheapest products and easiest accessible might not be the best product ▶ A monopoly position of the platform provider could allow to ask for a price that makes the product more expensive for the consumer <ul style="list-style-type: none"> ○ Possible over- and under insurance

	<ul style="list-style-type: none"> ○ Convenient, more automated fraud detection 	<ul style="list-style-type: none"> ○ More individualized products might make it more difficult to compare the products offered
Industry	<ul style="list-style-type: none"> ▶ Creates an element of differentiation for the company (compared to other competitors) ▶ Possible costs reduction ▶ Potential to pick-up technological 'know-how' ▶ Strategic co-operation might give insurers the strategic flexibility they need in a competitive environment. It can help insurers to enhance efficiency of product design and development and to target new customers and/or existing customers more effectively with new products that reflect more accurately consumers' needs ▶ Product development cycles can be faster with external partners <ul style="list-style-type: none"> ○ Quick market introduction of new products ○ Less up-front costs ▶ Better consumer experience and reduced price could lead to better consumer satisfaction ▶ The greater agility of some InsurTechs (e.g. their IT systems) could allow for quicker testing and implementation of new technologies and products ▶ The sale of new products and services (e.g. risk prevention devices) can diversify insurers' income streams, potentially reducing profit volatility. ▶ More accurate pricing of risks ▶ New sale channels ▶ Improved services quality and increased customer satisfaction ▶ More efficient claims handling and fraud prevention ▶ Possibly reduced claims through preventive measures 	<ul style="list-style-type: none"> ▶ Loss of market power as technology firm holds relationship <ul style="list-style-type: none"> ○ Strong dependencies could occur and undertakings could lose control over the point of entry of consumer communication. This would lead to the loss of important consumer data, needed to develop accurate/customized products and to train self-learning algorithms or other Big Data Analytic-tools ○ InsurTechs could enjoy success as the customer-facing entity, reducing insurers' brand recognition and leaving them simply as a capital provider. An increase in InsurTech bargaining power could then lead to increased commissions and either higher charges to customers or reduced underwriter profitability ▶ Uncertainty related to new and untried technology/business models ▶ Potential for loss of internal know-how in the long run ▶ Potential conduct risks could arise if the digital platforms used to offer policies also provide non-insurance services, thus making it ambiguous for the consumer to separate pure service products and those that involve insurance coverage. ▶ Issues related to outsourcing/oversight <ul style="list-style-type: none"> ○ Loss of control / influence ○ the insurance undertaking cannot assess correctly the InsurTech companies ○ The speed of innovation at the InsurTech may outpace incumbents' ability to adjust their risk reporting

33 See e.g. EIOPA, Big Data Analytics in Motor and Health Insurance: A Thematic Review, 2019. https://www.eiopa.europa.eu/content/big-data-analytics-motor-and-health-insurance_en; EIOPA, Thematic Review on Consumer Protection Issues in Travel Insurance, 2019; EIOPA, Consumer Trends Report 2019, 2019. <https://www.eiopa.europa.eu/content/consumer-trends-report-2019>

<ul style="list-style-type: none"> ▶ Benefits for InsurTechs: <ul style="list-style-type: none"> ○ Insurer can provide financing and infrastructure ○ Lower transaction costs and access to new customers through another channel 	<ul style="list-style-type: none"> metrics to maintain effective oversight of data, conduct or prudential risks ▶ Incumbent insurers who fail to form InsurTech partnerships or are unable to develop tailored propositions may face threats to the sustainability of their business models ▶ Information oligopolies can develop <ul style="list-style-type: none"> ○ e.g. health wearables data collected by one central institution ▶ Increased competition ▶ Reputational risk, cyber risks, data protection, IT security, legal risk ▶ Errors from robo-advisors could be systematic, with advice possibly being negligent or representing poor value for money ▶ Potential new types of fraud ▶ Risks for InsurTechs: <ul style="list-style-type: none"> ○ Possible dependence on co-operation partners ○ Depending on business model, possible regulatory risk
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Source: EIOPA InsurTech Task Force questionnaire on fragmentation of the value chain and new business models

QUESTIONS TO STAKEHOLDERS

15. Do you consider the potential benefits for consumers and for the industry to be accurately described?
16. Do you agree with the description of the risks identified for consumers and for the industry?
17. Is the regulatory framework adequately addressing the risks mentioned above? Do you think further regulation is needed? Please explain why.

