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## 1. General aspects

The insurance industry plays an increasingly relevant role worldwide, both by generating employment and wealth and by providing the stability that is vital to the smooth working of the economy. There nevertheless continue to be major disparities in the development of different markets around the world, which can be measured in terms of the gap between a fully developed level of insurance and the level actually found in any given country.

#### The Insurance Protection Gap

This difference in the level of development attained is referred to as the Insurance Protection Gap (IPG) and is also, for the purposes of this report, an indicator of the insurance potential of a given market. Here "insurance potential" specifically means the capacity of a country not only to generate new scope for insurance in the course of its socioeconomic development (i.e., to create an insurance gap), but also its ability to then reduce this gap thanks to an increasing level of insurance penetration in its market, and as a result, help to narrow the global IPG. Thus, the more a country has the capacity to create and narrow the global IPG, the greater its insurance potential is.

#### The MAPFRE GIP Index

This document supplements the report titled Global Insurance Potential Index, prepared by MAPFRE Economic Research, and analyzes the evolution of the insurance gap in almost a hundred different markets, with a view to identifying the mechanisms that affect its dynamics. It has thus been possible to establish that the relevant factors include both initial market conditions and growth differentials caused by variables such as the following:

- i) the existing IPG;
- ii) the relevant level of penetration (insurance premiums compared to GDP);

- iii) the elasticity of insurance demand in terms of the current economic cycle;
- iv) the relevant GDP per capita;
- v) the size of the population;
- vi) the growth gap in terms of population; and
- vii) the growth gap in terms of GDP.

Once these variables had been identified, an index was created to integrate their current values so as to allocate a score for each market's medium-and long-term capacity to create and harness its corresponding IPG. This score was weighted according to the relative size of each market, giving as a final score the Global Insurance Potential Index (the "MAPRE GIP Index"), which was used to calculate the ranking for insurance potential.

#### Rankings and levels (Tiers)

Based on these elements, this document presents the 2017 ranking for the MAPFRE GIP Index, which establishes a table comprising a total of 96 emerging and developed insurance markets in both the Life and Non-Life segments, ordered according to their potential for contributing to closing the world insurance gap. The MAPFRE GIP ranking identifies two categories or lists of markets with a high insurance potential. The first of these (Tier 2) includes those countries that are placed above the 75th percentile in terms of their insurance potential, and which together represent over 80% of world insurance potential. The second category (Tier 1) is more restricted. This forms a sub-group of the previous category and comprises those countries whose potential is placed above the 95th percentile, and which are together responsible for over 50% of world insurance potential.

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In order to be highly placed in the ranking, markets therefore need to be of an appropriate size (measured in terms of their GDP) and also to have an adequate capacity to narrow their own IPG. This means that there are countries with ample capacity to narrow their own gap, but which nevertheless have relatively little economic weight, which places them in a low position in the ranking. This report nevertheless also focuses on this group of countries, since thanks to their converging importance they represent a future source of insurance potential.

This document presents our results and analysis corresponding to 2017. It should also be noted that the MAPFRE GIP Index will be updated annually on the basis of the latest year's results, appearing at the start of the third quarter of each year.

#### 2. About the MAPFRE GIP Index

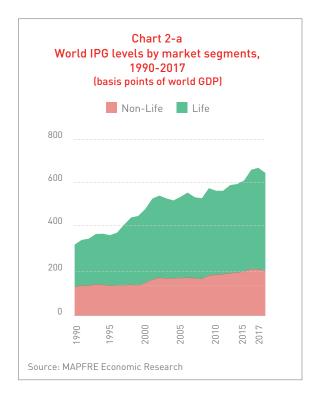
# Summary of the methodological aspects

The Global Insurance Potential Index, or "MAPFRE GIP Index", is prepared on the basis of an analysis of the evolution of the Insurance Protection Gap (IPG). The IPG in any given region or country represents the difference between the insurance coverage that is economically necessary and beneficial for society, and the proportion of that coverage that is actually acquired. It is, in other words, the difference between the level of insurance coverage in an ideal situation (identified by a theoretical benchmark) and the level actually reported in each individual market. Estimating the IPG helps to determine the potential market for insurance, which is the market size that could be achieved if the gap were to disappear. In this way, the IPG is not a static concept, but rather it evolves in accordance not only with the growth of a country's economy and population, but also with the emergence of new risks inherent to continuing economic and social development.

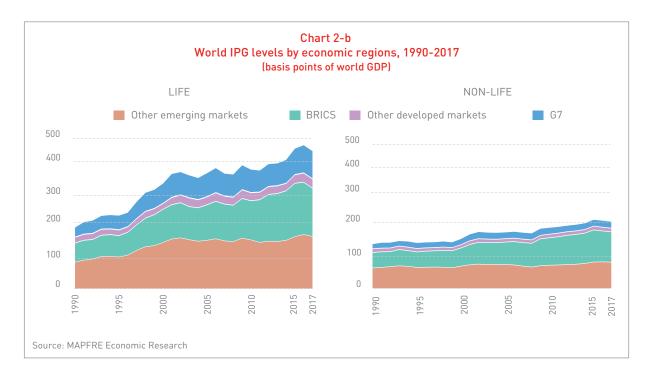
In general terms, the IPG can be measured by either of two approaches. The first, in an expost focus, is based on observed losses. In this case, the IPG is the difference between recorded economic losses at a specific period and the portion of the said losses that were covered through the mechanism of insurance compensation. The second, in an ex-ante focus, involves analyzing the optimum levels of protection, estimated as the difference between the socially and economically appropriate level of risk coverage compared with the real level of protection. For the fiscal year examined in this document, in keeping with the method followed in other reports prepared by MAPFRE Economic Research, we applied the latter of the two approaches, i.e., using the market penetration differential (premiums compared to GDP) between the market concerned and a theoretical benchmark.

