Euro-Balkan Law and Economics Review

Data di pubblicazione: 27 agosto 2026

SARA LANDINI*

Parametric Insurance

ABSTRACT: Parametric policies are characterized: firstly, by the fact that they are activated when the fulfilment of certain external and objective conditions, correlated to the existence of a loss and previously established in the contract, is verified and secondly, by the fact that the pay out is determined on basis of a trigger event.

1. Definition

Property and causality insurance, as part of nonlife insurance products, includes three main categories of risk: damage to property, which specifically covers the destruction, loss and deterioration of assets; personal injury, which covers the impairment or total loss of the capacity

* Full professor of Economic Law, University of Florence, sara.landini@unifi.it.

to generate income; civil liability for damage to third parties or to their property. One of the recent challenges of the sector is the increase of catastrophic events.

The cost of coverage against environmental catastrophic events represents the main limit to the diffusion of insurance contracts. The causes of high premiums are: i) adverse selection problems (only the most vulnerable subjects are interested in being insured), the diversity of catastrophic phenomena and the difficulty of identifying homogeneous classes of insured persons sharing the same insured risks; ii) the cost of coverages for catastrophic event is linked not only to the nature of the covered risk (Enz - Swarz, 2009), but also to the costs of the operation. Since the loss adjustment in case of natural catastrophic events is expensive in terms of settlement costs, the premiums for their coverage are necessarily high.

One of the possible solutions is the introduction of parametric insurance contracts. In case of parametric insurance, the amount of compensation is predetermined based on the achievement of certain target indexes. Advantages related to this mechanism are reduction of settlement costs; greater chance of predetermining losses and therefore better reinsurance capabilities. Accordingly, the insurer must pay compensation when specific circumstances are verified, such as, for example, the existence of a drought lasting a certain number of days or a certain amount of rainfall.

2. Parametric insurance in Eu market

Parametric Insurance is present at international level and proposed by the main Insurance Companies operating at global level. Some Countries are introducing norms to promote innovation in the insurance market including the diffusion of parametric insurance. In Chile the FINTEC Law

(No. 21,521), published on January 4, 2023, which promotes financial competition and inclusion through innovation and technology in the provision of financial services, amended the Insurance Law (D.F.L. No. 251) by adding the following to Article 11:

"Insurance may be agreed upon as parametric, that is, in the event of the risk or damaging event contemplated in the contract, compensation will be paid without the insured having to justify the existence or amount of the damages, even if they do not occur. The insured must be genuinely exposed to suffering damage in the event of the loss, even if said damage ultimately does not materialize. For this type of insurance, the variables and risks must be demonstrable and clearly measurable through objective procedures, and the risk must be insurable in accordance with the general rules.

The Commission will establish, through a general rule, the criteria for parametric insurance, including, among others, the variables that the risks that will be insurable under this modality and the characteristics of the policies deposited may be taken as indices. Pension insurance, mandatory insurance, and insurance required for the development of a specific activity may not be contracted under this modality".

EIOPA (the European Insurance and Occupational Pension Funds Authority), in its report on the digitalization of Insurance market, about parametric insurance saysthe penetration of insurance products linked to *IoT* devices is expected to increase.

Respect to parametric insurance products with pre-specified pay-outs based upon a trigger event (also known as index insurance), sometime combining both IoT and DLT technology, the input gathered through the survey showed a low penetration of such products in the European

insurance market; almost 10% of the respondents reported to be offering parametric insurance products.

Some respondents indicated that their portfolios include insurance products that offer similar coverage; however, these products do not feature automated pay-outs, thus falling short of being considered purely parametric products. For instance, natural catastrophe insurance usually covers risks associated with floods, severe storms, and earthquakes. Additionally, other insurers mentioned their use of telematics and sensor data to assess losses, which aids in expediting the claims management process.

Nevertheless, these pay-outs remain only partially automated. One company shared that it attempted to develop a parametric insurance product for the agricultural sector. However, due to inconclusive results from their modeling, they ultimately chose not to incorporate parametric features into their product offerings.

3. Is parametric insurance an insurance contract?

It should be noted that most of the parametric insurance contracts include a provision relating to the specific damage that needs to have occurred in order for payment of compensation to be made. Consequently, the damage can be presumed on the basis of a statement submitted by the insured or based on the achievement of certain indexes. In legal literature some argue that the inclusion of this provision makes it possible to safeguard the indemnification principle inherent in insurance contracts, since, without the existence of the damage, the insurer can refuse to pay compensation. In this regard, national insurance contract regulations reflect the indemnification principle by stating that the insurer is obliged

to compensate, in the manner and according to the terms provided for in the contract, the damage suffered by the insured because of the loss. Indeed, parametric insurance is characterized by the fact that there is automatic entitlement to the previously agreed compensation should the damage-causing event occur. This does not mean eliminating the aforementioned principle of insurance contract law but rather implies an automatic determination of compensation taking into account the individual indexes and the damage that is estimated to have been caused. Big data and algorithms can be used to calculate such damage with the aim of facilitating its quantification and reducing the margin of human error and fraud as much as possible. Accordingly, it is possible to individualize losses in an abstract way that is at the same time effective and realistic. Digital transformation in insurance makes it possible to improve efficiency or reduce costs, automate tasks and enable effective decision-making.

Indeed, it is necessary to start with the concept of the insured interest, understood in terms of the economic relationship between a person (the insured) and a thing, right or property. The value of the insured interest limits the maximum amount of damage that the loss may cause to the insured, since the principle of compensation governs, which limits compensation to the ratio between the value of the interest and the value of the damage actually suffered and prevents unjust enrichment. In the case of parametric insurance, the sum insured and the compensation to be paid by the insurer for each claim are predetermined to simplify the management and costs of assessing the damage once the claim has been submitted.

Moreover, it is possible to avoid human errors and frauds. Thus, this kind of indemnification is more effective and respectful of the principle of indemnification than current manual assessment procedures.

The problem in the development of the parametric insurance market is not a legal one, but rather a technical one related to the identification of a certain, objective index that allows a determination of damage consistent with reality. In agricultural insurance, for example, the problem is to determine the correlation between events (for example rain and wind) which can affect the extent of the damage.

4. Are Parametric insurance contracts derivative contracts?

As has been pointed out in the Italian legal literature, the presence of the principle of compensation and the necessary existence of damage make it possible to distinguish this concept from a very different one that raises other problems from the point of view of the applicable regulation, namely where the product goes outside the scope of insurance law and is configured as a derivative financial product. In other words, when the speculative function is prioritized over that of coverage, it should not be considered insurance, because insurance against damage cannot be used for speculative purposes. Such a situation would arise if a product was used for speculative purposes and the investor received the amount set according to the rules established in the contract regardless of the existence of an insured interest and, therefore, the occurrence of damage. A product of this type could be considered a derivative because it does not respect the indemnification principle, which is a defining characteristic of insurance: the payment made by insurers needs to replace what has been lost, thereby restoring the insured to where they were financially prior to the loss, without rewarding or penalizing the insured for their loss. In order to determine whether a parametric policy is an insurance contract, it

is important to consider whether the index is based on data and correlation, which, thanks to an algorithm, enables the amount of damage to be determined. In this case, the indemnification principle is respected.

