The InsurTechs in Brazil: a legal and regulatory analysis*

As InsurTechs *no Brasil: uma análise legal e regulatória*

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ABSTRACT

The insurance industry is facing an unprecedented wave of disruption. While all stakeholders welcome the new insurance products and the improved consumer experience resulting from technological advances, jurists face a number of challenges. In particular, it could be asked: is the current Brazilian legal system able to regulate InsurTechs adequately? The following paper will analyze the legal and regulatory aspects of the operation of companies characterized as "InsurTechs" and how they are functioning in Brazil. To this aim, the following will be addressed: (i) the concept of InsurTech; (ii) the Brazilian regulatory authority's Regulatory Sandbox approach and; (iii) The functioning of InsurTechs in Brazil.

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KEYWORDS

InsurTechs — innovation — regulatory sandbox — insurance — technology

RESUMO

A indústria dos seguros enfrenta uma onda disruptiva sem precedentes. Ao mesmo tempo que todas as partes envolvidas celebram os novos produtos de seguros e a melhora da experiência do consumidor resultante dos avanços tecnológicos, os juristas enfrentam diversos desafios. Em particular, poder-se-ia questionar: o atual sistema jurídico brasileiro é capaz de regular as *InsurTechs* de forma adequada? O presente artigo busca fazer uma análise do ponto de vista legal e regulatório do funcionamento das empresas caracterizadas como "*InsurTechs*" e como elas estão operando no Brasil. Para tanto, serão analisados: (i) o conceito de *InsurTech*; (ii) o modelo de Sandbox Regulatório adotado pela Superintendência de Seguros Privados (Susep); e (iii) o funcionamento das *InsurTechs* no Brasil.

PALAVRAS-CHAVE

InsurTechs — inovação — *sandbox* regulatório — seguros — tecnologia

1. Introduction

The word "InsurTech" does not exist in the official Portuguese dictionaries. It corresponds to the addition of the two separated parts — 'insurance' + 'technology' — however, its meaning goes pretty much beyond that an isolated analysis of them. An holistic comprehension of the InsurTechs in Brazil and abroad is giving rise to a new way to experience the insurance contracts, its effects to insurers and to policyholders, i.e., it is not wrong to say that a deep change is affecting the insurance industry as a whole.

As per the introduction of the subject of this article – the InsurTechs in Brazil – it is important to give a few steps backwards in order to build the appropriate scenario to comprehend (i) who is who in the Brazilian insurance market and the pillars of its regulatory/legal frameworks and (ii) the reasoning behind the insurance regulator's targets, followed by the effects of the implementation of technology into the insurance market.

(i) The Brazilian regulatory framework for insurance and reinsurance purposes is complex. As a country that belongs to the Civil Law system (in contrast with the Common Law system), the Brazilian legal system is preponderantly based in the law, as a formal source.[1] Designed by Hans Kelsen's pyramid, it has the Federal Constitution in the 1st place considering the order of binding legal force and influence. Then, Complementary Law and Ordinary Law (2nd and 3rd places). In the fourth place, Decrees, that are laws enacted by the President of the Republic and, in the fifth place, the administrative rules, that belong to the regulatory framework.

The enactment of a law *stricto sensu* — Complementary or Ordinary — depends on the fulfillment of a complex law-making process, that comprehends the Senate, the Chambers of Deputies and, still, the President's approval. It takes time, costs, bureaucracy, and lots of political influence to transform a simple bill into a formal source of rights.

On the other hand, an administrative rule depends solely on the initiative of a regulatory body that, in Brazil, can be an independent regulator, such as the Oil and Gas Regulatory Agency (ANP), the Energy Regulatory Agency (Aneel), or a non-independent regulator (an autarchy), such as the Superintendency of Private Insurance, Private Pension, Capitalization and Reinsurance (Susep), that regulates the insurance market together with the National Council of Private Insurance (CNSP).

In terms of the main differences between the independent and the non-independent regulators, basically two features are decisive and have a notable influence on the development of the Brazilian insurance market: 1) The term of Susep's head officer (its Superintendent) is not fixed and 2) Financially, Susep is closely linked to the Ministry of the Economy.

The non-fixed term means that Susep's head officer usually remains in power while the Minister of the Economy also is in power. When he changes or when the government changes — Brazil has Presidential elections every four years —, Susep's head officer probably changes as well.

Theoretically, regulation needs to be independent, fluid, with its eyes on the needs of all players of the market. It needs to be in favor of the market (*i.e.*, not on behalf of insurers, reinsurers, brokers or policyholders, separately).

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[1] Although in the civil law system, jurisprudence may be one of the sources of law, it cannot be said that precedents have the same binding force as occurs in common law systems, a system based on precedents.

There are bills of law in order to transform Susep into an independent regulatory agency but, as we explained before, the enactment of a law is subject to many different pressures and interests. It is difficult to foresee if this bill will or not be approved, since the legislative branch politics are quite unpredictable.[2]

Susep's main characteristics — non fixed term to its head officer and financial subordination to the Ministry of the Economy — bring some sort of instability to the insurance market. If the regulation in force is more a question of the Government's agenda than a State's agenda, it means that the current regulatory status can be easily changed.

This article will analyze how InsurTechs have been impacting the insurance industry — including challenging regulators —, and how SUSEP has been acting to address the issues and enhance insurTechs in Brazil. In this context, two administrative rules have been set by the insurance regulators – the CNSP Resolution n. 381, from March 4th, 2020, and the Susep Circular n. 598, from March 19th, 2020 — and, it is important to emphasize, its content is positive in the way to attract investments and to develop the insurance market. However, the instability related to the regulation would still be an issue of stress if the ground for the development of the InsurTechs has only been based on the above-mentioned administrative rules.

Taking into account that innovation and technology are paramount for the country's economic growth, it is important to highlight that the Complementary Law n. 182, from June 1st, has just been enacted and created the *legal* framework for the startups in Brazil.

Because of the enactment of this Complementary Law, possible regulatory changes will not be able to modify what it sets. Remembering the Kelsen's pyramid structure, a law *stricto sensu* shall not be modified, revoked, or annulled by an administrative rule, under the penalty of being considered unconstitutional. Moreover, the innovation and the technology agendas have a Constitutional ground set forth by articles 218 and 219 of the Brazilian Federal Constitution.[3]

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[2] It corresponds to the Bill of Law n. 5277/2016, still pending at the Chambers of Deputies. For more information, visit: www.camara.leg.br/proposicoesWeb/fichadetramitacao?idProposicao=2084394.

[3] Brazilian Federal Constitution from October 5th, 1988. Article 218. The State shall promote and foster scientific development, research, scientific and technological expertise, as well as innovation. Paragraph 1. Basic and technological scientific research shall receive preferential treatment from the State, with a view to public well-being and the advancement of science,

This said, it is time to address a few comments on the structure of the Brazilian insurance legal system. Brazil does not have an up to date insurance contract law. Again, there is a Bill of Law from the year 2004 that is still running through our Congress. It is difficult to make any predictions about its approval or not.[4]

As consequence, the legal structure of the Brazilian insurance system goes back to 1966 and the Law-Decree n. 73. Needless to say that the role of the State, at that time, was completely different from today's model. At that time, Brazil was under a military dictatorship, and the State used to be (or was meant to be) present in all aspects of the Brazilian economy. During the 2nd dictatorship in Brazil during the 20th, the number of State-controlled companies was huge.

In addition to the Law-Decree n. 73, from 1966, the system is also defined by the Brazilian Civil Code that deals specifically with insurance contracts (articles 757 up to 802). As a general civil law, it does not dig deep in details, stating rules to new insurance contracts such as, for example, cyber, D&O, or parametric; it does not encompass the InsurTechs, nor the very important digital improvements that are affecting the insurance market. The result of this lack of a modern insurance law refers, at least in part, with the content of this article: our legal system is governed by a multitude of administrative rules, what seems paradoxical. And, specifically referring to the InsurTechs, the CNSP Resolution n. 381, from March 4th, 2020, and Susep Circular n. 598, from March 19th, 2020, set the rules.