For the purposes of estimating the MAPFRE GIP Index, the benchmark is the 90th percentile within a sample of 96 insurance markets. Use of the 90th percentile guarantees that there will be at least nine countries above the benchmark, and that this benchmark does not represent an atypically high level produced by errors of measurement. The measurements of density and penetration for the benchmark thus remain stable over time, ensuring that the IPG and its evolution over time are realistic.

The global insurance gap was thus estimated both for the Life segment (441.8 basis points of world GDP in 2017) and for the Non-Life segment (208.5 basis points). Other assessments made were how the contribution to the IPG has changed since 1990 in relation to the world's major economic regions, and how the relationship with growth has changed in regional markets examined on an individual basis (see Charts 2-a, 2-b and 2-c).

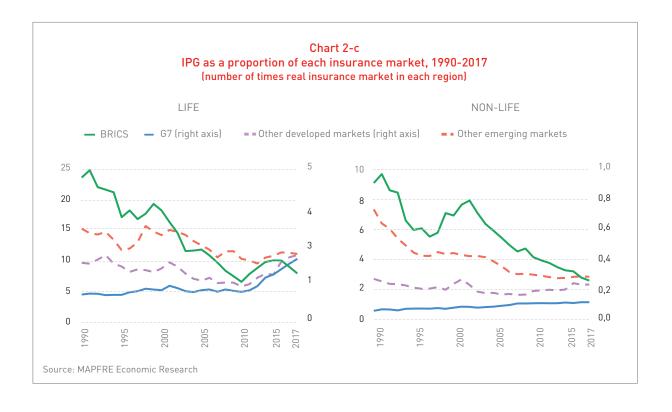


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Once the parameters that determine the IPG had been defined, a method of simulation was developed on the basis of initial conditions and growth differentials related to levels of income, population and the elasticity of insurance premiums to the economic cycle.

Thus, by comparing the results of the simulation with those of the initial definition, it was possible to measure the effectiveness of the projections and their ability to make accurate predictions. This process made it possible to identify the variables of the greatest relevance for estimating the insurance gap, and which were therefore selected to make up the MAPFRE GIP Index.



Specifically, seven weighted and calibrated variables were selected between 0 and 1, where 0 indicates a low effect on the market's potential and 1 indicates the maximum potential. These variables were: (i) the initial IPG; (ii) the relevant level of penetration, compared with the benchmark; (iii) the relevant elasticity of premiums in relation to the level of income, compared with the benchmark; (iv) the relevant GDP per capita; (v) the GDP growth gap; (vi) the population growth gap; and (vii) the size of the population.

The use of these variables generates two measurements that add complementary viewpoints to the analysis:

a) The GAI (Gap Absorption Index), which provides a scoring system and ranking on the basis of each market's potential for closing its insurance gap, and can indicate the rhythm at which the market can converge with the levels of penetration and density of the benchmark selected. b) The MAPFRE GIP Index (Global Insurance Potential Index), which provides a scoring system and ranking designed to put each market in order on the basis of its potential contribution to closing the world insurance gap (measured in basis points of the world GDP or as a percentage of the total insurance market), thus making it a way of measuring the "size of the market".

The corresponding methodological details can be found within the report: MAPFRE Economic Research, *Global Insurance Potential Index*, Madrid, Fundación MAPFRE, 2018. This provides confirmation that the MAPFRE GIP Index makes projections that are consistent with the real evolution observed. In other words, this indicator has allocated a high insurance potential to markets that have indeed produced the greatest contributions to the narrowing of the global IPG.

## 3. Life Ranking

#### A glance at the Top 10

As can be seen in Table 3-a, the top 10 markets in this Life Ranking (which measures insurance potential through the MAPFRE GIP Index) includes the five countries in Tier 1 (China, the United States, India, Japan and Russia), together with the five countries at the top of Tier 2 (Indonesia, Germany, Turkey, Brazil and Mexico). The 10 countries that lead the ranking in 2017 represent over 70% of the global insurance potential as measured by the MAPFRE GIP Index (the full list of Life segment markets analyzed is included in Table A-1 in the Appendix to this document).

While it must be stressed that over half of the said potential is attributable to the Tier 1 markets, this should not detract from the dynamic impact of the potential shown by the Tier 2 markets appearing in this top section of the ranking. In fact, Table 3-b underlines the stable concentration of insurance potential among the Tier 2 markets in comparison with the loss of 5 percentage points among the Tier 1 countries between 2016 and 2017. This phenomenon shows that the markets that follow closely in the footsteps of the Tier 1 countries have consolidated their potential during the last year, even if they are still a long way behind the largest markets in the ranking.

In addition, on the basis of the annual changes in the ranking, it can be seen that the net annual result for the Top 5 (which are in this case all Tier 1 markets) is 1, due to the entry of Russia to replace Indonesia. Over a 10-year period, this group of countries shows a net change of 14 positions, mainly thanks to the fact that Japan has risen by 15 places. If we turn to the Tier 2 countries, we can again see that the net annual change is neutral, although in this case it can be observed that the changes have been much more frequent. While only one country in Tier 1 had displayed changes, a total of 13 countries have undergone changes from one year to the next if the Tier 2 countries are also taken into account.