References

Olivier Lopez, Maud Thomas, *Parametric insurance for extreme risks: the challenge of properly covering severe claims*, Sorbonne, 2023;
Wynne Lawrence, Julie-Anne Tarr, Nigel Brook, Meg Chaperon, Arnaud Sorel, *Parametric Insurance*, Informa Law from Routledge, 2023;
Denise Garcia Ocampo, Carlos Lopez Moreira, in FSI Insights on policy implementation, *Uncertain waters: can parametric insurance help bridge Nat Cat protection gaps?*, n. 62, Bank for International Settlements, 2024;
Sara Landini, Emilia Giusti, Teresa Franquet Sugrañes, *Predictive analytics and Artificial Intelligence in insurance contracts and risk culture*, Law and Economics Yearly Review, 2024, pp. 207-235;
Sara Landini, Kyriaki Noussia, *The role of Insurance in dealing with Disasters*, in Margarida Lima Rego, Simon Grima (eds.), *Cross-Disciplinary Impacts on Insurance Law*, Springer 2024, pp. 53-73.

Euro-Balkan Law and Economics Review

Data di pubblicazione: 27 agosto 2026

ANDREA MARÍA SIGNORINO BARBAT*

Metaverse and Gaming: Towards a New Insurance Consumer

SUMMARY: 1. Introduction. – 2. The Metaverse Paradigm. – 3. Gaming at the forefront of the Metaverse. – 4. Gaming and Insurance: emerging synergies. – 5. Conclusions.

1. Introduction

The development of the metaverse and its impact on insurance markets has attracted increasing academic and professional interest in recent years. Various studies highlight that the integration of immersive technologies, virtual economies, and digital identity systems presents new challenges for regulation and user protection. Recent publications also analyze how platforms such as Roblox and Fortnite have anticipated dynamics unique to the metaverse, serving as testing grounds for emerging models of interaction and business.

* Chair, Working Group on New Technologies and Insurance, AIDA/CILA - Academic Director, International Postgraduate Program in Insurance Law, University of Montevideo – Member of the Executive Council and Presidency, AIDA International – Consultant in Insurance and Reinsurance. andreasignorino@gmail.com.

This note briefly analyzes how the convergence between the metaverse and gaming environments is transforming the dynamics of interaction with insurance consumers, the emergence of innovative distribution channels and current challenges related to user protection.

2. The Metaverse Paradigm

The concept of the metaverse refers to a persistent, three-dimensional virtual universe integrating multiple digital environments, representing the next evolution of the Internet. Users have access to job opportunities, meetings, recreational and social activities within a unified digital context. Although technology continues to improve, platforms such as Roblox and Fortnite have already implemented metaverse-like features, including virtual events, internal economies, and customizable avatars.

Blockchain technologies strengthen these spaces through cryptocurrencies for transactions, token creation, establishing digital ownership via NFTs, and secure asset storage with wallets such as Trust Wallet and MetaMask – all under the transparent governance offered by blockchain networks. These elements consolidate links between financial, virtual, and physical domains.

Interaction within these environments mainly takes place through personalized avatars, in augmented or mixed reality contexts. Notable examples include work meetings in virtual offices, blockchain-based games, and digital asset management in these spaces.

3. Gaming at the forefront of the Metaverse

The gaming sector offers the most advanced experiences within the metaverse. Events such as virtual concerts on Roblox or the record-breaking audience during Travis Scott's show in Fortnite demonstrate how gaming has gone beyond its purely entertainment function to become both a social and economic platform.

The social environment of gaming provides a significant avenue for enhancing brand visibility and direct consumer engagement. The gamer population grew substantially between 2019 and 2020, fostering communities able to share collective experiences and promote brands organically integrated into their settings.

Fundamental aspects for positioning brands in gaming include identifying target communities, analyzing players' demographic and motivational data, generating relevant content, and employing creative strategies adapted to the sector's dynamics.

The rise of eSports is redefining sports entertainment, with Spain playing a notable global role. Main sources of revenue come from sponsorships, media rights, and merchandising, while live streaming attracts massive global audiences.

Opportunities exist to integrate branded content into eSports events and influencer channels, contributing to repositioning towards technological consumers.

For example, IKEA is a case study. IKEA's strategy, aimed at the gamer audience with specialized furniture, demonstrates the potential of inbound marketing targeting young people aged 14 to 27.

Overcoming stereotypes, societal perception of video games has changed considerably. They are no longer associated exclusively with young males; nearly 50% of gamers are women and 23% are over the age of 50. Educational institutions are incorporating gaming and eSports programs,

recognizing their contribution to education, health, and team development.

4. Gaming and Insurance: emerging synergies

The interactive nature of gaming offers insurers new ways to connect with existing and potential customers. Concrete examples could include promotional campaigns linked to eSports competitions and cyber insurance policy offerings tied to online activities.

Integrating the insurance sector into gaming spaces could enable: increasing insurance awareness among younger segments; renewing institutional image through innovative projects; utilizing gamification to encourage policy subscription and risk education; and promoting responsible participation alongside disruptive innovation.

5. Conclusions

On the one hand, the study of the link between metaverse, gaming, and the insurance market reveals promising prospects for designing new communication and commercialization models. In this context, adaptability and openness to change stand out as essential skills to meet the demands of today's digital consumer.

But on the other hand, contemporary challenges of the metaverse exist that include secure verification of digital ownership, reliable value transfer between virtual domains, effective user participation in governance

processes and preservation of meaningful human connections amid increasing automation.

References

Matthew Ball, *The Metaverse: And How it Will Revolutionize Everything*, Centro de Libros PAPF, SLU, 2022;

John David N. Dionisio, William G. Burns III, Richard Gilbert, *3D Virtual Worlds and the Meta worlds and the Metaverse: Current Status and Future Possibilities*, 2013; https://digitalcommons.lmu.edu/cgi/viewcontent.cgi?article=1004&context=cs_fac

Hsuan Ting Chen, Yonghwan Kimm, *Problematic social media use: the interactive relationship between sought gratifications and privacy concerns*, in *Cyberpsychology, Behavior, and Social Networking*, 2021;

David B. Nieborg, Thomas Poell, *The platformization of cultural production: Theorizing the contingent cultural commodity*, in *New Media & Society*, 2018; https://pure.uva.nl/ws/files/31895348/The_platformization_of_cultural_production.pdf.

Euro-Balkan Law and Economics Review

Data di pubblicazione: 27 agosto 2026

GEORGIA HILL*

*Automated Car Insurance***

ABSTRACT: The UK legislature has recently introduced two pieces of legislation to respond to the growing development of automated cars: the Automated and Electric Vehicles Act 2018 ("AEVA") which clarifies the insurance position of these road vehicles, and the Automated Vehicles Act 2024 ("AV Act") which more generally addresses automated vehicle deployment and usage[1]. Specific legislative regimes for automated vehicles are needed given that a human driver is the focal point for UK conventional motor insurance whereas for automated cars, the automated system is the driver of the vehicle[2].

SUMMARY: 1. Definition of an 'automated vehicle'. – 2. Legislative regime in the UK. – 3. Legislative regimes elsewhere – is the UK approach adequate? – 4. Insurance Law meets Data Protection Law.

