Economics & INSURANCE

MAPFRE Economics

Posts

Introduction

Pension systems, the economic environment and the insurance industry outlook in the second quarter of 2021, financial inclusion in insurance, and the financial and the solvency position of Spanish insurance companies in 2020. These are the topics selected for this latest issue of the ***Economics and Insurance*** magazine, representing a summary of some of the research produced by *MAPFRE Economics* over the last year.

The article on the subject of pensions presents the main conclusions of the study *Pension systems from a global perspective,* which advocates the **Pressure to reform Retirement Pension Systems Index** (IPSPJ, in Spanish), a synthetic index developed by MAPFRE Economics that seeks to measure this pressure based on six indicators of adequacy and sustainability in pension systems. Moreover, from the analysis of the reforms carried out in recent decades across the 11 systems studied, the report distils the most common parameters on which these reforms have been focused, as well as the public monitoring mechanisms introduced to redistribute the risks arising from their operation. It is proposed that these elements of public policy may guide the reform of pension systems in other geographical areas.

Also in the issue, two articles have been put together based on the report *2021 Economic and industry outlook: second quarter perspectives*. The first article analyzes the state of the global economy one year on from the declaration of the COVID-19 pandemic. The second looks at the main implications for the insurance industry of this challenging economic environment. In addition, the article titled Financial inclusion in insurance is based on a report with the same title and discusses how microinsurance can help drive financial inclusion, as well as the main factors that are influencing the development of activities aimed at enhancing inclusive insurance.

Lastly, the **Spanish insurance market: Analysis of SCR, own funds and solvency ratios (2020)** examines a group of insurance companies that represent 70.3% of the insurance premiums and 79.4% of the technical provisions in the Spanish market in 2020, carrying out a comparative analysis of their financial and solvency situation in that year.

Readers of this issue of our magazine will hopefully be encouraged to delve deeper into the subjects discussed, and that new users will be motivated to subscribe to all the news published by **MAPFRE Economics.**

A global perspective on Pension Systems

Author: MAPFRE Economics

Summary of the report's conclusions:
MAPFRE Economics
A global perspective on Pension Systems
Madrid, Fundación MAPFRE, April 2021

Retirement pension systems are always exposed to great pressure to reform because of several factors that can be grouped into two large blocks: the first covers those related to the lack of sufficiency of pensions (to maintain a certain standard of living after retirement) and the second group includes those factors that have their cause in medium- and long-term sustainability problems.

Demographic factor

The block of factors related to pressure due to the lack of sustainability includes demography, especially for pension systems in which the distribution components (in which ongoing pensions are financed from the contributions of active workers) have a higher weight. A key indicator for assessing the degree of pressure that demographic dynamics exert on retirement pension systems is the "support ratio" or **"workforce ratio per retiree,"** which measures the number of working-age individuals for each individual who has reached retirement age.

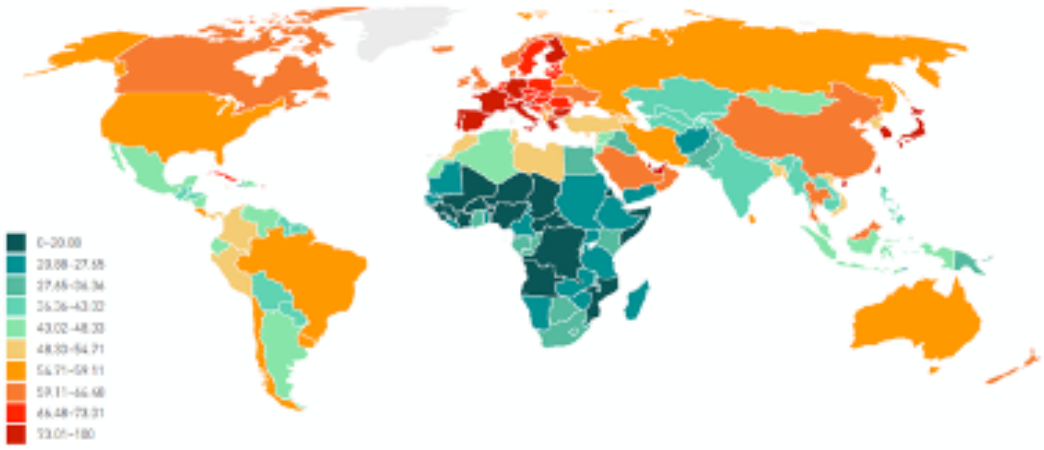
Due its structure, the ratio of workforce for each retiree allows for various metrics. The most used metric has the workforce of the population between the twenty and the sixty-five years old. This is because they are the ages at which people in a position to work are entering and leaving the labor market on average (the 20–64/65+ "support ratio").

The United Nations population databases provide estimates and forecasts by age group from 1950 to 2100 for a total of 201 countries. Based on these,

Chart 1 presents a demographic pressure index on retirement pension systems considering two elements:

- The **situation** of the workforce with respect to the population over 65 years of age **in 2020** (the 20–64/65+ "support ratio").
- The average annual percentage of **expected decline over the next thirty years** of that indicator (2020–2050).

Chart 1
Demographic pressure index



As can be seen, the Southern Europe region and, in general, Western Europe are showing the greatest demographic pressure. This is mainly because these regions have the lowest ratio of people in the workforce who have reached retirement age, which is around 3 working-age individuals per person over 65 on average. This ratio, according to the latest United Nations forecasts, will continue to deteriorate in the coming decades to fall below 2 in 2050 and around 1.5 by the end of the century. In contrast, the regions of Western, Central and Sub-Saharan Africa have the lowest rate of population pressure, followed by the South Asian region. In terms of breakdown by country, Japan has the highest demographic pressure.

It should be noted that, for the time being, these forecasts do not yet take into account the effect of the mortality caused by the COVID-19 pandemic. However, given the virus fatality rates observed to date, deviations that will significantly alleviate the demographic pressure on pension systems derived from these forecasts are not expected.

Pressure Index for reforming Retirement Pension Systems (IPSPJ)

Although demography is fundamental, it is not the only factor influencing pressure on pension reform. There are other factors that play an important role when it comes to proposing reforms and the pressure there is for them to be approved.

The synthetic index, entitled the "Pressure Index for reforming Retirement Pension Systems (IPSPJ)," developed by MAPFRE Economics, seeks to measure that pressure based on six indicators. Three of them are related to the pressure that the lack of sufficiency of the pensions exerts on the public authorities to take action to reform them and the other three factors are related to their lack of sustainability (see Table 1).