5. SUPERVISORY IMPLICATIONS

5.1 GENERAL

Innovative insurance products and sales, as well as the speed with which such products are sold and updated, bring new challenges and areas of focus with regards to prudential and conduct supervision. It can be expected that more complex value chains entail more complex supervision, focused, for instance, on the crystallisation of new risks through interactions of parties. Supervisors might need to develop knowledge, experience, data access, skillset and resources for supervising

new models and technologies. It might be challenging to keep up with the rapid changes.

NCA's pointed out risks such as conflicts of interest and lack of transparency, duty-of-care and other conduct risks, prudential or even systemic risk in case of mispricing, cyber risk and personal data protection issues, that are also relevant in the context of traditional insurance landscape, but can be significantly increased due to digitalisation.

Some issues, such as how to supervise and explain AI algorithms and the concerns related to improved risk modelling and financial exclusion were already highlighted in EIOPA's Big Data Thematic Review³⁴ and are already being addressed under separate EIOPA work stream on digital ethics in insurance. EIOPA has also published Cloud Outsourcing Guidelines.³⁵

There are, however, some more specific risks related to digitalisation and increased fragmentation of the insurance value chain and new business models, which are looked at in more depth below.

5.2 RISKS RELATED TO FRAGMENTATION AND INCREASED COMPLEXITY

The complexity³⁶ due to fragmentation of the value chain and increased outsourcing/co-operation with third parties is raising different issues for supervisors with regard to risks both for consumers and for NCAs.

Market monitoring is one of the biggest challenges. In order to make supervision more effective, supervisors need to understand the individual and collective impact of new technology-led business models/strategies, what risks they involve, and whether they will be sustainable in the longer term, what companies are involved throughout the value chain and their interactions and implications for consumers.

There is also a question of the regulatory perimeter, especially in cases where lines between financial sector and non-financial sector start to blur.³⁷ The external service providers that are used may or may not be regulated entities, where especially those that are unsupervised can lead to detriment to consumer protection that is not fully addressed by those that are supervised. Complex institutional structures and increased use of outsourcing can also make oversight for administrative, management or supervisory body more difficult and hence increase conduct risks. It may be also an example of a conflict between maximising profits and treating customers properly.³⁸

As the expectation is that the number of different parties and their influence on the insurance value chain increase, the importance that supervisors put proportionate action in place in order to gain insight into parties involved in the value chain also increases. Solvency II regular reporting might not be fit for purpose to have an overview of co-operation with all third parties and there might be a need for more flexible reporting. Similarly, although Solvency II Directive provides rules for outsourcing, it might be worth exploring additional practices for proper supervision of more fragmented value chains.

34 EIOPA, Big Data Analytics in Motor and Health Insurance: A Thematic Review, 2019.

https://www.eiopa.europa.eu/content/big-data-analytics-motor-and-health-insurance_en

35 https://www.eiopa.europa.eu/content/guidelines-outsourcing-cloud-service-providers-now-available-national-supervisory_en

36 Co-operation is always associated with an increase in complexity where additional structures must be supplemented or rebuilt. If the co-operating company works with other

process flows, other software or other hierarchies, common understanding and agreements have to be found and coordinated. Otherwise, each process is a friction point that can potentially lead to errors.

37 As one example it was pointed out by NCAs possible challenges with the POG application to new products.

38 Toronto Centre, Supervisory responses to retail misconduct, 2020.

<https://res.torontocentre.org/guidedocs/Supervisory%20Responses%20to%20Retail%20Misconduct.pdf>

5.3 CONCENTRATION RISK

Extended use of third parties could also increase concentration risk, especially in the context of insurance platforms and ecosystems. NCAs usually address possible concentration risk within the scope of regular supervisory review process, including through off-site and on-site inspections and talking with major stakeholders in FinTech/InsurTech sector, as well as continuous dialogue with the undertakings regarding their IT-operations and management. Some NCAs monitor it by having insurers notify the supervisor in case of material outsourcing.³⁹

Some NCAs have taken more tailored approach to assessing concentration risk through dedicated market surveys or incident reporting. One NCA observes the developments by registering incidents, which are driven / triggered by innovative technologies or can be linked to such technologies. Another NCA has conducted a large study on digitalisation in 2018 and in course of this has been able to draw up a map of current co-operations between insurance undertakings and InsurTechs. Similarly, another NCA has developed a survey asking the insurers who are their InsurTech partners, and whether they outsource specific parts of the value chain to InsurTechs. One NCA has recently launched a specific survey to assess if there are crucial or important services outsourced to dominant providers.