1. Definition of an 'automated vehicle'

* PhD Candidate, University of Exeter, UK. gh551@exeter.ac.uk.

** Thank you to Matthew Channon and two anonymous participants for their feedback on previous drafts of this document.

[1] Automated and Electric Vehicles Act 2018; Automated Vehicles Act 2024.

[2] Road Traffic Act 1988. See further Matthew Channon, Lucy McCormick and Kyriaki Nouissa, *The Law and Autonomous Vehicles* (Routledge 2019) ch3.

For AEVA 2018 and the AV Act 2024 to take effect, the definition of a 'automated vehicle' must first be satisfied. Section 3(1)(a) AV Act provides that the Secretary of State may authorise a road vehicle for use as an automated vehicle if 'the vehicle satisfies the self-driving test'[3]. The "self-driving test" is outlined in section 1(2) AV Act and is satisfied when the vehicle 'is designed or adopted with the intention that a feature of the vehicle will allow it to travel autonomously, and it is capable of doing so, by means of that feature, safely and legally[4]. Other sub-sections of section 1 AV Act help clarify this test by providing definitions and examples of 'features' and 'travelling autonomously'[5]. The Secretary of State must also consider various safety principles which are outlined in section 2 AV Act[6]. Essentially, this definition provides both a wide and a narrow scope for classifying a car as 'automated'. The definition is wide in that the car only needs *a* (one) feature to satisfy the self-driving test. Similarly, the self-driving test only needs to be satisfied by reference to intended travel on a road *in at least some circumstances*.[7]

Yet, given the prescriptiveness of elements within the self-driving test, the definition is also narrow. The requirement that the feature in question cannot be controlled or monitored for the vehicle to 'travel autonomously' coupled with the requirements for the vehicle to be travelling to an 'acceptable safety standard' will capture only the most developed and rigorous automated systems[8].

[3] AV Act 2024 s3(1).
[4] AV Act 2024 s1(2).
[5] AV Act 2024 s1(3)-(8).
[6] AV Act 2024 s2.
[7] AV Act 2024 s3(1).
[8] AV Act 2024 s1(5) and s1(7)(a).

That said, this definition is less controversial than its predecessor. Section 1(4) AEVA provides than an 'automated vehicle' is one that is listed by the Secretary of State. To be listed as automated, section 1(1) AEVA merely provides that the motor vehicle must be 'designed or adapted to be capable, in at least some circumstances or situations, of safely driving themselves'[9]. Given the legislature's desire to steer away from stipulating safety standards within automated vehicles, it is unsurprising that a new safety-neutral definition has promptly been introduced[10].

Ultimately, it will be the opinion of the Secretary of State that determines when a car's technological capabilities are sufficient for it to legally be classified as 'automated'. At the time of writing, no vehicle has formally been authorised as an 'automated vehicle' in the UK.

2 Legislative regime in the UK

When the Secretary of State does authorise a car as an 'automated vehicle', the legislative regime outlined in AEVA will take effect. When there is an accident caused by the automated vehicle driving itself, section 2(1) AEVA states that the insurer will be liable for damage[11]. The rationale behind having the insurer as the default party liable for damage stems from ensuring that the victim of the accident has a clear and accessible path for compensation.

However, the single insurer may not be the party who bears the final bill for compensating any damage or injury because section 5 AEVA provides a right for the insurer to claim against a person responsible for the

[9] AEVA 2018 s1(1) and (4).

[10] See further Channon, McCormick and Nouissa (n 3) ch3.

[11] AEVA 2018 s2(1).

accident[12]. A predicted usage of this right would be for an insurer to recover compensatory costs against a manufacturer through product liability law, claiming the software within the automated vehicle was defective[13]. If the human user fails to regain control of the car after the automated system has requested the user to take back control of the driving, that person can be found civilly liable under negligence law[14]. Similarly, if the injured party was 'to any extent' responsible for the accident or resulting damage, the insurer can pursue a claim of contributory negligence against the injured party[15].

However, responsible parties are likely to have their own insurance. For example, manufacturers may have their own product liability insurance, but may also take out new types of policies offered by the insurance sector in response to automated vehicle deployment or develop their own insurance models to offer to automated vehicle users[16]. AEVA may therefore create circular scenarios pitting the single automated vehicle insurer against other insurers, whether directly through the application of section 5 or more widely by encouraging more manufacturers to enter the insurance sector to take greater control of how the AEVA provisions are used.

That said, there is scope for the single insurer to instead rebut the application of section 2(1), without turning to section 5 AEVA. If the damage suffered was a direct result of software alterations made by the

[12] AEVA 2018 s5(1).

[13] See further Channon, McCormick and Nouissa (n 3) ch3.

[14] The insured person or 'user-in-charge' may also face criminal liability: AV Act 2024 s48(1).

[15] AEVA 2018 s3(1).

[16] Martin Ebers, 'Civil Liability for Autonomous Vehicles in Germany' (2022) 27 < https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4027594 > accessed 17 July 2025; Bryant Walker Smith, 'Automated Driving and Product Liability' (2017) Mich St L Rev 1, 53.

insured person, or a failure from the insured person to install safety-critical software updates, the insurer can exclude or limit their liability[17]. Like with conventional motor insurance, if the (automated) vehicle is not insured at the time of the accident, the owner of the vehicle is liable for damage[18].

Even if the single insurer is required to compensate, there are caveats to what the insurer needs to compensate against. For example, the insurer will not be liable for compensating damage against the automated vehicle itself[19].

Initially, the UK's legislative approach appears robust as it provides flexibility for insurers to recover compensatory costs against the responsible party while ensuring that victims have adequate access to compensation. However, considering alternative legislative regimes for automated vehicle insurance indicates that the UK legislature has failed to consider other practical implications of AEVA, particularly for (i) coherency in classifying a car as 'automated' to trigger the legislation and (ii) insurers accessing data to inform their decisions to pursue a responsible third-party.

3. Legislative regimes elsewhere – is the UK approach adequate?

The Australian National Transport Commission's work on automated vehicle liability and insurance has directly influenced UK legislation. Both jurisdictions focus on ensuring ease of access to compensation for victims and engaging with private (consumer) law for claims beyond insurers. The Commission recommends that all jurisdictional motor accident injury

[17] AEVA 2018 s4(1).
[18] AEVA 2018 s2(2).
[19] AEVA 2018 s2(3)(a).

insurance schemes should extend beyond conventional motor vehicles to cover injuries and deaths caused when automated driving systems are engaged. Automated driving system entities – the party that self-certifies the automated system, potentially the manufacturer – will cover damage, injury or loss outside motor accident injury insurance schemes through claims in consumer law[20]. The proposed Automated Vehicle Safety Law stemming from the consultations also looks to limit liability of insurers, for example by including a formal duty for the human user of the automated vehicle to respond to requests of the automated driving system and to regain control of the car without undue delay[21].