Susep, as we said, and the National Council of Private Insurance (CNSP) are the insurance regulators. While the second takes care of the insurance public policy (CNSP is composed by a group of public authorities, appointed by the Ministry of the Economy), the first, then, applies the policy drafted by the CNSP. To do it, SUSEP publishes several different administrative rules, such as Resolutions, "Circulares", Legal Memos (all infra legal rules) etc.

technology, and innovation. […] Article 219. The domestic market is part of the national patrimony and shall be supported with a view to permitting cultural and socio-economic development, the well-being of the population and the technological autonomy of the country, as set forth in a federal law. Sole paragraph. The State shall encourage the development and strengthening of innovation in companies, as well as in other entities, either public or private, the establishment and maintenance of technology parks and hubs and of other environments conducive to innovation, the participation of independent inventors, and the creation, absorption, dissemination, and transfer of technology. […] Paragraph 1. A federal law shall establish the general rules for the National Science, Technology, and Innovation System.

4 It corresponds to the Bill of Law n. 3555/2004. Afterwards, it has been converted into the Bill of Law n. 29/2017. It is still pending.

It is not easy to draw the limits of the normative power of the administration,[5] understand the hierarchy between this several different administrative rules and the correct placement for its content, i.e., what should be comprehended by a Resolution, a Circular or a Legal memo.

(ii) The insurance market has always been seen as a rigid and conservative one. The relevant players, globally speaking, remain the same for more than 200 hundred years, what can be explained mentioning, among others, issues of trust, fidelity, and financial stability.[6]

From a regulatory perspective, it is difficult for a new player to step into the insurance market because of the capital requirement, the need to comply with a multitude of administrative rules and, moreover, the balance between innovation and stability has always been towards the second. All these context issues represent significative entry barriers.

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[5] The normative power of the administration, especially its limit, is very controversial in Brazilian law. Regarding this topic, see: GUERRA, Sérgio. *Discricionariedade, regulação e reflexividade*: uma nova teoria sobre as escolhas administrativas. 3. ed. rev. e atual. Belo Horizonte: Fórum, 2015; and BINENBOJM, Gustavo. *Poder de polícia, ordenação, regulação*: transformações político-jurídicas, econômicas e institucionais do direito administrativo ordenador. Belo Horizonte: Fórum, 2016. In case law, it is worth noting the Ação Direta de Inconstitucionalidade No. 4874, which examined whether the Agência Nacional de Vigilância Sanitária (Anvisa) had the power to restrict the use of aroma and flavor in cigarettes commercialized in Brazil, as established in Resolution RDC No. 14/2012-Anvisa. The Federal Supreme Court, the highest court in the country, ruled as follows: "The power to issue normative acts for the organization and supervision of regulated activities falls within the general police power of the Health Administration. ANVISA's normative competence is qualified by the issue, in the exercise of the sanitary sectorial regulation, of acts: (i) general and abstract, (ii) of technical nature, (iii) necessary for the implementation of the national health surveillance policy and (iv) subject to the observance of the parameters set forth in the constitutional order and in the sectorial legislation. […] By issuing the Collegiate Board of Directors Resolution — RDC No. 14/2012, defining technical norms and standards on maximum tar, nicotine and carbon monoxide limits in cigarettes and restricting the use of the so-called additives in tobacco products, without changing their nature or redefining elementary characteristics of their identity, ANVISA acted in accordance with the constitutional and legal boundaries of its prerogatives, observing the constitutional clause of the right to health, the legal framework in force and the strict normative competence granted to it by arts. 7º, III, and 8º, § 1º, X, of Law n. 9.782/1999". (STF, ADI 4874, Justice Rosa Weber, judged on 2/1/2018, available at: www.stf.jus.br).

[6] "For decades or even centuries, insurance industry has not changed significantly. Similarly, insurance contract law developed gradually, as it did not have to deal with unexpected challenges of abruptly changing reality. Since the beginning of the twenty-first century, insurance law and practice have witnessed two major developments, that is, the emergence of the Big Data technology and significant reforms of insurance contract law." (Tereszkiewicz, Piotr. Digitalisation of insurance contract law: preliminary thoughts with special regard to insurer's duty to advise. In: MARANO, Pierpaolo; NOUSSIA, Kyriaki (Ed.). *InsurTech*: a legal and regulatory view. Aida Europe Research Series on Insurance Law and Regulation 1. Switzerland: Springer, 2020. p. 127).

Observing the Economy at the 21st century through a much broader picture, its *uberization* can be easily testified.[7] Using the Uber or Airbnb as simple examples, the person to person (P2P) business models have arrived with enormous strength and penetration through the Society. Needless to mention the effects caused by them to the conservative players of their markets, such as taxis or traditional hotel chains. For them, the challenge is serious and requires a complete rebranding and restructuring to stay alive.

In the insurance market, the addition of technology to traditional insurance business is also changing it deeply. The duty of disclosure, for example, that used to rely heavily on the policyholders' shoulders, now tends to be fully dominated by the insurers. Through Apps that measure health data, driver's habits, routes, agricultural data, just to mention a few, insurers now control the information which, so far, used to be managed by the policyholders. This means a major change of information asymmetry.[8]

As per the insurance penetration, one should consider the peculiarities about emerging and developed economies. There is a consensus around the remaining space for growth at the emerging markets and, in this sense, the use of the technology accessible to many potential customers is able to enhance it. Especially if we consider the number of digital devices (smartphones, tablets etc.) available in Brazil, which according to a researcher carried out by Fundação Getulio Vargas (FGV)[9] reported a staggering 424 million. If all these costumers are now able to access the insurance market through the Apps, the result, in terms of insurance penetration, can be exponentially high.

The InsurTechs are already playing a relevant role in insurance markets all over the world, with positive impacts to policyholders, insurers, regulators,

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[7] Uberization: "[…] Thanks to the advent of 4G in 2009, which brought the dawn of mobile payment systems and ubiquity of smartphone ownership, a large number of tele-networked businesses were born in the early 2010s, linking clients and service providers using digitalized platforms. […] The most iconic example of such companies is—of course—the ride hailing service, Uber, which has made its way to over 60 countries since its inception in 2009, while adding the verb "uberize" to the English language. Equally well known services such as Airbnb have been launched in the hospitality industry. Uberizing is now the modus operandi of many serial entrepreneurs across the world, while most newbies to the startup world these days open their pitch with: 'What this app does is it connects people who are on the lookout for…,' or something along those lines." (Available at: www.thebusinessyear.com/what-is-uberization-and-how-will-5g-technology-change-work/focus. Visited on: May 20th, 2021).

[8] For a Nobel prize approach on such matter see WILLIAMSON, Oliver E. *The economic institutions of capitalism*. Firms, markets, relational contracting. New York: The Free Press, 1985. p. 47.

[9] Source: https://portal.fgv.br/noticias/brasil-tem-424-milhoes-dispositivos-digitais-uso-revela-31a-pesquisa-anual-fgvcia. Visited on: April 21st 2021.

that is, the entire market. One can suppose that the InsurTechs would "steal" market share from traditional insurers but, in accordance with the opinion of relevant doctrine, their goal is to add value to all the insurance service chain, from pricing, to underwriting, claims handling, indemnity payments, i.e., the idea is to bring a better insurance experience to the insureds.[10] Therefore, the new insurance architecture is not supposed to destroy the elder as a Schumpeterian[11] analysis would suggest, but influencing and transforming the growth of both markets.

It is possible to argue that the InsurTechs are really changing the conservative way of the insurance business relying in four relevant pillars: (i) the brokerage management system is designed to connect carriers and policyholders directly, that is, with no intermediaries. Consequently, there is no need for any more written proposals; (ii) connectivity with insurers. Given that all information will be rendered through the internet, connectivity will play a relevant role; (iii) mobility, what is a consequence of the prior and (iv) the massive utilization of the cloud.[12]

In the past, the carriers used to measure its size and penetration considering the number of policies sold on a specific time length. As an example, the leader of the travel insurance market was the company "X", because on the year "Y" it sold "Z" million policies. Consider that no comments were argued about the satisfaction of the policyholders, about their trust or happiness with the insurance system, the quality of their experience.