5.4 SPECIFIC CONCERNS RELATED TO INSURANCE PLATFORMS/ECOSYSTEMS

Despite the potential benefits brought by ecosystems, it is also important to consider related conduct and prudential risks. NCAs must understand how platforms and ecosystems will shift value and change the nature of risk, keeping in mind that those players have the capability to scale at a far faster rate than companies could in the past.

From the conduct side, competition in digital ecosystems is still limited. Although consumers should expect to find a wide range of insurance products available, at present in these ecosystems consumers can often find only one product, which restricts overall consumer choice.⁴⁰ Similarly, although ecosystems should offer tailored products, currently product offer is tailored to the overall platform rather than being tailored to the demands and needs of the customer pool.⁴¹

Other risks can also emerge from consumer behaviour: as insurance is mostly the secondary product sold through these ecosystems, consumers may buy coverage inadvertently or may not be paying enough attention to the coverage they are buying, leading to over- or under-insurance coverage. Alongside these risks, other risks generally associated with ancillary insurance products — such as low value for money, lack of proper assessment of customers' demands and needs and lack of overall target market assessment — can be heightened by digital ecosystems.

39 Solvency II Article 49(3) states that insurance and reinsurance undertakings shall, in a timely manner, notify the supervisory authorities prior to the outsourcing of critical or important functions or activities as well as of any subsequent material developments with respect to those functions or activities.

40 BEUC Position Paper, Ensuring consumer protection in the platform economy, 2018.
<https://www.beuc.eu/publications/ensuring-consumer-protection-platform-economy/html>

41 EIOPA, *Consumer Trends Report 2019*, 2019.
<https://www.eiopa.europa.eu/content/consumer-trends-report-2019>

Moreover, given the market power — including data ownership — of certain brands, the relationship between insurance manufacturers and distributors may change, with distributors imposing conditions on insurers (e.g. payment of high commissions) that may not necessarily correspond to the service they offer. As insurers are often secondary providers, high commissions paid to ecosystem operators may also incentivise pressured sales techniques. Given that they have control over customers' data and the competitive advantage of having a generally large pool of customers, operators may set up upfront commissions — while offering limited mediation services — to be paid by those undertakings that want to participate.⁴²

Ecosystems also bring challenges, in particular with regard to the supervision of product oversight and governance (POG) requirements and supervision of distribution activities. As platforms could become 'co-manufacturers' of insurance products, it can often be difficult to discern/identify product manufacturers and product distributors. It may also be difficult to identify which participant in the ecosystem carries out insurance distribution activities versus other activities, making it challenging to identify what is within and outside the scope of the IDD.⁴³

Platforms may also be subject to conflicts of interest, and may bias search results and rankings to their advantage, for example if the platform

operator is itself active as a seller on the platform or owns insurance undertaking within complex group-structures. Conflicts of interest may also arise from the platform's fee structure.⁴⁴ These attributes of platforms could challenge fair pricing as well as the competitive market structure and could have negative impact on shopping around ('lock-in' effect). Furthermore, once a platform or ecosystem has gained a large market share, it may be a rational strategy to reduce transparency and make it difficult for its users to compare products with those provided on other platforms/ecosystems.

From prudential side, continuously changing customer expectations can put a strain on traditional insurance business models. The depth of the value-chain integration varies between different types of platforms. The integration in a platform may require a significant investment by an insurer, and this in turn creates a lock-in effect, making it difficult for the insurer to switch to other platforms. There is therefore a risk that insurers could become increasingly dependent on a relatively small number of dominant platforms/ecosystems which might increase the concentration risk. Large platforms may also act as gatekeepers⁴⁵ for their users, and they may assume a position of a demand-side monopoly or oligopoly. Should a tech firm establish dominance over an insurance market (as has been the case in other industries), failure of their insurance arm

42 See issues highlighted in EIOPA's Thematic Review on Consumer Protection Issues in Travel Insurance, 2019. https://www.eiopa.europa.eu/content/consumer-protection-issues-travel-insurance_en

43 EIOPA, Consumer Trends Report 2019, 2019. <https://www.eiopa.europa.eu/content/consumer-trends-report-2019>

44 Platforms typically earn revenue by charging fees for brokering transactions and/or by charging advertisers fees to gain access to the platform users. Some platform owners

retain a commission out of the fee that the buyer pays to their sellers. Most platforms rent out space so that advertisers can reach the users.