Like the UK, Germany have also amended their existing road traffic legislation to account for automated vehicles. The Act Amending the Road Traffic Act and the Compulsory Insurance Act (Autonomous Driving Act) 2021 comprehensively regulates the test specifications, registration, obligations, administrative and civil offences of automated vehicles by amending the general rules for civil liability and conventional motor vehicles[22]. A human driver will be generally found liable unless they are in a highly or fully automated vehicle at which case the roles of the

[20] National Transport Commission, 'The regulatory framework for automated vehicles in Australia' (February 2022) 61-2 < https://www.ntc.gov.au/sites/default/files/assets/files/NTC%20Policy%20Paper%20-%20regulatory%20framework%20for%20automated%20vehicles%20in%20Australia.pdf > accessed 18 June 2025.

[21] Brittany Eastman, Shay Collins, Ryan Jones, JJ Martin, Marjory Blumenthal and Karlyn Stanley, 'A Comparative Look at Various Countries' Legal Regimes Governing Automated Vehicles' (2023) JL & Mobility 1, 2-9.

[22] The Act Amending the Road Traffic Act and the Compulsory Insurance Act (Autonomous Driving Act) 2021 (Ger); Eastman et al (n 22) 30.

vehicle owner, manufacturer and technical supervisor are also considered. For example, strict liability can be imposed on the vehicle keeper[23].

Two notable differences can be made between the UK and Australia's approach as compared with Germany. First, UK legislation places the insurer of the automated vehicle as the primary liable party with a subsequent attribution of liability to a vehicle keeper or user provided that a positive cause of action is proven – whether this is through negligence law or through the specific software-based AEVA provisions. Germany however focuses on the vehicle keeper's or user's liability without any substantial acknowledgement of the role of insurers. That said, Germany have evaded the circular issue that the UK's legislation has surrounding the substitution or collation of insurers to provide compensation as a result of section 5 AEVA.

Second is the different definitions of 'automated vehicle'. Germany bases its different rebuttable presumptions on the Society of Automotive Engineers' ("SAE") scale of automation which defines six levels of driving automation: level 0 (no automation), levels 1-2 (partial automation), level 3 (conditional automation), level 4 (high automation) and level 5 (full automation)[24]. In Germany, the liability presumption is that the human driver is responsible for a level 3 vehicle whereas the human driver is sometimes liable for a level 5 vehicle[25]. Yet, the UK's definition explicitly departs from the SAE's technical definitions in favour of a more normative legal 'self-driving' test to define an automated vehicle[26]. Perhaps the UK's divergence stems from political reasons around Brexit or wider

[23]German Civil Code (BGB) § 832 Abs 1; Road Traffic Act (Straßenverkehrsgesetz) (Ger) ss 7, 18; Eastman et al (n 22) 36-8; Ebers (n 17) 7-9.

[24] See further Channon, McCormick and Nouissa (n 3) ch1; Eastman et al (n 22) 36-7.

[25] See further Eastman et al (n 22) 36-7.

[26] See further Matt Hervey and Matthew Lavy, *The Law of Artificial Intelligence* (2nd edn, Sweet & Maxwell 2024) ch17.

policy issues on defining the safety standard of automated vehicles as seen with the previous AEVA definition.

However, at EU level more widely, regulation focuses on the safety and approval of automated vehicles rather than liability and insurance regimes. As part of the type-approval process for automated vehicles as set out by the Vehicle General Safety Regulations 2018/858 and 2019/2144, specific data storage systems are mandated to accompany the automated systems within cars[27]. Data storage systems include Event Data Recorders which will 'only record and store critical crash-related parameters and information shortly before, during and immediately after a collision'[28], and Data Storage Systems for Automated Driving which record and store data more widely 'to determine the interactions between the [automated system] and the human driver'[29]. Yet, while Regulation stipulates the

[27] Regulation (EU) 2018/858 on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC (2018) OJ L 151**;** Regulation (EU) 2019/2144 on type-approval requirements for motor vehicles and their trailers, and systems, components and separate technical units intended for such vehicles, as regards their general safety and the protection of vehicle occupants and vulnerable road users, amending Regulation (EU) 2018/858 of the European Parliament and of the Council and repealing Regulations (EC) No 78/2009, (EC) No 79/2009 and (EC) No 661/2009 of the European Parliament and of the Council and Commission Regulations (EC) No 631/2009, (EU) No 406/2010, (EU) No 672/2010, (EU) No 1003/2010, (EU) No 1005/2010, (EU) No 1008/2010, (EU) No 1009/2010, (EU) No 19/2011, (EU) No 109/2011, (EU) No 458/2011, (EU) No 65/2012, (EU) No 130/2012, (EU) No 347/2012, (EU) No 351/2012, (EU) No 1230/2012 and (EU) 2015/166 (2019) OJ L 325. See further Hervey and Lavy (n 27) ch17.

[28] Regulation 2019/2144 (n 28) art 3(13).

[29] United Nations, Regulation No 157Automated Lane Keeping Systems (ALKS) (2021) E/ECE/TRANS/505/Rev.3/Add.156 [2.15] [8.1-8.6.1]; Commission Implementing Regulation (EU) 2022/1426 laying down rules for the application of Regulation (EU) 2019/2144 of the European Parliament and of the Council as regards uniform procedures and technical specifications for the type-approval of the automated driving system (ADS) of fully automated vehicles (2022) OJ L 221.

prospective data that must be recorded and stored within automated vehicles for the vehicle to be formally approved and authorised for use, little consideration is given at EU (and UK) level for the retrieval or usage of that data for insurance purposes.

Conversely, the importance of data exchange for automated vehicles is evident within France's automated vehicle legislation. The French Traffic Code and Badinter Law confirms that pre-existing road traffic liability applies to automated vehicles[30]. Unlike the UK, conventional motor insurance in France applies to the vehicle rather than to the driver. This gives the law versatility for dealing with conventional cars and automated cars simultaneously. However, to account for automated vehicles, France have supplemented their legislation to address data protection and safety concerns[31]. Ordinance 2021-442 explicitly provides for insurers to have access to an automated car's driving data to determine compensation in the event of a traffic incident[32].

4. Insurance Law meets Data Protection Law

Given the contrast in approaches to defining an automated vehicle coupled with differing liability and insurance regimes, acknowledgement of data access and usage are crucial. Like with artificial intelligence more

[30] Parlement Francais, Ordonnance n° 2021-443 du 14 avril 2021 relative au régime de responsabilité pénale applicable en cas de circulation d'un véhicule à délégation de conduite et à ses conditions d'utilisation (Ordinance No 2021-443 of 14 April 2021 relating to the criminal liability regime applicable in the event of the circulation of a vehicle with driving delegation and its conditions of use) (Fr); Eastman et al (n 22) 22-7.

[31] Eastman et al (n 22) 26.

[32] Parlement Francais, Ordonnance n° 2021-442 du 14 avril 2021 relative à l'accès aux données des véhicules(Ordinance 2021-4422021-442 of 14 April 2021 relating to access to vehicle data) (Fr) L 1514-4.

widely, vast amounts of different kinds of data are collected, produced and processed within automated vehicles[33]. Data obtained via these automated systems can provide sufficient details for a road traffic incident. Fora UK insurer, access to this data is essential for determining which sections of AEVA they can rely on – both establishing the initial application of section 2(1)'s attribution of liability to an insurer but also in the subsequent application of provisions such as section 5 for an insurer exercising their right to claim against a responsible party[34].

