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INSURANCE MARKET RESPONSE TO CHALLENGES IMPOSED BY ARTIFICIAL INTELLIGENCE**

Summary

The author analyzes the challenges that the use of artificial intelligence poses to legal professionals and legal science concerning the regulation of new modern technologies and indemnification of damage arising from their usage. As the majority of the lay public believes that introducing mandatory liability insurance will resolve all emerging challenges related to the use of artificial intelligence, the central part of the paper is dedicated to researching realistic and legally grounded possibilities of the insurance market in this regard. The fundamental dilemma faced by insurance companies is whether their existing insurance policies are sufficient to provide protection against damages caused by the use of artificial intelligence or whether it is necessary to develop and offer new specialized policies. In this context, the paper also analyzes the newly adopted EU Artificial Intelligence Act and the proposed Directive on Liability for Artificial Intelligence, as they contain clear indications of the requirements that will be imposed on the insurance market.

Keywords: *Insurance, Artificial Intelligence, Damage, Indemnification, Tort Liability, Insurance Policy.*

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1. Introduction

Nowadays there is no area of life in which the artificial intelligence (hereinafter, AI) is something unknown. White Paper on Artificial Intelligence drafted by the European Commission recognizes the significance of the AI for the improving of healthcare, national security, industry, production, farming.[1] Despite all the recognized advantages, its usage is recognized as a source of many new fears and risks that pose many challenges on personal, local and global level. Just to name some – bias, discrimination,[2] data protection, endangered cyber security, racism,[3] privacy, etc.[4] At the same time, companies feel themselves obliged to implement AI entities even though they are completely unfamiliar with them.[5]

Artificial intelligence posed a puzzle for lawyers and academia all over the world. On one side, they are still not sure how they could benefit from the AI in their area of work, while on the other side, all eyes are on them expecting to find appropriate legal solutions and regulations for the usage of AI in all other areas. The reason for such high expectations from legal scholars and legislators is that an atmosphere of fear prevailed due to the great possibility of AI causing damage to both everyday life and business.[6] Damages may vary

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[1] European Commission, White Paper on Artificial Intelligence: A European approach to excellence and trust, Brussels, 19. 02. 2020, COM(2020) 65 final.

[2] M. Glintić, "The Impact of Digitalization on Insurance Contract and Insured's Rights", in: *The Dynamics of Modern Legal Order* (ed. Duško Čelić), University of Priština, Faculty of law, Institute of Criminological and Sociological Research, Institute of comparative law, Kosovska Mitrovica, Belgrade 2024, 109.

[3] Tay, a chatbot from Microsoft, was supposed to learn to use Twitter by interacting with other users. After a short time, due to the targeted influence of other Twitter users, she posted racist, even Nazi tweets. If she had insulted other users on Twitter and if they would demand compensation for defamation, it would be unclear who would be held responsible. Microsoft as a company used Tay, but had neither foreseen nor intended the development towards racist tweets.

[4] R. Rodrigues, "Legal and Human Rights issues of AI: Gaps, Challenges and Vulnerabilities", *Journal of Responsible Technology* 4/2020, available at: https://www.sciencedirect.com/science/article/pii/S2666659620300056, last visited 15. 08. 2024. Also, the 2023 Stanford AI Index reported a 2600% growth in the number of AI-related incidents and controversies since 2012. Stanford University, *The AI index report: Measuring trends in artificial intelligence*, last visited 01. 08. 2024.

[5] B. Lin, "Is your AI model going off the rails? There may be an insurance policy for that," *Mint*, October 2, 2023.

[6] Some surveys show that this fear is recognized as the most present one among

from property damage to economic losses, personal injury and immaterial harm. Also, the AI features like its autonomy and unpredictability, possibility of self-learning raise many questions regarding liability stemming from AI.

The level of always growing independence of AI, that still does not fulfill the preconditions for acquiring legal personality like natural and legal persons, leads to a question how one can protect oneself from this kind of damage and to whom the request for indemnification can be submitted. At the moment discussion takes place among scholars and practitioners on whether the tort liability for the damage caused by AI should be defined as vicarious, strict or fault-based liability, including product liability.[7] From the current theoretical stand of point it is imaginable and possible to use the concepts of the aforementioned liabilities to explain the liability for the AI-caused and related damage. It is still questionable whether the existing system of tort law will be able to provide all necessary responses since the AI system can be extremely complex, involving number of companies and individuals participating in the development, manufacturing and operation of AI systems.[8] The result of scholars' and practitioners' attempts might be that the existing rules of tort liability may not be sufficient and effective enough to cover all the AI-related damages. The current ideas of civil tort liability are still applicable since the AI systems still require the involvement and participation of true legal and natural persons. The real challenge will appear the moment when damage can be caused by intelligent entities that are completely independent from any real legal or natural persons. It will not be clear who ultimately bears the responsibility for causing the damage. Will the presumption that a person causing damage acted in the name and on the behalf of a person liable for causing damage still be acceptable or will the new concept of liability be required?[9]

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professionals. World Economic Forum, *The global risks report 2024, 19ᵗʰ edition*. Also, P. Singh, "'AI can pose risk of extinction as great as pandemic or nuclear war': Top experts issue a 22-word warning," *Business Today*, May 30, 2023.

