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Reinsurance in Brazil: challenges and opportunities of the opening of the market

"Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribblers of a few years back."
John Maynard Keynes, *The General Theory of Employment, Interest and Money*, 1936

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Summary

This report discusses several issues and facts of the reinsurance opening in Brazil. The opening of the reinsurance market in 2007 marked the end of the monopoly of the Brazilian Reinsurance Institute (IRB – Instituto de Resseguros do Brasil). The role of the IRB was a typical case of the "infant industry argument" that justified the closing of the economies from the 1940s to the 1970s in Brazil and other Latin American countries. At that time, the IRB was a public entity with operations guaranteed by the National Treasury. The nationalized reinsurance sector was supposed to favor an expansion of the insurance market and would be the main force to trigger the development of the domestic financial market. The evidence shows that the supply of reinsurance causes an increase in the supply of insurance which, in turn, justifies the expansion of the supply of reinsurance. Paradoxically, this was one of the arguments for the opening of the reinsurance market, in the same way it had previously served to justify the creation of nationalized reinsurance.

Key Words

Reinsurance, opening, technical efficiency, history.

Contents

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Sinopse

Resseguro no Brasil: desafios e oportunidades com a abertura do mercado

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Resumo

Este trabalho aborda várias questões e fatos sobre a abertura do resseguro no Brasil. A abertura do mercado de resseguros, em 2007, marcou o fim do monopólio do Instituto de Resseguros do Brasil (IRB). O papel do IRB foi um caso típico do "argumento da indústria nascente", que justificou o fechamento das economias no período entre 1940 até a década de 1970 no Brasil e em outros países da América Latina. Na ocasião, o IRB era uma entidade pública com operações garantidas pelo Tesouro Nacional. O setor de resseguros nacionalizado deveria favorecer a expansão do mercado de seguros e ajudaria a desencadear o desenvolvimento do mercado financeiro doméstico. As evidências mostram que a oferta de resseguros provoca um aumento na oferta de seguros que, por sua vez, justifica a expansão da oferta de resseguro. Paradoxalmente, este foi um dos argumentos para a abertura do mercado de resseguros, da mesma forma que havia sido anteriormente utilizado para justificar a criação de um resseguro nacionalizado.

Palavras-Chave

Resseguro, abertura, eficiência técnica, história.

Sumário

Sinopsis

El reaseguro en Brasil: desafíos y oportunidades de la apertura del mercado

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Resumen

Este trabajo analiza varias cuestiones y hechos de la apertura del reaseguro en Brasil. La apertura del mercado de reaseguros en 2007 marcó el fin del monopolio del Instituto Brasileño de Reaseguros (IRB – Instituto de Resseguros do Brasil). El papel del IRB fue un caso típico de "industria naciente" que justificó el cierre de las economías desde 1940 hasta la década de 1970 en Brasil y en otros países latinoamericanos. Lo IRB era una entidad pública con operaciones garantizadas por el Tesoro Nacional. El sector de reaseguros nacionalizado debería favorecer la expansión del mercado de seguros y ayudar a desencadenar el desarrollo del mercado financiero nacional. Las evidencias muestran que la oferta de reaseguro provoca un aumento en la oferta de seguros que, a su vez, justifica la expansión de la oferta de reaseguro. Paradójicamente, este ha sido uno de los argumentos a favor de la apertura del mercado de reaseguros, de la misma manera que anteriormente había servido para justificar la creación de un reaseguro nacionalizado.

Palabras-Clave

Reaseguro, apertura, eficiencia técnica, historia.

Sumario

1. Introduction

The opening of the reinsurance market in 2007 marked the end of the monopoly of the Brazilian Reinsurance Institute (IRB – Instituto de Resseguros do Brasil). Created in 1939 (Law 1186) during the *Estado Novo* (New State) period of the Vargas Government, the IRB was part of the package of reforms and the creation of public and mixed economy agencies, founded on the belief in the higher efficiency and social equity of government as the organizer of society and driver of economic and social development.[1] By the time of his death in 1954, Getúlio Vargas had founded companies and modernized institutions: CSN – Cia Siderúrgica Nacional (steelmaking); CVRD – Cia Vale do Rio Doce (mining); FNM – Fábrica Nacional de Motores (vehicles); Cia Nacional de Álcalis (soda and salt); Cia Hidroelétrica de São Francisco (electricity); CNP – Conselho Nacional do Petróleo (National Petroleum Council – the seed for the creation of Petrobras in 1953); DASP – Departamento Administrativo do Serviço Público (public service administration); and modern labor legislation (inspired by Mussolini's Labor Charter), among others. As part of this package, the IRB was an important pillar of the country's modernization process, creating the market for private insurance.[2]

Before the creation of the IRB, reinsurance was contracted directly abroad or through foreign companies operating in Brazil. Four reasons were important for the creation of the IRB: (a) the need to strengthen and expand the risk retention capacity of the few existing domestic insurers; (b) the need to reduce Brazil's outflow of foreign exchange and maintain the technical reserves for fixed capital formation; (c) the need to reduce dependence on foreign capital to avoid the problems suffered during the great depression of 1929; and (d) World War II, which halted the flow of foreign capital into Brazil and increased the perception of risk. In an environment with a shortage of private capital, it was expected that the IRB would be a public entity – actually, a mixed economy company, controlled by the government – with operations guaranteed by the National Treasury. At the time of its creation, the IRB was subordinated to the Ministry of Labor, Industry and Commerce.

[1] Getúlio Vargas assumed the presidency of Brazil in 1934 by indirect election. The Constitution of 1934 marked the beginning of modernization and democratization (subsequently stopped) in Brazil, with innovative and healthy measures, such as the principles of alternating powers; universal and secret vote, voting rights for women; labor union pluralism and the right to free expression. Even so, the Federal Constitution of 1934 was strongly interventionist in insurance, including (Art. 111) providing for the nationalization of insurance in all its forms. Decree 5901 of 1940, during the *Estado Novo*, established mandatory insurance for merchants, industrialists, providers of services, individuals or companies against the risk of fire, etc. The 1937 coup by Getulio interrupted the democratic phase and facilitated the implementation of the *Estado Novo* reforms. Belief in the authoritarian state as organizer of the society was a global phenomenon typical of 1930s-1940s. As declared by Getúlio in 1938, "The New State does not recognize individual's rights above the society. Individuals do not have rights, they have duties. All the rights belong to society."

[2] Classic articles on insurance and reinsurance, including by authors unrelated to the topic such as Gilberto Freire, are found in Castro, Roberto L.M. de; and Antonio Salvador Dutra (orgs.), Clássicos do resseguro [Classics of Reinsurance], (Rio de Janeiro, IRB-Brazil RE and the National School of Insurance, 2010). Theoretical aspects are found in Harrison, Connor M., Principios e práticas do resseguro [Principles and Practices of Reinsurance], (Rio de Janeiro, AICPCU-IIA and Escola Nacional de Seguros (National School of Insurance), 2007). For the legal view, see Mello, Sergio Ruy Barroso de, Contrato de resseguro [Reinsurance contract] (Rio de Janeiro, Escola Nacional de Seguros (National School of Insurance), 2011)

As further justification, the nationalized reinsurance sector was supposed to favor an expansion of the insurance market (which occurred) and would help trigger the development of the domestic financial market, through the creation of new institutional investors and better risk management (achieved in part). The protection of national insurers was justified as a way to compensate for their lower levels of capitalization *vis-à-vis* international insurers and lower technical capacity. The role of the IRB was a typical case of the "infant industry argument" that justified the closing of the economies from the 1940s to the 1970s in Brazil and other Latin American countries. Unfortunately, this "non-argument" has recently been revived, although in disguised form.

The evidence shows that the supply of reinsurance causes an increase in the supply of insurance which, in turn, justifies the expansion of the supply of reinsurance. In this sense, the relationship is bi-causal, with the strongest causality flowing in the direction of reinsurance to insurance. Paradoxically, this was one of the arguments for the opening of the reinsurance market, in the same way it had previously served to justify the creation of nationalized reinsurance.[3]

Until the 1990s, the IRB monopoly fulfilled its role in consolidating and modernizing the insurance market in Brazil, and especially training professionals who would become responsible for the current insurance sector framework. Unfortunately, behind the veil of protection, less efficient insurers managed to survive with the concessions granted by the IRB. The exhaustion of this model began to be seen in the 1990s, but protected markets survived for nearly two more decades.

Finally, the opening of the reinsurance market was included as part of the privatization process of the Collor government in 1990, but without success. Constitutional Amendment 13, 1996, broke the monopoly exercised by the IRB, but, again, with no practical effects. Finally, after several unsuccessful attempts, Complementary Law 126 of January 2007 and Resolution 168 of December of the same year governed the opening of the reinsurance market in Brazil. It looked to be a successful outcome and a response to the strategic needs of the Brazilian economy. Unfortunately, however, protectionism and excessive interventionism were not deeply buried.

[3] The causality between insurance and reinsurance deserves specific empirical analysis, but preliminary tests confirm bi-causality. See Faria, Lauro Vieira de, "Opening of the reinsurance market: the demand for reinsurance and impacts on the insurance market," Revista Brasileira de Risco e Seguro *International* vol.1, no.1, 2007, pp.1-40. A similar argument is suggested for the relationship between financial markets and economic growth, especially in less developed countries. Jung, W.S., "Financial development and economic growth: international evidence", Economic Development and Cultural Change, vol. 34, 1986, pp. 333-346.

This report discusses several issues and facts of the reinsurance opening in Brazil. Section 2 summarizes the early history, describes the effects of key events in the insurance and reinsurance markets and summarizes the transition period for the opening of the sector. Section 3 discusses the opening process, the expected and effective effects and the benefits and possible harm, analyzes the changes in the sale of premiums, the new institutional design, the structure of the market with new types of reinsurers, and the technical performance of the local reinsurers. Section 4 lists some requirements for the effective progress and modernization of the insurance and reinsurance markets. Section 5 presents the conclusions and suggests areas for further research.

2. Early History and Concepts

With the startup of the IRB's operations, the protection of national insurers was accomplished in two ways, justified as a way to increase competitiveness and stimulate the creation and expansion of national capital: (1) the establishment of low limits of risk retention, and (2) the creation of the so-called sole surplus. Under these conditions, domestic insurance companies, relatively poorly capitalized and with inferior technical capacity, had automatic reinsurance backing. If necessary, the IRB could count on the financial backing of the National Treasury for larger claims. The system thus provided domestic companies with advantageous, differentiated conditions allowing them to compete with foreign insurers. The rates of the policies were set and regulated, and competition was measured by the quality of service and the image of each insurer.

The IRB fulfilled its mission to consolidate and modernize the insurance market in Brazil up to the 1990s, and mainly to train the professionals who would create the framework for the current insurance market. In addition, of course, the growth of the insurance market provided the justification and made the monopolistic activities of the IRB possible. Despite the good intentions, the protected market had the effect of concentrating risks in Brazil that an open model would have transferred abroad. Moreover, under the veil of protection, less efficient insurers managed to survive through IRB transfers. The protection also discouraged the offer of new products, mainly the lines that needed less expensive reinsurance and better pricing of the risks.[4] For nearly 70 years, the IRB made adjustments and occasional improvements, and survived as a state monopoly until the privatizations of the 1990s.

The exhaustion of the protected market became apparent in the 1990s. The net benefits of protectionism based on the "infant industry" argument disappeared and the social costs became excessive. Even so, the closed market would survive for nearly two more decades. By 2007, in Latin America, only Brazil, Costa Rica and Cuba continued to have a government monopoly on reinsurance.

Before the opening up of the reinsurance market, the insurance industry experienced a paradox in Brazil. From the side of the insurance companies, there were competitive conditions with free prices and

[4] Faria, *op.cit.*

tariffs, made up of private companies seeking globalization. Furthermore, trained professionals carried out SUSEP's regulatory and oversight activities and solvency rules that converged with international practice. However, by contrast, the reinsurance market was a monopoly, controlled by the government and had a protectionist bias. In addition to being a monopolistic supplier, the IRB acted as the reinsurance market regulator.[5] After the market was opened, a new paradox emerged, which will be discussed below.

In March 2002, the International Monetary Fund and the World Bank analyzed the Brazilian financial market, identifying problems and suggesting changes in the various segments and types of market agents.[6] On the positive side, the two institutions found that the regulation and supervision of the insurance market already met the principles of the International Association of Insurance Supervisors (IAIS)[7], regarding solvency and minimum capital requirements, information transparency, risk management, implementation of internal controls and fraud detection. With regard to the governance of SUSEP, the most relevant suggestions were in the direction of greater autonomy for the agency, including financial autonomy (whose budgets were submitted to the Ministry of Finance), the selection of executive officers and oversight board members based on technical criteria and having fixed terms of office. Regarding intermediation, there was a proposal to implement a model of self-regulation[8] (endorsed and implemented by Fenacor in 2013). Moreover, with regard to reinsurance, the emphasis of the recommendation was to accelerate the market opening process and the adoption of supervision based on risk capital.

As an addendum to these suggestions, the end of the reinsurance monopoly also was the subject of international discussion, which may have contributed to a build-up of internal pressure from those opposed to the opening of the sector. In December 2004, the Trade Policy Review Body of the World Trade Organization (WTO), inspired by the Washington Consensus, urged Brazil to comply with the "Fifth Protocol to the GATS", signed in 1997, whose ratification depended on the opening of the reinsurance market.

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[5] It is important to differentiate the activities of regulation, inspection and supervision. Regulation is the establishment of rules of operation and conduct of institutions; inspection is observing that the rules are obeyed, and supervision corresponds to the verification of the operational behavior of companies and institutions. See Garcia, René, "Os fundamentos econômicos para uma teoria da regulação em mercados de capitais em processo de globalização" ["The economic foundations for a theory of regulation on capital markets in the globalization process"], Revista da CVM, 2001, pp.13-25

[6] A good summary is presented in Wehrhahn, Rodolfo, "Challenges for a credible and competitive Market, insurance and reinsurance regulation and supervision: key issues," CEBRI Conference, Rio de Janeiro, November 2013.