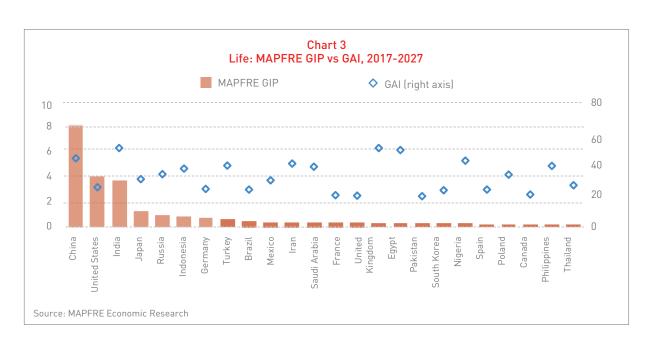


Table 3-a Life: MAPFRE GIP Ranking (75+ percentile of 96 countries), 2017

|                |            | Ranking |            |            |       |  |
|----------------|------------|---------|------------|------------|-------|--|
| Name           | MAPFRE GIP | 2017    | Δ2017-2016 | Δ2017-2007 | GAI   |  |
|                |            | Tier 1  |            |            |       |  |
| China          | 7.83       | 1       | 0          | 0          | 42.91 |  |
| United States  | 3.86       | 2       | 0          | 0          | 25.45 |  |
| India          | 3.63       | 3       | 0          | 0          | 49.11 |  |
| Japan          | 1.32       | 4       | 0          | 15         | 30.31 |  |
| Russia         | 0.98       | 5       | 1          | -1         | 33.35 |  |
|                |            | Tier 2  |            |            |       |  |
| Indonesia      | 0.93       | 6       | -1         | 0          | 36.72 |  |
| Germany        | 0.80       | 7       | 0          | 2          | 24.40 |  |
| Turkey         | 0.68       | 8       | 0          | 2          | 38.54 |  |
| Brazil         | 0.61       | 9       | 3          | -4         | 23.98 |  |
| Mexico         | 0.54       | 10      | 0          | 5          | 29.62 |  |
| Iran           | 0.53       | 11      | 0          | -4         | 39.67 |  |
| Saudi Arabia   | 0.53       | 12      | -3         | -4         | 37.85 |  |
| France         | 0.46       | 13      | 3          | 3          | 20.64 |  |
| United Kingdom | 0.46       | 14      | 0          | 4          | 20.31 |  |
| Egypt          | 0.43       | 15      | -2         | 2          | 49.13 |  |
| Pakistan       | 0.41       | 16      | -1         | -4         | 47.86 |  |
| Italy          | 0.38       | 17      | 2          | -3         | 19.99 |  |
| South Korea    | 0.36       | 18      | 0          | 5          | 23.62 |  |
| Nigeria        | 0.36       | 19      | -2         | -8         | 41.47 |  |
| Spain          | 0.33       | 20      | 0          | -7         | 23.96 |  |
| Poland         | 0.29       | 21      | 2          | 7          | 33.02 |  |
| Canada         | 0.28       | 22      | 2          | -1         | 21.05 |  |
| Philippines    | 0.26       | 23      | -2         | 7          | 38.31 |  |
| Thailand       | 0.26       | 24      | -2         | -2         | 26.58 |  |

 $Source: MAPFRE \ Economic \ Research$ 

Tier 1: A sub-group of Tier 2 with a MAPFRE GIP score that places them in the 95+ percentile Tier 2: Countries in the ranking whose MAPFRE GIP score places them in the highest quartile of the list



Over a 10-year period, the net change has been 14 positions, in which, apart from Japan, countries with a positive performance were Mexico, which rose by 5 places, and Philippines, which rose by 7 places, entering Tier 2. On the negative side, we should mention the 8-place fall by Nigeria and the 4-place fall by Brazil, which went from occupying the sixth position in 2007 to marking the border position in the Top 10 ranking for 2017. This dynamic is also reflected in the measurement of the number of years required for these markets to close the domestic IPG established in 2017 in the Life segment (see Table A-3 in the Appendix of this document).

It is clear that some insurance markets (mainly among the mature markets) have high potential simply due to their large size and not particularly because of their capacity to narrow the gap (since they occupy a relatively low level in the GAI indicator), while there are other insurance markets where both patterns (GAI and MAPFRE GIP) coincide, as is the case for China, India and, to a lesser extent, Indonesia (see Chart 3).

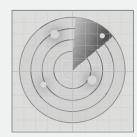
This consideration is relevant when it comes to identifying insurance markets' real potential, and also when trying to determine which represent the greatest future promise and thus merit further monitoring on the insurance "radar".

Table 3-b Life: Concentration in the MAPFRE GIP Ranking, 2017

| News                       | MAPFRE GIP Life |      |      |  |  |  |
|----------------------------|-----------------|------|------|--|--|--|
| Name                       | 2017            | 2016 | 2007 |  |  |  |
| Maximum annual rise        | 5               | 8    | 24   |  |  |  |
| Maximum annual fall        | -6              | -9   | -20  |  |  |  |
| Threshold to Tier 2        | 0.24            | 0.24 | 0.21 |  |  |  |
| Concentration up to Tier 2 | 86%             | 85%  | 82%  |  |  |  |
| Threshold to Tier 1        | 0.98            | 0.93 | 0.86 |  |  |  |
| Concentration up to Tier 1 | 53%             | 58%  | 50%  |  |  |  |

Source: MAPFRE Economic Research

# On the radar



- **⋆** Egypt
- ★ Pakistan★ Nigeria
- **★** Philippines

Over the next decade, due to their great insurance gap absorption capacity in the Life segment.

In this sense, it would be logical to focus on certain emerging markets which, while trailing toward the bottom of the Tier 2 group, display exceptional levels of gap absorption (GAI) which in the coming years could well advance considerably in the ranking if their economic and demographic conditions so permit. These countries are: Egypt, Pakistan, Nigeria and Philippines.

# 4. Non-Life ranking

#### A glance at the Top 10

As can be deduced from the analysis of Table 4-a, the 10 main insurance markets in the Non-Life Ranking in terms of their insurance potential as measured through the MAPFRE GIP Index are the four Tier 1 countries (China, India, the United States and Indonesia) and the six countries heading the Tier 2 list (Russia, Japan, Germany, Brazil, Turkey and Mexico). In this case, Tier 1 concentrates 56% of the insurance potential, while the following six countries concentrate approximately 28% of the potential (the full list of Non-Life markets considered is included in Table A-2 in the Appendix to this document).

As in the case of the analysis of the Life segment, the list of insurance markets included in Tier 2 for the Non-Life segment displays a stable concentration of insurance potential over time. In this case, however, there has been no transfer between Tier 1 countries and those heading Tier 2. The list of the 10 insurance markets with the greatest potential has remained essentially unchanged over the last 10 years, as is demonstrated by the almost total lack of position changes in Table 4-b.