Table 1
Indicator of pressure on retirement pension systems (IPSPJ)

Country		IPSPJ	Pressure to reform the retirement pension systems					
			Due to insufficiency:			Due to lack of sustainability:		
			in low incomes	in medium incomes	of assets	demographic	budgetary	financial
1	Greece	77.3	60.1	56.0	100.0	84.4	63.3	100.0
2	Poland	72.9	100.0	90.3	96.7	72.2	35.3	43.1
3	Lithuania	72.2	91.3	100.0	96.6	72.5	31.8	41.0
4	Romania	71.4	99.9	90.1	97.5	68.6	22.8	49.3
5	Slovenia	70.4	78.3	74.7	97.1	77.5	48.9	45.7
6	Japan	68.4	56.3	46.2	87.4	100.0	41.1	79.4
7	Croatia	67.5	88.5	74.1	86.7	75.3	21.7	58.9
8	Latvia	67.5	82.1	65.0	92.8	71.5	53.4	40.5
9	Hungary	67.2	68.4	45.7	97.9	69.8	67.2	54.1
10	Italy	66.3	40.6	6.6	95.4	85.6	95.3	74.5
11	France	65.7	63.6	39.1	95.6	73.8	69.6	52.5
12	Portugal	65.6	45.1	15.1	91.0	83.5	89.2	70.1
13	South Korea	65.5	69.0	77.1	87.6	77.3	47.9	34.4
14	Spain	65.2	49.2	18.7	94.4	82.1	86.6	60.4
15	Slovakia	64.1	64.3	56.6	94.6	67.0	62.3	39.7
16	Malta	62.7	56.0	75.0	78.0	74.6	52.3	40.2
17	Germany	62.4	73.0	52.2	97.0	75.2	46.3	30.8
18	Czech Republic	62.2	46.0	62.8	96.4	72.0	62.7	33.2
19	Turkey	61.9	55.0	26.8	99.0	53.5	80.8	56.5
20	Norway	61.7	75.1	63.5	95.4	61.2	46.1	28.8
21	Austria	60.6	44.1	11.5	97.6	70.4	91.7	47.9
22	Finland	60.4	67.9	45.0	73.3	74.2	67.7	34.3
23	Brazil	59.8	25.7	41.0	88.5	55.5	83.9	64.4
24	Indonesia	58.4	69.4	47.1	99.6	47.8	39.7	46.7
25	Belgium	58.0	50.0	37.5	84.4	68.8	55.0	52.4
26	Bulgaria	57.4	52.7	23.6	94.2	73.0	57.5	43.2
27	Estonia	57.1	62.1	60.8	91.9	72.2	27.1	28.7
28	Chile	56.5	92.0	87.3	63.6	58.7	2.0	35.6
29	Mexico	56.3	77.7	67.6	91.9	46.9	7.1	46.3
30	China	55.9	27.5	19.8	99.5	60.7	90.8	37.2
31	India	54.5	35.9	0.0	99.5	40.8	100.0	50.7
32	Russia	53.6	36.8	22.5	97.8	57.9	62.7	43.6
33	Sweden	52.7	70.8	49.0	54.9	66.9	45.6	28.9

33	Sweden	52.7	70.8	49.0	54.9	66.9	45.6	28.9
34	Luxembourg	52.2	26.4	7.8	99.1	58.5	97.8	23.4
35	South Africa	51.5	76.6	57.3	57.1	34.9	25.3	57.5
36	New Zealand	49.4	19.8	43.5	86.2	60.8	58.1	27.8
37	Switzerland	48.3	72.1	68.5	28.2	69.5	27.6	24.2
38	Ireland	48.3	28.3	34.4	83.0	63.9	39.6	40.5
39	United Kingdom	47.9	48.8	54.5	44.3	65.3	31.8	42.7
40	Australia	47.4	57.9	87.8	37.8	58.8	13.6	28.6
41	Canada	43.2	49.6	32.3	27.8	62.4	47.8	39.6
42	United States	41.6	38.9	21.9	32.0	58.2	49.0	49.7
43	Israel	39.4	19.6	30.0	71.3	48.2	26.4	41.1
44	Netherlands	37.7	47.7	20.9	11.9	70.9	42.4	32.5
45	Denmark	25.2	0.0	15.1	0.4	65.6	40.0	30.1

Source: MAPFRE Economics (with data from the United Nations, OECD and OEF/Haver Analytics)

The current direction of the retirement pension system reforms

After analyzing in-depth the reforms implemented in eleven pension systems over recent decades (which cover the spectrum of the main models that are often taken as a reference when considering reforms), the most common parameters on which the reforms focus are shown below:

- **Contribution rates.**
- **Ordinary retirement age:** It is currently the quintessential reform parametric since it enables the problems of budgetary sustainability of the distribution components to be addressed without altering the replacement rates. This increases the retirement age to align it with longer life expectancy and even in other areas in order to cope with the deformation of the constrictive population pyramids that arise from the phenomenon known as the baby boom until absorption of this phenomenon is completed and the pyramids become stationary.
- **Parameters that come into play when the ordinary retirement age is changed.** These parameters affect the pension amount in cases of early and/or deferred retirement and pension compatibility with active work. The penalty percentages in the case of early retirements, as well as the percentages of incentives for deferred retirement or compatibility with active work (and the obligation or not to continue paying contributions in that period) are also relevant parameters when it comes to making reforms.
- **Incomplete Careers.** In relation to working life, other parameters of great importance are the years of contribution necessary to access the contributory pension and the years necessary to accrue the entire pension that corresponds to the regulatory base. This is in addition to the percentage of penalty for each year remaining year of contribution required to reach the minimum (pension in incomplete careers = regulatory base * percentage of penalty).
- **Regulatory or average base of the updated** ("pensionable salary"). contribution bases. The number of years considered in the calculation of

the average is a parameter that can have a great influence on the final amount of the pension and is always subject to review in the various reforms that we have analyzed in the systems that use it. The salary-updating mechanism to correct the effect of inflation is also of great importance. Some systems only consider a part of the pensionable salary when calculating the average, usually the higher salaries in order to reduce early retirement incentives. The regulatory bases connect with the contribution bases, which depend on the salary, as well as the maximum and minimum limits applicable to the contribution bases at any time.

- **Direct application of replacement rates to regulatory bases.** This is applied in some pension systems with different percentages for different tranches, as is the case in the United States system. It is also applied by applying them in part to the average salary of all workers to calculate the pension as is the case in South Korea, giving it a redistributive character.
- **Pension limits.** Use of maximums and/or minimums (and the complement to minimums) and indicators used for regular updating.
- **Revaluation of pensions.** The parameters commonly used are the Consumer Price Index (CPI) and, to a lesser extent, other parameters such as the change in salaries, GDP growth and, in some cases, indicators related to the sustainability of the system *(see chart,* income and social security expenses), among others. There is a trend of introducing adjustment mechanisms in which the indexation to the indicators that measure the loss of purchasing power (the consumer price index, the salary trend index or a combination of both) is combined with other indicators related to the sustainability of the system. However, it is not a general practice, it is not done automatically and sometimes a part of the pension considered a vital minimum is left out of the adjustment. This is often linked to a greater or lesser extent to the evolution of salaries.
- **Life Expectancy.** Adjustment mechanisms for improvements in life expectancy for people who reach retirement age that may only affect (if introduced) new pensioners or all retired individuals.
- **Point Systems.** Parameters for calculating the purchase price and the value of the accumulated points for retirement (as is the case with pension systems in Germany and France).
- **Parameters related to national accounts.** It is an instrument for adapting the amount of benefits under the first pillar to the contributions made during working life (as is the case with the Swedish system). This is particularly true with the parameters related to the annual revaluation applied to the amounts entered in the notional accounts, as well as the revaluation percentages, interest rates and biometric tables used in calculating the portion of the pension from the notional accounts.

- **Fragmentation of the first pillar.** Splitting the first pillar of the pension systems into components to which different calculation and revaluation parameters are applied (as is the case with pension systems in the United Kingdom and Japan). The first component is often referred to as a "flat rate benefit", applying different update mechanisms (see the "Triple Lock" *chart* in the UK).
- **Strengthening the pillars that are complementary to the compulsory tax system (pillar 1)** by improving the taxation of pension contributions promoted by companies and other employers for their workers (pillar 2) and individuals (pillar 3), seeking to achieve a greater balance between the three pillars.
- **Linking severance pay with pension systems** as is the case in South Korea.

Other reforms related to the management of pension systems

It should also be noted that all the reforms analyzed have taken additional measures to redistribute the risks arising from the operation of their systems, to a greater or lesser extent, among the various parties. They have introduced public control mechanisms to prevent mismanagement of risks due to inadequate functioning of the system that may lead to situations where people who reach retirement age suffer consequences in the form of lower replacement rates.