[7] The IAIS, created in 1994, brings together regulators and supervisors from over 140 countries, comprising over 97% of the global insurance market. The IAIS has more than 130 observers (who are not part of the staff of regulatory agencies) from the various member countries. The main goals of the IAIS are to foster the development of regulatory and supervisory measures with consistent and harmonious frameworks, and contribute to the stability of the financial markets.

[8] Supplemental Law 137 of August 2010 created, among other measures, the self-regulation of the brokerage activity. In 2013, Fenacor set up the IBRACOR – Instituto Brasileiro de Autoregulação do Mercado de Corretagem de Seguros, de Resseguros, de Capitalização e de Previdência Complementar Aberta. [Brazilian Self-regulation Institute of the Brokerage in Insurance, Reinsurance, Capitalization and Open Pension Fund Market].

Nationalized reinsurance received undeserved praise for the development of the insurance market. Other factors played a key role, because of the decline in inflation and rising real incomes in the 1990s. The first decade of the new millennium helped foster the expansion of the insurance market in Brazil. Despite the positive numbers, the environment of lower inflation and better income distribution did not consolidate the healthy and sustainable growth of the insurance sector, due to the anomalies. One such anomaly, as previously discussed, was nationalized reinsurance.

Two other anomalies are older and continue to play a role in the insurance market: (a) fragmented supervision with no single coordinating body, with the coexistence of three supervisory agencies: SUSEP, for the insurance and open pension plan market; the National Health Agency (ANS), for health plans; and the Superintendence of National Complementary Pension Funds (PREVIC), for pension funds, with each government agency reporting to a different ministry (Finance, Health and Welfare, respectively), with different supervisory mechanisms, budgets and missions; and (b) the financial regulation of the Central Bank and the Securities Exchange Commission (CVM) concerning the criteria for the management of technical provisions.

Discussions for opening up reinsurance emerged in the early 1990s as part of the Collor government's privatization program, and resurfaced at various other times, with more visibility and strength as the new century arrived. Constitutional Amendment 13, of 1996, broke the monopoly exercised by the IRB, but without practical effect. Finally, after several unsuccessful attempts, Complementary Law 126, of January 2007, and Resolution 168 of December of the same year, started to regulate the opening of the reinsurance market in Brazil.

- **What is reinsurance?**

  To simplify, reinsurance is the insurance for insurance companies and, as such, behaves as insurance-derived demand. Seen from the demand side, the same factors that determine the performance of the insurance market – macroeconomic, social and regulatory – directly and indirectly influence reinsurance. Therefore, the reinsurance market is pegged to insurance, although this does not mean they experience similar growth patterns. As insurance operations become more complex, guaranteeing higher risks, the reinsurance/risk ratio naturally tends to rise. Or, if the country's reinsurers become internationalized and cover risks in other economies, the behavior of the reinsurance market takes on its own dynamic, assuming a different path to that of the domestic insurance market.[9]

  Viewed from the supply side, reinsurance corresponds to additional capital, which increases the solvency margin of insurers and, as such, increases their risk retention capacity, which may well increase the supply of insurance.

[9] Which does not mean that causality flows only from insurance to reinsurance.

Reinsurance represents a contract in which an agent (called the reinsurer) agrees to indemnify an insurance company – named cedent or reinsured – for damages that may occur as a result of losses suffered by policyholders covered by the contract made with the insurer and the reinsurance contract. It is simply a transfer of insurance risk to reinsurers, and thereby reinsurance allows the insurer to reduce its liability with respect to a risk deemed excessive for its financial and technical capacity.[10] Reinsurance, in the same manner as coinsurance, serves to spread risk, with the advantage that it occurs in a global market, transferring part of the risk to the exterior, which reduces the country's risk level. The reinsurer may also use the risk retrocession mechanism where it passes along part of the responsibilities assumed to another insurer or another reinsurer.

Reinsurance contracts are classified according to their technical and contractual characteristics, which are divided into two types. The first is how the risk is distributed: the risk may be proportional, when the reinsurer is responsible for the claim in proportion to the cession of responsibility; or non-proportional, in the opposite case. The second type is how the reinsurance is evaluated and put into effect: when the risks are considered in an isolated manner, the contract is called facultative, and when the risks are aggregated into portfolios of insurance policies, the reinsurance is the treaty type. Most reinsurance policies are of the proportional and treaty type (i.e., encompasses a portfolio of policies with various risks).[11] In any case, in reinsurance operations there is no connection or direct link between the original insured and the reinsurer.

- **What purpose does reinsurance serve?**

Reinsurance increases market liquidity, stabilizes the claim rate (which reduces the risk of volatility of returns of insurance policy portfolios) and makes it possible to meet catastrophic risks, which are generally sizeable. In Brazil, catastrophic risks are modest, which on one hand is good for the insurance market, but on the other hand reduces the need for this type of reinsurance risk. Even without major natural disasters, insurance and reinsurance are crucial for the coverage of large risks in Brazil. The best example is the Petrobras P-36 platform accident, in March 2001, where Petrobras recovered US$ 490 million with the receipt of the insurance indemnity. Other risks, where reinsurance is essential, are aviation, maritime, environmental and large-scale industrial accidents.

[10] See www.tudosobreseguros.org.br from the Escola Nacional de Seguro (National Insurance School).

[11] KPMG, Abertura do Mercado de resseguro no Brasil: percepções do mercado [Opening of the reinsurance market in Brazil: Market perceptions], (KPMG and Rating de Seguros, 2011). The most widespread contracts are the automatic, optional, catastrophe, differentiated, in original conditions, surplus of responsibility, excess damage, excess claim, non-proportional, mandatory, percentage, by quota, proportional and stop loss. Each contract has specific characteristics that are beyond the scope of this paper.

Since reinsurance standardizes the behavior of the direct insurance portfolios from insurers, mitigates imbalances and keeps the severity of claims from jeopardizing the financial stability of the insurer. Imbalances in an insurance portfolio have two components: severity and frequency of claims. Severity represents the magnitude of the loss, and frequency the number of occurrences. These two imbalance components are essential for the preparation of reinsurance contracts, and determine the needs of each insurer.

The spreading of the risks from different markets, regions and activities leads to the diversification of reinsurers' policy portfolios, lowering total risk. Imbalances can also be offset by reinsurance through portfolio diversification. Moreover, through reinsurance, the accumulated knowledge from the experience of claims in different regions, environments and activities gives national insurers access to information about the international market, other products, new management practices and risk mitigation, etc. Since reinsurance operating in a competitive environment is essentially a globalized activity, national insurers are encouraged or forced to eventually adopt international practices.

- **Reinsurance in Brazil before the opening up of the market**

Even with the reinsurance monopoly, the Brazilian market did not face limits regarding the financial capacity of the insurers. Moreover, there were difficulties in the supply of insurance for certain types of risk due to limitations imposed by lack of technical knowledge in insurance risk assessment, a lack of commercial interest or simply the impossibility of reconciling the price-risk ratio.

To understand the post-market opening reinsurance environment, one must look at the evolution of the insurance market in Brazil, and the main factors determining its behavior – in particular, the level of income, the real price of the policies and inflation.

Regarding the role of income, the literature indicates the demand for insurance has an income-elasticity greater than one; that is, over the long-term the needs of insurance protection grow faster than the growth of the economy. Economic growth and the complexity of the activities tend to increase the need for protection and risk coverage. Empirical evidence in Brazil confirms insurance as a luxury good, though not always visible over the short-term.

Concerning price, the demand for insurance, like any good or service, responds to the cost of the policies compared to the cost incurred in alternative forms of protection, and here a technical comment applies, based on how our market functions. Though competitive, the Brazilian insurance market is not truly open and internationalized. Actually, there is no completely open insurance market in the world; rather the situation varies by country. In general, only insurers operating in the country (national capital or foreign subsidiaries) may sell insurance, and legislation prevents the direct purchase of insurance from insurers operating in other countries, which makes

the demand for insurance more price-inelastic. In Brazil, this rule is strictly enforced. This is not just a purely academic issue, since the price-inelasticity determines what happens to the billing of premiums in response to changes in price. With price-inelastic demand, a drop in price (other variables remaining constant) reduces total revenue, and this finding helps to understand why insurance can be expensive in Brazil, incorporating high taxes and excessive commercial and administrative costs.[12]

The third factor that affects, and in the past strongly impaired, the development of insurance in Brazil has been inflation. In the early 1960s, the Brazilian insurance market faced a serious financial crisis not shared by other sectors. The entire insurance system, accounting records, contracts and applications of technical provisions were based on a low-inflation model and the contracts were not indexed to inflation. With the rising inflation in the first half of the 1960s – and even more in the 1980s and the first half of the 1990s – the values of the contracts fell in real terms, which caused dissatisfaction and loss of equity on the part of the insured.[13] The insurance companies faced the combined effects of loss of customers, demonetization, a shrinking financial market and the inability to assess future risks *vis-à-vis* contracted prices of policies.

Finally, political instability affected the quality of supervision, market regulation and management quality: the IRB had eleven different presidents in the 1960s. Due to lack of control and clear operating rules in an inflationary environment, consumer confidence in the insurance market was once again severely affected. After the pawnbroker scandal of the 1920s, consumers and insurers viewed each other with suspicion. Both were pawns in the perfect storm of rising inflation, unprotected insurance contracts and the chaos of economic policy. Indexing was not included in insurance policies until 1987, at the stage of runaway inflation and the violence of broken contracts, 23 years after the formal implementation of indexation in contracts in Brazil.

This anomaly explains the difference in growth between commercial banks and insurers in Brazil. While indexation of financial assets served to underpin growth and technological modernization of the banks, the insurance market was deprived of this support. Without contractual indexation, the insurance activity was seen more as timid banking operations, with a component of deferred gains from the spread between the premiums collected and the uncorrected claims.[14]

[12] The issue is discussed in Contador, C.R., Economia do seguro: fundamentos e aplicações ["Insurance economics: principles and applications"] (São Paulo, Editora Atlas, 2007), Chapter 5.

[13] As a curiosity, cumulative inflation from April 1964 until the Real Plan in July 1994 totaled 787.69 trillion percent, with an annual average of 168.3% and monthly inflation averaging 8.6%, as measured by the IGP-DI of the Getúlio Vargas Foundation. This shows the difficulty in comparing values over time in Brazil. From 1964 until the implementation of indexing in insurance contracts in 1987, the accumulated inflation reached 3.05 million percent and a monthly average of almost 60%!

[14] In a research with data collected by the Central Bank, the insurance market has had a systematically higher return on net equity than the commercial banks since 1995. The total return of the insurance industry is the sum of industrial (about the business itself) and financial (return on management reserves) results. Excluding the latter, the industrial return is negative in most years.

For this reason, empirical evidence in Brazil indicates categorically that an especially high, and mainly unstable, rate of inflation strongly depresses the demand for insurance.[15] These factors – GDP growth, falling inflation from the thousand percent levels of the 1980s and 1990s to almost civilized rates after the Real Plan, real income and wages growth and respect for contracts – played an important role in expanding the sector after 1994.

Institutional factors contributed to the growth of the insurance market on healthier bases, with the deregulation of tariffs, the modernizing measures proposed in 1992 by the Directive Plan[16], and the preparation for the opening up of the reinsurance market. As a result, from 1995 until the beginning of the millennium, the environment was marked by major qualitative changes in the insurance market and strong growth in the real value of the premiums and assets of the insurers until these measures lost strength. Nevertheless, the insurance industry had a small, but growing, role in the financial system. In 2012, the total assets of insurance companies reached US$ 214 billion (R$ 460 billion), compared with US$ 2.3 trillion (R$ 4.9 trillion) of the commercial banks, while the total assets of the national financial system (SFN) totaled US$ 2.7 trillion (R$ 5.8 trillion). That is, the insurers' share of the total assets of the SFN is 8% whereas for the commercial banks it is 84%. By contrast, in the late 1990s, the assets of the insurers were little more than 3.8% of the SFN, which demonstrates the excellent growth of the sector in just over ten years.[17]

The opening of the reinsurance market gave a boost to the insurance market, which now needs to be supplemented and reinforced by a regulatory framework committed to the internationalization of the market, with a competitive market, less intervention, setbacks and rule changes, and mainly by transformations within the companies themselves and their representations.

Prior to the eventual opening, and based on technical studies, the winds had clearly begun to favor modernization of the market. In 2004, measures favorable to the insurance companies were suggested by the CNseg (Fenaseg at the time), in the Sectorial Plan.[18] Still in 2004, the Escola Nacional de Seguros [National School of Insurance] presented a set of proposals for a new Directive Plan[19],

[15] See discussion and empirical evidence in Contador, *op.cit*.

[16] Plano diretor do sistema de seguros, capitalização e previdência complementar [Directive Plan for the Insurance, Capitalization and Complementary Pension Plan System"], (Brasília, Ministry of Economics, Finance and Planning, 1992)

[17] In 2005, the value of total SFN assets was 78% of GDP. In 2012 – after the international financial crisis – reached 131%. That is, the financial crisis did not depress the value of the SFN assets in Brazil, unlike what occurred in other economies. All figures of 2013 are converted by the annual average exchange rate of R$ 2.15/US$.