45 For example, the role of data as a market entry barrier has been emphasised. Large volumes and a large variety of data collected by platforms may be a source of competitive advantage over traditional undertakings. They may result in a market entry barrier if new entrants are unable to collect or buy access to the same kind of data in terms of volume and/or variety.

(either as a broker or underwriter) could be very significant due to the likely customer concentration.

Furthermore, a separation of risk assessment and risk carrying — e.g. if a large platform sells pre-packaged and pre-classified bundles of risk to insurers — may make it difficult for insurers and insurance regulators alike to assess the riskiness of the risk bundles. The ability of online platforms to analyse all transactions across the companies operating on the platform may also create an information advantage over other firms. As a

consequence, insurers may become dependent on large platforms that are able to extract an increasing share of the added value.

From a competition perspective online platforms have the potential to enhance efficiency, but they can also be a source for potential emergence of dominant undertakings. The reason for the often observable monopoly-tendency of successful platforms is network effect⁴⁶, which favours the emergence of large market players.

FINAL QUESTIONS TO STAKEHOLDERS

18. What are the greatest future challenges in the fragmentation of the value chain including the emergence of insurance platforms and ecosystems?

19. This Discussion paper refers to some areas for further work meant to mitigate some of the risks and providing supervisors better tools to tackle with the increased fragmentation (see Executive summary in page 5). Are other measures and tools needed? If so, what are they and what they should cover (e.g. to ensure compliance with conduct and organisational regulatory requirements; data and consumer protection; better supervisory oversight capabilities; better information about new developments).

20. What additional tools could support supervisors to understand increased fragmentation and complexity of the markets as well as new business models?

21. Are there any other comments you would like to convey on the topic? In particular, are there other relevant issues that are not covered by this Discussion Paper?

⁴⁶ The value of networks increases to each member as more users join.

ANNEX 1.

EXAMPLES OF THE FRAGMENTATION THROUGHOUT THE VALUE CHAIN

The examples in this Annex are the result of a survey filled in by NCAs in Q3 2019.

Product design and development

Although often new products are being introduced by incumbent undertakings themselves, there are also partnerships in place between InsurTechs and insurance undertakings to develop e.g. instant insurance products, based on on-demand and pay-per-use micro-policies, for sectors like travel, liability, goods, health, mobility and pets. However, often when insurance companies are offering ancillary products, such as home alarm systems or activity measurement bracelets in a bundled offering with insurance, these ancillary services are rather offered by device manufacturers and/or other technology vendors.⁴⁷

An interesting development was mentioned where there is a tendency observed to package old products in new garments and sell through new channels with a different brand/profile.⁴⁸

There can be seen four main trends:

1. on-demand insurance/usage-based insurance (UBI) developments mainly on motor, home and health sectors;

2. products related to social change and lifestyle (e.g. gig economy or insurance for luxury goods⁴⁹);
3. cyber insurance developments;
4. and instant insurance.

The products related to broader social change and lifestyle were often highlighted by NCAs (e.g. group insurance for members of the 'sharing economy', where riders are covered automatically by insurance from the time they go online/start application). Usually, these are products that can be activated via an app and based on fully digitized systems.

UBI is becoming more common in the motor market, with consumers paying either per-km or per-smaller unit of time (e.g. a couple of hours). As part of it, the use of telematics⁵⁰ is also more common, where premiums are determined by driving habits (frequent or not) and driving pattern (aggressive or not). Other data that could be collected is mileage, average speed, routes used etc. Telematics could also be used for prevention (e.g. reward of safe driving or healthy lifestyle). This could be provided both by incumbent undertaking or in co-operation with InsurTech companies.⁵¹ Different models (e.g. telematics via

47 E.g. Some InsurTechs, in partnership with incumbent insurers, are selling IoT devices (e.g. security cameras, leak detection equipment) alongside home insurance.

48 An example is a new small insurance undertaking profiling itself as a very environment friendly alternative: they don't fly; they don't drive; they don't use paper; they are all digital; they are a small and streamlined organisation. However, they are also fully owned by a large traditional insurance undertaking, which also happens to stand all the insurance

risk. Hence, it could be stated that the environmentally friendly subsidiary is just a front, which might again raise questions from consumer protection perspective (e.g. transparency).