The development of these mechanisms is important and the latest reforms tend to involve to a greater extent public institutions that are given greater supervisory powers. The measures analyzed include, but are not limited to:

- Measures aimed at improving **collection** mechanisms, **fraud control** and the management bodies (collection and benefits), in order to reduce the levels of misuse of protection and non-compliance with the obligation to pay contributions.
- Reforms aimed at **eliminating or reducing** the existence of **special regimes** to very justified cases of particularly grievous activities (see the *chart* on mining), which introduce complexity into the system, difficulties in its control and management, and lead to the coexistence of different groups of pensioners with widely varying, and socially disruptive, replacement rates.
- **Outsourcing requirements** of funds for the coverage of pension commitments by companies with their workers, such as the Dutch and Spanish system. However, this is not a widespread practice, as there are still systems in which the funds supporting the commitments are allowed to be kept within the company's balance sheet, such as in Japan, South Korea, the United States, among others, unless the outsourcing thereof is agreed upon, usually through collective bargaining.
- Public control over competition and **commissions** charged by private entities managing capitalization funds, by creating public entities that

participate in the system, as in the cases of the United Kingdom, Sweden and Chile.

- The creation of **public compensation mechanisms** for workers who have suffered a loss in their rights because of the irregular operation of the parties involved in the system, as is the case in the United States.
- The assumption by public institutions of some of the elements of the greatest risk and that have the greatest impact on retired individuals (such as **life annuities)**, such that the coverage of demographic risks, both idiosyncratic, aggregate and systematic, rests on a public enterprise, in the case of the Swedish system.

The comprehensive analysis of the exogenous factors and risks affecting retirement pension systems, public policy measures, IPSPJ structure, and the in-depth study of systems in the United States, Brazil, Chile, Sweden, United Kingdom, Germany, the Netherlands, France, Spain, Japan and South Korea can be found in the "A global perspective on pension systems" report, prepared by MAPFRE Economics.

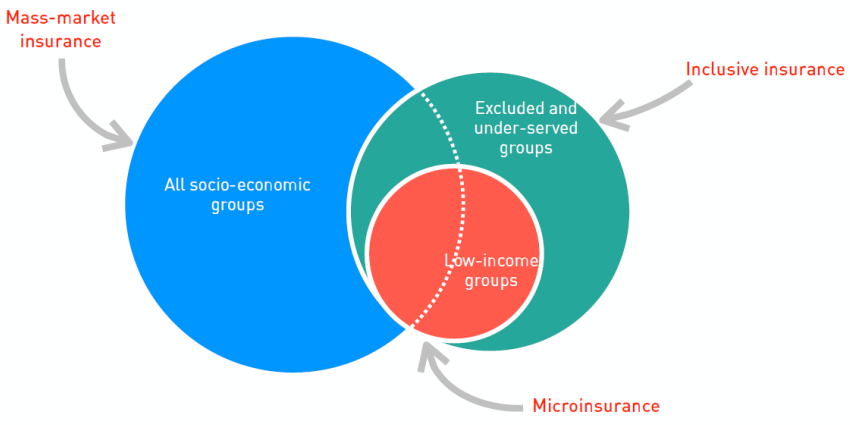
Financial inclusion in insurance

Autor: MAPFRE Economics

Summary of the report's conclusions:
MAPFRE Economics
Financial inclusion in insurance
Madrid, Fundación MAPFRE, June 2020

The concept known as financial inclusion is the process through which a society provides access to different financial services (credit, savings, insurance, payment and pension services), as well as financial education mechanisms, with the goal of improving its material well-being. In the case of insurance activity, financial inclusion focuses on allowing excluded or underserved groups, usually lower-income groups, to gain access to the products that enable them to protect their life, health and assets, through the loss compensation and savings processes which are an inherent part of insurance products (see Chart 1).

Chart 1
Taxonomy of mass-market and inclusive insurance



Source: MAPFRE Economics (with data from IAIS and ASSAL)

As such, "microinsurance" is a tool that can be used to protect the most economically vulnerable populations, small businesses, farmers, stockbreeders, and companies from unexpected costs due to the occurrence of an event which can be mutualized through insurance techniques.

Two main factors can be identified that are influencing the development of activities aimed at enhancing inclusive insurance and, in particular, microinsurance at the global level in recent years. The first is the willingness of international bodies and public authorities to stimulate its growth to support vulnerable groups, as part of the design of public policies aimed at promoting the social factor in business activity. The second is technology, which can facilitate access to a broad group of prospective policyholders (even in rural areas) at a reasonable cost.

The role of technology

From a technological standpoint, there are several elements that may influence the future development of microinsurance. Among them are the following:

- Electronic payment methods (especially for unbanked populations).
- Digital platforms (through a website or mobile apps).
- Electronic identification, the Internet of Things (IoT), sensors (wearables, telemetry).
- Information obtained through artificial satellites and social networks.
- Cloud services (data storage and computing).
- Macro data analytics, artificial intelligence and machine learning (chatbots, call center management, pricing calculation, among other applications.
- Video calls (especially for health insurance).
- Blockchain, still at an early stage (electronic contracts, etc.).

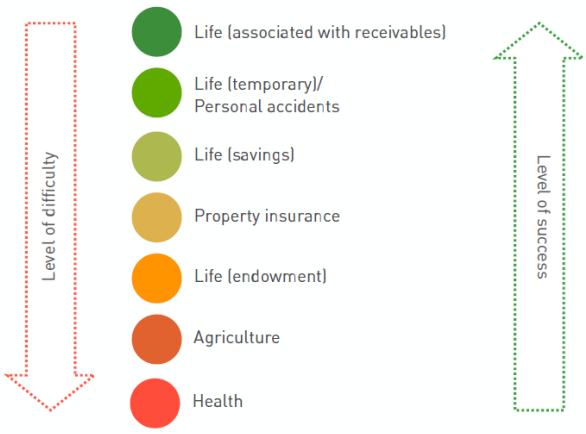
The lack of information on insurance policyholders has been identified as one of the major issues when it comes to issuing microinsurance policies. Therefore, these technological elements may be extremely useful when segmenting clients according to the data they provide, with a view to preventing the absence of such data from resulting in surcharges which can significantly raise the price of products. In addition, such technologies facilitate the digital identification of policyholders; the receipt, management and payment of claims (including automatic compensation based on indices); the analysis of call center calls, chatbots, and information from social networks; the detection of fraud; as well as the prevention and mitigation of risks, etc.

Electronic money and payment methods are of particular relevance to the development of microinsurance. The ability to write policies for these types of products via prepaid cell phones is a significant phenomenon that is serving to increase the penetration of microinsurance in regions such as Africa, Latin America and emerging countries in Asia. Additionally, the digital platforms used for carrying out shipments and electronic sales can also contribute to the development of this type of product.

Most of the time, the most vulnerable groups are found in rural areas, which makes access to traditional insurance distribution channels difficult, as these tend to focus on urban areas due to cost efficiency. However, new digital distribution channels are helping to break down this barrier.

Chart 2 shows the classification of the most common microinsurance products according to their relative marketing success, which is inversely related to the level of difficulty in their implementation.