[7]   Y. Burylo, "Civil Liability for Damage Caused by Artificial Intelligence: The Modern European Approach", *Civil Law and Process* 6/2022, 6–7. See also, K. Jovičić, „Proklamovano ili realno ostvarivo načelo pune kompenzacije štete? - Upoređivanje ugovorne i vanugovorne štete", in: *Prouzrokovanje štete, naknada štete i osiguranje* (eds. Vladimir Čolović, Zdravko Petrović, Dragan Obradović), Insitut za uporedno pravo, Udruženje za odštetno pravo, Pravosudna akademija, Valjevo 2023, 279–281.

[8]   Y. Burlo, 10.

[9]   The legal capacity of so-called hybrids consisting of humans and digital agents is also being discussed. C. Kemper, "Rechtspersönlichkeit für Kunstliche Intelligenz",

2. Can Insurance Solve All the Problems?

Different concepts of liability will certainly be further developed in the future and it still remains to be seen what the definite form of the liability will be. At the moment and taking into account the legislative initiatives of the European Commission and European Parliament on the EU AI Liability Directive[10] and the provisions of the newly adopted AI Act[11] there are clear signs that there will be several forms of civil liability for the AI-caused damage because different AI systems pose different levels of risk. AI Act seeks to address certain risks stemming from the use of AI which are mostly related to how their algorithms work,[12] and sets out four risk levels for AI systems: unacceptable, high, low or minimal, which all require different requirements and regulations.[13] Those AI systems to which high risk is immanent cannot be legal treated in the same manner as AI systems that are not to be classified as high-risk. That means that, at least at the European level, the concept of civil liability for the damage caused by AI will depend on and will be defined by the risk assessment (and risk management).[14] Terms risk assessment and risk management are deeply rooted in insurance law and insurance industry and for that reason it is no wonder that it is expected that insurance industry would offer magic wand that would solve or contribute to solving of many problems stemming from the usage of AI. It is observed as a certain and reliable supplement to the civil liability that will be a part of any policy response as a regulatory mechanism.[15] What is certain is that

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Cognitio 1/2018, 10.

[10] Proposal for a Directive of The European Parliament and of The Council on Adapting Non-Contractual Civil Liability Rules to Artificial Intelligence (AI Liability Directive), COM/2022/496 Final.

In September 2022, the EU Commission tabled a proposal for an AI Liability Directive. In March 2024, several months before the adoption of AI Act, European Parliament adopted its position on AI Liability Directive. Since then, the legislative procedure on this act has stopped.

[11] Artificial Intelligence Act (Regulation (EU) 2024/1689), *Official Journal of 13 June 2024* (hereinafter, AI Act),

[12] T. Samman, B. de Vanssay, *What to Take away from the European Law on Artificial Intelligence*, Schuman Paper No. 757, 16th of July 2024, Fondation Robert Schuman, 1.

[13] 5.2.2 of AI Act.

[14] Risk is recognized as business dedicated to risk management, O. Ben-Shahar, K. Logue, "Outsourcing Regulation: How Insurance Reduces Moral Hazard"*, Michigan Law Review* 2/2012, 197, 199.

[15] A. Lior, "Insuring AI: The Role of Insurance in Artificial Intelligence Regulation", *Harward Journal of Law and Technology* 2/2022, 467.

mandatory liability insurance is perceived as an answer to all issues, especially for all businesses using AI systems because there is a great possibility that the damage will occur and that they will be faced with damage claims, which is not a legit expectation.

Even though the pure existence of insurance does not eliminate someone's liability for the caused damage,[16] insurance policy has always been regarded as a mechanism to channel the behavior of the policy holder and the insured and to reduce the risk. This is to be the case because maintaining the validity of the policy and realization of rights from an insurance contract requires certain behavior from these persons.[17] Irrespective of the future development of AI-related liability policies, business insured will have to adapt their way of doing business in order to be entitled to the sum insured from an insurance contract. Despite the fact that new technologies set new standards of doing business and their behavior, there is no possibility that insurers will set aside standards as "reasonable person"[18] that still will have to be fulfilled in order to be eligible to receive the damage compensation. This preventive role of insurance will decrease the number of AI-related damages. Through its mechanisms, insurance industry provides sense of security for the whole process of accepting and integrating AI systems through mitigating the arising AI-related damages.