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[10] "Instead, most applications seem to be about refining and improving existing insurance products, the selling of insurance policies, and back-office operations (e.g. processing applications, information disclosure, or claim processing, etc.)" (CHEN, Christopher. *Regulatory Sandbox and InsurTech*: a preliminary survey in selected countries. Singapore Management University School of Law. October 10, 2018. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3275929. Visited on: April 21st, 2021). In this same sense, see also: Piotr Tereszkiewicz, Digitalisation of insurance contract law, op. cit., p. 127: "Recent technological advances have begun profoundly changing the business of insurance. All stages of the insurance value chain (product design, marketing and distribution, underwriting and pricing, post-sales services and contract governance and claims management) are influenced by technology-enabled innovation in insurance (InsurTech, Eiopa 2017)".

[11] SCHUMPETER, Joseph Alois. *Capitalismo, socialismo e democracia.* Rio de Janeiro: Fundo de Cultura, 1961. p. 106.

[12] CAPPIELLO, Antonella. Digital disruption and InsurTech startups risks and challenges. In: CAPPIELLO, Antonella. *Technology and the Insurance Industry*. Springer International Publishing, 2018. p. 36. In Spain the perception is the same. The cloud is the next destiny for insurers. Covid-19 is also a reason for doing more business through the cloud. "La nube es el próximo destino del negocio de las aseguradoras." Source: www.ciospain.es/industria-y-utilities/la-nube-el-proximo-destino-del-negocio-de-las-aseguradoras#. Visited on: March 28th, 2021.

In Brazil, specifically, this old-fashioned way to observe the insurance market was even stronger, what has been a consequence of the above-mentioned Law-Decree n. 73/1966. Susep, as the regulator, created insurance wording standards for several different insurance contracts and the carriers, as a matter of law, were bounded to follow them.[13] From a competition public policy perspective, the consequences were awful, because there was no real space for it between insurers thus stimulating the perpetuity of the oligopoly. When only premium and deductibles were in the table, the customers did not look at the quality of the insurance coverage.

All the innovation brought by the InsurTechs is changing this policy driven approach. Insurers are risk specialists. They have been working will all this data for centuries. In this sense, with more and more precious information on their hands, it is time to add value to the insurance experience provided to the customers:

> A problem with the old-fashioned model: an indemnity or a sum assured only deals with part of the problem. An event can be financially compensated, however, the losses of the insured or its family are broader than this. The trauma, the feeling of unsafety, reputation, just to mention a few hazards suffered by an insured. The approach for insurers, therefore, considering all the innovation stuff that is now available, is to apply its intelligence to avoid these events. It is, therefore, a question of risk management, not a policy driven approach anymore. Secondly, a policy doesn't provide a lot of options for regular, meaningful customer contact. If interaction with customers is limited to policy renewal and premium payments, there is not much opportunity to build a more solid customer relationship. And lastly — let's be honest: there is not much attractiveness in an insurance policy. People are not looking for a policy because they want to, but because they must, due to legal requirements, or for lack of alternatives.[14]

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[13] Law-Decree n. 73/1966. Art. 36. It is Susep's duty, in the capacity of enforcer of the policy outlined by CNSP, as the supervisory body of the constitution, organization, functioning and operation of Insurance Companies, to […] c) establish conditions for policies, operation plans and tariffs to be compulsorily used by the national insurance market.

[14] BLOEMERS, J. H. F. Onno. *The future of insurance* — from managing policies to managing risks. Source: https://onlinelibrary.wiley.com/doi/abs/10.1002/9781119444565.ch44. Visited on: April 14th, 2021.

The insurance regulators, therefore, also need to quickly adapt their targets considering this new scenario.[15] While in the past the stability of the market used to be the priority number one, now and in the future, there is a consensus around the need to balance stability and innovation. If the first harms the second, the scale ought to whey towards the second.

This statement, definitely, is not irresponsible. The stability of the insurance markets, globally considered, rely on a huge number of policyholders. The risks will be absorbed by the market as long as there are more and more policyholders. It is the mutualism principle, one the core fundamentals of the insurance industry.

The InsurTechs, as the facts already demonstrate, are able to introduce an expressive number of costumers to the insurance market, with benefits to all stakeholders. Whit this said, regulators need to enhance innovation, to create good conditions to these new players and methods of doing insurance.

Finishing this introduction and moving to the next section, the carriers have an amazing opportunity to observe "*the end of the policy driven approach*. […] *Instead of answering the question how do we sell more policies? This is the time to ask in which business are we?*"[16]

2. The insurTechs. Its meaning

As already explained, the appearance of the InsurTechs is closely linked with the Fintechs that, broadly arguing, are also bringing serious changes to the heavily regulated market of the financial institutions. As explained, the main goal of the InsurTechs, as per the addition of technology to all phases of the insurance chain, is not to directly compete with traditional carriers.

In fact, if an upcoming InsurTech decides to sell car insurance, there can be competition with an already established carrier, however, as the facts illustrate, the way in which the entrants will take place at the market is quite different. The insurance product targeted by the InsurTechs is not going to be the traditional car insurance. New modalities such as "pay per use" insurance

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[15] "It is a fact—becoming more obvious in the case of FinTech developments—that regulators seem to always be one step behind the market." (CHATZARA, Viktoria. FinTech, InsurTech, and the regulators. In: Pierpaolo Marano and Kyriaki Noussia (Ed.), *InsurTech*, op. cit., p. 4.)

[16] J. H. F. Onno Bloemers, *The future of insurance*, op. cit., p. 4.

will be at the horizon, what means that, at least directly, there shall be no competition with traditional carriers but an economic and complementary relation.

The InsurTechs, moreover, are not only assigned to be typical insurers. As a matter of fact, it seems that the great contribution brought by them rely on specific activities that are meant to add quality to the services provided by traditional carriers.

If an App is able to, collecting data from satellites, optimize the loss adjustments procedures of an agricultural insurer, there shall not be any questions about the benefits that these two companies can achieve together. The same can be argued as per automated car insurance, health/life insurance and the better assessment of personal data of policyholders etc.

The investments that are taking place with the InsurTechs are huge, and, in the same way are the expectations of all stakeholders:

> Although the first investments in the InsurTech sector date back to 2011, there has been a significant expansion of the phenomenon since 2014 (CB Insights 2017b, c). The number of start-ups continues to go up and, according to some estimates, will soon exceed the figure of 1500 companies, at a global level, with the USA occupying the most significant share, followed by the UK, India, and Germany (Venture Scanner 2017a, b). In 2011, the total fund raising of the InsurTech sector was 130 million dollars, peaking at 2.7 billion in 2015, compared with about 750 million in 2014. For the future, a growth of the InsurTech platforms has been envisaged, which would bring the fund raising from 175 billion dollars in 2016 to 235 billion dollars in 2021 (CB Insights 2017d; Maynard 2017). Most InsurTech investments are concentrated on innovations in the non-life compartment, and particularly on the health and car segments.[17]

The InsurTechs tend to propose a new way to do business, replacing or adding to the traditional B2C model (business to consumer) per the P2P model (peer to peer). While in the past a costumer needed to find a broker, sign a proposal, and wait for the insurer risk's approval (B2C model), now

[17] Antonella Cappiello, Digital disruption and InsurTech startups risks and challenges, op. cit., p. 34-35.

the *modus operandi* shall be completely different. The P2P model introduces a company (that administrates a platform) that will join the two peers, thus creating conditions to conclude the business.