Chart 2
Most common types of microinsurance



Source: MAPFRE Economics (with data from the International Labor Organization)

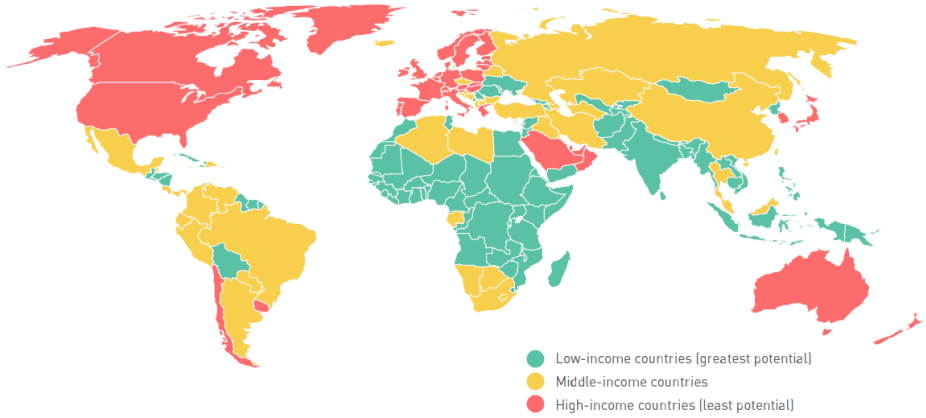
As can be seen, the most common microinsurance product on the market is life insurance associated with receivables (also known as credit life insurance). This is essentially because of the partnerships that have been forged between insurance companies and companies specialized in granting microloans in emerging countries, known as "microfinance institutions" or "Monetary Financial Institutions (MFIs)." However, in recent years there has been a great deal of innovation. Digital native insurance companies have emerged that have developed platforms that enable them to market microinsurance in most emerging countries, and with a wide variety of products. This includes more complex products that allow medical

consultations to be conducted via video call and medication to be prescribed remotely, for example.

Development potential in the field of financial inclusion

The greatest potential within "microinsurance" lies in its targeting of the low-income population in the informal economy, which in emerging countries is often regarded as a target group for "microinsurance" programs. This is because the low-income segment that provides its services under the egis of formal labor contracts usually has accident, disability and death coverage as part of its mandatory remuneration package. Chart 3 shows the countries with the greatest potential for development in the field of financial inclusion, sorted by income level.

Chart 3
Financial inclusion development potential based on income level



Source: MAPFRE Economics (with data from the World Bank)

The comparative analysis of the microinsurance activities being carried out in several emerging countries in Asia, Mexico, Central America, Colombia, Brazil, Peru, Argentina and other Latin American markets can be found in the MAPFRE Economics report *Financial inclusion in insurance*.

Global economic outlook

Author: MAPFRE Economics

Summary of the report's conclusions:
MAPFRE Economics
2021 Economic and industry outlook: second quarter perspectives
Madrid, Fundación MAPFRE, April 2021

The economic crisis caused by the COVID-19 pandemic led to a decline in global GDP of -3.3% in 2020. This is the largest recorded loss in GDP since the Second World War, resulting in an output gap estimated to be more than 3% of global potential GDP. In this context, the only major economy in the world to have succeeded in recording positive growth in 2020 was China, which it achieved thanks to an economy centered on technological competence, domestic sustainable development, integration into regional value chains (with Europe) and the promotion of its sovereign governance model.

Despite its severity, the global economic contraction has been much lower than initially projected, thanks to the deployment of fiscal and monetary stimuli and the greater tolerance to the pandemic seen in the second half of last year. The first figures from national accounts and short-term indicators reveal the highly asymmetrical and asynchronous recovery taking place around the world. Markets such as China and the US are leading the way out of the current economic cycle and toward recovery, while others such as Latin America are showing signs of an economic sluggishness that is in danger of becoming structural. Moreover, this recovery is taking place against a backdrop of increased risk appetite, with a financial market buoyed by tremendous levels of liquidity. It is also set in a context of considerable differences in monetary policy between developed and emerging markets, engendered by the resurgence of global inflationary pressures.

The 2021 Economic and industry outlook: second quarter perspectives report, prepared by MAPFRE Economics, predicts global economic growth of between 6% (baseline scenario) and 3.7% (stressed scenario) in 2021, compared to a fall of -3.3% in 2020 (see Table 1).

Table 1
Baseline and stressed scenarios: gross domestic product
(annual growth, %)

	Baseline scenario (BS)						Stressed scenario (SS)					
	2017	2018	2019	2020(e)	2021(f)	2022(f)	2017	2018	2019	2020(e)	2021(f)	2022(f)
United States	2.3	3.0	2.2	-3.5	6.6	3.3	2.3	3.0	2.2	-3.5	4.0	0.6
Eurozone	2.7	1.9	1.3	-6.8	4.0	4.1	2.7	1.9	1.3	-6.8	2.1	1.0
Germany	2.9	1.3	0.6	-5.3	3.5	3.7	2.9	1.3	0.6	-5.3	1.9	0.2
France	2.3	1.8	1.5	-8.1	5.6	4.0	2.3	1.8	1.5	-8.1	2.6	1.4
Italy	1.7	0.8	0.3	-8.9	4.7	4.2	1.7	0.8	0.3	-8.9	3.0	1.3
Spain	3.0	2.4	2.0	-10.8	6.0	5.0	3.0	2.4	2.0	-10.8	3.6	1.7
United Kingdom	1.7	1.3	1.4	-9.8	5.1	5.2	1.7	1.3	1.4	-9.8	2.7	2.2
Japan	1.7	0.6	0.3	-4.9	2.9	2.2	1.7	0.6	0.3	-4.9	1.5	0.2
Emerging markets	4.8	4.5	3.6	-2.2	6.7	5.0	4.8	4.5	3.6	-2.2	4.7	2.0
Latin America[1]	1.3	1.2	0.2	-7.0	4.6	3.1	1.3	1.2	0.2	-7.0	3.8	1.7
Mexico	2.3	2.2	-0.1	-8.5	4.9	3.1	2.3	2.2	-0.1	-8.5	3.1	0.4
Brazil	1.6	1.7	1.4	-4.4	3.6	2.8	1.6	1.7	1.4	-4.4	2.0	0.8
Argentina	2.8	-2.4	-2.1	-9.7	6.0	3.2	2.8	-2.4	-2.1	-9.7	3.4	0.9
Emerging European[2]	4.1	3.4	2.4	-2.0	4.4	3.9	4.1	3.4	2.4	-2.0	1.5	1.1
Turkey	7.4	3.3	0.8	1.6	5.2	3.5	7.4	3.3	0.8	1.6	3.9	0.5
Asia Pacific[3]	6.6	6.4	5.3	-1.0	8.6	6.0	6.6	6.4	5.3	-1.0	4.9	1.8
China	7.0	6.8	6.0	2.0	8.9	5.2	7.0	6.8	6.0	2.0	7.3	2.6
Indonesia	5.1	5.2	5.0	-2.0	5.0	5.4	5.1	5.2	5.0	-2.0	3.0	2.1
Philippines	6.9	6.3	6.0	-9.3	6.8	7.1	6.9	6.3	6.0	-9.3	4.8	4.9
World	3.8	3.6	2.8	-3.3	6.0	4.4	3.8	3.6	2.8	-3.3	3.7	1.3

Source: MAPFRE Economics

[1]Argentina, Brazil, Chile, Colombia, Mexico and Peru; [2]Russia, Turkey, Commonwealth of Independent States (CIS) and Central Europe; [3]Association of Southeast Asian Nations (ASEAN)
Forecast end date: April 23, 2021.

Click here to access the interactive version of this information

In the *baseline scenario,* herd immunity is expected to be achieved in developed countries during the transition between the second and third quarters 2021, while emerging countries are expected to achieve this a year later, on average. A moderate and temporary upswing in inflation can also be seen, with ongoing monetary and fiscal support policies guaranteeing liquidity, stability in asset valuation and improved consumer expectations. The overall financial situation is stable, with asset values remaining free of volatility, low real interest rates and moderately high profit levels.