Here is where automated vehicle insurance law meets data protection law. The UK's General Data Protection Regulation 2016, directly taken from the EU's General Data Protection Regulation, and Data Protection Act 2018 provides an array of data rights for automated vehicle users and data obligations for data controllers (who may include manufacturers and insurers) when personal data is being processed[35]. Given the vastness of Big Data coupled with the notion that data points in large datasets are inextricably linked, almost all data within automated vehicles will be treated as personal. This means almost all data will be subject to data protection legislative regimes that aim to give a high level of protection to data and individual privacy rights rather than facilitate data access and usage. For automated car insurance law to flourish, both in the UK and beyond, the legislature must revisit the specific relationship between automated vehicle insurance and data law.

---

[33] See further Wolfgang Kerber, 'Data Governance in Connected Cars: The Problem of Access to in-Vehicle Data' (2018) 9(3) JIPITEC 310.

[34] AEVA 2018 ss2(1) and 5. See further Asif Faisal, Md Kamruzzaman, Tan Yigitcanlar and Graham Currie, 'Understanding autonomous vehicles' (2019) 12(1) J of Transport and Land Use 45, 61.

[35] Regulation (EU) 2016/679 of the European Parliament and of the Council on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (UK General Data Protection Regulation) (2016) art 4(1); Data Protection Act 2018 art 3(2). See also the Data (Use and Access) Act 2025.

References

F. Boon, *Automated Vehicle Liability in Great Britian*, in H. Steege, I. Caggiano, M. Gaeta and B. von Bodungen (eds.), *Autonomous Vehicles and Civil Liability in a Global Perspective. Data Science, Machine Intelligence and Law* (Springer 2024);

M. Channon, L. McCormick and K. Nouissa, *The Law and Autonomous Vehicles* (Routledge 2019);

J. Davey, *By Insurers, For Insurers: The UK's Liability Regime for Autonomous Vehicles*, (2020) 13(2) J Tort L 163;

B. Eastman, S. Collins, R. Jones, J. Martin, M. Blumenthal and K. Stanley, *A Comparative Look at Various Countries Legal Regimes Governing Automated Vehicles*, (2023) JL & Mobility 1;

M. Ebers, *Civil Liability for Autonomous Vehicles in Germany*, (2022) < https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4027594 > accessed 17 July 2025;

A. Faisal, M. Kamruzzaman,T. Yigitcanlar and G. Currie, *Understanding autonomous vehicles*, (2019) 12(1) J of Transport and Land Use 45;

M. Hervey and M. Lavy, *The Law of Artificial Intelligence* (2nd edn, Sweet & Maxwell 2024);

W. Kerber, *Data Governance in Connected Cars: The Problem of Access to in-Vehicle Data*, (2018) 9(3) JIPITEC 310;

J. Marson, K. Ferris and J. Dickinson, *The Automated and Electric Vehicles Act 2018 Part 1 and Beyond: A Critical Review*, (2020) 41(3) Stat LR 395;

K. Nouissa and M. Channon (eds.), *Regulation of Automated and Autonomous Transport* (Springer 2023);

N. Purtova, *The law of everything. Broad concept of personal data and future of EU data protection law*, (2018) 10(1) L Innovation & Tech 40;

BW. Smith, *Automated Driving and Product Liability*, (2017) Mich St L Rev 1;

B. Van der Sloot B and S. van Schendel, *The Boundaries of Data* (1st edn, Amsterdam University Press 2024)

S. Van Uytsel and DV. Vargas, *Autonomous Vehicles Business, Technology and Law* (1st edn, Springer 2021).

Euro-Balkan Law and Economics Review

Data di pubblicazione: 27 agosto 2026

PEGGY SHARON*

Parametric Insurance – Israeli Perspective

Parametric Insurance whereby the Insurer agrees to pay an agreed sum to the insured if an event of certain magnitude or level occurs, without proof of loss or damage to the insured, is a new mode of insurance which so far has not been used by many Israeli Insurers.

Does the lack of a requirement of loss or damage cause this arrangement not to be an insurance contract? Can the Parametric insurance be considered as an Insurance Contract under the Israeli Law?

The Israeli Insurance Contract Law, 1981 defines an insurance contract in Clause 1:

"An Insurance contract is a contract between an Insurer and an Insured which obligates the Insurer, in consideration of insurance premium, to pay insurance benefits to the beneficiary upon the occurrence of the Insured event".

The Parametric Contract of Insurance satisfies this definition.

* Adv., Levitan, Sharon & Co. Law Firm.

The Insurer undertakes to pay the Insured/the beneficiary insurance benefits upon the occurrence of an Insured Event, which is defined as an event beyond a pre-determined threshold, for example, an earthquake beyond 7.8 at the Richter scale, floods or rainfall above a certain quantity or level, within the area of the Insured Business.

But, when dealing with Property Insurance hence the article relating to this insurance under the Insurance Contract Law, provides that the duty of the Insurer towards the Insured is to indemnify the latter for damage caused to the property insured.

Article 55(a) to the Law:

"In property Insurance, the Insurer must indemnify for damage caused to the Insured or the beneficiary due to loss of or damage to the Insured property".

In indemnification insurance, the payment for the damage caused is aimed at placing the Insured or the beneficiary in the position prior to the Insured Event, hence the notion of property insurance is based on damage caused to the property and the duty to indemnify therefore.

This is specifically provided in the law in article 56(c):

"The insurance benefits will be calculated as to place the beneficiary, as far as possible, in the position in which he would have been had the event insured against not occurred".

Does the parametric insurance contradict this notion and hence cannot be considered as property insurance?

The answer is no, for two reasons:

1. Article 55(a) of the law can be stipulated against, as this article is not jus cogens, and the parties can define the Insured Event for property insurance without including the damage and/or the indemnification factors.

2. The Insurance Contract Law enables the parties to agree in advance on the quantum of indemnification – agreed value insurance, and according to article 56(d) where the parties have agreed in advance on the amount of indemnification, the insurance benefits will be as agreed, independently of the amount of the damage caused.

Traditionally, property insurance requires the occurrence of damage to the property, and imposes on the Insurer the duty to indemnify the Insured for such damage, yet the law permits other modes of property insurance which do not require proof of damage by the Insured.

Another question which arises is whether this insurance is solely gambling, in view of the speculative nature thereof, by depending on an occurrence as determined by a third-party, neither the Insured nor the Insurer. In addition, in cases where no damage actually occurred, the Insured may profit from the occurrence of such an event.

Gambling is illegal, and subject to punishment according to the Israeli Penal Law, which permits only two kinds of gambling, in sport and lottery which were specifically excluded and allowed to certain regulated entities. However, unlike gambling, the insured in parametric insurance has a business or a property which may be damaged by the occurrence which is set in the Policy as a trigger to a claim, hence the Insured has an insurable interest in such property, and is entitled to pass the risk for the damage to

an Insurer. This distinguishes the parametric insurance from mere gambling.

The index, or the parameters, which are defined in the specific policy are based on the likelihood that when these indexes or parameters, are met, damage will be caused to the property.

This is a new mode for risk management which may serve as a security net especially for farmers in agriculture risks, but not only in agricultural. The Index may be cyber-attack, server outage, or crashing internet services, as long as it is determined by an independent third party.