In line with this reality, the net annual change in Tier 1 is zero, since none of the markets that it includes has undergone any change at all, and none is perceived until we get to the 9th position in the ranking. Annual changes of position are seen less frequently in Tier 2 compared with the Life ranking, where France (which is outside the Top 10) displays the best performance, rising by 4 places. Over the last 10 years, there have also been hardly any movements in Tier 1, the only one being an interchange of places between Russia and Indonesia. The outstanding performance in Tier 2 is that of Mexico, which rose by 8 places to enter the Top 10. In the lower part of Tier 2, Bangladesh has established a place for itself after rising by 9 places on the indicator over the last decade. This dynamic is also reflected in the measurement of the number of years required for these markets to close the domestic IPG established in 2017 in the Non-Life segment (see Table A-4 in the Appendix of this document).



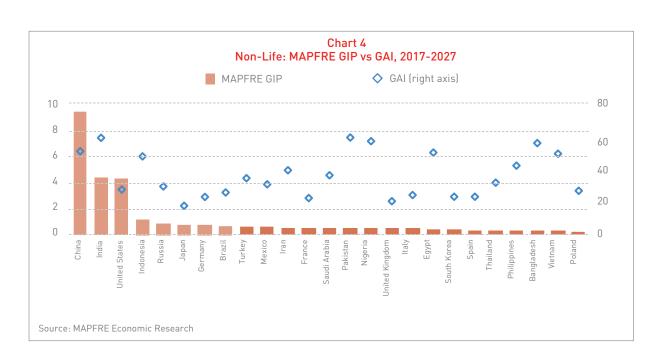
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Table 4-a
Non-Life: MAPFRE GIP Ranking (75+ percentile of 96 countries), 2017

|                | MARERE OIL |        | Ranking    |            |       |
|----------------|------------|--------|------------|------------|-------|
| Name           | MAPFRE GIP | 2017   | Δ2017-2016 | Δ2017-2007 | GAI   |
|                |            | Tier 1 |            |            |       |
| China          | 9.38       | 1      | 0          | 0          | 51.39 |
| ndia           | 4.40       | 2      | 0          | 0          | 59.45 |
| United States  | 4.28       | 3      | 0          | 0          | 28.16 |
| ndonesia       | 1.23       | 4      | 0          | 1          | 48.29 |
|                |            | Tier 2 |            |            |       |
| Russia         | 0.88       | 5      | 0          | -1         | 30.11 |
| Japan          | 0.80       | 6      | 0          | 2          | 18.41 |
| Germany        | 0.78       | 7      | 0          | 2          | 23.83 |
| Brazil         | 0.67       | 8      | 0          | -2         | 26.54 |
| Гurkey         | 0.62       | 9      | 1          | 4          | 35.11 |
| Mexico         | 0.58       | 10     | -1         | 8          | 31.45 |
| ran            | 0.53       | 11     | 1          | -4         | 39.93 |
| France         | 0.52       | 12     | 4          | 0          | 23.08 |
| Saudi Arabia   | 0.51       | 13     | -2         | -3         | 36.88 |
| Pakistan       | 0.51       | 14     | -1         | 0          | 59.66 |
| Nigeria        | 0.50       | 15     | -1         | -4         | 57.50 |
| Jnited Kingdom | 0.48       | 16     | -1         | -1         | 21.16 |
| taly           | 0.47       | 17     | 1          | 0          | 24.91 |
| Egypt          | 0.45       | 18     | -1         | -2         | 50.57 |
| South Korea    | 0.37       | 19     | 0          | 3          | 23.87 |
| Spain          | 0.33       | 20     | 2          | -1         | 23.86 |
| Thailand       | 0.31       | 21     | -1         | -1         | 32.36 |
| Philippines    | 0.29       | 22     | -1         | 2          | 42.69 |
| Bangladesh     | 0.28       | 23     | 1          | 9          | 56.28 |
| /ietnam        | 0.25       | 24     | -1         | 3          | 49.91 |
| Poland         | 0.24       | 25     | 1          | 1          | 27.54 |

Source: MAPFRE Economic Research

Tier 1: A sub-group of Tier 2 with a MAPFRE GIP score that places them in the 95+ percentile Tier 2: Countries in the ranking whose MAPFRE GIP score places them in the highest quartile of the list



With regard to the factors that condition the top positions in the ranking, i.e., market size and gap absorption capacity (GAI), a similar effect is produced to that observed in the Life segment ranking, due also to the similarities between the Tier 2 countries. In this sense, China, India and Indonesia combine both structures (with a high score for both GAI and the MAPFRE GIP Index), while once again the United States, Japan and Germany have large markets, but a relatively low level in the GAI indicator (see Chart 4).

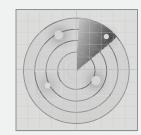
It is thus important to emphasize the growth prospects of the emerging markets, as already mentioned in relation to the Life ranking. In addition to the markets already indicated as possessing relatively high levels in the GAI indicator for this segment (Egypt, Pakistan, Nigeria and Philippines), we can also mention cases such as Bangladesh and Vietnam. All of the above markets stand out for their high performance in absorbing the insurance gap (GAI), which marks them out for future

Table 4-b Non-Life: Concentration in the MAPFRE GIP Ranking, 2017

| Name                       | MAPFRE GIP Non-Life |      |      |  |  |  |
|----------------------------|---------------------|------|------|--|--|--|
| Name                       | 2017                | 2016 | 2007 |  |  |  |
| Maximum annual rise        | 4                   | 7    | 9    |  |  |  |
| Maximum annual fall        | -4                  | -9   | -4   |  |  |  |
| Threshold to Tier 2        | 0.24                | 0.24 | 0.19 |  |  |  |
| Concentration up to Tier 2 | 87%                 | 86%  | 83%  |  |  |  |
| Threshold to Tier 1        | 0.89                | 0.90 | 0.90 |  |  |  |
| Concentration up to Tier 1 | 56%                 | 57%  | 51%  |  |  |  |

 $Source: MAPFRE\ Economic\ Research$ 

# On the radar



- **★** Egypt
- **★** Pakistan
- **⋆** Nigeria
- **★ Philippines**
- **★ Bangladesh**
- **★ Vietnam**

Over the next decade, due to their great insurance gap absorption capacity in the Non-Life segment.

monitoring on the insurance radar, since a good economic performance in the coming years could give them a significant role in future rankings for insurance potential.