The report also presents its forecasts based on a more pessimistic outlook (the *stressed scenario*), as defined by two key markers: a rise in inflation that is considered rather more structural in nature, and the possibility of problems arising with respect to the effectiveness of the vaccines. This would lead to a scenario characterized predominantly by a loss of consumer and producer confidence. In this scenario, monetary policy would be affected by the pressure exerted on the Federal Reserve as a result of market expectations, public and private income would fall due to rising real interest rates, and corporate credit risk premiums would suffer significant stress. All of this would trigger margin calls and liquidity problems, despite the efforts of central banks (i.e. LTROs).

The financial situation and loss in confidence envisioned in this alternative scenario would trigger a risk-off mood that would sharply curb portfolio investment flows to emerging countries, causing balance-of-payment problems with twin deficits (whether inherited from the pandemic or not) and

strong exchange-rate depreciation, thus leading to a rise in unemployment and a decline in wages.

The full analysis can be found in the *2021 Economic and industry outlook: second quarter perspectives* report, prepared by MAPFRE Economics.

Industry Outlook for the Insurance Market

Author: MAPFRE Economics

Summary of the report's conclusions:
MAPFRE Economics
2021 Economic and industry outlook: second quarter perspectives
Madrid, Fundación MAPFRE, April 2021

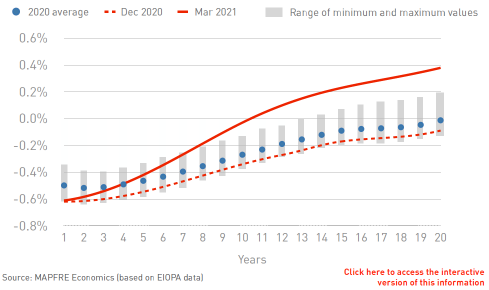
In the wake of the severe economic downturn caused by the pandemic, the outlook for both the insurance industry and the economy in general is improving thanks to a return to global economic growth in 2021 and reduced uncertainty due to progress in vaccination. However, recovery is increasingly uneven. In many emerging countries, the pace of vaccination remains slow, with fiscal leeway virtually exhausted and an increasing inflation rate, which—in some cases—is forcing a reversal of the accommodative monetary policies that were being pursued, delaying the recovery process of their economies and the development of their insurance business, especially those lines of business more linked to trends in the economic cycle.

The rapid intervention of central banks with their ultra-accommodative monetary policies and extensive fiscal aid packages, in those economies with sufficient fiscal and monetary leeway to continue to implement them, is unprecedented and these continue to support financial markets, governments, households and businesses in a way that was not possible in previous economic crises. As a result of this, the larger economic declines initially forecast have been avoided, while investment and consumption levels continue to recover and major economies are beginning to regain confidence. Insurance markets, for their part, have benefited from these measures and continue to show themselves to be solvent and resilient, with less pronounced declines in business levels compared to previous global crises. Nonetheless, insurance market profitability may be negatively impacted by an increase in loss experience in some segments, such as Life

Protection, health, and business interruption insurance, as well as reinsurance. This may put pressure on the prices of these coverages.

Further, the first quarter of 2021 saw a generalized upswing in market risk-free interest rates globally, with a steeper gradient being observed in interest rate curves (as can be seen in the graphs produced by EIOPA [the European Insurance and Occupational Pensions Authority]). This has created an improved environment for Life savings and annuity insurance products in some markets (principally emerging), with the ability to offer guaranteed rates in the medium- to long-term that are higher than short-term rates (term premium). However, interest rates in the eurozone remain low, despite the rebound in the first quarter (see Chart 1), and this is expected to remain the case for a long time. In the United States, the rebound was greater (see Chart 2) as a result of inflation data, which are increasing uncertainty about the direction that interest rates will take as a result of decisions the Fed may make in the coming quarters, which in turn will depend on whether or not inflationary pressures and labor market trends persist. It should be noted that Life investment insurance products are common in the US insurance market, and these are more closely linked to the performance of the stock markets, which continue to perform well, although they are also subject to greater uncertainty because of the effect that tapering could have on stock prices.

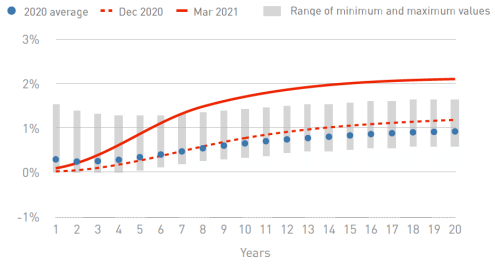
Chart 1
Eurozone: risk-free yield curve
[%]



Source: MAPFRE Economics (based on EIOPA data)

Click here to access the interactive version of this information

Chart 2
United States: risk-free yield curve
[%]

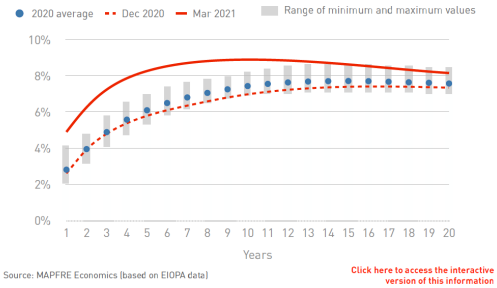


Source: MAPFRE Economics (based on EIOPA data)

Click here to access the interactive version of this information

Among emerging countries, despite the pandemic, the Turkish insurance market performed better in 2020, in line with the good performance of its economy that was among the few in the world to experience slight growth in that year (1.6%) and for which economic growth prospects for 2021 are good (5.2%). Insurance markets in Mexico and Brazil, for their part, saw premiums fall in real terms, according to data at the close of the previous year. Prospects for partial recovery of their economies in 2021 may also help their insurance industries to recover. In addition, the rebound in market risk-free interest rates has improved the environment for Life savings and annuity insurance products in the latter two markets (see Charts 3 and 4).

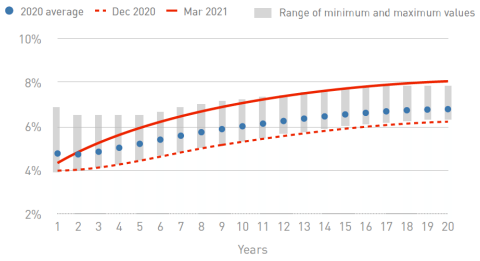
Chart 3
Brazil: risk-free yield curve
(%)



Source: MAPFRE Economics (based on EIOPA data)

Click here to access the interactive version of this information

Chart 4
Mexico: risk-free yield curve
(%)



Source: MAPFRE Economics (based on EIOPA data)

Click here to access the interactive version of this information

In Spain, economic growth for 2021 is forecast to be around 6%, after an estimated fall in 2020 of 10.8%, one of the largest in the world due to the productive structure of the Spanish economy, which was hit particularly hard by the effects that restrictions on mobility had on consumption, trade, hospitality and tourism-related businesses. **Recovery in 2021 will depend largely on the rate of vaccination,** which has been accelerating in recent weeks, allowing for a relaxation of measures set in place as a result of further outbreaks.

The impact of the crisis on employment, trade and solvency of households and businesses continues to feed through to the insurance market unevenly across lines of business. With the latest data from ICEA (Investigación Cooperativa entre Entidades Aseguradoras y Fondos de Pensiones – the research arm of the Spanish insurance industry) for the first quarter of 2021, growth in Non-Life premiums appears to be recovering year-on-year, at around 1.9% at an aggregate level compared to premiums for the first four months of 2020 (compared to growth of 1.1% in 2020 for the whole year). The health insurance line shows growth of around 4.4% (5.1% in 2020), and multirisk continues to show great resilience both for homeowners with 4.4% (2.7% in 2020) and for condominium with 2.7% (2.8% in 2020). The Non-Life business is particularly suffering in the **Automobiles line, with a fall in the first four months of 2021 of -1.2% (-2% in 2020).** Other smaller lines that continue to be strongly impacted by the crisis were travel assistance insurance and, to a lesser extent, trade multirisk.