In Israel, we can find only two policies which are parametric based, which cover earthquakes and cloud services outages. Therefore, there is no actual experience with these insurances, and we cannot relate to faults or discrepancies in relation to the parametric insurance.

It seems that a hybrid model which combines the traditional property insurance with extensions or riders, which are based on parametric principles, can be expected to be a first step adoption of this concept.

Euro-Balkan Law and Economics Review

Data di pubblicazione: 27 agosto 2026

IRENE HERNÁNDEZ BATISTA*

Artificial Intelligence and Insurance

ABSTRACT: Digitalization is a reality. It encompasses the integration of Information and Communication Technologies (ICTs) into businesses, a process that has been ongoing for the past decades. In other words, this phenomenon didn't begin recently, but it now faces its greatest challenges due to the speed with which it's penetrating all sectors and the rapid evolution it's undergone in recent years. This sudden leap is largely due to Artificial Intelligence (AI), particularly "Deep Learning". This method of algorithm training seems remarkably precise and offers limitless possibilities, as already seen in the insurance field.

1. Current Landscape

* Head of Data Privacy at I-DE REDES ELÉCTRICAS INTELIGENTES S.A.U and Doctor of Law. Rovira i Virgili University. irenehb02@hotmail.com.

The use of AI and Big Data has led to the emergence of "Insurtech." This broad concept encompasses both insurance companies adopting these technologies within their operations and tech startups seeking to enter the insurance market – either to compete or partner – by leveraging revolutionary technology capable of analyzing vast amounts of data and delivering increasingly precise results.

Some examples can be found in insurance companies that, relying on blockchain technology, have developed systems for flight delay or cancellation insurance where, if either evento occurs, appropriate compensation is paid without the need for additional paperwork. Once the risk triggering the payment is confirmed, the payout is made automatically.

These technologies offer a wide range of opportunities for the insurance sector:

- Smart contracts that execute automatically without complex procedures once predefined conditions are met
- Robo-advisors used to communicate with clients or provide produc to recommendations
- Fraud detection systems
- Parametric insurance, useful in disaster scenarios
- Dynamic premium adjustment, tailored to the individual rather tan generic criteria likeage
- Targeted marketing strategies informed by personal profiling within databases.

All of the above are merely examples of the utilities and benefits that AI offers for this sector, but this should not lead us to overlook the problems it also creates. Particularly for legal professionals, who fase numerous challenges arising from the intersection between law and technology.

2. Primary challenge

The central issue is how to respond to these developments within the current legal framework. It's clear that practice has outpaced theory; digital evolution and legal adaptation are out of sync.

Using AI involves the massive use of data – firs tduring training, then in analyzing new input. Algorithms generate outputs through correlations, but this process is marked by opacity, which impacts transparency, intelligibility, and explainability.

In short, AI usage introduces risks to fundamental rights and freedoms. Who are the affected parties? The most prominent concerns arise in areas like personal data protection and intelectual property rights. That is, the primary stakeholders are data owners fueling the system, as well as intelectual property holders questioning the legality and reliability of the data used for training.

Conflicts have already arisen in these areas, for example, lawsuits over the use of files without permission to train chatbots; copyright infringements involving protected images; and concerns raised in Europe about major tech companies using personal data to train their algorithms. In insurance, AI usage triggers questions about core contractual elements:

- What happens to the randomness inherent in insurance when precise prediction becomes possible?
- If smart devices offer health advice that reduces the premium, what if the insured ignores these recommendations?
- Could failure to follow advice become grounds for denial of payment or reduced compensation?

- Does information asymmetry increase when insurers infer data via AI beyond what the insured provides?
- How can clients be informed of system risks and results if the algorithmis a "black box" even to its developer?
- How do control authorities coordinate efforts when responsibilities are split between AI regulation and personal data protection?

These open-ended questions remain unresolved. Current regulations appear outdated, and many safeguards may fall short given thecapabilities AI offers.

For example, Spain's Insurance Contract Act (Law 50/1980) states the insured isn't obligated to disclose information unless specifically asked. But what happens when AI enables insurers to deduce even unspoken facts? Such contradictions are increasinglycommon.

Should we create an entirely new legal framework or adapt existing law? Whichever path we choose, foundational legal principles must remain intact – they are the pillars of today's legal order. Complexity should not lead to abandoning coreprotections.

3. National Approaches

Each country's stance will be key in shaping the future. Fundamentally, this is a power struggle between innovation and legal certainty – total freedom versus regulation and oversight.

- United States: Initially considered regulation, but ultimately favors business dynamism. Innovation has been prioritized over control, with techgiants leading development largely free from government

interference. However, disparities exist between states – California, for example, has stronger privacy regulations.

- China: AI serves national interests. Tech companies must align with the regime's priorities, meaning innovation and competitiveness are tightly entwined with state control. In China, AI is at the service of the government.
- Europe: Unlike the others, the EU isn't dismissing innovation but acknowledges its risks. It aims to set boundaries and ensure transparency, governance, ethics, safety, and reliability. Yet, laws addressing this complex reality remain vague, with important áreas – such as civil liability – still undefined. Europe wants responsible AI, but many feel a false sense of security. Until regulations on personal data and AI are aligned, the focus should be on developments that don't directly involve personal data, unless there's clear legitimacy.

4. Implications for the Insurance Sector

It is difficult to determine thecurrent status of this issue with in the insurance sector. What is clear, however, is that the AI regulation has classified as high-risk those artificial intelligence systems used to assess risks and set prices in life and health insurance. Equally evident are the uncertainties stemming from the interpretation of the regulation itself, full of technical jargon that undermines the legal certainty required in any attempt at regulation.

For this reason, it may be advisable – at least initially and until the requirements of the personal data protection regulation can be

coordinated with those of the artificial intelligence regulation – to prioritize the use of AI in areas where personal data is not directly involved, unless there is clear legitimacy for its use.

5. Ethical Dimension of AI

Primarily within the European sphere, the importance of AI reliability stands out, with ethics being one of its key components. This component goes beyond mere compliance with regulations and must focus on the human being – placing people at the epicenter of development – and, therefore, be respectful of recognized rights, both those that are legally binding due to explicit mention in legislation and those that stem directly from human nature.

AI presents new challenges in the following areas:

- Human Dignity: The use of AI often requires data that comes directly from individuals and their privacy. This data forms part of a person's intimate sphere and, thus, must be protected not only by legal limits but also by natural ones inherent to being human.
- Individual Freedom: Ongoing monitoring of individuals, or even health-related recommendations used by insurers to offer policy discounts, can greatly influence personal freedom of choice – that is, autonomy and self-determination.
- Equality, Non-Discrimination, and Solidarity: Insurance is a fundamental service for individuals. When insurers have full Access to data about a person – sometimes without the individual's awareness – entire groups may be excluded from coverage. Discrimination can also arise from AI systems trained

on databases affected by biases tied to characteristics such as race or gender.

- Explicability: The complexity of these systems makes them opaque – they lack sufficient transparency and intelligibility. This can lead to monopolies of knowledge and blind trust in those who claim to interpret these algorithms or own them.