Unpredictability and uncertainty are an integral part of insurance industry and for that reason it isn't surprising that insurance is expected to provide a response to the emerging new technologies. It is estimated that the issues with AI represent one of the biggest opportunities for a development and financial gain of insurance industry, which by the 2030s should be several billion dollars in annual AI insurance premiums.[19]

At this very moment when it is still questionable how an issue of liability for AI-related damages will be solved, insurance is regarded as an instrument capable of bypassing this lack of a legal solution. Especially since the insurance industry already had to cope with some dangerous technologies to which the answer was (mandatory) insurance. At the same time those using AI technologies that do not require compulsory insurance

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[16] M. Glintić, *Kumulacija prava na osiguranu sumu i prava na naknadu štete kod osiguranja lica*, Institut za uporedno pravo, Beograd 2022, 6.

[17] O. Ben-Shahar, K. Logue, 197, 199.

[18] K. Jovičić, S. Vukadinović, „Ugovorna odgovornost – pravni režim u uporednom pravu", *Časopis za društvenu teoriju i praksu* 2/2018, 650–653.

[19] https://www2.deloitte.com/xe/en/insights/industry/financial-services/financial-services-industry-predictions.html#innovation-and-growth, last visited 25. 7. 2024.

would aspire to conclude insurance contract to provide additional protection from AI risks.[20]

The question for the insurance industry and legal theory is whether the current insurance system is wide and flexible enough and prepared to cover the damages related to the usage of the new technologies or the completely new policies and concept of insurance are required in order to provide preventive and compensatory role of insurance. Is modern and traditional insurance ready to offer policies covering AI-caused damages?[21] Will it be necessary to create new policies or the existing ones will be adjusted to new and artificial forms of free will or consciousness?[22]

3. Responses from Insurance Industry

Looking at the insurance industry and expecting the solution is not something that came with the possibility of AI-caused damages. On the EU level for the last couple of years the legislator has been dedicated to finding a suitable insurance scheme as a part of rules of civil law for robotics. In 2017 the European Parliament published a resolution which in article 59 proposed, among other things, compulsory insurance scheme for AI systems accompanied by newly established compensation fund.[23] The main question and challenge ahead of insurance industry and academia are whether the current

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[20]   J. Rappaport, "How Private Insurers Regulate Public Police", *Harvard Law Review* 6/2017, 1539, 1553.

[21]   A. Bertolini, G. Aiello, "Robot Companions: A Legal and Ethical Analysis", *The Information Society* 3/2018, 130, 135.

[22]   J. Rappaport, 1539, 1553.

[23]   European Parliament Resolution of 16 February 2017 with Recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)). However, nowadays many voices have been risen against these kinds of funds and that criticism even ended up in the AI Liability Directive "Believes that a compensation mechanism at Union level, funded with public money, is not the right way to fill potential insurance gaps." Preamble of the Proposal of AI Liability Directive, par. 25. The only exception should be allowed in following cases: "In exceptional cases, such as an event incurring collective damages, in which the compensation significantly exceeds the maximum amounts set out in this Regulation, Member States should be encouraged to set up a special compensation fund, for a limited period of time, that addresses the specific needs of those cases. Special compensation funds could also be set up to cover those exceptional cases in which an AI-system, which is not yet classified as high-risk AI-system and thus, is not yet insured, causes harm or damage." Preamble of the Proposal of AI Liability Directive, par. 22.

insurance system can be applied on the new technologies-related schemes, whether they are flexible enough and whether the insurers have the knowledge and time to develop and implement the new policies.

3.1. Arguments for Relying on the Existing Insurance Infrastructure – We Already Have It All!

The fact that the AI systems are characterized by the fast-paced development makes it highly questionable whether the industry can keep up the pace and offer the new policy every time the new technology appears. It is far more reasonable and practical to adjust the existing insurance schemes and infrastructure.[24] Taking into account some of the principles of the new technologies and its largely substitutive principle it is likely that most of the activities performed by the AI systems and possible damages stemming from them are already covered by the existing damage compensating policies.[25] Despite the everyday development in AI sector, in the terms of insurability, one may say there are no new categories of insurable risk.[26] New technology does not have to correspond with the emerge of a new risk that is completely unknown to the insurer and that requires new risk pool and the whole process of underwriting. That is definitely a current situation which can evolve with time with a further future technological development. Those scenarios involving new capabilities of AI systems that were not intentionally developed would require new insurance infrastructure that would be in accordance with new vulnerabilities. Currently only the existing, already known and familiar risks are manifested, which means the consequences of the risks realization still are bodily injury, financial loss, physical damage, which are all well-known risks already covered by different insurance policies. In the terms of insurability there are no surprises.