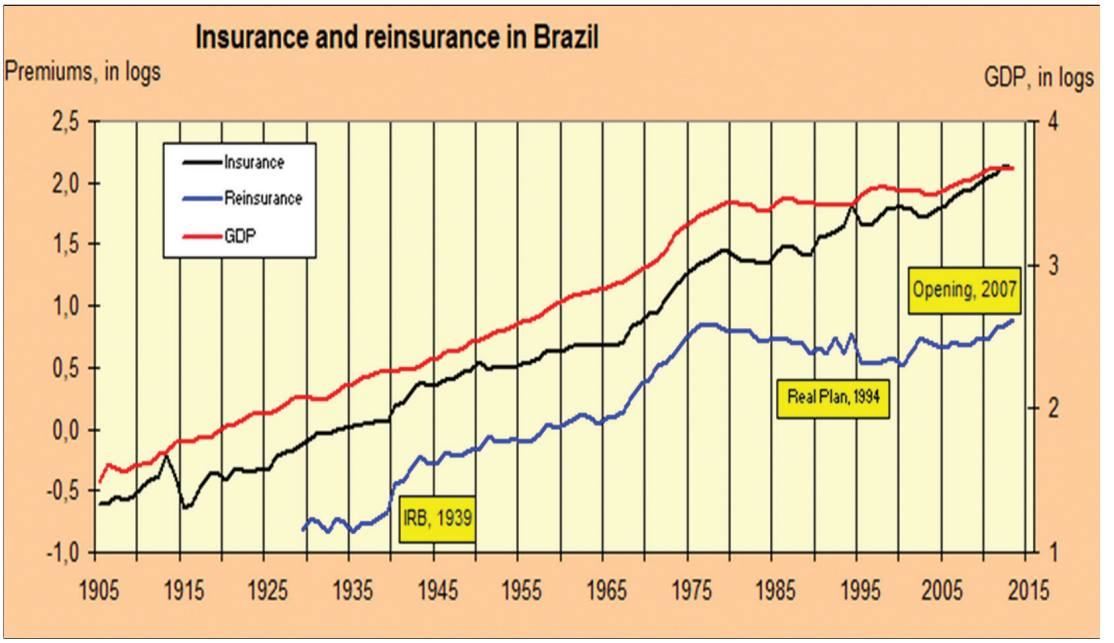
[18] 2º Plano setorial da indústria de seguros, [2nd Sector Plan of the Insurance Industry], (Rio, Fenaseg, 2004). The previous Plan was developed by McKinsey and Delphos consulting companies, Plano setorial da indústria do seguro [Sectorial Plan of the Insurance Industry], (Rio de Janeiro, Fenaseg, 1994)

[19] Plano diretor para o Mercado de seguros : propostas apresentadas pela Funenseg [Directive Plan for the Insurance Market: proposals presented by FUNENSEG], (Rio de Janeiro, Fundação Escola Nacional de Seguros (National School of Insurance), October 2004). The project had the participation of Prof. Roberto Macedo, University of São Paulo, as a consultant, who reconciled the proposals and drafted the technical report. Macedo was the coordinator of the 1992 Directive Plan, as Secretary of Economic Policy.

linked to the macroeconomic goals of the Federal Government covering suggestions of interest to other segments of the market. It is important to stress that simulations based on an econometric analysis anticipated that, even in a favorable macroeconomic environment, growth in the insurance segment would not be sustainable in the long term. Accordingly, the recommendations for qualitative changes became increasingly important.

In terms of values, and including only the markets supervised by SUSEP (insurance, private pensions), savings and lottery bonds [títulos de capitalização], and reinsurance, the payouts reached US$ 79 billion (R$ 170 billion) in 2013. Reinsurance premiums are US$ 3.7 billion (R$ 8 billion), just over 7% of the volume under SUSEP supervision. For a broader concept, the premiums from health plans, (supervised by the ANS), total US$ 44.2 billion (R$ 95 billion) and from the closed private pension (supervised by PREVIC) add another R$ 52 billion (US$ 24 billion). Therefore under a broader concept, earnings of privately administered insurance plans are almost US$ 163 billion (R$ 350 billion), or about 7% of GDP.[20] Total reserves for private insurance plans exceed US$ 230 billion (R$ 500 billion), which could be more efficiently used in the formation of private investment.

Figure 1



[20] Even so, this figure underestimates the value because it does not include the protection provided by other private institutions, such as funeral services, consortia and health plans offered by health clinics, just to name a few. These segments operate on a commercial basis, but without supervision. Although illegal, they attend the society as part of the large underground economy.

Figure 2

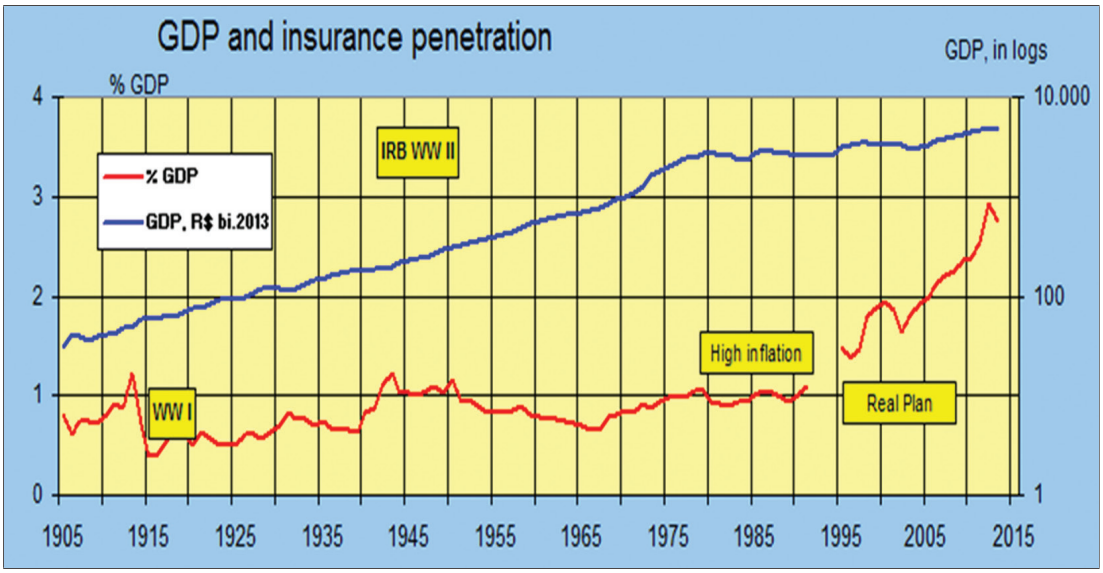


Table 1 – Evolution of the Insurance and Reinsurance Market

	Premiums, US$ billion of 2013			Reinsurance/ insurance ratio, %
	Total Insurance	Branches more suitable for reinsurance[a]	Reinsurance	
1995	21.35	10.31	1.61	15.7
1996	21.20	10.90	1.56	14.3
1997	23.26	11.51	1.59	13.8
1998	28.68	10.53	1.68	16.0
1999	29.18	9.87	1.68	17.0
2000	29.60	9.80	1.53	15.6
2001	28.33	10.29	1.95	19.0
2002	24.75	13.14	2.52	19.2
2003	25.70	15.68	2.41	15.4
2004	28.68	18.17	2.18	12.0
2005	30.72	19.58	2.09	10.7
2006	35.62	23.07	2.41	10.5
2007	39.56	26.81	2.18	8.1
2008	41.29	27.99	2.31	8.2
2009	45.75	32.65	2.56	7.8
2010	50.89	36.74	2.52	6.9
2011	54.64	23.86	3.06	12.8
2012	63.53	26.96	3.16	11.7
2013	60.77	27.51	3.63	13.2

Source of data: SUSEP, IRB, IBGE, SILCON. Prepared by: SILCON

[a] Lines of property risks, financial, oil and gas, rural, people, engineering, cargo, marine hull, aviation, third party liability.

Adding in the insurance provided by the public sector – FGTS, PIS/PASEP, SUS, INSS, Workers compensation (SAT), unemployment insurance, etc. – the size of the total insurance market in Brazil is almost US$ 372 billion (R$ 800 billion), or 18% of GDP. The several forms of insurance provided by the public sphere compete directly with the commercial lines offered by the private sector.[21]

Some insurance sectors with a higher risk concentration are more suitable for reinsurance operations. Table 1 shows that the sectors of property risks, financial, oil and gas, agriculture, life, engineering, cargo, marine hull, aviation, and third party liability had premiums of nearly US$ 27.5 billion (US$ 59.2 billion) in 2013, slightly less than half of the total insurance premiums. Reinsurance amounted to US$ 3.6 billion (R$ 7.8 billion), which corresponds to 13% of potentially reinsurable premiums.[22]

Figure 1 shows the evolution of insurance and reinsurance premiums in R$ billions at 2013 prices. The scale is in logs and the deflator is the average annual IGP-DI of the Getulio Vargas Foundation.[23] In brief, the history of the insurance industry (premiums in black line) can be divided into four phases: (1) an increasing trend, from the beginning of the twentieth century to the mid 1960s interrupted during World War II; (2) the faster growth stage, explained by the 1965 reforms and the period of the economic "miracle"; (3) the confused period with high and volatile inflation of the 1980s and first half of 1990s; and (4) the phase after the Real Plan. In terms of the reinsurance premiums, the growth path (blue line) is similar except for the period after 1990. Creating the IRB in 1939 and the opening of the market in 2007-08 accelerated the real value of the premiums, not only in the reinsurance market, but also in the insurance market. In this sense, reinsurance – of the state or in the private sector – was significant for the creation and development of the insurance market, although it occurred with help from other factors.

[21] This configuration biases the comparison of the size of the Brazilian insurance market with other countries that do not have a social safety net similar to that of Brazil.

[22] Other compositions of branches indicate different relations, but in general the insurance-reinsurance ratio is between 10 and 14%.

[23] Historical statistics are provided by SILCON Economic Studies (www.silcon.ecn.br), and published in Uma contribuicao a história do seguro no Brasil ["A contribution to the history of insurance in Brazil"], RS041 Report, Oct. 1999; Mercado de capitalizacao: o resgate da história e os cenários futuros, ["Market of savings and lottery bonds: the rescue the history and future scenarios"], RS042 Report, November 1999, SILCON Economic Studies; Contador, CR and Clarisse Ferraz Bohrer, O mercado de seguro e de capitalizacao no Brasil : revisão e atualizacao ["Insurance markets and capitalization in Brazil: an update,"], Funenseg Studies, no.6, April 2003.

It is easier to see the evolution of the market in Figure 2, with real GDP and the coefficient of insurance penetration – simply the division of insurance premiums by GDP – since the beginning of the twentieth century. While real GDP (blue line) shows a growth trend – albeit with variations around the trend line – insurance penetration (red line) has gone through distinct periods (two world wars, the creation of the IRB and high and volatile inflation, associated with breaking rules), and maintained modest penetration, rarely more than 1% of GDP, until the arrival of the Real Plan in 1994. Starting from the steady decline in inflation, insurance penetration shows unprecedented growth. This is the period relevant for the analysis of the opening of the reinsurance market.

3. The Opening of the Reinsurance

3.1 What should happen?

From the macroeconomic point of view, there is no doubt that the opening of the reinsurance market brings substantial net benefits to the Brazilian economy. For the insurance market as a whole, the net result was also positive, although some companies and market sectors may encounter problems and suffer losses.

Compared to the conditions prevailing in the period preceding the opening of the market, the end of the monopoly offered the potential for the generation of several effects, which would become more visible in the long term:

- A decline in the domestic price of reinsurance, to levels converging to that which prevails in the international market,
- An increased capacity for risk retention and potential supply of insurance,
- Transfer of risks to abroad through the reinsurers,
- An improvement in the technical efficiency of reinsurers, reinsurance brokers, and insurers in general,
- An improvement in the technical skills of the insurance market and the management of risk,
- An inflow of foreign investment by institutions with high credit ratings,
- An absorption of technical knowledge, technology, and new product lines,

- The encouragement of research and the search for knowledge about risk in unexplored areas in Brazil (environmental, rural, catastrophic),
- The development and improvement of existing product lines in Brazil,
- An increase in the sophistication and complexity of insurance, and
- The creation of the foundations to make Brazil a hub of regional reinsurance, and an exporter of knowledge and experience to other emerging markets.

3.2 What the market expected

In 2011, three years after the opening of the market, KPMG conducted a survey among executives of insurers and reinsurers to assess their perception about the opening of the market and its future prospects.[24] At that time, the expectations for growth in reinsurance were excessively optimistic, seduced by the sporting events, and the resulting investment in infrastructure, the PAC, and the pre-salt.[25] Some of the optimism has diminished, not only because of the deterioration of the macroeconomic environment, but also because of regulatory intervention. Nevertheless, there is no doubt that the opening of the reinsurance market provided an impetus and dynamism to the insurance market: risk management of insurers improved and became more technically competent; insurance companies became more profitable and solvent; the cost of reinsurance decreased; and there was greater exchange of information and technology between insurers and reinsurers.

In February 2014, FENACOR and the consulting firm Rating de Seguros developed an index of the global perception of the insurance industry on the environment, called Insurance Industry Confidence Index (ICSS), covering three market segments: the insurance companies, through the ICSS; the Confidence Index and Expectations of Reinsurance companies (ICER)[26], and the Brokers Confidence Index (ICGC). Starting in February 2014, the indexes survey the expectations of the insurance industry and allow comparison with similar indicators of other sectors of activity.

[24] KPMG, *op.cit*.

[25] Direct investment forecast for the Pre-Salt are estimated to be US$ 50 billion. Petrobras is expected to invest over US$ 220 billion by 2015. PAC infrastructure project investments will total US$ 590 billion in Stage 2. Altogether direct investments planned are over US$ 900 billion. Including indirect investments, in related sectors, total investment could top US$ 1 trillion over the next five years. All of these projects require insurance and reinsurance.

[26] Only local insurers were consulted.