Appendix: Table A.1 Life: MAPFRE GIP world ranking and GAI values, 2017

| Name            | MAPFRE<br>GIP | 2017 | Δ2017<br>- 2016 | Δ2017-<br>2007 | GAI   |
|-----------------|---------------|------|-----------------|----------------|-------|
| China           | 7.83          | 1    | 0               | 0              | 42.91 |
| United States   | 3.86          | 2    | 0               | 0              | 25.45 |
| India           | 3.63          | 3    | 0               | 0              | 49.11 |
| Japan           | 1.32          | 4    | 0               | 15             | 30.31 |
| Russia          | 0.98          | 5    | 1               | -1             | 33.35 |
| Indonesia       | 0.93          | 6    | -1              | 0              | 36.72 |
| Germany         | 0.80          | 7    | 0               | 2              | 24.40 |
| Turkey          | 0.68          | 8    | 0               | 2              | 38.54 |
| Brazil          | 0.61          | 9    | 3               | -4             | 23.98 |
| Mexico          | 0.54          | 10   | 0               | 5              | 29.62 |
| Iran            | 0.53          | 11   | 0               | -4             | 39.67 |
| Saudi Arabia    | 0.53          | 12   | -3              | -4             | 37.85 |
| France          | 0.46          | 13   | 3               | 3              | 20.64 |
| United Kingdom  | 0.46          | 14   | 0               | 4              | 20.31 |
| Egypt           | 0.43          | 15   | -2              | 2              | 49.13 |
| Pakistan        | 0.41          | 16   | -1              | -4             | 47.86 |
| Italy           | 0.38          | 17   | 2               | -3             | 19.99 |
| South Korea     | 0.36          | 18   | 0               | 5              | 23.62 |
| Nigeria         | 0.36          | 19   | -2              | -8             | 41.47 |
| Spain           | 0.33          | 20   | 0               | -7             | 23.96 |
| Poland          | 0.29          | 21   | 2               | 7              | 33.02 |
| Canada          | 0.28          | 22   | 2               | -1             | 21.05 |
| Philippines     | 0.26          | 23   | -2              | 7              | 38.31 |
| Thailand        | 0.26          | 24   | -2              | -2             | 26.58 |
| Bangladesh      | 0.24          | 25   | 0               | 11             | 47.84 |
| Malaysia        | 0.21          | 26   | 3               | 8              | 28.96 |
| Argentina       | 0.21          | 27   | 1               | -7             | 29.27 |
| Algeria         | 0.21          | 28   | -1              | -4             | 42.68 |
| Vietnam         | 0.21          | 29   | -3              | 3              | 41.24 |
| Australia       | 0.19          | 30   | 0               | 1              | 20.84 |
| The Netherlands | 0.17          | 31   | 2               | 7              | 24.05 |
| Colombia        | 0.16          | 32   | 0               | 1              | 28.98 |
| UAE             | 0.16          | 33   | -2              | -6             | 29.70 |
| Romania         | 0.15          | 34   | 0               | 3              | 38.28 |
| Kazakhstan      | 0.14          | 35   | 0               | -6             | 36.28 |
| South Africa    | 0.12          | 36   | 2               | -1             | 20.83 |
| Ukraine         | 0.11          | 37   | 0               | -12            | 37.51 |
| Peru            | 0.11          | 38   | -2              | 4              | 31.09 |
| Czech Republic  | 0.09          | 39   | 5               | 4              | 30.79 |
| Belgium         | 0.09          | 40   | 2               | 9              | 21.89 |
| Austria         | 0.09          | 41   | 4               | 6              | 24.90 |
| Singapore       | 0.09          | 42   | -1              | 10             | 21.77 |
| Switzerland     | 0.09          | 43   | 3               | 10             | 20.40 |
| Sri Lanka       | 0.09          | 44   | -4              | 1              | 40.75 |
| Qatar           | 0.09          | 45   | -6              | -1             | 32.50 |
| Hong Kong       | 0.08          | 46   | -3              | 24             | 23.82 |
| Morocco         | 0.08          | 47   | 0               | 3              | 35.91 |
| Sweden          | 0.08          | 48   | 3               | 0              | 20.13 |
|                 |               |      |                 |                |       |