As per the introduction of P2P business in the insurance market, Margarida Lima Rego and Joana Campos Carvalho explain the following:

> In the insurance sector, the expression 'P2P insurance' is used to describe new technology-based business models which allow the insured to pool their risks and their capital, self-organise and self-administer so as to minimise their losses and maximise their gains. P2P insurance is indeed about risk and capital pooling, given that in these models at least a part, sometimes the entirety of the risk is carried by the peers themselves. These models aim to reduce costs commonly associated with insurance underwriting and claims handling by their use of innovative digital technology, as well as to cut or at least reduce the insurer's profit margin, typically by giving any excess premiums back to the policyholders in years when the total losses are lower than the aggregate premiums and having the platform's retained funds or ultimately reinsurers pay for the excess losses in years where the opposite occurs.[18]

Moving forward, the two professors from Portugal explain that the P2P insurance, actually, illustrates a very old way of the insurance contracts, that goes back to its origin with the mutual insurers. However, considering that the risks shall be absorbed by the group (not by an insurer), then one question emerges: in accordance with the current regulation, P2P insurance is really insurance?

> The self-governing model appears to be the only true P2P model. In this model, no insurer, reinsurer or insurance intermediary is allegedly involved. No premiums are paid and the risk is shared solely amongst the members of a group, according to the terms they define. The role of the platform operator is to provide the technological means for the

[18] REGO, Margarida Lima; CARVALHO, Joana Campos. Insurance in today's sharing economy: new challenges ahead or a return to the origins of insurance? In: Pierpaolo Marano and Kyriaki Noussia (Ed.), *InsurTech*, op. cit., p. 29.

> model to work: the company merely provides a virtual marketplace through which anyone can communicate, enter into and perform contracts.[19]

The question is very interesting, and it brings on the need to review traditional regulatory standards. As mentioned in the introduction, if the Brazilian regulator still considers a pretty much formal enforcement of the Law Decree n. 73/1966, there shall not be room for innovation in this market. The regulation needs to follow the Economy's development, to create conditions to enhance it, and never the contrary.[20]

In this sense, there are no doubts that regulatory issues will arise because of the introduction of all these brand-new ways to experience the insurance contracts by the Society.

2.1 The regulatory sandbox

An important tool that has been deeply used to foster innovation in insurance markets is the regulatory sandbox. If one forgets its existence, it will be easy to understand its goals.

A businessman decides to enter in the insurance market. He, therefore, studies the current regulation, capital requirements, questions of compliance and corporate governance, and, of course, all other aspects related to the building of a company from ground zero (e.g. taxes, labor, social security, intellectual property, marketing, competition etc.).

The barriers and challenges to enter are so high that he gives up. Not only based on the capital requirements or heavy and complex regulation, he realizes that, in fact, it will be very difficult to compete with carriers that have been doing business in this market for so many years.

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[19] Ibid. p. 30.

[20] Regarding the need for speed to high frequency trading in the United States, please see: WOODWARD, Megan. The need for speed: regulatory approaches to high frequency trading in the United States and the European Union (November 1, 2017). *Vanderbilt Journal of Transnational Law*, Vol. 50, No. 5, 2017, Available at SSRN: https://ssrn.com/abstract=3203691. Visited on: May 11, 2021. One phrase, in particular, shows the drama faced by regulators: "People no longer are responsible for what happens in the market, because computers make all the decisions." (See LEWIS, Michael. *Flash boys*: A Wall Street revolt. Nova York: W. W. Norton & Company. 2014. Asserting that the US stock market faces the increasingly controlling influence of computer-based technology. p. 1).

The regulatory sandbox corresponds to a creation of insurance regulators, that aims to prepare an environment friendly to new entrants. The capital requirements shall be seriously reduced, as well as the compliance with the heavy regulation. As mentioned by Christopher Chen:

> The concept is similar to a clinical trial for new drugs before hitting the market. On the one hand, it may buy some time for regulators, incumbent financial institutions and new technology firms to try out new services with minimized legal risk without killing the bird before it can fly. On the other hand, such legal certainty may attract more innovators from both sides of the universes to apply new technology and services that might benefit the market and general public in the long run. As a result, it is not surprising that some Asian markets also seek to adopt the idea of regulatory sandbox.[21]

There is a consensus around the time length of the regulatory sandbox, in the sense that is shall be limited. If a member of the sandbox has competitive advantages in comparison with the non-members, it is clear that this environment cannot last forever.[22]

Another issue of concern deals with the result of the time trial, i.e., what will happen when a participant leaves the sandbox (because of the end of the trial) and entry the market. If it is an insurer, there will be conditions to compete with traditional carriers? If not, what will happen with its policyholders?

These questions are worthwhile and deserve the attention of the regulators. However, it seems that que advantages brought by innovation whey lots more than these potential issues.

Globally speaking, the cradle of the InsurTechs goes back to 2015, in London. According to the aforementioned research, there is a total of 87 sandboxes in operation since the introduction in 2015 until mid-2018, of which only 15% linked with insurance services directly.[23]

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[21] Christopher Chen, *Regulatory Sandbox and InsurTech*, op. cit., p. 2. In accordance with the British FCA, the idea is to provide "A safe space in which businesses to test out innovative products, services, business models and delivery mechanisms without immediately incurring all the normal regulatory consequences of engaging in the activity in question." Ibid., p. 8

[22] "This assumption is not fully tested. In addition, a sandbox is not meant to exist forever (at least at this moment). A trial must have an end date. Nonetheless, it is unclear what will happen after the completion of a sandbox and what may be the future of sandbox." Ibid., p. 3.

[23] Ibid., p. 7.

Furthermore, in the UK the entrants can apply for the sandbox on three different ways: (i) Restricted and full license: At the end of experiment period, a firm may apply to lift the restrictions that are applicable and acquire the full authorization to offer full financial services under the supervision of the FCA; (ii) Under the sandbox umbrella, a firm would have 12 months to experiment its technology. The FCA would invite application of sandboxes by cohorts; (iii) Ask to FCA a kind of a waiver or no action letter.[24]

This said, a few important questions remain unanswered. "*Who can enter the sandbox? What kinds of rules are they subject to in the period of real-world experimentation? Perhaps most importantly, what constitutes a successful innovation?*"[25] As per the launch of the regulatory sandboxes, the regulators need to carefully address these answers, thus avoiding misunderstandings.

At this stage, it is possible to observe that the InsurTech's arena will capitalize the risks' assessment by insurers on a great way. It is not exaggerated to argue that the duty of utmost good faith, so closely linked with the insurance contracts, is being subject of a deep rewriting, what, in fact, brings on new risks to the table.

These risks are not exactly insurable risks, as the market got used to absorb. Now, the "enemy" is different, and it corresponds to a risk that can be created by the insurers by themselves, that is, all the concerns that deal with data protection.

Insurers that are able to analyze with a ridiculous precision the behavior of the policyholders, their habits, personal relationships, that can foresee the future in some sort of way, need to treat all this data on a so very caution way. Basically, relevant doctrine mentions the risks of discrimination addressed by algorithms applied by insurers and, additionally, the cyber risks, related to bad use of protected data.[26]

In this sense, the regulator shall focus on innovation, therefore enhancing more sandboxes, trying to engage more participants, and, in the same way, set rules to protect personal data of the policyholders.

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[24] Ibid., p. 8.

[25] YADAV, Yesha; BRUMMER, Chris. Fintech and the innovation trilemma. *Georgetown Law Journal*, v. 107, n. 235, p. 296, 2019. Available at: https://scholarship.law.vanderbilt.edu/faculty-publications/1084. Visited on: May, 10th, 2021.

[26] For a deep analysis of this specific issue, please see JUNQUEIRA, Thiago. *Tratamento de dados pessoais e discriminação algorítmica nos seguros*. São Paulo: Thomson Reuters Brasil, 2020; and Vianna, Eduardo Araujo Bruzzi. *Regulação das fintechs e sandboxes regulatórias*. Dissertação (mestrado em economia, intervenção e estratégias regulatórias) — Escola de Direito do Rio de Janeiro, Fundação Getulio Vargas, Rio de Janeiro, 2019.

Another point of interest refers to the need of cooperation between regulators, what can be observed in two different ways. Thus, introducing the issue that will be developed in the next section, imagine if regulators in France and Italy set different rules within their sandboxes. Considering that all the businesses will be developed through the internet, there shall be harmony between regulators' rules, especially considering two countries that belong to the European Union. In terms of Latin America, the same issue shall be argued, even though the difference between the EU and Mercosur rules are huge in terms of alignment.