For example, AI risks may manifest in financial loss to the business that is covered a traditional D&O insurance. This insurance can be also appropriate in those cases when directors and officers have used AI in decision-making processes, which could lead to the breach of duty or mismanagement.

Professional indemnity insurance will definitely be used providing policyholders with a protection from AI systems that will be used for service

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[24]   A. Lior, 473.

[25]   J. M. Balkin, "The Path of Robotics Law", *California Law Review – The Circuit* 6/2015.

[26]   J. Holsboer, "Insurability and Uninsurability: An Introduction", *The Geneva Papers on Risk and Insurance. Issues and Practice* 77/1995, 407–413.

providing or in the event of breach of any regulation. Product liability insurance could easily be activated in cases when a damage is caused to the consumer by the product that is powered by AI. Property Damage and Business Interruption insurance will be relevant in the event that AI causes property damage and consequential business interruption.[27]

There is a long path ahead of insurers that will have to investigate and establish in which way their potential policyholders use AI systems and how precautious they are. Finding an appropriate solution requires a cooperation with policyholders, both natural and legal persons that will have to disclose the information that they are using AI systems,[28] which is all in line with the demand of transparency from AI Act.[29] The current knowledge does not indicate that some new sorts of damage will be caused by the usage of AI.[30] Apart from that, voices from insurance industry suggest that there will be shifting of responsibility, especially to product liability, which is in line with the new EU regulation on product liability framework that includes digital and AI products.[31]

Insurers worldwide tend to establish the existing cover gaps in order to define if the new insurance is necessary or not. Back in the past when the insurance policies were drafted there were no sign of AI systems or other forms of new technologies which does not mean that they don't leave enough room for interpretation that will allow insurance coverage for AI-related damages. Task ahead of the insurers will also be to potentially draft a new policy for AI-related damage, but only if they establish that the existing policies or their combination are not sufficient and that they are not up to standard with regulatory changes. Future development of AI systems will make them be more and more in usage which would result with the emergence of new damages that are completely unfamiliar in this very moment.

For now, there were no concrete steps undertaken by insurers at the EU or national level, in sense that they still haven't updated their policies by

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[27] An example would be if an AI-powered thermostat malfunctions and causes a fire in a factory.

[28] For more information on duty to disclose see N. Petrović Tomić, M. Glintić, "The Hybridization of The Regulatory Framework of Insurance Contract Law: Elements of a New Setting", *Annals of the Faculty of Law in Belgrade* 2/2024, 231–232.

[29] Preamble of AI Act, par. 5.2.4.

[30] A. Lior, 479.

[31] European Commission published a proposal for a new Directive on Liability of Defective Products in September 2022. The Parliament confirmed its negotiating position in October 2023, while the Council adopted its negotiating mandate in June 2023. The Parliament and the Council are now working towards a compromise text.

excluding or limiting their scope in regard of AI-related damages. This might change if large claims appear or if the sense of legal uncertainty requires it, which still is not the case.[32]

Finally, big advantage of using the current insurance system is its possibility to cope with all the possible disadvantages of insurance policies for AI caused damage because insurance industry is used to appearance of new technologies[33] and is even capable of using the AI entities themselves to set premiums accordingly while precisely defining who should be obliged to buy a liability insurance policy. This challenge makes it possible for insurance industry to react accordingly to the high level of unpredictability[34] and lack of possibility to explain the process of decision making within AI systems, that leads undisputably to issues when establishing a legal nexus between damage and liable party.[35]

3.2. Arguments against Insurance as a Response to AI Caused Damage

The main argument that has always been triggered in order to show inadequacy of insurance infrastructure in this matter is the problem of moral hazard, a phenomenon always accompanying duo of insurance and new technologies. Under the concept of moral hazard, one understands lack of motivation of insureds to prevent the damage due to awareness of insurance coverage that will also exclude their liability.[36] When it comes to AI entities, the

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[32] Similar issues happened during the COVID pandemic when many insurers didn't want to cover damage caused by the virus, even though it hasn't been explicitly excluded risk, M. Glintić, „Pokriće po osnovu ugovora o osiguranju prekida rada tokom pandemije kovida 19", in: *Pandemija Kovida 19: pravni izazovi i odgovori* (ur. Vladimir Đurić, Mirjana Glintić), Institut za uporedno pravo, Beograd 2021, 143–154.