Figure 3

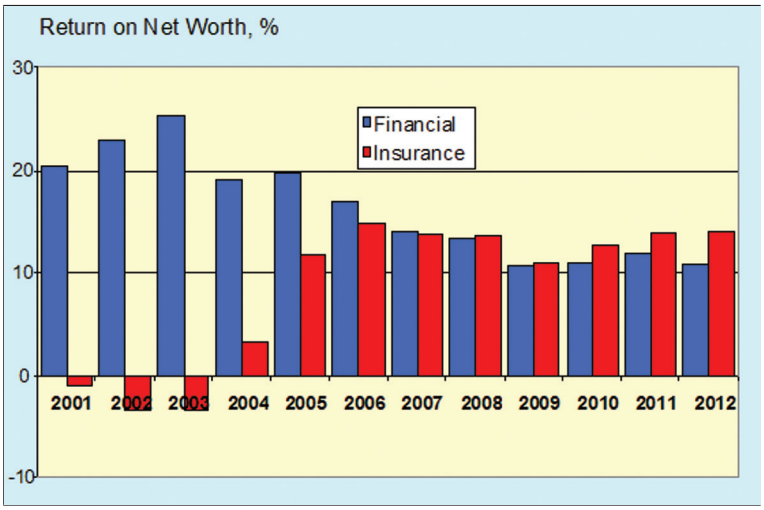


Table 2 – Expected effects of the opening of the reinsurance market
Prospects for medium- and long-term, % of responses.
Summary of the KPMG survey 2011

Question	Agree	Disagree	Don't know
Creation of new distribution channels	87	13	0
Insurance companies are more aware	88	13	0
Growth of insurance greater than GDP	79	8	13
Growth of reinsurance greater than GDP	79	12	8
Increased number of local reinsurers	79	16	4
Increased number of admitted reinsurers	79	21	0
More profitable insurance companies	80	17	4
More solvent insurance companies	83	8	8
Better risk management by insurers	96	0	4
Better risk management by policyholders	92	4	4
More profitable reinsurance companies	71	21	8
Lower costs of reassurance	63	33	4
More products for individual policyholders	79	12	8
More products in basic areas	67	21	13
Better qualified reinsurance brokers	58	38	4
Better qualified insurance brokers	67	29	4
More technically qualified insurers	96	0	4

Source: KPMG, 2011

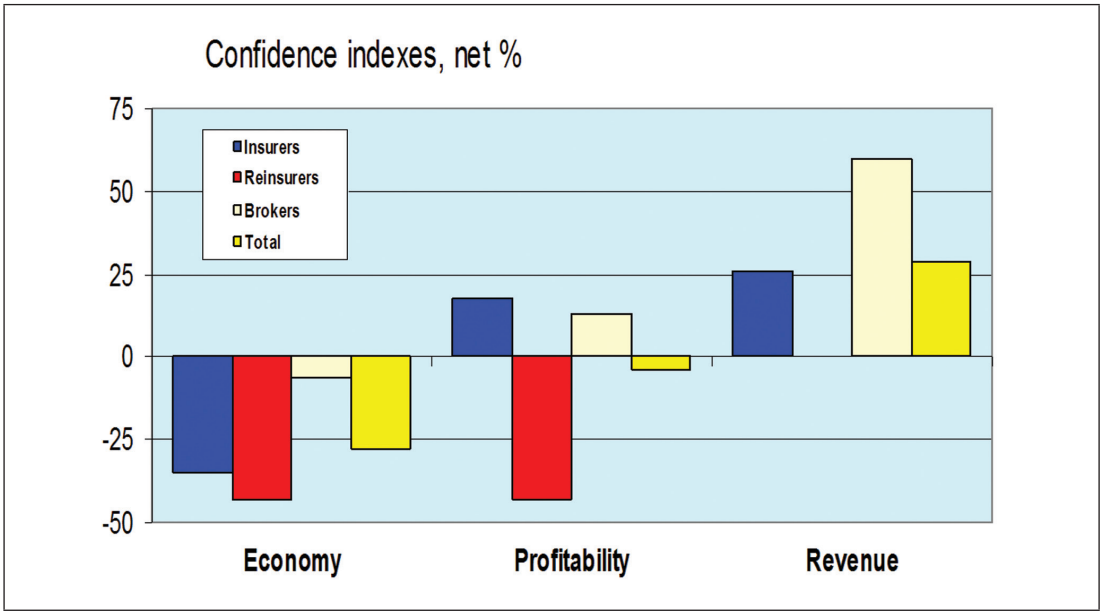
Table 3 – ICSS – Insurance Industry Confidence Index Poll
FENACOR, net balance of positive expectations[a], %

	Economy	Profitability	Billing
Insurers, ICES	-35	18	26
Reinsurers, ICER	-43	-43	0
Brokerage, ICGC	-6	13	60
Overall, ICSS	-28	-4	29

Source: FENACOR. Prepared by SILCON.
[a] Sum of percentages: Much better + Better – Worse – Much worse

In the release of the first ICSS, local reinsurers showed signs of pessimism, especially regarding the prospects of profitability of reinsurance operations during the next six months. In the three categories – macroeconomic environment, profitability of operations and billing – the pessimism of reinsurers over the next six months is higher than the insurers, while brokers had expectations of a more generous scenario. The reasons for this pessimism amongst reinsurers can be tied to the setback of CNSP Resolutions of 2010 and 2012, the creation of ABGF – Agência Brasileira Gestora de Fundos Garantidores e Garantias [Brazilian Agency of Funds Guarantors and Guarantees] in 2013, and the possibility of new rule changes. These factors foster an environment of cut-throat competition that is not conducive to the self-sustaining and healthy development of the sector in the long term.

Figure 4



Source: SILCON

3.3 What has happened already?

3.3.1 Fall in the price of reinsurance

In a competitive market, the price charged for reinsurance is a sensitive variable for evaluating the performance of reinsurers and the intensity of the impact of the market opening. In the extreme case of identical prices to those on the international market – under equal conditions of risk and taxation, of course – the opening of the market, though not necessarily perfect, generates similar effects to those of a competitive market. Where there is a difference in prices, with domestic prices above international – as in the case of heavily regulated and protected markets – the impact of the opening of the market is partial or non-existent.

The comparison between the prices charged by the IRB Brasil Re and international prices was a question that has elicited sporadic debates over the last two decades, but has not received the attention it deserved, especially with regard to the discussion of the opening of the reinsurance market. A survey by Faria[27] in 2006 examined this question and found that reinsurance premiums declined, as expected, and this had a statistically significant impact on reinsurance: as reinsurance fell, the demand for reinsurance increased, and vice versa. Other variables included in the model were then used to simulate the effects of the opening of the market.

Faria estimates that the average price of reinsurance in Brazil in the 1999-2004 pre-opening period was 62% higher than the average price charged by a sample of international reinsurance companies. Adopting the hypothesis that the opening of the market would lead to a gradual convergence to international prices, real revenues of reinsurance would increase by nearly 150% via direct effects, and if the migration of coinsurance operations were included, the indirect increase would exceed 200%. Therefore, considering the direct and indirect effects, the demand for reinsurance has a high response to price changes. The positive effects also extend to the insurance market itself, which could expect a 36% increase in risk retention capacity.

3.3.2 Technical competence to compete with international reinsurers

At the end of 2013, 14 local reinsurers were operating in Brazil, four with local capital, including the IRB Brasil Re. According to the opening model – to be discussed in more detail – there are three types of reinsurers: local, admitted and occasional. Most of the conclusions of the analysis are geared towards local reinsurers, which concentrate 64% of assigned premiums.

[27] Faria, *op.cit.*

Table 4 – Reinsurers licensed in Brazil
Premiums earned in 2013

	Date of Authorization	Premiums, R$ million
1 – Locals:		4,734.6
IRB Brasil Resseguros S.A	April 1939	2,664.0
J. Malucelli	May 2008	152.4
Munich Re do Brasil	May 2008	370.6
Mapfre Re do Brasil	November 2008	271.8
XL Resseguros Brasil	December 2008	81.5
ACE Resseguradora	November 2009	240.8
Austral Resseguradora	January 2011	234.1
AIG Resseguros (ex-Chartis Resseguros)	April 2011	45.8
Zurich Resseguradora	January 2012	312.0
Markel Resseguradora (ex-Alterra)	January 2012	34.0
Swiss Re Brasil	June 2012	82.7
Terra Brasis	October 2012	15.2
Alianz Global Corporate	December 2012	195.3
BTG Pactual Resseguradora	February 2013	34.4
2 – Occasional and admitted	–	2,854.0
Total market	–	7,888.6

Source: SUSEP

In the group of local reinsurers, the presence of foreign companies, with greater experience and international integration, would suggest that national reinsurers, excluding the IRB Brasil Re, should find themselves in an unequal competitive environment, where survival and expansion would have to be based on efficient use of specific factors. However, despite the short period of experience and statistics, the preliminary results of an ongoing research provide positive signals for the technical efficiency and competitiveness of the few local reinsurers operating in Brazil.

In summary, the research found that some local Brazilian reinsurers have gained technical efficiency, and are prepared to compete with the more experienced foreign reinsurers. Of the 14 local reinsurers, three were excluded from the analysis due to the quality of accounting or lack of data information. For ethical reasons, the corporate names may not be disclosed. The analysis uses operations research methods with the Data Envelopment Analysis (DEA), to evaluate the technical efficiency of production units, comparing the level of output (the reinsurance premiums) with the use of factors of production (administrative and personnel expenses, commercial and administrative spending, facilities, and investments in advertising).

Based upon the accounting information available on the SUSEP website for the accounts and results (DREs) of local reinsurers for the years 2008, 2010 and 2012, the empirical analysis shows[28] that:

1. only two of the seven foreign reinsurers show persistent maximum technical efficiency (100%) in the three periods.

2. of the other five foreign reinsurers, one suffered a decline in technical efficiency, and another showed an increase in efficiency. For the remaining three reinsurers, the analysis is inconclusive, or shows a poorly defined trend in efficiency, or lack sufficient accounting information.

3. four Brazilian reinsurers have technical efficiency of less than 100%. Two reinsurers became more efficient; one declined; and one newly established reinsurer does not show a defined trend, with information available for only the most recent period.

4. over the period 2008-2012 there was a significant increase in the real value of reinsurance premiums, which means that the measurement of technical efficiency should take into account the upward dislocation of efficiency potential. That is, maximum efficiency of 100% in one year is different from the level of maximum efficiency at a different point in time, since the gradation in efficiency between the companies is relative.

[28] DEA methodology indicates which factors and cost items less efficient firms should focus attention on and the gains from the adjustments should provide. For a case study based on a real case see SILCON Economic Studies, "Efficiency, productivity and technology: assessing the performance of companies," RS045 Report, March 2000. The estimation of technical efficiency of the reinsurers assumed production functions with constant returns to scale. Some studies with the DEA technique applied in the Brazilian insurance market are available. See Contador, Claudio et alli, "Evaluation of the Brazilian insurance market performance by DEA method (Data Envelopment Analysis) in the first half of 1999", [Avaliação da performance do Mercado segurador brasileiro atraves do método DEA (Data Envelopment Analysis) no primeiro semester de 1999], XXXII Brazilian Symposium of Operational Research, Annals, Viçosa, 18-20, Oct. 2000, pp.890-903; Magalhães da Silva, Antonio Carlos, "Tests of efficiency in the area of insurance, private pension and capitalization in the Brazilian market for the period 2000-2003: an approach using non-parametric tests and models of fuzzy logic" ["Testes de eficiência na área de seguradoras, previdência privada aberta e capitalização no mercado brasileiro em relação ao período de 2000 a 2003: uma abordagem através de testes não paramétricos e modelos de lógica nebulosa"], Revista Brasileira de Risco e Seguro, vol.1, no.2, October 2005-May 2006, pp.89-119.

Therefore, the technical advantage of foreign reinsurers is indeed observed but cannot be generalized, because the level of 100% is found in only two cases. In contrast, two foreign reinsurers suffered a reduction in technical efficiency. Hence, one cannot say that the technical efficiency of foreign reinsurers is better than the national reinsurers, provided both groups adopt modern management practices. And the evidence that two foreign reinsurers have technical performance of 100% in comparison with other local reinsurers, does not mean they are 100% efficient in comparison to peer companies or their counterparts installed in other countries.[29]

Table 5 – Technical efficiency of local reinsurers
Simple average of the coefficients of DEA efficiency, %

	2008	2010	2012
Foreign:			
All	61.0	66.2	53.1
Excluding the most efficient	22.1	43.6	34.4
Domestic:			
All	46.2	31.1	37.9
Excluding the IRB	12.0	18.0	33.7

Source: SILCON, preliminary results.

As an important result, two national private companies demonstrate increasing technical performance, either because they are learning and training their professional employees; absorbing and using international practices; or because they have, or have access to, differential factors. It is therefore possible for domestic reinsurers to compete with foreign companies operating in Brazil if they adopt similar practices, improve professional skills and adopt the new technology.

[29] This empirical analysis requires more effort, with access to the statistics and accounting information of foreign reinsurers operating in other countries, but this is necessary for the strategic positioning of domestic and foreign reinsurers, and also as a guide for supervision by SUSEP. The DEA technique applied to the accounting information available in SUSEP allows the development of a survey to monitor the evolution of the relative performance of local reinsurers over time.

3.4 Problems with the opening of the market

In the heat of discussion on the likely effects of the opening of the market, there existed the fear that it would cause the outflow of foreign exchange, with the transfer of reinsurance premiums to international companies, causing a decrease in the size of the domestic market and the loss in the formation of technical provisions to other markets.[30] This was not an unreasonable assumption, because if there were no minimum requirements for the generation of reinsurance internally – a complete opening of the market – there would be no barriers to entry and exit which could, in fact, permit the transfer operations to other countries.

What would be the limiting factors that might cause the transfer of reinsurance operations abroad? We can cite four. The first is the scarcity of qualified professionals which, although being remedied, is still a cause for concern. Here, a critique of the market and its institutions is worth noting. The various attempts to open the reinsurance market since 1992 at least gave enough time to provide better professional training. This did not happen, however. The opening in 2007 came as no surprise, but found the insurance and reinsurance market lacking professionals able to operate in a global environment. Certainly, this behavior cannot be generalized, as some reinsurers and reinsurance brokers are investing heavily in professional training. Unfortunately, the language barrier in the globalized reinsurance market is strong in Brazil.

The lack of attention to the development and training of the technical staff cannot be justified on the grounds of lack of training programs. Some educational institutions offer good quality graduate and undergraduate courses in insurance and reinsurance. The most traditional of these, the *Escola Nacional de Seguros* [National School of Insurance] offers an undergraduate degree in business administration with an ENADE Grade 5[31] in São Paulo and Grade 4 in Rio de Janeiro, in addition to MBA and Extension programs, international programs with scholarships at Cass University (London), and other training programs abroad. Still, the demand for their programs is not high enough in relation to those with the average level of knowledge and professional training programs in other markets.