|                     | MARERE        |      | Ranking         |                 |       |  |
|---------------------|---------------|------|-----------------|-----------------|-------|--|
| Name                | MAPFRE<br>GIP | 2017 | Δ2017<br>- 2016 | Δ2017<br>- 2007 | GAI   |  |
| Chile               | 0.08          | 49   | 0               | -9              | 22.93 |  |
| Ireland             | 0.08          | 50   | 2               | 8               | 26.45 |  |
| Kuwait              | 0.07          | 51   | -3              | -12             | 32.12 |  |
| Israel              | 0.07          | 52   | -2              | 10              | 27.54 |  |
| Hungary             | 0.07          | 53   | 0               | 1               | 31.80 |  |
| Angola              | 0.06          | 54   | 0               | -8              | 42.59 |  |
| 0man                | 0.06          | 55   | 0               | 0               | 38.12 |  |
| Portugal            | 0.06          | 56   | 2               | 0               | 22.03 |  |
| Greece              | 0.06          | 57   | 3               | -16             | 23.91 |  |
| Kenya               | 0.05          | 58   | -2              | 2               | 40.46 |  |
| Ecuador             | 0.05          | 59   | -2              | -2              | 31.83 |  |
| Dominican Republic  | 0.05          | 60   | -1              | 5               | 35.36 |  |
| Norway              | 0.05          | 61   | 1               | -10             | 18.83 |  |
| Denmark             | 0.05          | 62   | 5               | 1               | 19.79 |  |
| Slovakia            | 0.04          | 63   | 2               | -2              | 31.01 |  |
| Tunisia             | 0.04          | 64   | -3              | 0               | 38.70 |  |
| New Zealand         | 0.04          | 65   | -2              | 1               | 27.01 |  |
| Bulgaria            | 0.04          | 66   | 0               | -7              | 36.28 |  |
| Guatemala           | 0.04          | 67   | -3              | 1               | 36.44 |  |
| Finland             | 0.04          | 68   | 0               | -1              | 19.48 |  |
| Serbia              | 0.03          | 69   | 2               | 0               | 36.06 |  |
| Jordan              | 0.03          | 70   | -1              | 2               | 39.03 |  |
| Panama              | 0.03          | 71   | -1              | 8               | 33.57 |  |
| Croatia             | 0.02          | 72   | 1               | -1              | 30.31 |  |
| Lithuania           | 0.02          | 73   | 1               | 0               | 33.23 |  |
| Lebanon             | 0.02          | 74   | -2              | 6               | 32.45 |  |
| Costa Rica          | 0.02          | 75   | 0               | 1               | 29.82 |  |
| Bahrain             | 0.02          | 76   | 0               | -1              | 34.88 |  |
| Slovenia            | 0.02          | 77   | 2               | 1               | 28.63 |  |
| Uruguay             | 0.02          | 78   | -1              | -1              | 26.03 |  |
| Macao               | 0.01          | 79   | -1              | 2               | 26.03 |  |
| Latvia              | 0.01          | 80   | 0               | -6              | 32.50 |  |
| El Salvador         | 0.01          | 81   | 0               | 3               | 31.33 |  |
| Luxembourg          | 0.01          | 82   | 0               | 1               | 25.20 |  |
| Estonia             | 0.01          | 83   | 1               | -1              | 32.11 |  |
| Botswana            | 0.01          | 84   | 1               | 2               | 32.06 |  |
| Zimbabwe            | 0.01          | 85   | -2              | -5              | 34.59 |  |
| Trinidad and Tobago | 0.01          | 86   | 0               | -1              | 23.22 |  |
| Mauritius           | 0.01          | 87   | 0               | 3               | 28.79 |  |
| Jamaica             | 0.01          | 88   | 0               | 0               | 24.95 |  |
| Cyprus              | 0.00          | 89   | 1               | -2              | 21.12 |  |
| Namibia             | 0.00          | 90   | -1              | -1              | 22.97 |  |
| Iceland             | 0.00          | 91   | 0               | 0               | 31.74 |  |
| Malta               | 0.00          | 92   | 0               | 0               | 29.03 |  |
| Bahamas             | 0.00          | 93   | 0               | 0               | 23.16 |  |
| Barbados            | 0.00          | 94   | 0               | 0               | -     |  |
| Liechtenstein       | 0.00          | 95   | 0               | 0               | -     |  |
| Venezuela           | 0.00          | 96   | 0               | 0               | -     |  |

Source: MAPFRE Economic Research

Appendix: Table A.2 Non-Life: MAPFRE GIP world ranking and GAI values, 2017

|                 |               |      | Ranking       |               |       |  |
|-----------------|---------------|------|---------------|---------------|-------|--|
| Name            | MAPFRE<br>GIP | 2017 | Δ2017-        | Δ2017-        | GAI   |  |
| China           | 9.38          | 1    | <b>2016</b> 0 | <b>2007</b> 0 | 51.39 |  |
| India           | 4.40          | 2    | 0             | 0             | 59.45 |  |
| United States   | 4.28          | 3    | 0             | 0             | 28.16 |  |
| Indonesia       | 1.23          | 4    | 0             | 1             | 48.29 |  |
| Russia          | 0.88          | 5    | 0             | -1            | 30.11 |  |
| Japan           | 0.80          | 6    | 0             | 2             | 18.41 |  |
| Germany         | 0.78          | 7    | 0             | 2             | 23.83 |  |
| Brazil          | 0.67          | 8    | 0             | -2            | 26.54 |  |
| Turkey          | 0.62          | 9    | 1             | 4             | 35.11 |  |
| Mexico          | 0.58          | 10   | -1            | 8             | 31.45 |  |
| Iran            | 0.53          | 11   | 1             | -4            | 39.93 |  |
| France          | 0.52          | 12   | 4             | 0             | 23.08 |  |
| Saudi Arabia    | 0.51          | 13   | -2            | -3            | 36.88 |  |
| Pakistan        | 0.51          | 14   | -1            | 0             | 59.66 |  |
| Nigeria         | 0.50          | 15   | -1            | -4            | 57.50 |  |
| United Kingdom  | 0.48          | 16   | -1            | -1            | 21.16 |  |
| Italy           | 0.47          | 17   | 1             | 0             | 24.91 |  |
| Egypt           | 0.45          | 18   | -1            | -2            | 50.57 |  |
| South Korea     | 0.37          | 19   | 0             | 3             | 23.87 |  |
| Spain           | 0.33          | 20   | 2             | -1            | 23.86 |  |
| Thailand        | 0.31          | 21   | -1            | -1            | 32.36 |  |
| Philippines     | 0.29          | 22   | -1            | 2             | 42.69 |  |
| Bangladesh      | 0.28          | 23   | 1             | 9             | 56.28 |  |
| Vietnam         | 0.25          | 24   | -1            | 3             | 49.91 |  |
| Poland          | 0.24          | 25   | 1             | 1             | 27.54 |  |
| Malaysia        | 0.24          | 26   | -1            | 5             | 32.55 |  |
| Canada          | 0.23          | 27   | 2             | -4            | 17.57 |  |
| Argentina       | 0.21          | 28   | 0             | -7            | 29.04 |  |
| Algeria         | 0.20          | 29   | -2            | -4            | 39.87 |  |
| UAE             | 0.16          | 30   | 0             | -2            | 29.96 |  |
| Romania         | 0.16          | 31   | 3             | 6             | 40.23 |  |
| The Netherlands | 0.16          | 32   | 3             | 6             | 22.24 |  |
| Australia       | 0.15          | 33   | 0             | -3            | 17.10 |  |
| Kazakhstan      | 0.15          | 34   | -2            | -1            | 41.22 |  |
| Colombia        | 0.15          | 35   | -4            | 0             | 27.50 |  |
| South Africa    | 0.13          | 36   | 2             | -7            | 22.14 |  |
| Peru            | 0.12          | 37   | -1            | 6             | 34.03 |  |
| Singapore       | 0.11          | 38   | -1            | 4             | 27.76 |  |
| Belgium         | 0.10          | 39   | 3             | 6             | 24.26 |  |
| Ukraine         | 0.10          | 40   | -1            | -6            | 33.87 |  |
| Sri Lanka       | 0.10          | 41   | -1            | 7             | 44.72 |  |
| Ireland         | 0.10          | 42   | 2             | 14            | 33.39 |  |
| Hong Kong       | 0.10          | 43   | 0             | 14            | 26.82 |  |
| Chile           | 0.09          | 44   | -3            | -4            | 27.41 |  |
| Austria         | 0.09          | 45   | 2             | 6             | 23.84 |  |
| Sweden          | 0.09          | 46   | 0             | -2            | 21.70 |  |
| Czech Republic  | 0.08          | 47   | 1             | -1            | 27.44 |  |
| Switzerland     | 0.08          | 48   | 1             | 4             | 18.72 |  |