The second way applies to the different areas of knowledge that the activities developed by the InsurTechs shall touch. On one hand, it can be insurance or services related to the insurance chain, therefore subject to the insurance regulator oversight. On the other hand, data protection shall be oversighted by the data protection regulator. Coordination between both regulators must be exercised.

2.2 The new risks and the regulators' targets

Whereas the risks' assessment improves, the cyber risks also improve and becomes dangerous.[27] For instance, it is interesting to observe what is happening with the underwriting of life insurance.

At a not so far past, carriers needed to invest in qualified and experienced professionals to correctly understand and, then, underwrite life insurance risks. The policyholders used to sign a proposal, to send documents and, in some situations, were bound to deliver a few medical exams. The whole process was complex, bureaucratic, and slow. Thanks to the "explosion" of data, available through Apps, algorithms, all the past requirements are now almost useless.

> Ralf, in an article in the Financial Times, states that 'Robots learn the business of covering risk', highlighting that the underwriting of life insurance "previously requiring an in-depth assessment of the customer by a qualified underwriter using a well-worn set of actuarial models,"

[27] GRIMA, Simon; SPITERI, Jonathan; ROMANOVA, Inna. The challenges for regulation and control in an environment of rapid technological innovations. In: Pierpaolo Marano and Kyriaki Noussia (Ed.), *InsurTech*, op. cit., p. 84.

> is now being replaced by a 'selfie' emailed by customers. He notes that computers analyze thousands of different regions of the face, and with this information plus a few other details received from customers, the computers, in a few minutes can come up with an accurate prediction of life expectancy. Moreover, he explained how business applied artificial intelligence to aerial photos of farms to help provide crop insurance and machine learning could strengthen the efficiency of the services being offered.[28]

Needles to argue that with the *bonus* — more accurate data — comes the *onus*, i.e., an obligation to handle the data on the proper way. The insurance regulators, in this direction, need to focus on three core fields: (i) consumer privacy; (ii) security of customer data; and (iii) appropriate use.[29] As far as insurers will have conditions to be more efficient and, in this sense, underwrite risks and charge premiums and deductibles properly, it seems clear, on the other hand, that they shall invest more money in the data protection issues.

Imagine a situation in which, for a lack of care, a programmer fails to adjust the algorithms that will analyze personal data for purposes of risks' underwriting. The consequences can easily cause discrimination, what shall be avoided.[30] The Organization for Economic Co-operation and Development also stressed this concern:

> Data protection is an area that will require closer examination by regulators, as the volume of personal data handled by insurers increases, whether consensus was gained for the intended use becomes blurred. Data aggregation brings forth the possibility of certain segment of the population becoming uninsurable, so how data is harnessed should be closely considered.[31]

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[28] Ibid., p. 86.

[29] KASINOW, R. *Key regulatory challenges facing the insurance industry in 2017*. Americas FS Regulatory Center of Excellence. KPMG. 2017. Available at: https://assets.kpmg.com/content/dam/kpmg/us/pdf/2017/04/facing-the-insurance-industry-in-2017.pdf. Visited on: May 20, 2021.

[30] The risks of discrimination in Portugal have been emphasized by BARROSO, Maria de Nazaré. *Fintech e seguros*. In: BARROSO, Maria de Nazaré. *Fintech*: desafios da tecnologia financeira. 2. ed. Available at: https://almedina.ams3.cdn.digitaloceanspaces.com/pdf_preview/9789724078472.pdf. Visited on: April 28th, 2021.

[31] OECD. *Technology and innovation in the insurance sector*. 2017. Available at: www.oecd.org/finance/Technology-and-innovation-in-the-insurance-sector.pdf. Visited on: May 20th, 2021.

The regulator, in his turn, shall enhance administrative rules to achieve this goal, but, also, keeping this focus on the need for innovation. The regulator's balance shall combine data protection and innovation in a fluid way. While in the past the markets got used with an intense regulation — a prescriptive control — now is the time to a softer regulation — high level controls.[32]

The debate between data protection and innovation shall also bring another element to the discussion. Instead of facing a dilemma, the doctrine refers to a trilemma, bringing the following members to the panel: (i) clear rules; (ii) market integrity and (iii) the enhancement of financial innovation.

Yesha Yadav and Chris Brummer explain that at best, regulators can achieve two of these three objectives:

> Specifically, when seeking to (i) provide clear rules, (ii) maintain marketintegrity, and (iii) encourage financial innovation, regulators can achieve, at best, two out of these three objectives. For example, if regulators prioritize market safety and clear rulemaking, they necessarily must do so through broad prohibitions, likely inhibiting financial innovation. Alternatively, if regulators wish to encourage innovation and issue clear rules, they must do so in ways that ultimately result in simple, low-intensity regulatory frameworks, increasing risks to market integrity. Finally, if regulators look to promote innovation and market integrity, they will have to do so through a complex matrix of rules and exemptions, heightening the difficulties of compliance, international coordination and enforcement.[33]

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[32] "This 'control theory' specifically recognizes a basic trade-off between two social costs of each choice of control: Prescriptive Control and High-Level Control. Prescriptive controls to try and achieve more security, uniformity acceptability, trust, profitability, competition, enforceability, affordability, and transparency but may stop innovation efficiency and result in more bureaucracy and more costs. On the other hand, high-level controls may result in more innovation, less uniformity but still achieve the results of prescriptive controls from self-regulation while being more efficient. However, this depends much on the culture of the insurance industry and may result in being more vulnerable and less secure." (Simon Grima, Jonathan Spiteri and Inna Romanova, The challenges for regulation and control in an environment of rapid technological innovations, op. cit., p. 93). See also STERN, Gary. *Can regulators keep up with Fintech*? Available at: https://insights.som.yale.edu/insights/can-regulators-keep-up-with-fintech. Visited on: April 21st, 2021.

[33] Yesha Yadav and Chris Brummer, Fintech and the innovation trilemma, op. cit., p. 242.

Giving a step backwards, what if all this huge amount of data is accessed by the wrong hands? The number of episodes in which strong institutions have been attacked by hackers is enormous and, so on, the cyber risks are growing exponentially. These risks, notwithstanding all the insurers expertise, are difficult to foresee and to evaluate.[34]

Regarding the risks that comes along with all this innovation and data protection concerns, relevant doctrine argues for the necessity of coordination between, for example, United States and Europe, what seems easy to comprehend.

> Another concern is the central regulation system calling for uniform Insurance Regulations across Europe and the United States. The advantage of such a system is that since decisions are decentralized, issues can constantly emerge from these different countries and states, uncovering, what is known in risk management as 'unknown uncertainties', issues that certain countries might not have ever been able to experience and identify. Therefore, uniformity and centralization of decisions on regulations will help identify these 'unknown uncertainties' and create an appropriate antidote.[35]

The same reasoning is applicable to the Latin America countries, even though in pragmatical terms, this does not seem a concern over some of its countries. In Brazil, as it will be addressed in the next section, there is a regulation about the InsurTechs, and the regulatory sandbox created by its insurance regulator. In Argentina, Chile and Peru, for instance, no specific

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[34] "The problem is that insurers are both excited and nervous about the opportunities. There is concern about the extent of their exposure to claims for cyber breaches under existing portfolios. Moreover, the lack of historical data means insurers (and reinsurers) face problems in determining the questions that should be asked in proposal forms, in drafting policies, in calculating premiums and in dealing with claims. There is legal uncertainty about where liability might fall. The problems posed over liability for accidents involving driverless cars have been mentioned, but these issues are already with us because modern cars are loaded with computer-controlled devices — the Ford Fusion has more lines of code than the Boeing 777 Dreamliner". (RAWLINGS, Philip. Cyber risk: insuring the digital age. *British Insurance Law Association Journal*, Vol. 128, January 18, 2015. Queen Mary School of Law Legal Studies Research Paper No. 189/2015. Available at SSRN: https://ssrn.com/abstract=2551421. Visited on: May 14th, 2021. p. 6).