The second potential difficulty is access to technology which, fortunately, is proceeding at a faster than expected pace. Local reinsurers, including IRB-Brazil Re understand that they operate in a competitive and globalized market and are absorbing modern practices and technology.

The third is a regulatory environment that is impeditive and disadvantageous to foreign companies. Despite the protectionist bias, the regulatory framework did not limit the freedom of reinsurance operations, nor did it create excessive capital requirements, nor restrict the flow of resources and the contracting of risk, nor the inclusion of bizarre clauses in contracts.

[30] These arguments are criticized by Bopp, Jutta, "Impact of the potential opening of the Brazilian reinsurance market", Swiss Re Economic Research & Consulting , 2005

[31] ENADE – Exame Nacional de Desempenho de Estudantes [National Student Performance Examination] is an examination conducted by MEC with the graduating students of the universities and faculties throughout Brazil. The maximum score is five. In São Paulo, the program of the Escola Nacional de Seguros took second place along the Business Administration programs, and in Rio de Janeiro, students placed in the top six undergraduate courses.

The fourth difficulty would be to establish loose rules and regulations, allowing the conditions to create the so-called "fronting market", in which reinsurance operations are contracted by representations and offices and transferred abroad.

3.5 The transition

3.5.1 A chronology of missteps and setbacks

The opening of the reinsurance market took place after a long and intermittent process. Although suggested in 1992 in the Directive Plan, the first real step occurred in August 1996, when the Congress approved Amendment 13 of the Federal Constitution. Article 192, Section II, dealt with the regulation of the financial system, of which the insurance market is part. With this Amendment, the "... *IRB ceased to be the official reinsurance agency...*", revoking a position that had been guaranteed in the 1988 Constitution. However, the Amendment was not regulated which rendered the measure innocuous. Nevertheless, it broke the legal barrier and paved the way for the opening of the reinsurance market.

In June 1997, the IRB's General Shareholders Meeting changed the denomination to IRB-Brasil Re, and the new name was confirmed by Article 59 of Provisional Measure 1549-36 November 1997. On May 27, 1998, Law 9649 confirmed the proposed measures which were published in the Official Gazette the following day.

Decree 2423 of December 1997 included reinsurers in the National Privatization Program of the Fernando Henrique Cardoso administration and the BNDES announced the IRB-Brasil Re privatization schedule in January 1999, with the auction scheduled for October 1999. This, however, was postponed because of the failure to approve the regulatory structure for the end of the monopoly.

In 1998, the federal government assumed a commitment under GATS (General Agreement on Trade in Services, WTO) to allow free competition of foreign insurers in Brazil. This agreement would be another source of pressure for the opening of the market, which did not take place until almost ten years later.

In September 1999, the government sent to Congress an ordinary draft bill that transferred the responsibilities for regulation and supervision to SUSEP and on December 20, 1999, Law 9932 was passed transferring the supervision and regulation of the reinsurance industry to SUSEP. In June 2000, the Workers' Party (PT) filed a suit citing the law's alleged unconstitutionality (ADIN 2223) and claiming that changes in the responsibility for the IRB could not be done by an ordinary law and would require a supplementary law. Although published in the Official Gazette, the Supreme Court deemed the law unconstitutional. The National Council of Privatization then halted the IRB-Brazil privatization process. Only in October 2001 was the suit brought before the Court, but the trial was suspended. In June 2002, discussion began on ADIN 2223, but it was not tried for lack of a quorum. A second meeting was scheduled, and again there was no quorum. In October, the Supreme Court resumed the trial of ADIN 2223 and upheld the injunction granted in July 2000. This meant that the IRB-Brasil Re recovered the functions of regulating and supervising the insurance market, and the granting of permits for operating companies.

In January 2000, the National Private Insurance Council (CNSP) published new rules for the operation of the open market, but normative acts passed after Law 9932 remained without legal status as long as the Supreme Court decision was upheld.

In March 2000, the National Privatization Council published a new notice and scheduled the auction for July 2000. In April, the auction was postponed to prepare a revaluation of the price of the company. Activities were suspended for three years, until May 2003, when Constitutional Amendment 40 was approved, allowing regulation by Article 192 of the Federal Constitution, allowing each sector of the financial system to be regulated by a specific supplementary law.

In June 2003, the Presidency – now under the administration of the PT (Labor Party) – transferred the regulatory and supervisory functions for reinsurance from IRB-Brazil to SUSEP, which had been suspended since the ADIN 2223 Decision, submitted by the same Labor Party in 2000. In June 2004, the General Prosecutor of the Republic and the Federal Attorney's Office issued opinions obviating the requirement of additional object of the law ADIN 2223.

Finally, in January 2007 via Complementary Law 126, the Federal Government promoted the opening of the reinsurance market, which would not be completed until April 2008 by the entry of new firms. Consolidating the process in February 2013, the Government authorized a capital increase of the IRB-Brasil Re through the issue of stock, but ultimately renounced the exercise of subscription rights for new shares. The IRB-Brazil was thus definitively privatized, after nearly 20 years of back and forth progress. Even so, the opening of the reinsurance market had a bias towards protecting reinsurers established in Brazil. Two amendments to the Federal Constitution, a Complementary Act and various adjustments in the regulatory framework, were necessary. Despite the improvement, however, the market cannot be regarded as globalized and completely competitive.

3.5.2 Successes and threats

Parallel to the legal arguments of the opening, the IRB Brasil Re went through internal changes that facilitated the process of privatization. The best evidence of these adjustments is the fact that privatization occurred in an orderly manner without manifestations to the contrary; a different environment than observed in previous privatizations.

In the late 1990s and early 2000s, the monopoly position of IRB-Re became increasingly untenable. Allegations of corruption and political use of the company tarnished the credibility and the history of the institution. Delays in compensation payments – more than six months, according to testimony from insurers – and unnecessary bureaucracy completed the IRB-Re situation.

The internal preparation for the opening of the reinsurance began in 2005, with a new president who established management practices common in financial institutions. New products were developed, an ombudsman was put in place to answer questions within 24 hours, average claim times dropped from 400 to 100 days, and large contracts were established with international reinsurers. The President of the IRB-Re himself put aside any doubts about the inevitability of the opening by stating that *"... (IRB-Re) ... no longer exerts monopoly power."* This was an important step in breaking down the internal resistance against the market opening within IRB-Re and a signal that a new market model was close to implementation. Finally, in 2008 the opening was put into practice.

The consolidation of the competitive model for reinsurance was already in progress when, in late 2010, the National Private Insurance Council (CNSP) passed two resolutions that were seen as steps backward. Resolution 224 inhibited the transfer of reinsurance contracts between companies linked to or owned by the same financial group, and Resolution 225 required that 40% of the surpluses of insurance must be placed in local reinsurers. In March 2011, the CNSP relaxed Resolution 224, allowing the insurer or reinsurer to transfer up to 20% of the premiums to companies linked to or belonging to the same financial conglomerate headquartered abroad, except for some areas.

Another intervention – and a new setback – was the creation by Decree 7976 of the ABGF – Agência Brasileira Gestora de Fundos Garantidores e Garantias [Brazilian Agency of Funds Guarantors and Guarantees], under the Ministry of Finance in August 2013, with the ability to operate in any type of insurance, with the spurious argument that insurers and reinsurers showed no interest or were unable to guarantee the risks of major infrastructure projects. The argument is flawed for several reasons. First, the technical capacity for large insurance and reinsurance risks does exist. Second, in an open market, the price mechanism is able to determine the appropriate premium for the risk. Therefore the measure was a relic from the protectionist philosophy, a return to interventionist thinking, a new element of uncertainty in the market, and a source of pessimism. However, depending on the behavior of ABGF, some professionals believe that the reinsurance market may be more attractive to new entrants.[32]

With these interventions, the insurance industry in Brazil experienced a new paradox. Before the opening, and throughout 2013, all insurers were private, and the reinsurance market was nationalized and closed. In the current environment, the reinsurance market is open, and accessible to the participation of foreign companies, but private insurers coexist with a state-owned enterprise (ABGF)!

[32] Pereira, Marcela Semeghini, "System Brazilian and American reinsurance: needed of convergence", Revista da Faculdade de Direito da UERJ, Rio de Janeiro, vol.1, no.23, 2013

3.6 Market structure and institutions

The reinsurance model before the opening was very simple: IRB received the policies of the insurers and processed them directly or re-passed them overseas. The companies involved were the reinsurer, the IRB and the reinsured. The IRB established the limits for lines of insurance, the operating limits, the solvency margins and the minimum capital requirements determined by CNSP and SUSEP. The risk in excess of the technical limit of the insurer was transferred to another insurer, through coinsurance operations, and/or the IRB, through reinsurance. With reinsurance accepted, the IRB could retain the risk (since the value was within its technical limits), redistribute value to other Brazilian insurers (if the value exceeded its technical limit, but was less than the retention capacity of insurers), or pass through to the international reinsurers, if the value of the risk exceeded the capacity of the domestic market. Until 2000, the surrender of national insurance was automatic, with payment of a proportional commission by the IRB. In many cases, the insurers were required to accept a minimum of 50% of the value of the reinsurance and the IRB retained 50% of the pass-through. In this pre-opening format, the price of reinsurance was essentially determined by the IRB.

The opening of the reinsurance market radically changed the *modus operandi.* First, from the point of view of the domestic market, the model gave freedom in choosing the reinsurer to insurers, who were able assess the risk and charge an appropriate premium. Second, the price of reinsurance came to be determined by the market. Third, the operations became more agile and had less bureaucracy. Fourth, the market structure is flexible with three types of reinsurers: local, admitted and occasional.

- A **local reinsurer** has its headquarters in Brazil, and is constituted as a corporation with a minimum capital of US$ 60 million.

- An **admitted reinsurer** is authorized to operate in accordance with their business needs in Brazil. It must have over five years of operation in the international market; a minimum net worth of US$ 100 million; meet the minimum requirements of economic and financial capacity; pass a solvency assessment by a rating agency, be registered with SUSEP; and operate as a representative office. It must have a bank account in foreign currency linked to SUSEP as a guarantee of operations and provide guarantees through the allocation of resources in Brazil.

- An **occasional reinsurer** is a foreign reinsurer operating in its country of origin for more than five years, with net assets of more than US$ 150 million. It does not need to have office or representative office in Brazil, but it must have a positive solvency assessment by a recognized rating agency and must appoint an attorney residing in Brazil with extensive administrative and judicial powers, as required by Brazilian law.

At the end of 2013, 113 reinsurers (14 locals, including IRB-Brazil Re, 67 occasional and 32 admitted) and 26 reinsurance brokers operated in Brazil. In terms of values, the total reinsurance market ended 2013 with premiums of nearly US$ 3.6 billion (R$ 8 billion), with 65% of reinsurance in the local market. The amount of premiums yielded to IRB-Brazil Re reached US$ 1.3 billion (R$ 2.8 billion) in 29th place in the rank of international reinsurers.

Table 6 – Number of firms operating in the reinsurance market

	2011	2012	2013
Reinsurers:	96	106	113
• Local	8	13	14
• Occasional	59	59	67
• Admitted	29	34	32
Reinsurance brokers	33	32	26

Source: SUSEP

Charts 1 and 2 reproduce the new configuration of flows, with the evolution of the values in Tables 7 and 8 respectively in R$ million, at 2013 prices, and current US$ billion. The deflator used was the IGP-DI, the Getulio Vargas Foundation, and the conversion to dollars by the average annual commercial rate of R$ 2.15/US$. The mega-inflation phase of the '80s and early '90s, the currency changes, the imposition of *tablitas* and different indexation criteria greatly hindered the accounting records at the time. As far as possible, the data of Tables 7 and 8 corrected the discrepancies.

The model adopted by post-opening reinsurance brings clear advantages: type-flexibility of companies (local, admitted and occasional), total openness to foreign companies and less restrictive than that observed in other countries.[33]

[33] For example, the U.S. legislation restricts the transfer of premiums to other countries. This practice, with fewer rigors, is adopted in other countries. In emerging economies – China, India, Russia – reinsurance operations virtually exclude foreign reinsurers.