Life business premiums have grown 4.9% year-on-year in the first four months of the year (compared to the drop of 20.7% in 2020, for the whole year), with recovery of both Life savings insurance premiums with growth of 5.6% (-25.0% in 2020) and Life Protection insurance premiums with growth of 1.9% (-0.4% in 2020). In addition, it is worth noting that, despite the fall in business in 2020, savings managed through Life insurance did not decline and even showed slight growth at the end of the first quarter of 2021, reaching 194.9 billion euros (compared to 192.1 billion at the end of the same quarter of the previous year).

Full analysis of the economic and industry perspectives with additional information and interactive charts on the eurozone, Germany, Italy, Spain, the United Kingdom, the United States, Brazil, Mexico, Argentina, Turkey, Japan, China and the Philippines can be found in the report titled *2021 Economic and industry outlook: second quarter perspectives*, compiled by MAPFRE Economics.

Spanish insurance market: Analysis of SCR, own funds and solvency ratios (2020)

Author: MAPFRE Economics

In recent weeks, insurance companies operating in the Spanish market have released their fifth annual Solvency and Financial Condition Report for 2020, as required by the Solvency II regulation (the harmonized solvency regulation system for insurance companies operating in the European Union). This article features a comparative analysis carried out by a group of insurance companies representing 70.3% of the insurance premiums and 79.4% of the technical provisions of the Spanish market in 2020.

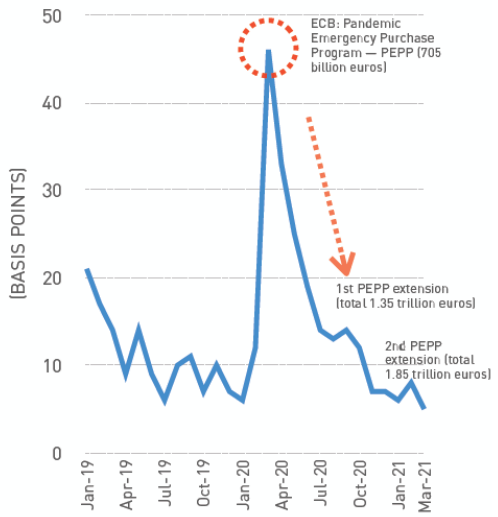
The aggregate total solvency ratio for the selected sample stood at 241%, compared to 243% in 2019, thereby highlighting the insurance industry's resistance to the difficult situation caused by the pandemic. An analysis of own funds reveals that almost all eligible funds were of the highest quality (99% were Tier 1 at the aggregate level in the analyzed sample, a percentage similar to the previous year).

As part of these reports, insurance companies must disclose not only their solvency ratio but also the impact of applying the transitional and adjustment measures (LTGs) on their solvency position. It is worth noting that these measures were introduced by the Directive in order to alleviate any potential harm that the entry into force of Solvency II could entail for business with long-term guarantees. The most significant measures were the transitional measures, the adjustment for volatility and the adjustment for matching assets and liabilities applied in the valuation of insurance liabilities for the purpose of calculating their solvency ratio.

The events of the 2020 financial year as a result of the COVID-19 pandemic highlights the importance and relevance of volatility adjustments and matching adjustments as mechanisms to (partially) offset the effect that occasional volatility spikes in financial markets may have on the solvency position of insurance companies and their groups, taking into account their nature of medium- and long-term institutional investors as well as their proper risk management.

In this sense, the evolution of the volatility adjustment for the Spanish market reflects the high level of uncertainty experienced by financial markets in the early stages of the health and economic crisis caused by the pandemic (see Chart 1).

Chart 1
The Spanish market: volatility adjustment trend, 2019-2021



Source: MAPFRE Economics (based on EIOPA data)

In March 2020, the currency volatility adjustment for the euro (calculated by the European Insurance and Occupational Pensions Authority (EIOPA)) reached the highest level that this indicator has seen since the Solvency II regulation came into force. This was due to the strong bout of volatility to which the investment portfolios of the insurance companies operating in the European Economic Area were exposed. The adjustment also reflects the powerful effect of the message launched by the European Central Bank on March 18, 2020 by approving the broad asset acquisition program called the "Pandemic Emergency Purchase Program (PEPP)," which involved resorting to the widespread use of unconventional monetary policy measures to provide liquidity to bond markets (sovereign and corporate), amounting to

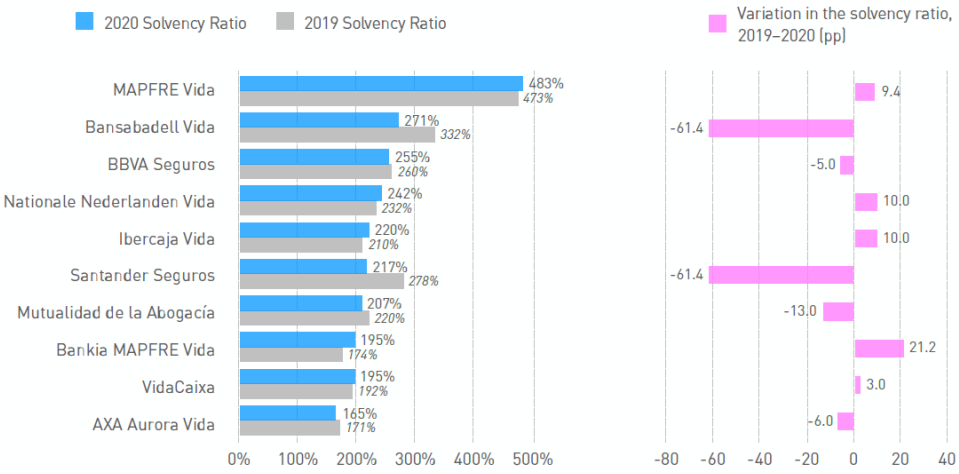
750 billion euros, easing the maximum limits they can acquire from individual member states and between asset categories.

Subsequently, on June 4, 2020, the European Central Bank extended the maximum limit of acquisitions by an additional 600 billion to 1.35 trillion euros, which was reflected again in the indicator, at a time when it seemed to be changing trends. Finally, on December 10, 2020, the ECB again increased the limit on acquisitions by an additional 500 billion to 1.85 trillion euros, extending this extraordinary procurement program as long as necessary and at least until the end of March 2022.

Solvency ratios of Life insurance companies

The aggregate solvency ratio for the sample of insurance companies mainly operating in the Life line during 2020 was 234% (245% in 2019), which represents a decline of -11 pp compared to the previous year. Chart 2 shows the breakdown of solvency ratios for each of the insurance companies comprising the sample analyzed.