49 Which often also involve on-demand/usage based element.

50 Telematics Device is plugged into cars diagnostics outlet and connected to smartphone app via Bluetooth.

51 E.g. InsurTech is the daughter company of an insurer.

the connected car, or via smartphones) impact who is involved in the value chain.

New insurance products are also emerging to protect against technology-related risks, e.g. cyber risk⁵² and (to a much lesser extent) cryptoasset holdings.

BOX 6: SPECIFIC EXAMPLES OF NATIONAL DEVELOPMENTS IN PRODUCT DESIGN AND DEVELOPMENT

- ▶ **Italian** undertaking in collaboration with a car rental and sharing community is issuing policies on its insurance platform to protect both the owner and the driver. A supplementary policy is activated on shared cars for the duration of the rental, with accessory guarantees only (e.g. voluntary car insurance theft and fire).
- ▶ **Belgian** InsurTech covers the administrative and the operational work but the risk carrier is a foreign insurer. One Belgian insurer works together with an InsurTech for car sharing.
- ▶ In the **UK** one InsurTech provides a pay-as-you-go insurance product for part-time parcel delivery and courier services.
- ▶ **UK** InsurTech, in partnership with incumbent company, offers cover for rare pets and travel insurance for the elderly and those with chronic health conditions.
- ▶ **UK** InsurTech, in partnership with incumbent company, offers bike insurance where premiums are paid at the end of the month based on the total amount of claims made by the pool over the previous month with a max cap in place.
- ▶ **UK** start-up, in partnership with incumbent company, have a five year deal to provide telematics-based motor insurance.
- ▶ **In Slovakia**, one incumbent company introduced PHYD (pay-how-you-drive) product, a combination of car insurance and telematics. The main features are monitoring of individual drivers, evaluation of driving style and mileage, crash severity assessment, sharing data with data center, assistance and sending rescue device. Telematics device is installed on windscreen, contains GPS module and crash sensor and evaluates prudence, riskiness and attention.
- ▶ **In Sweden**, moisture sensors are used by some insurers to detect and warn about leakage, bad water piping and/or growth environment for fungi. Installation leads to premium reduction.
- ▶ **In Italy**, a flight delay indemnity parametric product could be activated via an app and is based on the blockchain technology to ensure the data integrity. The user, who has already purchased the flight ticket, can activate the policy up to 15 days before the departure; once the policy is registered, the blockchain creates a smart contract that manages the automatic reimbursement as soon as the system is notified of the flight delay (e.g. from an oracle⁵³).
- ▶ **In Slovakia**, an incumbent company is offering household insurance cyber endorsement against internet threats; Another incumbent company covers loss of sensitive data.

Source: EIOPA InsurTech Task Force questionnaire on fragmentation of the value chain and new business models

52 Some NCAs pointed out cyber insurance products as a new developments, however it was also pointed out that there is not enough information available on exact market penetration and especially on co-operation and collaboration.

53 An oracle is typically a third-party service designed for use in smart contracts on a blockchain. Oracles find and verify real-world occurrences usually through external database and submits this information to a blockchain to be used by smart contracts (e.g. flight delay database).

Pricing and underwriting

Co-operation in pricing and underwriting seems in general to be non-existent or rather limited and companies do not normally outsource the development of enhanced pricing and underwriting models, preferring to develop their own models (although sometimes with the help of IT companies). This is mainly because insurance companies tend to be quite cautious about what data they are using in their insurance activity and pricing models are seen as a business secret.⁵⁴

There are some experiments related to Big Data and the use of advanced analytics with more details about the insured object, the consumer/client and how the insured object is used by measuring behaviour, but not to a large scale. The use of innovative technology seems to be used mostly in motor and health insurance (e.g. telematics or devices that monitor health).

This could include collaborations with data scientists (consultants) to improve fraud analytics as well as in-house collection of data through the encouragement of tracking behaviour using wearables to inform pricing. In some countries increased co-operations are seen with data vendors offering both private and open data which can enhance risk assessments and improve predictive models. Some Cloud Service Providers also grant free access to open-source analytical tools. This provides a low-cost gateway for undertakings wishing to experiment with non-traditional data analysis.