Chart 1 – The configuration of the new reinsurance market
Reinsurance premium ceded by Brazilian originators
Flow values shown in Tables 6 and 7

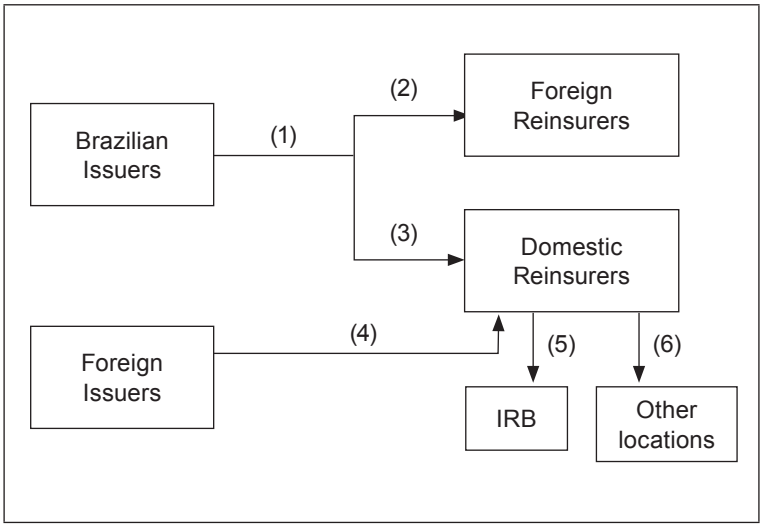


Chart 2 – The configuration of the new reinsurance market
Reinsurance premium accepted by local reinsurers
Flow values shown in Tables 6 and 7

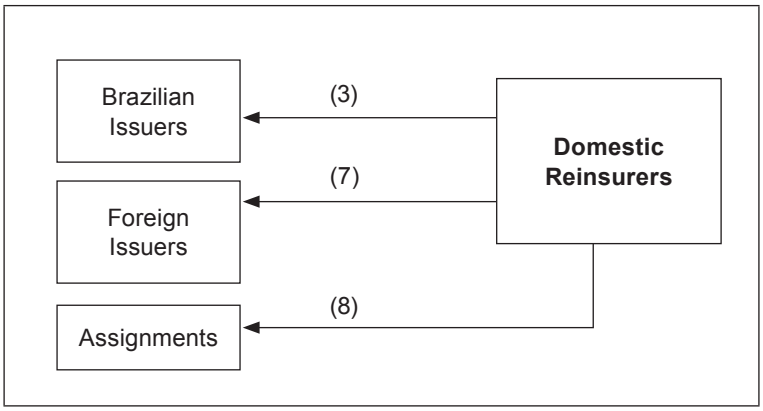


Table 7 – The reinsurance market, R$ million at 2013 prices

	Ceded by Brazilian originators					Accepted by local reinsurers, from:				
	Total market (1)	IRB (5)	Private locals (6)	Local market (3)	Foreign (4)	Brazilian Originators (3)	Foreign Originators (7)	Gross Reinsurance Premium	Net Transfers (8)	Retained Premiums
1970	**2,204.5**	**2,204.5**	**...**	**2,204.5**	**...**	**...**	**...**	**2,204.5**	**1,952.7**	**251.8**
1971	2,579.8	2,579.8	...	2,579.8	...	...	...	2,579.8	2,327.4	252.4
1972	3,096.7	3,096.7	...	3,096.7	...	...	...	3,096.7	2,699.6	397.1
1973	4,070.1	4,070.1	...	4,070.1	...	...	...	4,070.0	2,629.8	1,440.2
1974	5,145.0	5,145.0	...	5,145.0	...	...	...	5,145.0	2,663.7	2,481.3
1975	6,254.9	6,254.9	...	6,254.9	...	...	...	6,254.9	3,316.3	2,938.6
1976	6,923.4	6,923.4	...	6,923.4	...	...	...	6,923.4	3,973.0	2,950.5
1977	7,294, 8	7,294, 8	...	7,294.8	...	...	...	7,294.8	4,204.1	3,090.7
1978	6,980.4	6,980.4	...	6,980.4	...	...	...	6,980.4	3,448.1	3,532.3
1979	6,297.7	6,297.7	...	6,297.7	...	...	...	6,297.7	2,923.1	3,374.6
1980	**6,088.2**	**6,088.2**	**...**	**6,088.2**	**...**	**...**	**...**	**6,088.2**	**3,030.1**	**3,058.1**
1981	6,081.3	6,081.3	...	6,081.3	...	...	...	6,081.3	3,249.5	2,831.9
1982	6,217.7	6,217.7	...	6,217.7	...	...	...	6,217.7	3,490.6	2,727.1
1983	5,139.8	5,139.8	...	5,139.8	...	...	...	5,139.8	2,934.0	2,205.8
1984	5,261.6	5,261.6	...	5,261.7	...	...	...	5,261.6	3,135.6	2,126.1
1985	5,293.9	5,293.9	...	5,293.9	...	...	...	5,293.9	3,063.0	2,231.0
1986	5,487.1	5,487.1	...	5,487.1	...	...	...	5,487.0	2,994.6	2,492.4
1987	4,911.6	4,911.6	...	4,911.6	...	...	...	4,911.6	2,636.5	2,275.2
1988	5,087.2	5,087.2	...	5,087.2	...	...	...	5,087.2	2,560.2	2,527.0
1989	4,147.7	4,147.7	...	4,147.7	...	...	...	4,147.7	2,062.2	2,085.6
1990	**4,560.6**	**4,560.6**	**...**	**4,560.6**	**...**	**...**	**...**	**4,560.6**	**1,824.2**	**2,736.3**
1991	4,068.3	4,068.3	...	4,068.3	...	4,068.3	...	4,068.3	1,784.9	2,283.4

	Ceded by Brazilian originators					Accepted by local reinsurers, from:				
	Total market (1)	IRB (5)	Private locals (6)	Local market (3)	Foreign (4)	Brazilian Originators (3)	Foreign Originators (7)	Gross Reinsurance Premium	Net Transfers (8)	Retained Premiums
1992	5,607.0	5,607.0	...	5,607.0	...	5,607.0	...	5,607.0	2,301.5	3,305.6
1993	4,018.8	4,018.8	...	4,018.8	...	4,018.8	...	4,018.8	1,792.8	2,226.0
1994[d]	5,841.5	5,841.5	...	5,841.5	...	5,841.5	...	5,841.5	2,610.1	3,231.5
1995	3,470.9	3,470.9	...	3,470.9	...	3,470.9	...	3,470.9	1,012.9	2,458.0
1996	3,344.3	3,344.3	...	3,344.3	...	3,344.3	...	3,344.3	1,316.5	2,027.8
1997	3,408.7	3408, 7	...	3,408. 7	...	3,408.7	...	3,408.7	1,220.0	2,188.7
1998	3,621.2	3,621, 2	...	3,621.2	...	3,621.2	...	3,621.2	1,272.5	2,348.7
1999	3,618.3	3,618, 3	...	3,618, 3	...	3,618.3	...	3,618.3	1,536.7	2,081.5
2000	**3,291.0**	**3,291.0**	**...**	**3,291.0**	**...**	**3,291.0**	**...**	**3,291.0**	**1,464.2**	**1,826.8**
2001	4,200.9	4,200.9	...	4,200.9	...	4,200.9	...	4,200.9	2,194.5	2,006.4
2002	5,422.4	5,422.4	...	5,422, 4	...	5,422.4	...	5,422.4	3,022.7	2,399.6
2003	5,176.9	5,176.9	...	5,176, 9	...	5,176.9	...	5,176.9	2,897.0	2,279.8
2004	4,692.5	4,692.5	...	4,692, 5	...	4,692.5	...	4,692.5	2,342.1	2,350.4
2005	4,499.7	4,499.7	...	4,499.7	...	4,499.7	...	4,499.7	2,387.9	2,111.8
2006	5,188.3	5,188.3	...	5,188.3	...	5,188.3	...	5,188.3	2,522.0	2,666.3
2007[b]	**4,681.4**	**4,681.4**	**0.0**	**4,681.4**	**0.0**	**4,681.4**	**30.5**	**4,711.9**	**2,382.8**	**2,330.5**
2008	4,963.3	4,202.2	429, 5	4,631.7	331.6	4,631.7	40.5	4,672.1	2,528.6	2,143.5
2009	5,496.6	3,738.4	1,033.7	4,772.0	724.6	4,772.0	107.7	4,879.8	2,366.1	2,513.6
2010	**5,415.2**	**1,434.6**	**1,174.6**	**2,609.2**	**2,806.0**	**2,609.2**	**144.6**	**2,753.7**	**1,112.7**	**1,641.1**
2011	6,578.2	2,867.7	1,487.6	4,355.3	2,223.0	4,355.4	56.0	4,411.2	2,409.9	2,001.3
2012	6,794.4	2,554.9	1,541.0	4,095.9	2,698.5	4,095.9	157.4	4,253.2	1,914.9	2,338.4
2013	7,848.0	2,505.0	2,489.3	4,994.0	2,854.0	4,994.0	194.0	5,188.0	2,216.0	2,972.0

Sources: IRB and SUSEP. Adaptation of diagrams developed by Terra Brasis. Data and calculations: SILCON. Current values deflated by the IGP-DI, annual average.

[a] IRB and other local

[b] Opening of reinsurance

[d] Real Plan

Table 8 – The reinsurance market, current US$ million

	Ceded by Brazilian originators					Accepted by local reinsurers, from:				
	Total market (1)	IRB (5)	Private locals (6)	Local market (3)	Foreign (4)	Brazilian Originators (3)	Foreign Originators (7)	Gross Reinsurance Premium	Net Transfers (8)	Retained Premiums
1970	**93.4**	**93.4**	**...**	**93.4**	**...**	**...**	**...**	**93.4**	**82.7**	**10.7**
1971	114.0	114.0	...	114.0	...	...	...	114.0	102.9	11.2
1972	143.2	143.2	...	143.2	...	...	...	143.2	124.9	18.4
1973	209.4	209.4	...	209.4	...	...	...	209.4	135.3	74.1
1974	307.5	307.5	...	307.5	...	...	...	307.5	159.2	148.3
1975	399.4	399.4	...	399.4	...	...	...	399.4	211.8	187.6
1976	476.4	476.4	...	476.4	...	...	...	476.4	273.4	203.0
1977	539.2	539.2	...	539.2	...	...	...	539.2	310.7	228.4
1978	558.9	558.9	...	558.9	...	...	...	558.9	276.1	282.8
1979	523.7	523.7	...	523.7	...	...	...	523.7	243.1	280.6
1980	**515.4**	**515.4**	**...**	**515.4**	**...**	**...**	**...**	**515.4**	**256.5**	**258.9**
1981	611.2	611.2	...	611.2	...	...	...	611.2	326.6	284.6
1982	632.0	632.0	...	632.0	...	...	...	632.0	354.8	277.2
1983	413.7	413.7	...	413.7	...	...	...	413.7	236.1	177.5
1984	427.1	427.1	...	427.1	...	...	...	427.1	254.5	172.6
1985	414.2	414.2	...	414.2	...	...	...	414.2	239.6	174.5
1986	476.1	476.1	...	476.1	...	...	...	476.1	259.8	216.3
1987	476.4	476.4	...	476.4	...	...	...	476.4	255.7	220.7
1988	576.1	576.1	...	576.1	...	...	...	576.1	289.9	286.2
1989	625.4	625.4	...	625.4	...	...	...	625.4	311.0	314.5
1990	**815.5**	**815.5**	**...**	**815.5**	**...**	**...**	**...**	**815.5**	**326.2**	**489.3**
1991	618.2	618.2	...	618.2	...	618.2	...	618.2	271.2	347.0

	Ceded by Brazilian originators					Accepted by local reinsurers, from:				
	Total market (1)	IRB (5)	Private locals (6)	Local market (3)	Foreign (4)	Brazilian Originators (3)	Foreign Originators (7)	Gross Reinsurance Premium	Net Transfers (8)	Retained Premiums
1992	838.8	838.8	...	838.8	...	838.8	...	838.8	344.3	494.5
1993	668.3	668.3	...	668.3	...	668.3	...	668.3	298.1	370.2
1994[d]	1,249.8	1,249.8	...	1,249.8	...	1,249.8	...	1,249.8	558.4	691.4
1995	866.4	866.4	...	866.4	...	866.4	...	866.4	252.8	613.6
1996	846.7	846.7	...	846.7	...	846.7	...	846.7	333.3	513.4
1997	868.3	868.3	...	868.3	...	868.3	...	868.3	310.8	557.5
1998	890.1	890.1	...	890.1	...	890.1	...	890.1	312.8	577.3
1999	633.2	633.2	...	633.2	...	633.2	...	633.2	268.9	364.2
2000	**649.7**	**649.7**	**...**	**649.7**	**...**	**649.7**	**...**	**649.7**	**289.0**	**360.6**
2001	712.6	712.6	...	712.6	...	712.6	...	712.6	372.3	340.4
2002	840.1	840.1	...	840.1	...	840.1	...	840.1	468.3	371.8
2003	934.6	934.6	...	934.6	...	934.6	...	934.6	523.0	411.6
2004	975.1	975.1	...	975.1	...	975.1	...	975.1	486.7	488.4
2005	1,190.4	1,190.4	...	1,190.4	...	1,190.4	...	1,190.4	631.7	558.7
2006	1,562.6	1,562.6	...	1,562.6	...	1562.6	...	1,562.6	759.6	803.0
2007[b]	**1,652.9**	**1,652.9**	...	**1,652.9**	...	**1652.9**	**10.8**	**1,663.6**	**841.3**	**822.8**
2008	2,072.4	1,754.6	179.3	1,934.0	138.5	1934.0	16.9	1,950.9	1,055.8	895.0
2009	2,145.6	1,459.3	403.5	1,862.8	282.8	1862.8	42.1	1,904.8	923.6	981.2
2010	**2,532.6**	**670.9**	**549.4**	**1,220.3**	**1312.3**	**1,220.3**	**67.6**	**1,287.9**	**520.4**	**767.5**
2011	3,508.7	1,529.6	793.4	2,323.0	1,185.7	2323.0	29.9	2,352.9	1,285.4	1,067.5
2012	3,291.0	1,237.5	746.4	1,983.9	1,307.1	1983.9	76.2	2,060.2	927.5	1,132.7
2013	3,637.4	1,161.0	1,153.6	2,314.6	1,322.8	2314.6	89.9	2,404.5	1,027.1	1,377.5

Sources: IRB and SUSEP. Adaptation of diagrams developed by Terra Brasis. Data and Calculations: SILCON. Conversion to US$ at the average annual exchange rate.

[a] IRB and other local

[b] Opening of reinsurance

[d] Real Plan

The value of the reinsurance premiums expressed at 2013 prices (that is: excluding inflation) is only 7% higher than that of 1977 – almost four decades earlier –, as shown in Figure 5.[34] However, the comparison is misleading since the post-opening environment is healthier, more likely to reward efficiency and has better prospects than in the era of monopoly.