[33] Fire insurance and liability insurance have been developed as an answer to the industry revolution and the accompanying risks. K. Abraham, "Liability Insurance and Accident Prevention: The Evolution of an Idea", *Maryland Law Review* 1/2005, 573, 580.

[34] R. Yampolskiy, "Unpredictability of AI: On the Impossibility of Accurately Predicting All Actions of a Smarter Agent", *Journal of Artificial Intelligence and Consciousness* 1/2020, 109.

[35] M. Scherer, "Regulating Artificial Intelligence Systems: Risks, Challenges, Competencies, and Strategies", *Harvard Journal of Law and Technology* 2/2016, 353, 363.

[36] V. Njegomir, B. Marović, „Informaciona asimetrija u osiguranju: negativna selekcija, moralni i hazard morala", *Osiguranje i naknada štete* (ed. Zdravko Petrović), Zlatibor 2013, 67–77.

risk of moral hazard on the insured's side is even higher due to higher level of unpredictability compared to other more traditional insurances. Additional problem represents the fact that insurers are still not sure what risks will be excluded from the insurance coverage which leaves insureds with more space to test the boundaries of insurance coverage. Even though this shortcoming is obvious, it may represent the biggest opportunity for the further secure development of AI technologies that stems and will stem from the potential liable persons' wish to limit the scope of their liability. Financial security providers, such as insurance companies, differentiate risk by imposing conditions on the liable party to obtain financial security. This is done exactly to control moral hazard risks.

When reading different insurance policies, it is to be noticed that insurers still haven't excluded the risk of AI even though it has been used widely. Is it because the probability of the AI caused damage cannot be actuarially calculated at all?[37] Or because this kind of risk is manageable according to the existing data, but insurers still wait for the additional information on the required reserves, height of premiums and solvency requirements before putting their final decision on AI risks out there?

The main task for the insurers in the context of AI will be how they will do the risk pooling in order to enable sustainable business and development. That shouldn't cause problems in the areas where large insurance pools already exist, like auto insurance, professional liability insurance because insurers will be able to establish and keep the balance between AI related risks and non-AI risks.[38] It is not even imaginable that all the AI risks will end up in the same pool because the variety of possible damages is not unique. "The pre-existing categories of specialized insurance policies allow insurers to issue policies to AI users, manufacturers, or whoever is obligated or desires to purchase this type of hedging within their field of expertise."[39]

Since the insurers haven't excluded any of damages caused by AI entities, those policyholders who have other policies will request the indemnification from their insurers, relying their right on indemnification on their existing policies. Further evolution of coverage of AI caused damages will probably request additional premiums for the coverage of these damages. After collecting all the necessary information, there is always a possibility

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[37] The reasons for that can be numerous, starting from the fact they don't happen too often which enables insurers to discover the exact pattern in their occurrence. For that reason, insurers decide to exclude risks like war, terrorism, etc.

[38] A. Lior, 507.

[39] *Ibidem*., 507.

that insurers will develop and offer a specialized AI insurance policy that would at certain point overlap with "traditional" policies till the point these damages will be covered exclusively by AI specialized policies while representing exclusion according to traditional policies.

4. Which Policy Is an Adequate One?

Another question standing in front of the insurance industry is what kind of insurance policy would offer an adequate insurance coverage for AI caused damage – first-party or third-party policy? Difference between two depends on who is a policyholder and to whom the insured sum is provided. Third-party financial security covers the risk of having to compensate a third party for damages incurred due to liability. That is referred to as third-party cover because the potential victim does not directly seek financial insurance; rather, financial cover is provided in the event that someone is liable to cover the loss incurred by a third party (the victim).[40] The primary reason for establishing financial protection for third-party liability is to mitigate the risk of insolvency for parties responsible for AI-related risks.

What is sure is that a lot is expected from liability insurance policy that would have to be bought by AI manufacturers or the users.[41] However, even if some will be obliged to conclude liability insurance contracts, that doesn't prevent consumers to buy first-party insurance policies as a form of additional protection.

Some actions by AI manufacturers show that they want to be seen as responsible actors on the market, despite of all the disadvantages of AI systems. Companies, such as Tesla and Volvo already offer in-house insurance for their autonomous vehicles for all the damage caused by them.[42] In this model the burden of liability is upon the manufacturer and not the operator or even the owner of the vehicle.[43] At the EU level different points of view

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[40] M. Faure, S. Li, "Artificial Intelligence and (Compulsory) Insurance", *Journal of European Tort Law* 1/2022, 7.