|                     |               |      | Ranking |        |       |
|---------------------|---------------|------|---------|--------|-------|
| Name                | MAPFRE<br>GIP |      | Δ2017-  | Δ2017- | GAI   |
|                     |               | 2017 | 2016    | 2007   |       |
| Kuwait              | 0.08          | 49   | -4      | -10    | 32.60 |
| Angola              | 0.07          | 50   | 1       | -1     | 46.91 |
| Qatar               | 0.07          | 51   | -1      | -4     | 26.28 |
| Morocco             | 0.07          | 52   | 0       | 3      | 29.83 |
| Israel              | 0.07          | 53   | 1       | 12     | 26.54 |
| Hungary             | 0.07          | 54   | 1       | 0      | 30.40 |
| Portugal            | 0.07          | 55   | 1       | -2     | 25.30 |
| Greece              | 0.06          | 56   | 3       | -15    | 25.86 |
| Oman                | 0.06          | 57   | -4      | 1      | 39.40 |
| Ecuador             | 0.05          | 58   | -1      | 3      | 34.41 |
| Kenya               | 0.05          | 59   | -1      | 3      | 38.62 |
| Dominican Republic  | 0.05          | 60   | 0       | 7      | 35.03 |
| Norway              | 0.05          | 61   | 2       | -11    | 18.32 |
| Denmark             | 0.04          | 62   | 2       | -2     | 19.58 |
| Guatemala           | 0.04          | 63   | -2      | 3      | 40.37 |
| Bulgaria            | 0.04          | 64   | -2      | 0      | 36.85 |
| Finland             | 0.04          | 65   | 1       | -6     | 20.93 |
| Slovakia            | 0.04          | 66   | -1      | -3     | 28.44 |
| Tunisia             | 0.03          | 67   | 0       | 1      | 30.62 |
| New Zealand         | 0.03          | 68   | 0       | 2      | 21.31 |
| Serbia              | 0.03          | 69   | 2       | 0      | 31.28 |
| Panama              | 0.03          | 70   | -1      | 11     | 33.03 |
| Jordan              | 0.02          | 71   | -1      | 2      | 35.76 |
| Lithuania           | 0.02          | 72   | 0       | 0      | 34.29 |
| Croatia             | 0.02          | 73   | 2       | -2     | 26.46 |
| Costa Rica          | 0.02          | 74   | -1      | 4      | 29.64 |
| Lebanon             | 0.02          | 75   | -1      | 9      | 27.48 |
| Macao               | 0.02          | 76   | 1       | -2     | 33.67 |
| Bahrain             | 0.02          | 77   | -1      | -2     | 32.42 |
| Uruguay             | 0.02          | 78   | 0       | -1     | 27.61 |
| Luxembourg          | 0.01          | 79   | 1       | 4      | 28.21 |
| El Salvador         | 0.01          | 80   | -1      | 6      | 33.14 |
| Latvia              | 0.01          | 81   | 0       | -5     | 30.24 |
| Slovenia            | 0.01          | 82   | 2       | -2     | 21.75 |
| Botswana            | 0.01          | 83   | -1      | 2      | 35.06 |
| Estonia             | 0.01          | 84   | 1       | -2     | 29.59 |
| Zimbabwe            | 0.01          | 85   | -2      | -2     | 35.61 |
| Trinidad and Tobago | 0.01          | 86   | 0       | -7     | 23.90 |
| Mauritius           | 0.01          | 87   | 0       | 2      | 27.29 |
| Namibia             | 0.01          | 88   | 0       | 0      | 26.47 |
| Cyprus              | 0.01          | 89   | 2       | -2     | 23.63 |
| Jamaica             | 0.00          | 90   | -1      | 1      | 24.16 |
| Malta               | 0.00          | 91   | -1      | 1      | 33.97 |
| Iceland             | 0.00          | 92   | 0       | -2     | 28.18 |
| Bahamas             | 0.00          | 93   | 0       | 0      | 23.16 |
| Barbados            | 0.00          | 94   | 0       | 0      | 21.03 |
| Liechtenstein       | 0.00          | 95   | 0       | 0      |       |
| Venezuela           | 0.00          | 96   | 0       | 0      | _     |
| TOTICZUCIU          | 5.00          | , 0  | 0       | 0      |       |