Figure 5

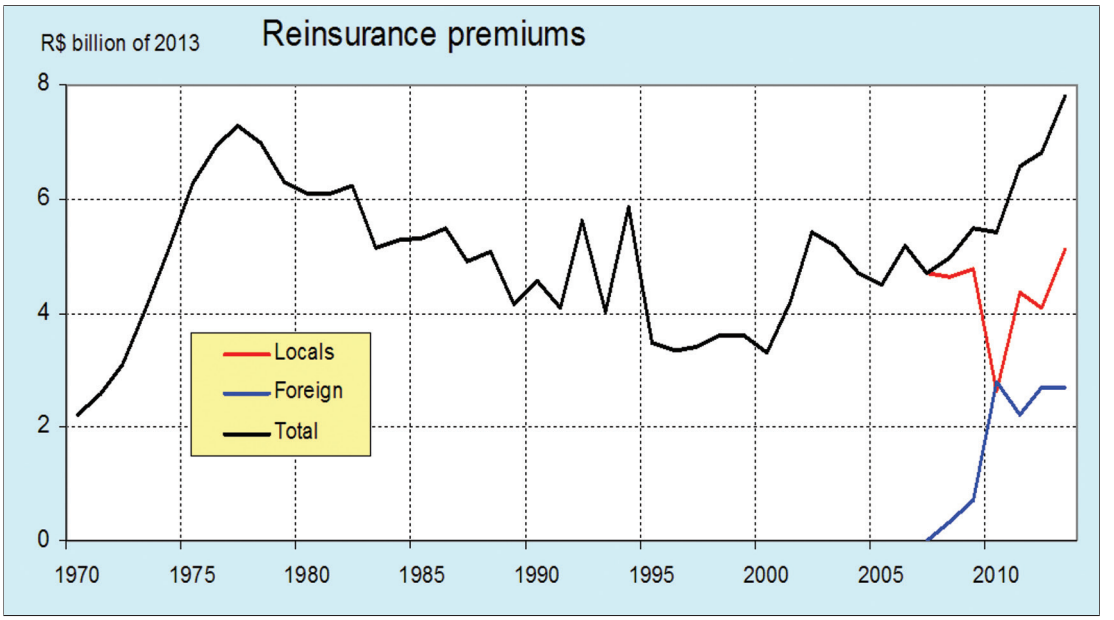


Figure 5 also shows the explosive growth of total reinsurance premiums in real terms. From the opening in 2007 through 2010, there was a drop in reinsurance for local companies – basically the loss of the IRB-Brazil – offset by the expansion of the premiums from foreign reinsurers (occasional and permitted). Beginning in 2011, local reinsurers began to experience continued strong growth, and this trend should remain in the coming years.

Figure 6 shows reinsurance ceded by local companies since 2000, with two remarks. First, the losses of IRB Brasil Re (red line), and second the uninterrupted growth of the real premiums of other reinsurers (blue line). Both effects are visible and evidence of the salutary effects of the opening of the market.

[34] Despite inflation, the comparison to 1977 is nevertheless valid since inflation in 1977 – 42%, although high compared to current levels – did not significantly distort accounting records which used monetary correction (restatement).

Figure 6

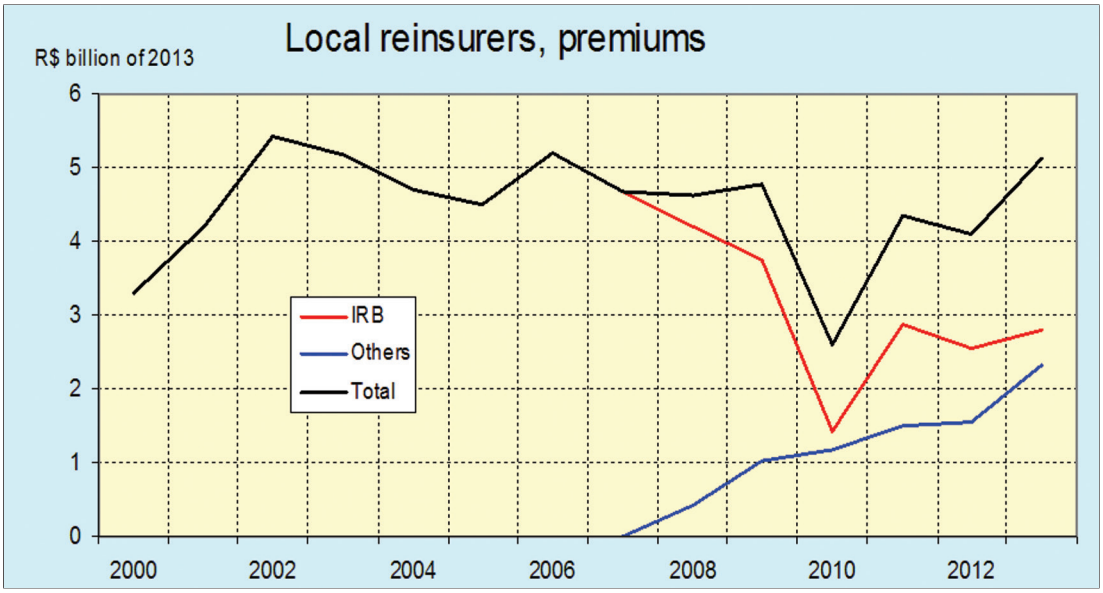
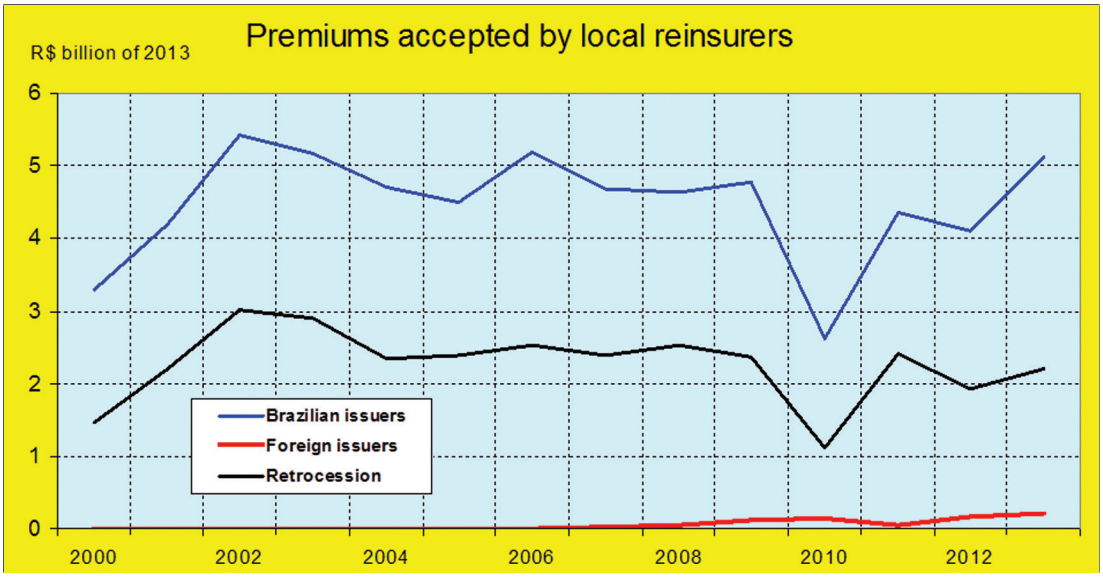


Figure 7



The breakdown of the premiums accepted by local reinsurers in Figure 7 shows the importance of reinsurance ceded by Brazilian firms (blue line), followed by retrocession (black line), and, with smaller significance, the assignments to foreign companies (red line). With regard to the breakdown of gross reinsurance premiums, retrocession and retained premiums have similar fluctuations in most periods and is visible during the expansion phase from 2011 of the retention of premiums. This trend should continue in the coming years.

Figure 8

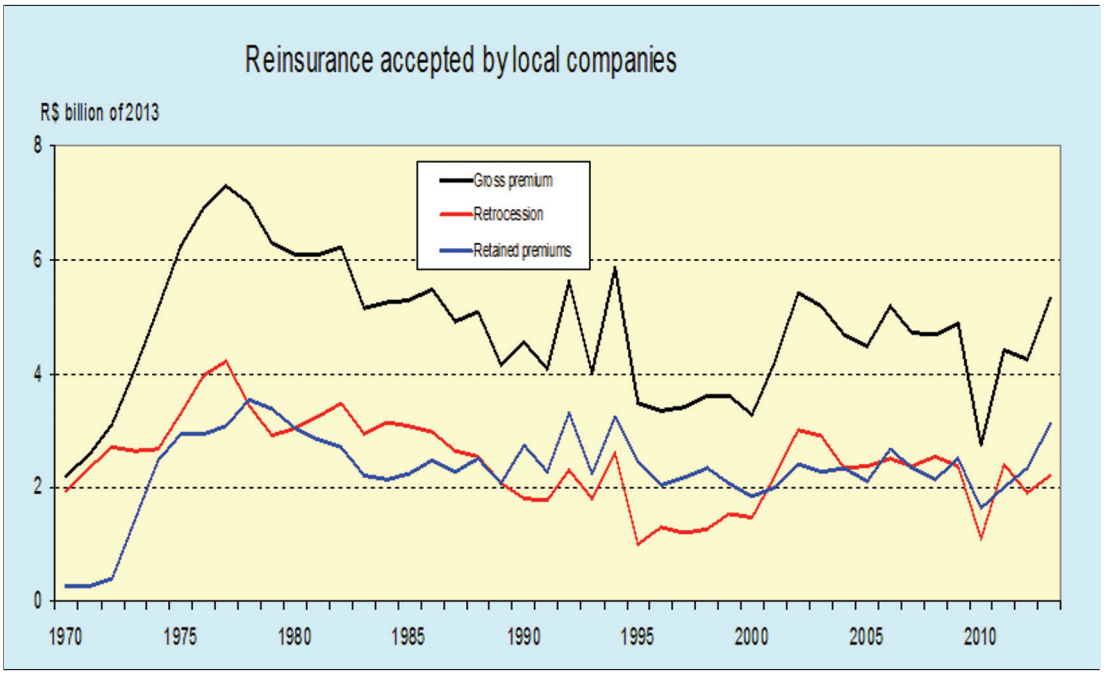
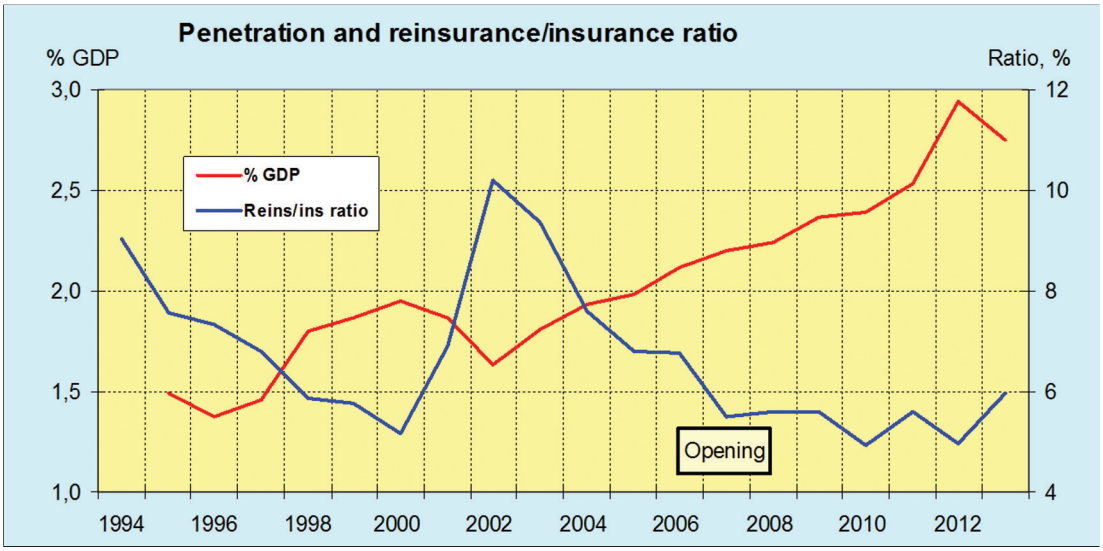


Figure 9 uses the information in Table 1 and illustrates the evolution of penetration of insurance and reinsurance-insurance relations, in the operations branches most amenable to the reinsurance market.[35] Despite the strong growth in the value of reinsurance premiums, there was a decline in the relationship between insurance and reinsurance premiums (right scale, blue line in Figure 9). This does not mean, however, that the opening of the market did not raise the intensity of reinsurance. Since the opening allowed greater risk retention by insurers, insurance premiums could grow even faster than reinsurance, reducing the reinsurance/insurance ratio.

[35] Property risks, financial, oil and gas, rural, people, engineering, transport, maritime, aeronautical, and responsibility.

Figure 9



4. Steps For Modernization

4.1 The market Brazil needs

A candid portrait of Brazilian society reveals huge contrasts with the past and between social classes and sectors of activity in the present. Of the most glaring realities, the demographic structure offers us the so-called "demographic bonus", with over 60% of the population of working age, and a life expectancy of more than 74 years versus 63 years in the 1980s. The infant mortality rate fell from 69% in 1980 to 16% in 2011, according to IBGE statistics. Population growth is approaching the replacement rate, and in 2040, the Brazilian population will have stabilized at 220-225 million people. In 2011, the C class exceeded 54% of the population, up from 34% five years before. It is a social class characterized by the avid consumption of durable goods, better housing and services that are more sophisticated.

These demographic and economic changes have direct and significant impacts on the Brazilian insurance markets in numerous ways. First, the growing class C tends to be conservative, desirous of protecting its assets and of maintaining its standard of living. It is a social segment that remains poorly served by private insurance, but it is an important niche. The low-cost and microinsurance, administered by the private sector, could free up the public sector of several activities that are embedded into social policy and provide them with greater efficiency at lower cost. Second, a larger proportion of the elderly population demands differentiated products, principally supplementary pension plans and health insurance.

The opportunities for the insurance market are also broad in other sectors. Brazilian agribusiness is one of the high-tech sectors, generating annual export revenues of more than US$ 90 billion and a domestic supply of food never before observed. It is another sector that needs insurance protection and few insurers offer well designed policies for this. Less than 5% of the cultivated land in Brazil has insurance protection.