[41] It is argued that is economically undesirable that users of AI are obliged to conclude liability insurance contracts, which is the case with cyber insurance where the software producers are not to one obliged to conclude the contracts on insurance.

[42] K. Korosec, *Volvo CEO: We Will Accept All Liability When Our Cars Are in Autonomous Mode,* http://fortune.com/2015/10/07/volvoliability-self-driving-cars/, last visited 16. 08. 2024.

[43] More precisely, Tesla acts as an insurer when selling its autonomous vehicles in which insurance policy is already built in. F. Lambert, *Tesla (TSLA) Is About to Launch*

have been taken regarding the appropriate insurance scheme for AI caused damages.[44] Despite the differences in approaches, the main idea is to establish the main insurance infrastructure (current or the new one) while all the other models would be an addition to it.[45]

4.1. Proposition from the EU Legislator

The main document on the EU level that concerns the role of insurance in regulation and protection from the AI linked damage, AI Liability Directive, has an idea to enable the adjustment of non-contractual civil liabilities to the usage of AI. This idea has been mainly inspired by the fact that fault-based liability rules are not applicable on AI caused damages since it can and will be almost impossible to identify a liable person and his wrongful action.[46] In order to avoid legal uncertainty that could be a result of adaption of existing rules to AI caused damages, legislator motivation was to purpose a legislative act that would be an addition to AI Act in terms of rules on liability and forms of financial security. For that reason, AI Liability Directive relies on the risk classification idea and purposes the liability rules accordingly. Also, the Directive recognizes the necessity of an adequate insurance scheme that would provide the users with the feeling of security since the AI caused damage would be covered by insurers.[47] It is however pretty unique that the European legislator has decided to limit financial security on insurance only, on one hand. When other international legislative acts are taken into account, the necessity of providing financial security is usually defined

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Its In-House Insurance Program in More States, http://www.electrek.co/2021/03/22/tesla-tslalaunch-in-house-insurance-program-more-states/, last visited 16. 08. 2024. This idea was a basis for one more model called MER defined as "manufacturer-financed, strict responsibility bodily-injury compensation system, administered by a fund created through assessments levied on HAV [high autonomous vehicles] manufacturers." See K. Abraham, R. Rabin, "Automated Vehicles and Manufacturer Responsibility for Accidents: A New Legal Regime for a New Era"*, Virginia Law Review* 1/2019, 127.

[44] F. Patti, "The European Road to Autonomous Vehicles"*, Fordham International Law Journal* 43/2019, 129–131.

[45] One of the ideas was to establish a compensation fund on EU level to which programmers, manufacturers, owners and users would contribute, which would provide them with the benefit of limited liability. Section 59(c) of the Report with Recommendations to the Commission on Civil Law on Robotics

[46] K. Jovičić, S. Vukadinović, 650–653.

[47] Preamble of the Proposal of AI Liability Directive.

in that manner that solvency guarantee is required without limiting it just to one form of financial security.[48] On the other hand, if one examines the way in which mandatory financial security is regulated, for example in the international conventions that have introduced mandatory financial security, it is striking that the duty to provide financial security is usually channeled to one particular actor who controls the activity, which is also the case within the proposed AI Liability Directive.

4.2. Mandatory Insurance for High-Risk AI Systems

Idea that insurance can be a key instrument for regulating AI caused damage is not a new idea that occurred in the 21st century. Model of "Turing Registry" dates back to 1996[49] and was developed by Curtis Karnow whose idea was that only registered AI systems could be covered by insurance policies. The premiums would be paid by programmers that would be obliged to obtain Turing certificate, that would be a way to secure protection from the further usage of AI entities.[50] Even though this idea has its shortcomings (especially in the terms of capacity to run such broad registry that would comply all AI entities and the problem of liable person),[51] the main idea in accordance with which "higher the risk stemming from AI, higher the premium" is the idea European legislator has in mind when purposing legal solutions nowadays.

AI Liability Directive proposes that all operators of high-risk AI-systems[52] listed in the Annex to the proposed Regulation must hold liability insurance which shouldn't be requiring premiums that are too expensive even though the whole idea is followed by the feeling of uncertainty and is *pro*

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[48]   International regimes on nuclear liability provide a duty for the operator to maintain insurance or other financial security up to the cap of its liability. Other international conventions do not specify the type of financial security to be provided or refer broadly to 'insurance, bonds or other financial guarantees including financial mechanisms providing compensation in the event of insolvency', stated according to M. Faure, S. Li, 14.

[49]   A. Lior, 487.