[35] Ibid., p. 94. In the same way: "it seems that the effective regulation of FinTech applications/services will require more, new, and enhanced forms of international cooperation between the competent national regulators." (Viktoria Chatzara, FinTech, InsurTech, and the regulators, op. cit., p. 4).

regulation has been enacted. In Colombia, the Decree n. 1234/2020 set the conditions for its regulatory sandbox (it is more designed for the Fintechs, but the general idea is also appliable to the InsurTechs)[36]. Also, it seems important to have a coordination between regulators from different areas of oversight such as, for example, insurance, data protection and telecommunications.[37]

3. InsurTechs in Brazil

The Brazilian insurance regulator is aligned with the innovative disruption that is taking place in insurance markets all over the world. This statement is not only based on the InsurTechs, as will be specifically observed later, rather, is a matter of a deep transformation that has been conducted by Susep since the early 2021.

As stated, the Brazilian insurance legal framework is outdated. It is still greatly based on the Law-Decree n. 73/1966, that, of course, was not prepared for the technological era. In the same way, the Brazilian Civil Code is also old-fashioned. Even though it has been enacted in 2002, its Bill of Law was firstly presented through Congress over the 70s.

Considering that from a legislative perspective the insurance market was "arrested" by old rules, a regulatory initiative was needed to build up an arena on behalf of the innovation. This is exactly what is happening in Brazil, not only with the InsurTechs, but also with several administrative rules enacted by Susep and CNSP in the sense of bringing more flexibility to the insurance contracts at several different types, ranging from property to casualty and, moreover, to the so-called large risks.[38]

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[36] For more information, please access: www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=142005. Visited on: May 20th, 2021. About Mexico, there also is a specific administrative rule referring to the InsurTechs. It is the "*Circular Modificatoria* 5/19 a la *Circular Unica de Seguros y Fianzas*", from March 26th, 2019.

[37] "Moreover, other regulatory authorities, apart from those competent in the financial services sector, such as the competition authorities, the data protection and telecommunications regulators, could be also involved for a number of issues." (Viktoria Chatzara, FinTech, InsurTech, and the regulators, op. cit., p. 4).

[38] Examples are Resolution CNSP n. 407, of March 29th 2021, which disciplines large risks; Circular Susep n. 621, of February 12 2021, which disciplines non-life insurance; and the draft of Circular Susep submitted to public consultation through Public Notice 06/2021, published on April 14, 2021, which will discipline the liability insurance, namely general liability insurance, professional liability insurance (E&O), directors and officers liability insurance (D&O), environmental liability insurance and cyber risks liability insurance.

Susep's reasoning behind the enactment of these administrative rules is clear – let the private autonomy of the parties conduct its businesses, without the interference of the State, what is also an influence of the Law n. 13.874, from September 20th, 2019, named as the Law of Economic Liberty.

With this is mind, it is time now to move on to the most important Susep's initiative designed to welcome innovation at the insurance market, i.e., its regulatory sandbox.[39]

3.1 Susep's regulatory sandbox

Through the Resolution CNSP n. 381/2020 and the Circular Susep n. 598/2020, the insurance regulators launched the first insurance regulatory sandbox in Brazil. The specific date of its beginning is March 6th, 2020. It is important to clarify that as per the launch of the insurance regulatory sandbox, Susep positioned the insurance market in the forefront of all other regulated markets in Brazil. So far, there are no news about, for example, other sandboxes at the stocks market, nor financial institutions.

Before describing the core features of the Brazilian insurance sandbox, it is important to broadly understand how the insurance market is structured. Moving a little to the past — during the 90s and the beginning of the years 2000 — the Brazilian insurance market used to be concentrated on the hands of very few competitors, basically insurance companies that had large banks on its backs. That was the time of the bancassurance, with strong market share in consumer lines and, also in large risks.

Around 2005, this picture began to change and a clear division between consumer lines and large risks started to influence the appetite of the insurance companies. Those who were specialized in large risks moved to this business, while the consumer lines specialists decided to keep their businesses focused on it.

Therefore, the well-known Brazilian commercial banks decided to remain in the insurance market but, basically, working with consumer lines, in which

[39] "The creation of the Susep's regulatory sandbox is a clear example of potential regulatory disconnection. If the regulator did not create the environment for the development of innovation to the insurance market, there would be a disruption between the reality and the rules existent so far." (GUERRA, Sérgio; GONÇALVES FILHO, Péricles. As InsurTechs e o papel do regulador de seguros no século XXI. In: GOLDBERG, Ilan; JUNQUEIRA, Thiago. *Temas atuais de direito dos seguros*. São Paulo: Thomson Reuters Brasil, 2020. t. 1, p. 220-253).

the exposure to risks was definitely small in comparison with the large risks. Very specialized insurers, the great majority of them multinational, stayed with the large risks. As a matter of fact, the market share changed from hands, but the concentration on a few players remained.

Coming back to 2020, the picture was basically the same, i.e., almost the same players were seriously scoring in the local market. The well-known barriers to step into the market were the same: (i) large amount of capital; (ii) compliance with regulation and (iii) very strong competition between the participants. Therefore, what could be done to provide conditions for the entry of new participants? The answer is the subject of this article: the regulatory sandbox.

Susep realized that, on normal conditions, new entrants would not even try to step into the market. Just to give a very basic picture, the minimum capital required to star an insurance business in Brazil is from BRL 3,960,000.00 (three million nine hundred and sixty thousand reais) up to BRL 15,000,000.00 (fifteen million reais), depending on the type of insurance contract, all in accordance with Resolution CNSP nº. 321/2015, with the amendment promoted by Resolution CNSP n. 388/2020.[40]

Accordingly, Susep, aligned with the UK experience with its several regulatory sandboxes, was aiming to create a more amicable and less restrictive regulatory framework, that would be capable to enhance innovation.

The key factor around the regulatory sandbox consists of the creation of an innovative project, that is, to encourage new ways to do business adopting

[40] Resolution CNSP n. 388/2020 amended Resolution CNSP 321/2015 to segment the minimum capital into four levels: a) BRL 15,000,000.00 (fifteen million reais) for open private pension entities ("Oppes") and insurance companies classified as S1 or S2; b) BRL 8,100,000.00 (eight million and one hundred thousand reais) for Oppes and insurance companies classified as S3; c) BRL 3,960,000.00 (three million nine hundred and sixty thousand reais) for insurance companies classified as S4; and d) BRL 3,000,000.00 (three million Reais) for supervised companies that operate exclusively in microinsurance. The requirements for classification as S1, S2, S3 and S4 are foreseen in the Resolution CNSP n. 388/2020. Briefly explaining, the entities will be classified in levels from S1 to S4 based on size criteria (annual premiums and technical provisions) and risk profile. As an example, the entities classified in S1 must have, alone or together with other entities of the same group, (i) technical provisions equal or higher than 6.0% of the total technical provisions of the entire market supervised by Susep; or (ii) premiums equal or higher than 9.0% of the total premiums of the entire market supervised by Susep; or other criteria linked to reinsurance premiums and retrocession. Entities classified as S3, for example, must have (i) technical provisions lower than 0.2% of the total; (ii) premiums lower than 0.9% of the total, in addition to criteria related to reinsurance premiums and retrocession. At the time Resolution CNSP nº 388 was published, the S1 category was composed of 19 supervised entities, S2 was composed of 60 entities and S3 and S4 were composed of 89 entities.

new technology or, adopting new technology on the current way to do business. Moreover, the innovative project shall be positive not only for the insurer and its shareholders, rather, for the market as whole.[41]

3.2 The Resolution CNSP 381/2020 and Circular Susep 598/2020

CNSP and Susep published these two administrative rules about the regulatory sandbox. While the first is broader, the second moves to a more detailed analysis on the requirement that shall be fulfilled by the sandbox applicants.

Beginning with the Resolution CNSP 381 it is worth mentioning the concept of the regulatory sandbox:

> Sandbox concept – it is an experimental regulatory environment, in which its participants will be **authorized to develop and sell insurance in a proper way**. Their project shall be new and, moreover, it needs to be good for the insurers, insureds and the market as a whole. (art. 1st. Emphasis added).