References

G. Beekman, *Computación &1nformática Hoy: Una mirada al Futuro.* Addison-Wesley. Buenos Aires, Argentina (1994).

A.B. Veiga Copo, *Seguro y tecnología, el impacto de la digitalización en el contrato de seguro*. Thomson Reuters, Civitas, 2020;

R. Illescas Ortiz, *Principios fundamentales del contrato de seguro*, RES, Nº157, 2014;

R. Battaglini, M.T. Giordano, *Blockchain e Smart Contract*, Milano, 2019;

A.B. Veiga Copo, M. Martínez Muñoz (dirs.), *Seguro de personas e inteligencia artificial*, Thomson Reuter, Civitas, 2022;

M.L. Muñoz Paredes (dir.), M Covadonga Díaz Llavona (coord..), *Digitalización y seguro*, Comares, 2024;

L. Cotino Hueso, P.S. Castellano, *Tratado sobre el reglamento de inteligencia artificial de la Unión Europea*, Aranzadi, 2024;

Grupo independiente de expertos de alto nivel sobre inteligencia artificial. Directrices éticas para una IA fiable, 2019.

Euro-Balkan Law and Economics Review

Data di pubblicazione: 27 agosto 2026

GIOVANNI LUCHENA*

RegTech

ABSTRACT: RegTech refers to the use of advanced technologies (e.g., AI, machine learning, data analytics) to support compliance, regulatory monitoring, and risk management. It aims to increase efficiency without entirely replacing human oversight, promoting a collaborative approach between technology and regulators. RegTech represents a key driver in modernizing the regulatory landscape. While it enhances compliance and supervision processes, a cautious and balanced approach is encouraged to mitigate technological risks. The coordinated support from EU institutions demonstrates its growing significance in shaping future regulatory frameworks.

* Full professor of Economic Law, Aldo Moro University of Bari.

1. Why RegTech

The evolution of RegTech represents one of the most advanced frontiers in the field of regulation through technological solutions, aimed at regulatory monitoring and legislative and regulatory compliance via automated or semi-automated processes [S. Landini, 2020, 291 ff.]. The goal is to increase efficiency and enhance the effectiveness of regulatory compliance. However, this advancement does not imply a complete delegation to technology, but rather the adoption of a collaborative approach, which can also be beneficial to regulators independently of the direct use of RegTech itself – as suggested by the definition adopted by the European Banking Authority.

For this reason, public authorities advocate for a prudent and balanced approach, aimed at preventing the potential risks associated with the use of technology.

The rapid development of RegTech responds to various needs: the increasing volume of data required from regulated entities for reporting and compliance purposes; the concurrent progress of data science; the opportunity for more efficient operators to reduce compliance costs; and the ongoing tendency of regulators to adopt IT tools to enhance the effectiveness of supervisory activities [M.F. Anaclerio, G.P. Bazzani, A. Miglietta, 2020, 117].

In short, RegTech can be defined as the use of technology to support stakeholders in regulated sectors in complying with applicable legislation, fulfilling compliance obligations, and managing risk. Improving the effectiveness of regulation remains arguably the most significant aspect, as the complexity stemming from regulatory overproduction can lead to

critical challenges for businesses – even beyond the financial and insurance sectors.

2. Forms of RegTech

The areas of application of Reg Tech are broad and multifaceted, encompassing tools such as Monitor Tech, Report Tech, Data Exchange Tech, LegalTech, and Comply Tech – each considered specific subcategories within the wider RegTech ecosystem.

Monitor Tech enables real-time monitoring of the activities of financial institutions. The volume of available data is so vast that it becomes unmanageable for any individual. In this context, technology plays a crucial role by supporting the analysis of key data relevant to both businesses and regulatory authorities. For instance, a company may use Monitor Tech to ensure that traders adhere to established risk limits, while regulators can employ it to detect potential money laundering operations conducted via home banking systems. Artificial intelligence, particularly machine learning, is playing an increasingly central role in this area, enabling continuous monitoring and significantly reducing costs [S. Landini, 2021, 433 ff.].

Report Tech refers to reporting activities directed toward supervisory authorities, including disclosures related to securities transactions, breaches of credit limits, tax reporting, risk analyses, and other regulatory requirements. This tool allows for more efficient and accurate data collection, processing, and transmission, reducing manual errors and enabling continuous oversight. Moreover, it enhances interoperability between corporate systems and those of regulatory bodies, facilitating

compliance tasks and accelerating response times to supervisory requests. Report Tech not only streamlines the management of information flows but also contributes to more timely and effective regulation, helping prevent systemic risks, money laundering, and illicit financing.

DataExchangeTech allows financial system actors to remain connected through information exchange. This approach is rooted in the theory of regulation through information and is particularly valuable to supervisory authorities in defining regulatory standards that market participants are required to comply with. The relevance of this model has grown with the rise of artificial intelligence, which has significantly enhanced the capabilities of information-based regulation.

LegalTech focuses on supporting financial institutions in the understanding and management of often complex and evolving regulatory frameworks. The use of advanced technologies such as artificial intelligence and natural language processing (NLP) makes it possible to analyze and synthesize large volumes of regulatory documents, facilitating the identification of specific obligations applicable to different operational contexts. Additionally, LegalTech automates processes such as due diligence, streamlines document management, and provides concrete assistance in verifying real-time compliance. This results in a reduced workload for legal and compliance professionals, and greater efficiency and security in regulatory compliance management.

Lastly, ComplyTech assists financial institution staff in navigating an increasingly complex regulatory environment. By integrating artificial intelligence, data analytics, and process automation, ComplyTech supports the interpretation and application of regulations, reducing the risk of errors and enhancing alignment with regulatory requirements. It also enables real-time monitoring of regulatory updates, ensuring that internal

procedures remain aligned with the latest changes. The adoption of such solutions contributes to lowering compliance costs, strengthening transparency, and promoting more effective management of regulatory and operational risks.

3. RegTech e the European regulatory authorities

The European Banking Authority (EBA) considers RegTech as one of its *priority topics*, emphasizing its central role for both financial operators and institutions themselves [EBA, 2021], in line with the principle of technological neutrality. The EBA actively promotes the adoption of innovative technologies, in accordance with Article 31 of Regulation (EU) No. 1093/2010 – which established the Authority – assigning it the task of fostering convergence among supervisory authorities, also through the Committee on Consumer Protection and Financial Innovation, with the aim of "contributing to the adoption of a common European approach towards technological innovation." Moreover, the EBA is entrusted with supporting the market entry of innovative operators and products by encouraging the exchange of information and best practices.

These objectives fall within a broader European Union strategy aimed at promoting technological development as a lever to strengthen the internal market, ina framework of cooperation and competitiveness, as established by Articles 3 of the TEU and 4 and 179 of the TFEU.

In parallel, the European Insurance and Occupational Pensions Authority (EIOPA) pays particular attention to the impact of technology in the insurance sector, with a focus on topics such as artificial intelligence, open insurance, and active support for national supervisors. Through its

Digitalisation Market Monitoring Survey, EIOPA tracks technological developments in the insurance sector, analyzing trends such as new distribution models and cybersecurity, with specific attention to parameters such as coverage levels, risk exposure, claims ratios, and policy pricing.