In many EU countries, a vast majority of insurers still use Generalised Linear Model for pricing retail

lines of business. However, some insurers are modifying their current approach by using ML and AI for pricing (with and without support from InsurTechs). However very few insurers currently apply such approaches in a 'live' commercial environment. Offering discounts if customers agree to use connected devices (e.g. home monitoring devices, telematics devices) has also been observed. Often these devices are sold by what are considered InsurTechs.

For cyber insurance, insurers are working with tech companies to extract publically available information about customers to enhance risk evaluation and pricing. However, there are also some cases of pricing in collaboration with third parties (data providers, reinsurers) reported for policies covering specific risks (e.g. cyber-insurance). Reasons for co-operation could also include providing know-how and improving cyber resilience of policyholders.

⁵⁴ Insurance companies are concerned about reputation risk related to BDA if something would go wrong.

BOX 7: SPECIFIC EXAMPLES OF NATIONAL DEVELOPMENTS IN PRICING AND UNDERWRITING

- ▶ **In the UK** commercial market, a few InsurTechs are providing underwriting support to commercially focused insurers. For example, one InsurTech claims its software allows insurers to price its SME risks far more accurately (although, at this stage, this is primarily based on the additional information they can extract from publically available sources, rather than significant improvements in the algorithmic methods to determine the technical price).
- ▶ **In the UK**, analytics company uses geospatial data to validate property features at point of quote and is used by a number of UK commercial property underwriters
- ▶ **In Italy** one leading group is developing a project to build a single IT platform for pricing, sales and management of a standardised motor insurance product, to be issued by different undertakings in the group operating through direct channels in various European countries.
- ▶ **In Germany**, an incumbent company has created a partnership with an InsurTech, which is calculating the scores for their telematics tariffs in life insurance. Similarly, another incumbent has founded a group internal service provider, which will assess the scores for their telematics tariff in motor insurance.

Source: EIOPA InsurTech Task Force questionnaire on fragmentation of the value chain and new business models

Sales and distribution

The survey confirmed the growth of online sales of insurance and innovation in the entire value chain, including distribution, as identified in other EIOPA's and ESA's work.⁵⁵ InsurTech start-ups are often partnering with incumbents (both insurers and intermediaries) and this partnership is beneficial to both sides: it allows incumbents to benefit from cutting edge technology while start-ups can benefit from incumbents' customer-base – this is particularly important for insurance intermediaries as they often have an established personal relationship with consumers – market knowledge, and regulatory expertise.

InsurTechs acting as intermediaries and initial points of customer contact, such as comparison portals and sites that offer financial advice or contract management functionalities, seem to be most favoured co-operation partners. Incumbents are also increasingly partnering with authorised

insurance intermediaries to distribute products in new ways (e.g. via mobile apps and chatbots).

Indeed, comparison websites⁵⁶ were highlighted several times, e.g. for motor third-party liability insurance (MTPL) and voluntary motor insurance. Those tools enable users to insert data, get price offers from several insurers and purchase the policy. However, the commercial comparison is limited to insurance companies partnering with the comparison websites.

Primarily driven by technological developments, there are also non-financial companies occupying a place in the insurance value chain and the role they play is becoming more important as they increasingly carry out significant parts of the insurance companies regulated and unregulated activities. An example of this type of parties is software suppliers who provide software for price comparison and providers of automated advice. In addition, they are data suppliers to insurers or advisors and intermediaries. As an interesting

55 See EIOPA, Consumers Trends Report, 2018; EIOPA, Report on the Evaluation of the Structure of Insurance Intermediaries Markets in Europe, 2018; Joint Committee of the ESAs, Report on automation in financial advice, 2016.

56 EIOPA, Report on Good Practices on Comparison Websites, 2014. https://www.eiopa.europa.eu/content/eiopa-issues-good-practices-websites-compare-insurance-products-0_en

finding, in the UK there has been speculation that automated energy switching services (provided by price comparison websites) could offer automated switching for insurance.

Respondents also pointed out robo-advice, where in order to acquire an insurance policy, a new consumer interacts and provides personal information to a e.g. chatbot, while algorithms cross that information with other databases, assess the risk of the consumer, set a price and make an automatic offer. As stated in EIOPA's work on evaluation of the structure of insurance intermediaries markets in Europe, there are many different types of 'robo-advisors' operating in Europe, ranging from simple chatbot to sophisticated algorithms, making it difficult to quantify to what extent undertakings and consumers revert to robo-advice. While in most countries figures on the number of clients using robo-advice or on the customers' segment where it is prevalent are not available yet, NCAs reported

that this phenomenon is growing, but not very rapidly and the scale of the market is still rather limited.⁵⁷

Robo-advice has been given for quite some years on relatively simple products, such as car insurance. Robo-advice on more complex insurance products, such as disability insurance, seems to be currently being developed.⁵⁸ Some insurers are experimenting with chatbots and introducing technologies that can help in the provision of advice to customers, but these are mostly either procured from external providers or built in-house and are usually not products of active co-operation with tech firms.