The participants of the Susep's regulatory sandbox shall only have an authorization to develop and sell insurance contracts. It is important to understand, therefore, that all the non-insurance services brought by InsurTechs do not comply with this regulatory sandbox.

In other words, if a candidate applies for the sandbox willing to render some specific services to the insurance chain (for example, an App that analyses insured's data through algorithms), Susep will not authorize it. The Brazilian regulatory sandbox is entirely focused on insurance services.

The minimum base capital required by Susep corresponds to BRL 1,000,000. (art. 2nd, item IV). As explained before, outside the regulatory sandbox the minimum capital is BRL 3,960,000.00 (three million nine hundred and sixty thousand reais) up to BRL 15,000,000.00 (fifteen million reais).

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[41] An interesting analysis of the 'innovative project' was addressed by BRUZZI, Eduardo. *InsurTech e sandbox Susep*: o filtro regulatório da inovação securitária. Available at: www.jota.info/opiniao-e-analise/colunas/regulacao-e-novas-tecnologias/insurtech-e-sandbox-susep-o-filtro-regulatorio-da-inovacao-securitaria-30032020. Visited on: March 31st, 2021.

Regarding the innovative project: "Innovative project: development of a project or service within the insurance market, that shall be originated from new methodologies, procedures, or technologies applied on a different way. (art. 2nd, item IX)".

As stated in section 2 of this article, the whole idea of the sandboxes is to create an environment in favor of innovation.

Concerning the selection process of the winners, the rule sets that SUSEP will select, among the participants, the top ten innovative projects. (art. 3rd). Specific comments on the criteria adopted by the regulator will be presented on the next section.

Another important feature of the sandbox, that is also aligned with the foreign sandboxes, is the term. In accordance with art. 4, item I, the sandbox shall last no longer than 36 months, counted from the date in which the operations begin, or 60 days after the issuance of Susep's authorization to be part of the regulatory sandbox.

Moving to the Circular Susep n. 598/2020, it brings more specific content referred to the insurer's operation:

- Insurance policy term: the maximum insurance policy term shall be equivalent to the remaining period issued by Susep for the insurer participant at the regulatory sandbox. (art. 7)
- The insurance coverages shall have a maximum time length of one month. (art. 11)
- The insurer shall disclose to the insured the fees owed as per brokerage services, if applicable. (art. 13)[42]
- About the insurance plan, its minimum content is explained at art. 17, items I up to XIII.
- The claims adjustment and payments shall be concluded in 30 days. (art. 19)
- Portfolio transfer: it is allowed between carriers that are participants of the regulatory sandbox. (art. 22)
- Cancellation rules are set by art. 30, items I up to XIII.
- Based on Susep's analysis, cancellation can be discharged by a business plan presented by the insurer, clarifying the steps necessary to solve the preexisting problems. (art. 30, sole paragraph).

[42] The disclosure of brokerage fees is subject to a specific administrative rule. It is the Circular Susep n. 382/2020.

3.3 The criteria established in Susep's bid notice n. 2/2020 and the current players in the Brazilian InsurTech market

After the enactment of the two administrative rules above-mentioned, Susep published the bid notice n. 2/2020, thus calling the potential participants to apply for the sandbox. The bid, as expected, was written in accordance with the respective administrative rules. Susep's choice on the selected participants was based on the following criteria: (i) adoption of new technology, (ii) reduce costs to consumers, (iii) offer a service/product different and better than the currently available, (iv) its commercialization out of the sandbox.

For a better comprehension, please observe the following chart:

Criteria	Lowest Score	Highest Score
Employment of new technology	0	15
Cost reduction for the consumer	0	15
Product and/or service different from what is currently available in the market	0	10
Scalable product and/or service (can be sold on a large scale)	0	15
Product and/or service that can be marketed outside the Regulatory Sandbox	0	10
Proven previous experience of the controlling partner(s) with innovation projects and/or startups	0	10
Projection of risks to consumers demonstrates sufficient safeguards, clear migration criteria, and form of remediation for possible damages	0	10
Simplified hiring and cancellation process	0	15

Afterwards, Susep has chosen the eleven better projects (instead of only ten, as previously announced) that joined its sandbox ever since. In summary, their activities are:[43]

[43] There is a remaining company: "Komus" — coverage for smartphones (https://komus.io/), which decided to leave the Sandbox and offer its services through an already authorized insurer, named Essor.

InsurTech	Description
88i	Insurance for mobile phones, videogames, smartwatches, notebooks, tablets, headphones, life, telemedicine, safe delivery of goods and employment interruption. (https://88iseguradora.digital/a-88i/)
Coover	Insurance for smartphones and pets. (https://coover.me) In partnership with Zurich.
Emotion	Life insurance. "The first insurer in the world created with the concept of 'People Centric', designed to inspire people and its life histories". (www.emotionseguros.com.br).
Flix	Home and pet insurance. (www.flix.com.vc).
IZA	Life and personal accident. (https://www.iza.com.vc) Ps. Insurance for less than BRL 1,00 per day.
MAG (Simple2u)	Home, smartphone, life and personal accident (always "on demand). Obs. This InsurTech has Mongeral Aegon ("MAG") on its background, a very traditional life insurer in the country. The website is not available.
Pier	Coverage for smartphones. (www.pier.digital/)
Stone	Coverage for home, funeral, and personal accident. Obs. It is an arm of Stone Fintech, that was already playing a relevant role as a payment method. Website not available.
Thinkseg	Car insurance on demand. (www.thinkseg.com)
Split Risk	Car insurance. Website not available.

As can be seen in the chart, the main lines of operation of InsurTechs in Brazil are in the car, life, personal accident, mobile, health, home, bicycles, funeral expenses assistance, agriculture, pets, and travel insurance.

Besides the eleven InsurTechs that offer a new business model for insurance, there are currently more than one hundred other Brazilian InsurTechs operating in insurance distribution or providing services to insurers and intermediaries.[44] The main activities of these non-insurance companies are: insurance products platform, software providers, artificial intelligence to avoid insurance fraud, to collect and administer data, to make underwriting decisions and claims handling.

[44] Source: https://www.digitalinsurance.lat/radares-insurtechs; visited on May 28th, 2021.

In accordance with news disclosed by Susep, a second regulatory sandbox is about to be launched for ten new participants.[45]

3.4 Innovative disruption as a matter of the Brazilian State Agenda (the Complementary Law n. 182, from June 1st, 2021)

In the introduction of this article, it has been explained that the Brazilian insurance regulatory framework is complex and that its regulator is not an independent agency. Susep is an autarchy closely linked with the Ministry of the Economy and its head officer is nominated by the Minister of the Economy.

Brazil has Presidential elections every four years, what means that the Minister of the Economy, also nominated by the President, is subject to change within this time frame.

All the regulatory innovation brought by Susep and CNSP seems positive to the market. It will, as demonstrated, enhance competition, introduce innovation, render new and more complex types of insurance coverages, free from the standardized model that, for a long time (since 1966 – year of the enactment of the Law-Decree 73), froze the domestic market.

This said, it is important to emphasize that all this good news is sustained by a matter of the Government agenda and, moreover, by the Complementary Law n. 182, from June 1st, 2021, that has created the legal framework for the startups in Brazil.

Some important features of this Complementary Law are, among others, the following:

- Art. 2º, item I — the "angel investor": an investor that is not a shareholder nor has a seat as an officer or director, that does not answer for obligations of the company and that is paid by its investments.
- Art. 2º, item II + art. 11 — the regulatory sandbox. It follows very closely the Susep's regulatory sandbox. The goal is to create a simplified environment able to enhance the creative capacity of its members. Criteria and limits shall be defined by the sectorial regulators.

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[45] Source: http://novosite.susep.gov.br/noticias/susep-lanca-edital-para-segunda-edicao-do-sandbox-regulatorio/ For additional info access: https://valorinveste.globo.com/mercados/renda-variavel/empresas/noticia/2021/05/27/susep-ter-nova-consulta-pblica-para-sandbox-regulatrio.ghtml , visited on May 28th, 2021.