Source: MAPFRE Economic Research

Appendix: Table A.3 Life: Years to close domestic IPG, 2017

Appendix: Table A.4
Non-Life: Years to close domestic IPG, 2017

| Name              | Years       | Name                   | Years           | Name                | Years | Name                 | Years     |
|-------------------|-------------|------------------------|-----------------|---------------------|-------|----------------------|-----------|
| China             | 24          | Chile                  | 13              | China               | 19    | Chile                | 21        |
| United States     | 0           | Ireland                | 0               | India               | 24    | Angola               | 26        |
| India             | 26          | Kuwait                 | 27              | United States       | 0     | Qatar                | 0         |
| Japan             | 0           | Israel                 | 8               | Indonesia           | 25    | Morocco              | 12        |
| Russia            | 21          | Hungary                | 21              | Russia              | 17    | Israel               | 0         |
| Indonesia         | 29          | Angola                 | 29              | Japan               | 0     | Hungary              | 12        |
| Germany           | 6           | Oman                   | 29              | Germany             | 0     | Portugal             | 19        |
| Turkey            | 25          | Portugal               | 12              | Brazil              | 9     | Greece               | 11        |
| Brazil            | 19          | Greece                 | 16              | Turkey              | 19    | Oman                 | 24        |
| Mexico            | 20          | Kenya                  | 27              | Mexico              | 15    | Ecuador              | 18        |
| Iran              | 32          | Ecuador                | 23              | Iran                | 26    | Kenya                | 16        |
| Saudi Arabia      | 29          | Dominican Republic     | 23              | France              | 0     | Dominican Republic   | 15        |
| France            | 0           | Norway                 | 6               | Saudi Arabia        | 23    |                      | 3         |
| United Kingdom    | 0           | Denmark                | 0               |                     | 27    | Norway               | 0         |
|                   | 29          | Slovakia               | 20              | Pakistan<br>Nigoria |       | Denmark<br>Guatemala |           |
| Egypt<br>Pakistan |             |                        |                 | Nigeria             | 28    | Guatemala            | 19        |
| Pakistan<br>Italy | 31          | Tunisia<br>New Zeeland | 23              | United Kingdom      | 0     | Bulgaria             | 22        |
| Italy South Korea | 11<br>0     | New Zealand            | <u>11</u><br>29 | Italy               | 1     | Finland              | 1 10      |
|                   |             | Bulgaria               |                 | Egypt               | 24    | Slovakia             | 10        |
| Nigeria           | 34          | Guatemala              | 24              | South Korea         | 0     | Tunisia              | 14        |
| Spain             | 10          | Finland                | 0               | Spain               | 0     | New Zealand          | 0         |
| Poland            | 21          | Serbia                 | 21              | Thailand            | 16    | Serbia               | <u>17</u> |
| Canada            | 6           | Jordan                 | 27              | Philippines         | 19    | Panama               | 5         |
| Philippines       | 24          | Panama                 | 20              | Bangladesh          | 21    | Jordan               | 18        |
| Thailand          | 23          | Croatia                | 20              | Vietnam             | 26    | Lithuania            | 19        |
| Bangladesh        | 25          | Lithuania              | 24              | Poland              | 11    | Croatia              | 6         |
| Malaysia          | 19          | Lebanon                | 20              | Malaysia            | 10    | Costa Rica           | 11        |
| Argentina         | 18          | Costa Rica             | 22              | Canada              | 0     | Lebanon              | 6         |
| Algeria           | 30          | Bahrain                | 26              | Argentina           | 11    | Macao                | 15        |
| Vietnam           | 31          | Slovenia               | 17              | Algeria             | 24    | Bahrain              | 17        |
| Australia         | 0           | Uruguay                | 17              | UAE                 | 19    | Uruguay              | 8         |
| The Netherlands   | 0           | Macao                  | 15              | Romania             | 22    | Luxembourg           | 19        |
| Colombia          | 23          | Latvia                 | 24              | The Netherlands     | 0     | El Salvador          | 17        |
| UAE               | 25          | El Salvador            | 23              | Australia           | 0     | Latvia               | 16        |
| Romania           | 28          | Luxembourg             | 11              | Kazakhstan          | 26    | Slovenia             | 0         |
| Kazakhstan        | 30          | Estonia                | 22              | Colombia            | 14    | Botswana             | 17        |
| South Africa      | 28          | Botswana               | 23              | South Africa        | 19    | Estonia              | 13        |
| Ukraine           | 27          | Zimbabwe               | 17              | Peru                | 16    | Zimbabwe             | 15        |
| Peru              | 22          | Trinidad and Tobago    | 12              | Singapore           | 10    | Trinidad and Tobago  | 10        |
| Czech Republic    | 22          | Mauritius              | 16              | Belgium             | 0     | Mauritius            | 8         |
| Belgium           | 5           | Jamaica                | 17              | Ukraine             | 22    | Namibia              | 11        |
| Austria           | 9           | Cyprus                 | 11              | Sri Lanka           | 24    | Cyprus               | 5         |
| Singapore         | 2           | Namibia                | 19              | Ireland             | 0     | Jamaica              | 5         |
| Switzerland       | 0           | Iceland                | 14              | Hong Kong           | 6     | Malta                | 2         |
| Sri Lanka         | 29          | Malta                  | 17              | Chile               | 11    | Iceland              |           |
| Qatar             | 0           | Bahamas                |                 | Qatar               | 0     | Bahamas              |           |
| Hong Kong         | 7           | Barbados               | 11              | Sweden              | 1     | Barbados             |           |
| Morocco           | 22          | Liechtenstein          |                 | Czech Republic      | 12    | Liechtenstein        |           |
| Sweden            | 1           | Venezuela              |                 | Switzerland         | 0     | Venezuela            |           |
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#### **MAPFRE GIP 2018**

On the basis both of an analysis of the economic and demographic factors that determine the growth of the Insurance Protection Gap, and the measurement of the capacity to close the said insurance gap in each market, the MAPFRE GIP Index (Global Insurance Potential Index) provides a scoring system and ranking that places insurance markets in order according to their potential contribution to closing the world insurance gap.

The MAPFRE GIP Index has been calculated for a total of 96 insurance markets, in both developed and emerging economies, so as to provide a comparative vision of the global potential for the expansion of the insurance industry in the coming years.

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