Trends such as partnering with companies selling white-labelled insurance products and using client aimed web advertisements, side banners at webpages, were also mentioned.

BOX 8: SPECIFIC EXAMPLES OF NATIONAL DEVELOPMENTS IN SALES AND DISTRIBUTION

- ▶ **In Estonia** there is one major platform provider between insurance undertakings and insurance brokers, who offers technical support to connect insurance undertakings and brokers IT-systems.
- ▶ **In Belgium**, a real estate website offers insurance against renter's non-payment. An Insurtech covers the interface (insurance-as-a-service) but works together with an insurer as risk carrier.
- ▶ **In Belgium**, an InsurTech is offering insurance providers platform to connect with digital consumers (both sales and post-sales services).
- ▶ **In the UK** one company integrates with Facebook Messenger to enable consumers to purchase and manage their policy through the Messenger interface.
- ▶ **In Ireland**, a company is offering geolocation activated travel insurance that uses a standard per day travel insurance product offered by an Irish underwriter.

Source: EIOPA InsurTech Task Force questionnaire on fragmentation of the value chain and new business models

57 Joint Committee of the ESAs, Joint Committee Report on the results of the monitoring exercise on 'automation in financial advice', 2018. <https://esas-joint-committee.europa.eu/Pages/News/ESAs-report-finds-automation-in-financial-advice-slowly-growing-but-scale-of-market-remains-limited.aspx>

58 See also ESAs Report on automation in financial, Joint Committee of the ESAs, 2016. <https://esas-joint-committee.europa.eu/Pages/News/European-Supervisory-Authorities-publish-conclusions-on-automation-in-financial-advice.aspx>

Post-sale services and assistance

As with distribution, insurance undertakings are developing and using mobile applications, online platforms and chat-bots to enable consumers to interact with their policy post-sale 24/7 (e.g. understand their level of coverage, modify their insurance, 'my pages' for clients to view, location of offices, insurer's collaborators etc.). Insurers often partner with InsurTech intermediaries or third party technology providers, although often this is also developed and offered by the companies themselves. Insurance companies are also interested in ancillary services, such as IoT applications (alarm systems for pipe leakages, smart detectors), personalised warnings in case of

accident and flood, storm, hail, lifestyle (e.g. supporting healthy lifestyle), warning systems e.g. when weather is icy (aimed to avoid elderly people from falling) or customer warnings based on weather forecast etc., often given through smartphone notifications. Services provided also include advice on home care and dealing with domestic problems, to be extended to 'edutainment'⁵⁹ contents on insurance products and risk prevention. Voice recognition and geolocation was also pointed out. As reported, those applications could be equally built in co-operation with device manufacturers or InsurTech companies (e.g. through procuring technology), or built in-house.

BOX 9: SPECIFIC EXAMPLES OF NATIONAL DEVELOPMENTS IN POST-SALE SERVICES

- ▶ **In Slovakia** a company is providing service that provides SMS/email warnings about adverse weather conditions and informs registered clients about expected weather fluctuations according to selected postal codes to help protect clients' property and health.
- ▶ **In the UK** an InsurTech claims to improve insurers' post-sale process efficiency, eliminating paper and postage from customer communication, and also speeding up an insurer's issuance of electronic policy documentation.
- ▶ **In Italy**, there are increasing partnerships of insurance companies with start-ups and telephone operators, to exploit the business potential from innovative home systems and devices for energy saving, comfort, and safety of the home and person. Household insurance products, in combination with traditional insurance covers, are testing the use of domestic devices for alarm and remote control management as well as prevention devices such as smoke or carbon monoxide sensors or intrusion detection, oftentimes integrated with intelligent voice assistants and the smartphone.