Chart 2
Life: solvency ratios, 2019–2020

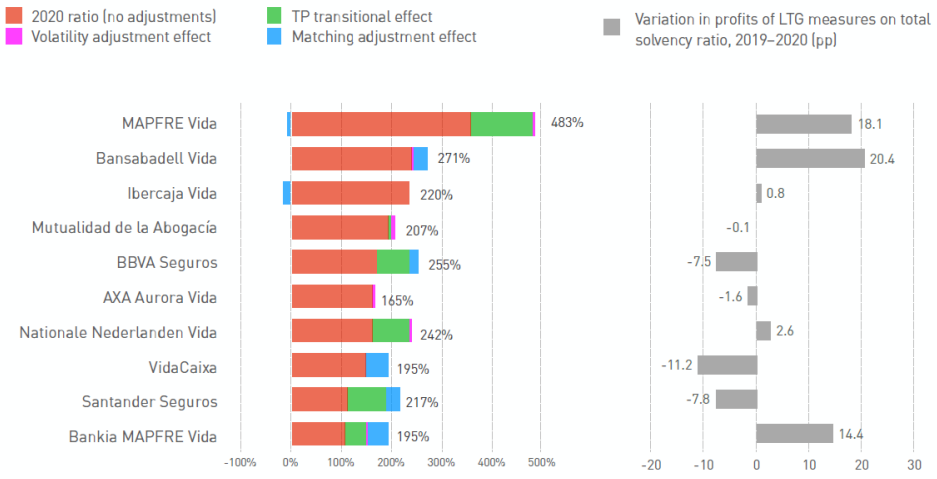


Source: MAPFRE Economics (based on data from the SFCRs published by the indicated companies)

MAPFRE Vida still boasts the highest solvency ratio in this market segment, standing at 483% (9.4 pp higher than in 2019). The improvement in the Bankia MAPFRE Vida ratio (+21 pp) is also noteworthy. Apart from Bansabadell Vida (-61.45 pp), Santander Seguros (-61.44 pp), BBVA Seguros (-5 pp), AXA Aurora Vida (-6 pp) and Mutualidad de la Abogacía (-13 pp), the remainder of analyzed companies reported improved solvency ratios when compared to the previous year.

Chart 3 gives an idea of the weight that the effect of LTG measures on the solvency ratios of companies operating mainly in the Life line represents in the solvency ratio.

Chart 3
Life: effect of LTG measures on 2020 solvency ratios and variation vs. 2019



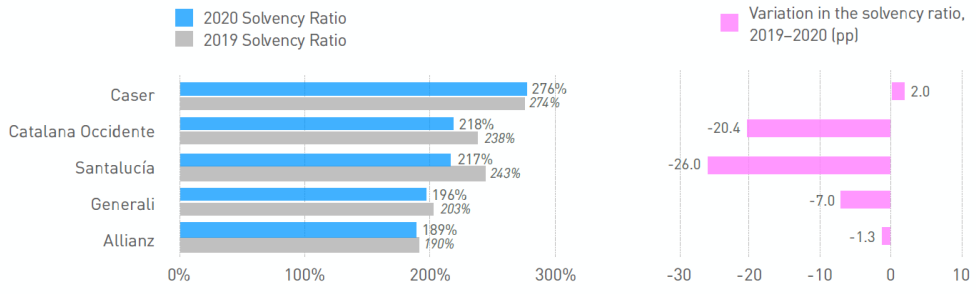
Source: MAPFRE Economics (based on data from the SFCRs published by the indicated companies)

Solvency ratios of mixed insurance companies (operating in Life and Non-Life)

For the sample of companies considered in this report operating in both the Life and Non-Life insurance sectors (Composites), the total aggregate solvency ratio for 2020 was 216% (225% in 2019), a -9-pp decline compared to the previous fiscal year.

Chart 4 shows that, with the exception of Caser, the solvency ratio of the other composite companies fell compared to the previous year. The biggest setbacks were experienced by Santalucía and Catalana Occidente by -26 pp

Chart 4
Composites: solvency ratios, 2019–2020

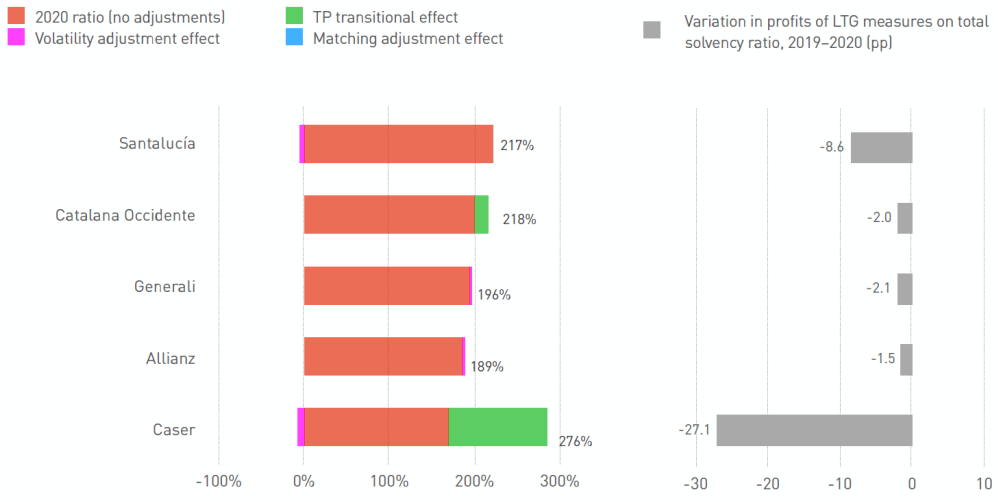


Source: MAPFRE Economics (based on data from the SFCRs published by the indicated companies)

and -20.4 pp respectively. However, the solvency position of both companies remains strong at over twice the minimum required regulatory capital.

Chart 5 gives an idea of the weight that the effect of LTG measures on the solvency ratios of companies operating mainly in the Life line represents in the solvency ratio.

Chart 5
Composites: effect of LTG measures on 2020 solvency ratios and variation vs. 2019



Source: MAPFRE Economics (based on data from the SFCRs published by the indicated companies)

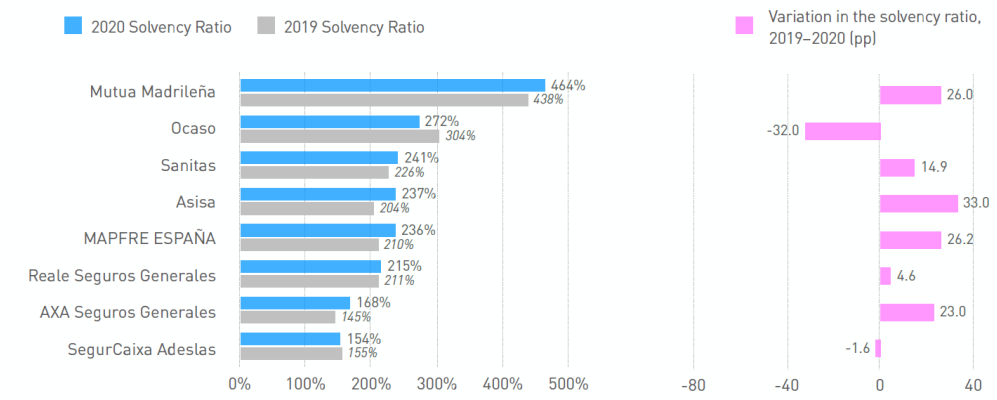
Solvency ratios of insurance companies operating in Non-Life

For the companies analyzed in this report operating solely or mainly in the Non-Life insurance sector, the total aggregate solvency ratio of the sample analyzed stood at 273% in 2020 (257% in 2019), recording a 16-pp increase compared to the previous fiscal year.

For this type of company, Chart 6 shows an overall improvement in the solvency ratio, the most notable of which was Asisa with 237% (+33 pp higher than in 2019), MAPFRE ESPAÑA with 236% (+26 pp higher than in the previous year) and Mutua Madrileña with 464% (+26 pp higher than in 2019). Of the remaining companies, only two saw a reduction in their solvency margins: Ocaso, with a ratio of 272% (-32 pp compared to 2019) and SegurCaixa Adeslas, with a ratio of 154% (-1.5 pp compared to 2019).