- Art. 2º, item VIII — the Law sets incentives that the public administration hires solutions and innovation delivered by the startups.
- Art. 4º. Requirements to be considered as a startup:
  - The company shall bring innovation by its business (head);
  - The annual income shall be up to BRL 16.000.000,00 or BRL 1.333.334,00 per month (multiplied by the number of months of activity in the past annual calendar) — paragraph 1st;
  - The company shall have no more than 10 years of registry at the CNPJ (Brazilian companies' registry). (item II);
- Investments can be brought by natural persons or companies. Investors can be shareholders or not. (art. 5º).

3.5 The insurance lines that will be most affected by InsurTechs and the evolving role of the 21st century broker

Two aspects remain important and need to be observed: (i) the specific kind of insurance business that has been and probably will be exercised by the InsurTechs and (ii) the role of the brokers.

Abroad or in Brazil, the InsurTechs are playing a relevant role within the field of the so-called consumer lines — home, life, personal accidents, smartphones, pets etc. — and, with a broad analysis, it is easy to understand the reason why.

In contrast with the personal insurance lines, the commercial insurance lines, specially dealing with large losses, tend to be more complex. The coverages, risks, underwriting, claims handling, payment, all is suitable to lengthy and complex procedures, that, accordingly, are very difficult to fit on an App of a smartphone. The user-friendly approach usually applied by the Apps are not harmonic with the dense and complex network of information and bureaucracy necessary in such cases.

Just for the purpose of illustration, think about a D&O insurance for a large corporation, with hundreds of directors and officers. From the beginning until the end, all the processes are complex. The signing of the forms, delivery of information, the notice of the claims, analysis of the fact in the lights of the coverages hired, plus questions related to claims made basis, interpretation of contract wording, just to mention a few, seem to simply does not fit with the scope of the InsurTechs.

The example of the D&O insurance can be spread to so many others complex risks, what means, in our opinion, that the InsurTechs, at least so far, were not created to deal with these risks. Therefore, a separation can be figured out: InsurTech and consumer lines in one side; commercial lines (large losses) on the other side, continuing with the traditional way to manage insurance contracts.

Needless to argue that the complex risks will also be granted with innovations arising from technology. The quality of the insurer's systems shall be improved, as well as the management of the data. However, notwithstanding the improvements, the pillars of the large risks structure still depend on procedures that, at least for a while, still are focused on the human intelligence.

Moving forward, it is important to address a few comments on the role of the brokers in this new environment. In Brazil, the insurance brokers have always had an important role spread all over the market. From consumer to commercial lines, the insurers always relied on their duties to mount their insurance sales forces.

With the improvement and enforcement of all innovation brought by technology to insurance, the role of the brokers is being radically changed. To prove this argument, take an example from one of the InsurTechs that currently is within the Susep's regulatory sandbox.

One of the basic characteristics of an InsurTech is the ability to provide a unique experience to the policyholder, that begins, processes, and ends totally online. No need of papers, intermediaries, loss adjusters or brokers. All shall be quick and simple. At this new scenario, it seems that the brokers will not have the same space anymore. If the policyholder can purchase an insurance contract at this own hand, only downloading an App., there are no questions about the necessity that the brokers reinvent themselves.

In this context of radical change, the brokers shall create more human intelligence (in contrast with artificial intelligence), trying to keep themselves relevant. When knowledge comes to play, the brokers need to be ready to assist clarifying any questions about the quality of the coverages available at the market, via an App or via a traditional way of commercialization.

In the personal lines segment, it seems that this is the picture. On the other hand, complex risks still need the participation of the brokers. The density of the facts, wordings, interpretation, all goes through the direction that an intermediary that knows the business deeply is still pretty much needed, the same prevailing in terms of reinsurance and retrocession.

4. Conclusion

After all these reflections and considerations, it is possible to formulate a few conclusions. The insurance market, as it was used to be seen and known, is and will not be the same. The intense use of technology radically changed the *modus operandi* of the market, from risk's underwriting, to claims adjustment and to indemnity payment.

The role of the utmost good faith and insurance institutes secularly known such as risk aggravation and to duty of disclosure are under a serious change, given to the modification of the management of data. What used to be a well-known duty of the policyholders now tends to be completely controlled by the insurers.[46]

All these IT innovations come along with the development of the InsurTechs that, as explained, are not playing a destructive competition with the traditional carriers. The idea is to add quality in terms of service to all the insurance chain, i.e., to provide a better insurance experience to the policyholders.

The regulatory sandboxes, in this sense, has an amazing functionality, thus helping entrepreneurs that want to invest in the insurance market, but, in normal conditions, would be prevented to attend considering the market barriers — minimum capital, intense regulatory rules and the strong competition.

The creation of this amicable environment, for a certain time length, enhance the possibility of bringing new players to the market and, moreover, to add services and, therefore, quality to all the insurance chain. On a global picture, investments on the InsurTechs have been enormous, what means that the results must begin to appear.[47]

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[46] Fore a deep analysis of these issues, see McGURK, Brendan. *Data profiling and insurance law*. Oxford: Hart Publishing, 2019.

[47] "An interesting perspective about the future of the InsurTechs. After a, let's say, an exhilaration period, then comes the hour to face the reality. Huge investments need to be corresponded. The decade view: Where next for InsurTech? Over the next 10 years, InsurTech is going to have to change given how unsustainable its current setup is, and the transitions for the next decade are already in motion. Decline in the pace of investments: Almost US$20 billion has been invested globally into InsurTech over the past 10 years. In the short term, the pace of investment will most likely continue, but over the next 10 years, it is highly likely that those firms that make it as the winners either will have been acquired or will not be requiring any further raises. It is, however, uncertain as to what the long-term effect of Covid-19 will be on InsurTech investment appetite. Plateauing of valuation: InsurTech firm valuations, in general, will plateau — and in some cases, drop. We expect, however,

The Brazilian experience with the Susep regulatory sandbox seems to be walking on a good pattern. Since the launch of the first sandbox in March 2020, there are already ten new insurers at the market, with clear benefits to all the stakeholders involved. As explained, Susep will launch the second sandbox within the next months, for an additional amount of ten insurers.

In terms of safe and stability of the market for the new entrants, it is important to emphasize that the creation of the regulatory sandboxes does not rely, exclusively, on administrative rules that, as explained, are subject to changes in accordance with the will of the regulator. More than grounds on a simple regulatory framework, the sandboxes in Brazil have a Constitutional base — articles 218 and 219 — and, moreover, on the Complementary Law nº. 182, from June 1st, 2021. As an emerging economy and part of the BRICS, the Brazilian insurance market has lots of space to grow. In this context, the InsurTechs are welcome in the country.

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the valuation bubble will persist for at least another year; the likelihood is we will not see a burst but rather a slow erosion." (Johnston, Andrew. *Quarterly InsurTech Briefing, Q1 2020*, April 2020. Willis Towers Watson. Available at: www.cbinsights.com/research-global-insurtech-report?utm_campaign=marketing_wtw-insurtech_2021-10&campaignid=270202443&adgroupid=128930004641&utm_term=%2Binsurtech&utm_campaign=Reports&utm_source=google&utm_medium=cpc&utm_content=adwords-reports-americas&hsa_tgt=kwd-321042473751&hsa_grp=128930004641&hsa_src=g&hsa_net=adwords&hsa_mt=b&hsa_ver=3&hsa_ad=557796437917&hsa_acc=5728918340&hsa_kw=%2Binsurtech&hsa_cam=270202443&gclid=CjwKCAiAv_KMBhAzEiwAs-rX1Nc4ogtrzg5WpcKnzMoWiuSzC37ZIowAl_ax0EIF3P2yCbENyGL7LxoCE7wQAvD_BwE. ttps://www.willistowerswatson.com/-/media/WTW/Insights/2020/05/Quarterly-InsurTech-Briefing-Q1-2020.pdf?modified=20200506130155Visited on: March 22, 2021).

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