[50]   G. Marchant, D. Sylvester, K. Abbott, **"**A New Soft Law Approach to Nanotechnology Oversight: A Voluntary Product Certification Scheme", *UCLA Journal of Environmental Law and Policy* 1/2010, 146–152.

[51]   Numerous other problems have been recognized within this model, including the general nature of this Registry that wouldn't be taken into account the differences between AI entities, which makes the whole model unattractive to insurers. *Ibid.*

[52]   Article 4 of the proposed AI Liability Directive establishes operators of high-risk AI systems as the ones responsible of concluding contract on mandatory liability insurance.

futuro oriented.[53] Even though the idea of introducing mandatory insurance[54] sounds appealing and as a quick solution to all problems, it will be prescribed only for high-risk AI systems.[55]

In accordance with AI Liability Directive High risk AI systems require from the frontend operator to conclude a contract on mandatory liability insurance, while the backend operator is responsible for ensuring that the services of the AI high-risk system are covered by business or product liability insurance.[56] Since this Directive aims at the standard of minimum harmonization, it also provides with the following rule: If compulsory insurance regimes of the frontend or backend operator already in force pursuant to other Union or national law or existing voluntary corporate insurance funds are considered to cover the operation of the AI-system or the provided service, the obligation to take out insurance for the AI-system or the provided service pursuant to this Regulation shall be deemed fulfilled, as long as the relevant existing compulsory insurance or the voluntary corporate insurance funds cover the amounts and the extent of compensation provided for in Articles 5 and 6 of this Regulation.[57]

The duty defined this way sets duty not only on the operators of high-risk AI-systems, but also on the European Commission. The Commission

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[53] Preamble of the Proposal of AI Liability Directive, par. 24.

[54] Compare to G. Borges, "New Liability Concepts: The Potential of Insurance and Compensation Funds", in: *Liability for Artificial Intelligence and the Internet of Things* (eds. Sebastian Lohsse, Reiner Schulze, Dirk Staudenmayer), Nomos, Baden Baden 2019, 159–163.

[55] Some of the examples of high-risk AI systems from the Anex VI of AI Act are Essential private and public services (e.g. financial institutions using credit scoring models that could deny citizens the opportunity to obtain a loan), employment, management of workers and access to self-employment (e.g. CV-sorting software for recruitment procedures), critical infrastructures (e.g. transport) that could put the life and health of citizens at risk, educational or vocational training that may determine access to education and the professional course of someone's life (e.g. the scoring of exams), safety components of products (e.g. AI applications in robot-assisted surgery), law enforcement that may interfere with people's fundamental rights (e.g. evaluation of the reliability of evidence), systems intended to be used to make or substantially influence decisions on the eligibility of natural persons for health and life insurance, migration, asylum and border control management (e.g. verification of authenticity of travel documents), administration of justice and democratic processes (e.g. applying the law to a concrete set of facts).

[56] Art. 4, par. 2 of the proposed AI Liability Directive.

[57] Art. 4, par. 4 of the proposed AI Liability Directive.

will have to start the assessment if a new AI system is a high-risky one at the same time when the product safety assessment begins because only that kind of dynamic would allow the approval of high-risk AI systems for the market that will operate with appropriate mandatory insurance cover.

Further close cooperation between European Commission and insurance industry is and will be required in order to provide operators with a mandatory insurance product that wouldn't be unreasonably expensive, which would stimulate future policyholders to choose the cheaper insurance product that would provide them with an appropriate coverage. The main focus of the insurers will be product and not the responsible persons because "one-size-fits-all" doesn't make an adequate response in this case either.

Most European insurers will wait and watch to see how large global carriers establish their system and pricing model before they decided to offer their insurance policies. Despite the idea that AI caused damage should be covered by the current insurance scheme, certain examples of new affirmative AI policies can be found on an insurance market. For example, Munich Re offers a policy for AI users that covers losses caused by AI model that didn't deliver the result properly.[58] Armilla Insurance offers a policy which would be activated if AI model doesn't work in a manner that seller promised.[59] Some cyber insurance policies now include coverage for AI caused damage.[60] One can even say that these policies were a prompt reaction of the insurance industry when compared to mandate auto insurance in the USA that took more than 30 years since the production of the first gasoline-powered cars in the late 1800.[61]

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[58] For a example, if a bank replaced property valuers used for loan assessments with an AI model, and the AI makes a mistake that a human valuer would not have made, the policy would engage. https://www.munichre.com/en/solutions/for-industry-clients/insure-ai.html, last visited 16. 08. 2024.

[59] https://www.webwire.com/ViewPressRel.asp?aId=311864, last visited 16. 08. 2024.