Source: EIOPA InsurTech Task Force questionnaire on fragmentation of the value chain and new business models

Claims management

Collaboration and co-operation models seem to be still limited in claims management. Insurance companies are more likely to use their own web portals and smartphone application to provide services such as automated claims management or digital administration of claims so that the customer can engage via an app rather than contacting a call centre (e.g. online damage

reports and solutions for uploading information like pictures to supporting the claim management), but also for fraud detection and fraud analytics (e.g. using BDA to better identify fraudulent claims). However, these are mainly built and designed by the insurance companies themselves⁶⁰ or based on outsourcing agreements and not on direct co-operation agreements.

59 Intended to be both educational and enjoyable.

60 e.g. in partnership with external traditional IT companies or procured tools or services and not of direct collaboration

As a growing trend, in some countries industry bodies or NCAs are providing central claims management support solutions or databases. The Icelandic Financial Services Association which represents the financial service providers in Iceland recently started operating a claim database. The database is used for fraud analytics, looking for pattern in claims etc. In Latvia, Motor Insurers' Bureau of Latvia is offering MTPL claims management via mobile application. Similarly in Portugal, the APS (Portuguese Insurer Association) launched an app for claims.

Although in general the co-operation is limited, there are noteworthy examples in several Member States. There are co-operations with start-ups for video expertise and image recognition (car or home damage) and applications for smartphones have been developed by an InsurTech platform. Insurers are also partnering with InsurTechs to deliver parametric insurance products.⁶¹ Insurance undertakings are also using drones for accurate information about the accident and its dynamics (photos and geolocation).

BOX 10: SPECIFIC EXAMPLES OF NATIONAL DEVELOPMENTS IN CLAIMS MANAGEMENT

- ▶ **In Belgium**, an insurer has outsourced its claim management to a service provider and most insurers rely on the services of third parties for expert's assessment. This company can in turn rely on technological companies.
- ▶ **In the UK**, an InsurTech aims to reduce costs, enhance speed of resolution and improve fraud detection through digitalisation. At present the firm applies its technology to motor insurance damage claims, but will aim to develop a solution for personal injury claims in future.
- ▶ **In the UK** a start-up applies AI techniques to fraud detection for motor insurance claims.
- ▶ **In Iceland**, one firm has launched an app from where consumer can report claims, and in some cases get that claim paid in less than a minute.
- ▶ **In Italy**, one start-up is promoting an app to automate the claim handling cycle, starting from the accident to the evaluation of the damages and the reimbursement, for non-life business, but its use is still scarce.
- ▶ **In the UK**, automated image recognition for first notification of loss in motor insurance is used, where ML software is then used to determine if the damage is repairable and if not, a payment to the insured is initiated.
- ▶ **In the UK**, a company offers flight delay and cancellation insurance with automatic claims settlement based on integration with third party data sources.

Source: EIOPA InsurTech Task Force questionnaire on fragmentation of the value chain and new business models

Other areas of the insurance industry

NCAs also reported several innovations that impact smaller areas of the insurance value chain such as document archiving, identity management and chat via messaging services. In Belgium, one bancassurer has outsourced its IT infrastructure to a joint venture with a large technology firm. It has also created a daughter company for the

development of virtual assistants that offers its services to other companies.

Similarly, in Austria support processes are being increasingly automated and integrated through consolidating into single software solutions, and the use of Cloud Services and IT tools like scripts and bots is also increasing. Though not on a truly collaborative basis, services from BigTech

61 It could be based on smart contracts where payments are automatically made when a certain parameter is met (e.g.

water level on a sensor for flood insurance, delay time for flight insurance etc.).

companies are often contracted, especially in the field of Cloud Services. Interestingly in Germany there is at least one project conducted by a couple of insurance groups, which explore the

possibilities of DLT in reinsurance processes. In Italy tests have been conducted on the use of DLT for dispute resolution and parametric insurance.

ANNEX 2. ABBREVIATIONS

AI – Artificial Intelligence

API – application programming interfaces

BDA – Big Data Analytics

DLT – Distributed Ledger Technology

EIOPA – European Insurance and Occupational Pensions Authority

ESAs – European Supervisory Authorities (EBA, ESMA and EIOPA)

GPS – global positioning system

ICT – Information and Communication Technology

IDD – Insurance Distribution Directive (2016/97/EC)

IoT – Internet of Things

ML – Machine Learning

MTPL – motor third-party liability insurance

NCA – national competent authority

P2P – peer-to-peer

POG – product oversight and governance

UBI – Usage-based insurance

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