Special attention is given to small and medium-sized enterprises (SMEs), which are often more vulnerable to cybersecurity threats and face greater challenges in accessing advanced technological solutions. In this context, the adoption of an updated regulatory approach becomes essential to address emerging risks, such as cyber threats, and to ensure a level playing field for all market participants.

Interest in the application of RegTech within the insurance sector is growing, as highlighted in the Report on the Digitalization of the European Insurance Sector [EIOPA, 2024]. According to the data collected, among 162 reported use cases, 59% of RegTech solutions are implemented via outsourcing, while the remaining 41% are developed in-house. These tools are primarily used to combat money laundering, support risk management, and facilitate prudential reporting. Additionally, RegTech is increasingly being applied in the areas of regulatory compliance and technological supervision (SupTech).

The European Securities and Markets Authority (ESMA) also acknowledges the transformative potential of RegTech in reshaping relationships between regulators and market participants. Technologies such as Application Programming Interfaces (APIs) are streamlining the storage and management of regulatory data by market operators. At the same time, supervisory authorities are developing AI- and machine learning-based solutions to enhance market monitoring and improve fraud detection capabilities. RegTech tools not only improve the efficiency of

compliance processes for financial intermediaries but also support regulators in analyzing increasingly large and complex data sets [ESMA, 2019].

References

R. LEENES, *Framing Techno-Regulation: an exploration of State and non-State regulation by technology*, in *Legisprudence*, vol. 5, n. 2, 2012;

S. LANDINI, *Ethical Issues, Cybersecurity and Automated Vehicles,* in P. MARANO, K. NOUSSIA, (eds.), *Insurtech: A Legal and Regulatory Review*, Cham, 2020;

M.F. ANACLERIO, G.P. BAZZANI, A. MIGLIETTA, *Con il RegTech banche più efficienti e compliance più efficace*, in *Corporate Governance and Research & Deveolpment Studies*, 2, 2020;

S. LANDINI, *Insurtech: innovation in production, distribution, governance, and supervision in the insurance market,* in *Assicurazioni*, n. 3, 2021;

J. MCCARTHY, *The Regulation of RegTech and SupTech in finance: ensuring consistency in principle and in practice*, in *Journal of Financial Regulation and Compliance,* vol. 31, n. 2, 2023;

B. CHAROENWONG, Z.T. KOWALESKI, A. KWAN, A.G. SUTHERLAND, *RegTech: Technology-driven compliance and its effects on profitability, operations, and market structure,* in *Journal of Financial Economics*, n. 154, 2024;

EBA, *Regtech in the EU Financial Sector*, June 2021;

EIOPA, *Report on the Digitalisation of the European Insurance Sector*, Eiopa-BoS-24/139, 30th April 2024;

ESMA, *RegTech and SupTech – change for markets and Authorities*, in *EsmaReport on Trend , Risks and Vulnerabilities*, n. 1, 2019.

Euro-Balkan Law and Economics Review

Data di pubblicazione: 27 agosto 2026

JUAN BATALLER GRAU*

Parametric coverage contracts and their legal nature

SUMMARY: 1. Technological Innovation and Blockchain application. – 2. Application in the insurance market. – 3. Legal classification: not a contract of insurance. – 4. Legality and regulatory framework. – 5. Practical implication and coexistence with traditional insurance. – 6. Conclusion.

1. Technological Innovation and Blockchain application

Blockchain technology, though relatively recent, has gained significant traction, particularly within the financial sector. It functions as a decentralised and encrypted digital ledger, where operations are validated by multiple nodes and recorded in blocks. One of its notable features is the ability to execute self-executing algorithms – commonly referred to as "smart contracts", though this term is contested due to its misleading connotation of contractual and intelligent nature –. These algorithms operate autonomously, executing predefined outcomes upon the occurrence of parametrised events, verified by an agreed "oracle".

* Catedrático de Derecho mercantil, Universitat de València.

2. Application in the insurance market

A prominent application of blockchain in insurance is the development of so-called parametric insurance products. These involve the automatic payment of a predetermined sum to the insured upon the fulfilment of a specific condition, without requiring proof of damage. Examples include flight delay coverage and agricultural risk protection, where the triggering event (e.g., delay or rainfall) is verified by an external data source (the oracle), and the payment is executed automatically.

This model diverges significantly from traditional insurance practices. Notably:

- The insured does not declare the event; the algorithm retrieves data directly.
- No additional information is requested from the insured.
- The insurer forfeits the deliberation period typically used to assess claims.
- Payment is made without verifying actual damage.
- Thus, the fulfilment of the condition alone triggers payment, bypassing the conventional claims process.

3. Legal classification: not a contract of insurance

Despite superficial similarities, parametric coverage contracts should not be classified as insurance contracts. According to Article 1 of the Spanish Insurance Contract Act (Ley 50/1980), a contract must meet specific

criteria to be considered insurance. While parametric contracts may involve risk and premium payment, they lack two essential elements: the insured interest and the requirement of damage.

In traditional damage insurance, indemnity is contingent upon the occurrence and verification of damage. Parametric contracts, however, execute payment based solely on the fulfilment of a condition, without assessing whether damage has occurred. This absence of damage undermines the indemnity principle central to insurance law.

Attempts to reconcile this model with insurance law—such as invoking estimated value clauses or reclassifying it as a sum insurance—are insufficient. Even in sum insurance, liquidation of the event remains necessary. Furthermore, parametric contracts do not accommodate the verification of contractual duties, such as risk disclosure or salvage obligations, which are integral to insurance law.

Consequently, I propose the term "parametric coverage contract" to more accurately reflect its legal nature.

4. Legality and regulatory framework

The exclusion of parametric coverage contracts from the definition of insurance does not imply their illegality. Commercial law permits the existence of atypical contracts, and Spanish legislation recognises that insurance entities may engage in activities beyond traditional insurance.

These contracts can be actuarially calculated and reinsured, and their legal framework should be based on freedom of contract, subject to general consumer protection laws and distance contracting regulations. Only

where analogical reasoning is applicable might certain provisions of insurance law be extended.

Importantly, parametric coverage contracts are not equivalent to gambling. They represent a new, lawful, aleatory contract type.

5. Practical implication and coexistence with traditional insurance

My interest in this topic is partly personal, stemming from the catastrophic flooding in Valencia on 29 October 2024. Parametric coverage could have provided fast payments within 24-48 hours, addressing urgent needs often excluded from standard insurance policies.

A key question arises: should parametric coverage be limited to the deductible under the Consorcio de Compensación de Seguros, or can it exceed this amount? If classified as insurance, the indemnity principle would restrict payment to the value of the insured interest. However, recognising parametric coverage as a distinct contract allows for cumulative compensation, enabling clients to receive both parametric payments and full indemnity under traditional insurance.

This classification also exempts parametric contracts from proportionality rules and subrogation rights, as no damage is covered. Duties associated with claims – such as declaration and salvage – are similarly irrelevant due to the automated nature of the contract.

6. Conclusion

Self-executing algorithms introduce a novel contractual model that challenges traditional insurance frameworks. This paper advocates for the exclusion of parametric coverage contracts from the definition of insurance, highlighting the benefits of immediacy and compatibility with existing insurance mechanisms. The absence of damage as a requisite element is critical, and the proposed classification facilitates broader market integration and regulatory clearness.