For companies operating mainly in the Non-Life line, the effect of LTG measures on solvency ratios is not shown as this was practically irrelevant or null.

Chart 6
Non-Life: solvency ratios, 2019–2020

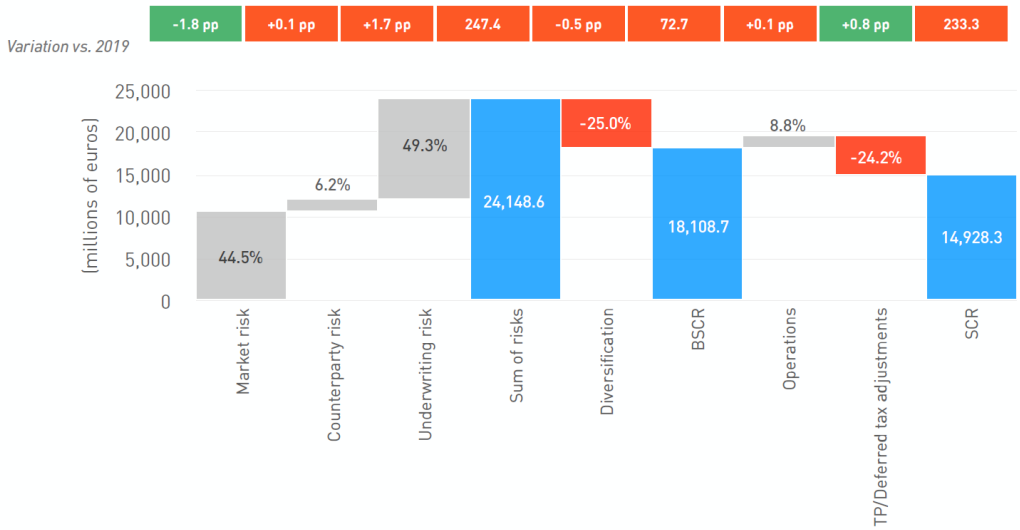


Source: MAPFRE Economics (based on data from the SFCRs published by the indicated companies)

Relative weights of the different SCR risk modules

Chart 7 illustrates the relative weight of each of the risk modules forming the SCR (market risk, credit risk, underwriting risk and operational risks) for the group of insurance companies under analysis in this report in aggregate form. Likewise, said chart shows the positive effect of diversification in each case, as well as the positive impact of loss-absorbing capacity (LAC) of both deferred taxes and technical provisions for products involving profit-sharing schemes.

Chart 7
Total market: relative weight of the different SCR elements for the sample analyzed, 2020



Source: MAPFRE Economics (based on data from the SFCRs published by the indicated companies)

All companies in the sample use the standard formula to calculate their solvency capital requirement in all their modules, with the following exceptions: VidaCaixa, which applies a partial internal model for longevity

and fatality risks; BBVA Seguros and MAPFRE Vida, which have a partial internal model for longevity risks; and SegurCaixa Adeslas and Sanitas, which use specific parameters to calculate their underwriting risk for medical expense insurance premiums.

Finally, Table 1 shows the relative weight that each of the risk modules that make up the SCR (market risk, credit risk, underwriting risk and operational risk) had in 2020 for each of the insurance companies considered in this report. This information also shows the positive effect of diversification in each case, as well as the positive effect of the loss-absorbing capacity of both deferred taxes (LAC DT) and technical provisions for products with discretionary profit-sharing schemes (LAC TP).

Table 1
Relative weight of risk modules, diversification and loss-absorbing capacity, 2020

Company	Market	Credit	Underwriting	Diversification	Operations	LAC (DT)	LAC (TP)
VidaCaixa	27.8%	1.9%	70.3%	-17.6%	13.9%	-30.0%	
MAPFRE Vida	63.2%	8.2%	28.7%	-22.3%	6.4%	-25.0%	-20.0%
Bankia MAPFRE Vida	37.9%	2.1%	60.0%	-22.0%	10.2%	-18.9%	-1.1%
Santander Seguros	42.0%	16.8%	41.2%	-23.2%	9.2%	-11.8%	
BBVA Seguros	26.1%	10.9%	63.0%	-23.5%	6.8%	-28.7%	
Bansabadell Vida	56.8%	8.1%	35.1%	-23.2%	13.9%	-23.5%	-13.0%
Mutualidad de la Abogacía	76.1%	1.6%	22.4%	-15.1%	3.3%	-25.0%	-1.4%
Ibercaja Vida	35.9%	19.1%	45.0%	-25.9%	7.9%	-30.0%	
AXA Aurora Vida	58.1%	2.5%	39.4%	-21.3%	4.7%	-20.3%	-5.6%
Nationale Nederlanden Vida	52.8%	6.2%	41.0%	-23.3%	7.3%	-23.5%	
Allianz	29.1%	6.6%	64.3%	-34.9%	10.5%	-24.9%	-1.7%
Generali	38.5%	8.8%	52.7%	-33.3%	5.5%	-21.5%	
Santalucía	62.9%	4.8%	32.3%	-24.3%	5.4%	-18.0%	-0.2%
Caser	42.3%	8.1%	49.6%	-33.4%	14.4%	-16.1%	
Catalana Occidente	60.5%	1.2%	38.3%	-24.6%	3.4%	-25.0%	
MAPFRE ESPAÑA	35.8%	7.3%	56.8%	-29.1%	10.3%	-25.0%	
AXA Seguros Generales	32.5%	8.6%	58.8%	-35.8%	18.0%	-24.3%	
SegurCaixa Adeslas	36.6%	3.5%	59.9%	-26.1%	8.6%	-20.3%	
Mutua Madrileña	72.1%	3.3%	24.5%	-17.5%	3.6%	-17.4%	
Sanitas	18.5%	10.3%	71.2%	-18.7%	26.3%	-11.6%	
Asisa	39.7%	8.0%	52.3%	-25.9%	15.7%	-22.3%	
Ocaso	38.4%	5.0%	56.6%	-33.3%	6.4%	-17.4%	
Reale Seguros Generales	36.0%	6.1%	57.8%	-23.6%	10.3%	-23.6%	

Source: MAPFRE Economics (based on data from the SFCRs published by the indicated companies)

NOTICE

This document has been prepared by MAPFRE Economics for information purposes only. It does not reflect the views or opinions of MAPFRE or Fundación MAPFRE. The document presents and compiles data, views and estimates relative to the time at which it was prepared. These were prepared directly by MAPFRE Economics or otherwise obtained from or prepared using sources considered reliable, but which have not been independently verified by MAPFRE Economics. Therefore, MAPFRE and Fundación MAPFRE specifically refuse all liability with respect to its precision, integrity or correctness.

The estimates contained in this document have been prepared on the basis of widely accepted methodologies and should be treated as forecasts or projections only, given that the results obtained from positive or negative historical data cannot be considered as a guarantee of future performance. This document and its contents are also subject to changes that will depend on variables like the economic outlook or market performance. MAPFRE and Fundación MAPFRE therefore refuse all liability with respect to how up to date or relevant these contents may be.

This document and its contents do not constitute any form of offer, invitation or solicitation to purchase, participate or divest in financial assets or instruments. This document and its contents cannot form part of any contract, commitment or decision. With regard to the investment in financial assets connected with the economic variables analyzed in this document, readers of this study must be aware that under no circumstances should they base their investment decisions on the information given in this document. People or companies offering investment products to potential investors are legally bound to provide the necessary information by which to make a suitable investment decision. For all of the foregoing, MAPFRE and Fundación MAPFRE specifically refuse all liability for any direct or indirect loss or damage that may ensue from the use of this document or its contents for these purposes.