Infrastructure projects, not just those in the PAC, but also small and medium sized projects, require insurance guarantees, a mechanism required by domestic and international lending institutions to reduce risk and interest rates on loans for investment. The environment and natural resources are not properly protected by insurance, and face methodological difficulties in risk assessment and valuation of natural resources. Natural or anthropogenic disasters, thought to be non-existent in Brazil until recently, are already a reality in some regions and we know little about the distribution of risks and its mitigation through insurance. The labor accident insurance administered by the government can be returned to the private sector. In 2011, Social Security provided assistance in 700 thousand job-related accidents (not counting those occurring among informal workers, civil servants and un-reported), with a direct cost of US$ 10 billion. In the hands of the private sector, this insurance can be more efficient, with better prevention and risk assessment, less fraud and lower social cost.

As an institutional investor, the private sector insurance and pension have a stock of reserves of over US$ 490 billion (R$ 1.05 trillion), of which US$ 255 billion (R$ 550 billion) in pension funds (closed pensions). Over 60% of these funds are invested in government bonds, and the remainder distributed among other financial assets, real estate and small portion in equity investments in productive activities. Two problems emerge from this situation. First, the role of institutional investors in the fixed capital formation is distorted, and second, the industry is captive and is sensitive to interest rate policy. This second theme is discussed below.

The internationalization of the Brazilian economy, with the establishment of insurance subsidiaries abroad, higher risk exposure in other countries and the benefits of diversification, has not yet fully reached the Brazilian insurance industry. Except for a few generally unsatisfactory experiments in the past, Brazilian insurance companies have a barely perceptible share in other countries, in contrast to banks with strong international experience and expertise. The noticeable exception is the IRB-Brasil Re which is taking an active (and isolated) position in Africa and in other countries in South America, outside of the traditional London and New York markets. Note that this expansion only occurred after the approval of Complementary Law 126, of January 2007, and CNSP Resolution 168.

Summing up, there is a wide range of opportunities and challenges in Brazil that allow the private insurance industry to increase revenues from 6-6.5% of GDP to 8-9% in a decade and play an important role in productive capital formation and better allocation of investments as one should expect from insurance companies as institutional investors. For this, several actions are required from both the public sector – in deploying articulated policies and ensuring the stability of rules and legal certainty – and, above all, the private sector, to recognize their shortcomings and understand that either they assume an active role in coordination of the market modernization or changes will be imposed by government and lead the way with statist measures.

4.2 What is the best way to proceed?

An agenda committed to the effective modernization of the insurance and reinsurance markets in Brazil includes at least six major points.

4.2.1 Definition of long-term goals

Over two decades have passed since the 1992 Directive Plan, which outlined the overall strategy for the insurance market that is still in place today. However, many changes undertaken by successive governments have been added to the document and subsequent proposals of Fenaseg and the National School of Insurance for various reasons did not take hold. With all the major changes in the Brazilian economy (social inclusion, consolidation of monetary policy based on inflation targets, fiscal responsibility, demographic bonus, aging population, etc.) and the insurance industry itself (the opening of the reinsurance market, life and health insurance plans, micro-insurance and low-cost insurance), there is a clear need to establish a new long-term strategy for the sector. The main actors in the market – regulators and supervisors of the insurance, health and welfare segments, insurance companies and other producing entities; and intermediaries – will have to formulate proposals.

4.2.2 Regulatory stability and less intervention

An environment of uncertainty, with the expectation of rule changes and/or changes in the new regulatory and tax framework, delays or discourages private investment. It happened with the reinsurance sector after the initial euphoria that followed the opening of the market. Insurance and reinsurance activities, by their very nature, involve long-term decisions that cannot be at the mercy of sudden changes.

This does not mean that changes in the regulatory and supervisory criteria should not occur, but it is necessary to differentiate the changes that are intended to correct the anomalies of short-term decisions and those that affect the long-term results. For instance: self-regulation promoted by the participants themselves. It is effective and allows regulatory agencies to remain dedicated to establishing long-term rules. Fenacor offers a good example with the creation of self-regulating mechanism to monitor and punish brokers and brokerage firms, based on the crude fact that it is impossible for SUSEP to monitor all 70 thousand brokers and brokerage-houses.

4.2.3 The transformation of SUSEP into an agency

Despite the improvements in its technical staff, SUSEP acts as an autarchy without its own resources and with supervision and executives that are not always nominated on technical criteria. There are already some positive signs that this institutional transformation is in the government's agenda.

Still on the question of institutional change in the insurance industry – including basic insurance, health and pension plans –, a more integrated supervisory model needs to be adopted with the gradual merger of the regulatory and supervisory activities of the three agencies. At a later stage, the model can also integrate the banking sector, which would merge the regulatory frameworks.

Similarly, the discussion of the operation and size of the insurance industry should consider its various segments, and Brazil should move towards an integrated regulation model based on a single regulatory framework, with specific rules for each agency, respecting the individual characteristics of each.[36] In the current situation, the SUSEP, ANS and PREVIC agencies are part of different ministries (Finance, Health, and Labor and Social Security respectively) with different budgets and schedules, without regard to a single coordination. As a result, there is dispersion of resources and room for legal interpretation which changes, in an undesirable manner, the behavior of firms and consumers faced with the conditions of risk, and does not favor the symmetry of information between the participants – producers and consumers – of markets. Proper regulation (together with control and supervision) generates confidence in the rules and contracts, inhibits fraud, attracts financial and human capital, and reduces asymmetry in information, with consequent stimulus to the growth of markets.

It would be premature to apply only the integrated regulation model in Brazil, but a model of partial semi-integrated regulation, integrating the three areas of insurance markets is perfectly feasible.[37]

As part of the semi-integrated regulation, the functioning rules of national institutions should converge with the international regulatory framework. In the Brazilian case, SUSEP adopts the solvency criteria based on the prudential model of risk-based capital, in line with the directives of the IAIS and the approach of the European Union – Solvency II, with more stringent capital requirements criteria. It is true that this model prevented the Brazilian market from being contaminated by the international crisis of 2007-2009, but it should be more flexible and adaptable to changes in market conditions. A strict regulatory framework characterized by risk aversion limits the effects of contagion from international financial crises, but then reduces the potential for market growth in post-crisis periods. Overall, the regulatory framework adopted in most countries allowed insurers – except for isolated cases (AIG, for example) –, to experience lower losses than other financial institutions. The exceptions can be explained by deficiencies in controls and internal fraud.

[36] It is important to differentiate between the activities of regulation, inspection and supervision. Regulation is the establishment of the rules of operation and conduct of institutions; surveillance is monitoring to see that the rules are obeyed and supervision is the verification of the operational behavior of companies and institutions. See Garcia, René, "Os fundamentos econômicos para uma teoria da regulação em mercados de capitais em processo de globalização", ["The economic foundation for a theory of regulation on capital markets in the globalization process"], Revista da CVM, 2001, pp.13-25.

[37] More than 50 countries have adopted integrated regulation with a single supervision agency for the entire financial sector or combined the power to oversee financial intermediaries in one agency. In 1986, Norway became the first country to establish a single agency for the regulation of banking, insurance and stock exchange. In 1988 and 1991, Denmark and Sweden respectively adopted single regulatory bodies. The creation in 1997 of the Financial Supervisory Authority (FSA) in the UK spread this model across different countries, both developing and developed, given the central role that London plays an important financial center. See Martinez, Jose Luna and Thomas Rose, "International Survey of Integrated Financial Sector Supervision", World Bank Policy Research Working Paper , 3096, July 2003; Benston, GJ, "Regulating financial markets: a critique and some Proposals", Institute of Economic Affairs, Hobart Paper 135, 1998; Group of Thirty, The structure of financial supervision, Washington, DC, 2008.

The main challenge is internal to the sector: to recognize that the existing model of specialized regulation, with different agencies, is obsolete and should be replaced by the modern semi-integrated regulation model used in many countries. It should be noted that the size and dynamism of the Brazilian economy requires a more modern approach to the regulation of the insurance industry in line with international practice.

Making the transition to a more modern model is not an isolated task for a segment or an institution in the industry. It requires coordinated action and recognition of the other problems of the sector.

4.2.4 Convergence with international standards

Reinsurance is a global activity by nature. There is no turning back from the opening of the reinsurance market and the search for a competitive market trends. In this field, there is much to do to catch up with the items mentioned.

One of the main obstacles is the average level of professional and technical training in the industry. Fortunately, a change in the employee profiles – mostly local reinsurers – is visible but this is still insufficient because it is easier and cheaper to hire more qualified business professionals who have already incurred the costs of training. There are international certification programs with very few Brazilian professionals on the list. Unfortunately, language is still a formidable barrier to market globalization but, hopefully, this is soon to be overcome. There is considerable demand from insurers, reinsurers, brokers, and analysts in general, for better-qualified professionals. Today, SUSEP has a very competent technical staff of actuaries, economists and lawyers. Even so, the market as a whole lacks technical professionals and in this field we are a long way from international standards for better-trained professionals. This limits the internationalization of our companies and professionals. The situation of the insurance sector is a reflection of the over-all neglect of education and that has limited productivity growth of the whole economy.

The use of arbitration in insurance and reinsurance contracts is a standard practice in other countries, but still faces mistrust in Brazil. There are several arbitration chambers in Brazil, some with very well trained arbitrators, resolving disputes in other markets. The insurance and reinsurance markets represent an excellent opportunity for the adoption of arbitration.

It is interesting to note that immediately following the opening of the market, almost all reinsurance contracts had an arbitration clause.[38] Unfortunately, there was an undesirable response to the strong resistance from insurers regarding its use. One reason given was the fear of litigation

[38] Resolution 168, April 2008, clearly established that the reinsurance contracts should include a clause that Brazilian laws and jurisdiction apply in the case of risks covered in Brazil, *except in cases of arbitration who apply the specific legislation* . (Emphasis added), Gomm-Santos, Mauricio, "Arbitration in the light of the opening of the Brazilian reinsurance market", Miami, USA, August 2008 See also Mello, Sergio Barroso, "Resseguro no Brasil: tema complexo", Resseguro Online, ["Reinsurance in Brazil: complex topic" Reinsurance Online], Pellon & Associados Law, Issue 36, January 2014, and the same author, Arbitragem no seguro e resseguro, [Arbitration in insurance and reinsurance], (Rio de Janeiro, National School of Insurance, 2007).

caused, directly or indirectly, by the reinsurer and the desire not to be involved in this process. This fear, however, is not justified, because the inclusion of the arbitration clause, by definition, is flexible and can deal with all the parties involved.[39] Ultimately, the issue should be clarified so that arbitration can be effectively used in reinsurance contracts, which will reduce the time and the costs in resolving disputes.

This topic is also of interest with regard to the eventual transformation of Brazil into a reinsurance hub for Latin America and Africa. This should be an integral part of the proposed measures, together with the equally important issues of the language barrier, inhibitive tax legislation, and the need for convergence to a single core regulatory framework.

5. Conclusions and Suggested Agenda

This essay is based on presentations and discussions held in Rio de Janeiro at the conference on reinsurance sponsored by CEBRI in November 2013, enriched by statistical information and the results of research carried out by consultants.

The opening of reinsurance in 2007-2008 unquestionably represented a radical change in the insurance market in Brazil, with long-term positive impacts that are just beginning to be felt. It is impossible to have an active insurance market without access to reinsurance. In as much as the state reinsurance monopoly model had exhausted its potential, the opening of a competitive market was the proper solution, injecting enthusiasm, capital and technology in the industry. The opening of the market was a lengthy process, lasting over the course of several governments, proceeding in fits and starts, but allowing outlines of the project to mature. The reform process broadly met the desires of the market and could not be delayed, at risk of stopping the growth of the insurance market with harmful effects on the functioning of the Brazilian economy. The shortcomings in the protection of infrastructure projects; rural insurance; disasters and environmental damage; and micro-insurance represent great opportunities for the insurance market in general and the reinsurance market in particular.

The open structure of the reinsurance market in Brazil is based on three categories of reinsurers: local, admitted and occasional, with their own legal structures and procedures for each specific operation. By the end of 2013, there were 113 reinsurance companies, 14 local, 67 occasional and 32 admitted foreign insurers, plus 26 reinsurance brokers. In value, reinsurance in Brazil has total premiums of US$ 3.7 billion (R$ 7.8 billion), small when compared with markets abroad.

Despite this progress, the opening of the market is not complete and sometimes suffers from the mutual distrust of the supervisory board, reinsurers and insurers, and foreign companies interested in investing in Brazil. Changes in the rules, the creation of new state-owned enterprise and a clear bias and pro-protectionist state are some of the issues that prevent a more optimistic outlook in the short term.

[39] The doubt is whether Brazil has jurisdiction for arbitration in international reinsurance contracts. If so, Law 9307 of September 1996 is applicable. Gomm-Santos, *op.cit*.

Other obstacles to sustained growth of the sector – also seen in other activities – are the lack of trained professionals – and as a result, better risk management. On the institutional side, the article recommends the transformation of SUSEP, currently an agency subordinate to the Ministry of Finance, into an agency with greater autonomy; an acceleration of the convergence of domestic regulations and international practices; the beginning of a discussion for the implementation of the integrated supervisory model; the adoption of an arbitration clause in reinsurance contracts; and the retrieval and incorporation of the workers compensation insurance (SAT) by the private sector, under government management since 1971.

Despite the problems, the conclusion is clearly optimistic. Partial results of an empirical analysis show that Brazilian local reinsurers, created after the opening of the market, are gaining technical efficiency and eventually will have full ability to compete with more experienced foreign reinsurers. The expected advantage of foreign local reinsurers exists in fact but cannot be generalized, since two are showing a decline in technical efficiency vis-à-vis improving capability of the Brazilian controlled companies. It is important to emphasize the healthy indications; there is room for national reinsurers to compete in the Brazilian reinsurance market, if they adopt modern management practices. In fact, it is a sign that Brazilian reinsurers may have an important role if the regional hub is created.

From the macroeconomic point of view, this result by itself compensates for the problems faced in the short term. It demonstrates that in the long term, the opening of the reinsurance market and a competitive environment in a healthy format generates benefits, and will be the instruments responsible for a major transformation in the insurance market. Most importantly, it shows that interventionist protection is not necessary and can be replaced by better supervision and regulation.

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