[60] Coalition, the world's first Active Insurance provider designed to prevent digital risk before it strikes, has added a new Affirmative Artificial Intelligence (AI) Endorsement to clarify what is covered by its U.S. Surplus and Canada Cyber Insurance policies, https://www.coalitioninc.com/announcements/coalition-adds-new-affirmative-ai-endorsement-to-cyber-policies, 10. 08. 2024.

[61] M. Musson, J. Root, *When did auto insurance become mandatory*?, available at https://www.autoinsurance.org/when-did-auto-insurance-become-mandatory/#:~:text=While%20auto%20insurance%20has%20existed,to%20do%20so%20in%20 1925, last visited 07. 08. 2024.

5. Conclusion

When it comes to AI and linked damages, it is obvious that there will be a high demand for financial security, which comes as no surprise due to risk-aversion, that usually accompanies risks that have a high probability of realizing and causing damage. Limited assets and lack of security make everyone risk averse and craving for financial security. Even though insurers are generally reluctant to provide cover as they often consider the risks of the digital world to be largely unknown and thus difficult to calculate, it is definitely sure that insurance will play an important part in providing additional level of security to those that manufacture AI systems, that control and use them. When regulating scheme of indemnification of AI caused damage, it came quite as a surprise that the European legislator decided to offer an insurance as the only form of financial security. That would be a great burden on the back of an insurance industry. Much more common approach of international legislator is the requirement of solvency without limiting it to a unique form of financial security.

Since the process of defining new rules on AI and the AI liability still runs, it is questionable whether the legislator will offer some other forms of financial security. What is however certain, is that insurance represents a good form of financial security because certain rules on duty to pay the damage and to conclude a contract will be established. In this manner a protection will be secured to those suffering a loss. It still does not mean that the question of liability for the caused damage will be resolved, but it certainly enables solving at least one level of problem stemming from the usage of AI entities. Apart from that, insurance policy is always to be regarded as a mechanism to channel the behavior of the policy holder and the insured and to reduce the risk. This is to be the case because maintaining the validity of the policy and realization of rights from an insurance contract requires certain behavior from these persons. Regardless of the future rules on AI liability, policyholders will always adapt their way of doing business in order to be entitled to the sum insured from an insurance contract.

Maybe the biggest advantage of insurance scheme as a part of response to AI caused damages is the capacity to handle unpredictability and uncertainty, that accompany all new technologies. The question that still remains is whether the existing insurance policies are suitable to indemnify the AI-caused damage. Response to this question will require a strong cooperation between insurers and "consumers" who will have to be honest and transparent about the fact that they are using AI systems, on one hand. Only that way insurers will be able to collect the additional information on AI-caused

damages, which would help them decide on the required reserves, height of premiums and solvency requirements before putting their final decision on AI risks out there. At the same time, at the EU level, EU Commission will have to nourish the cooperation with the insurers in order to provide the liable persons with an appropriate policy and coverage. Based on the current situation at both AI and insurance market, it seems that the current insurance scheme is an adequate one to provide financial security because there are neither new risks in the term of insurability nor new forms of damage, despite being caused by completely new technologies.

The end result may be that insurers will develop and offer a specialized AI insurance policy that would at certain point overlap with "traditional" policies till the point these damages will be covered exclusively by AI specialized policies while representing exclusion according to traditional policies.

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ODGOVOR TRŽIŠTA OSIGURANJA NA IZAZOVE UPOTREBE VEŠTAČKE INTELIGENCIJE

Apstrakt

Autorka analizira izazove koje je upotreba veštačke inteligencije stavila pred pravnike i pravnu nauku u pogledu regulisanja novih modernih tehnologija i vidova štete proisteklih iz njihove upotrebe. Kako veći deo nestručne javnosti veruje da će uvođenje obaveznog osiguranja od odgovornosti rešiti sve novonastale izazove u pogledu upotrebe veštačke inteligencije, centralni deo rada posvećen je predstavljanju realnih i pravno zasnovanih mogućnosti tržišta osiguranja u ovom pogledu. Osnovna dilema pred kojom se nalaze osiguravajuća društva jeste da li su njihove postojeće polise osiguranja dovoljne da pruže zaštitu od štete prouzrokovane upotrebom veštačke inteligencije ili je potrebno da sastave i ponude nove specijalizovane polise. U tom konteksu, u radu su analizirani i novousvojeni EU Zakon o veštačkoj inteligenciji i predlog Direktive o odgovornosti za veštačku inteligencije, jer sadrže jasne indicije koji će zahtevi biti postavljeni pred tržište osiguranja.

Ključne reči: osiguranje, veštačka inteligencija, šteta, naknada štete, vanugovorna odgovornost, polisa osiguranja.