

Fundación **MAPFRE**

RANKING
OF INSURANCE GROUPS
IN LATIN AMERICA
2016



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Introduction

This issue of the **Ranking of Insurance Groups in Latin America 2016**, as in previous versions¹, is based on the criterion of premium volume. It is therefore comparable with the results presented in previous editions. However, it also incorporates two new elements.

For the first time, it includes an analysis of concentration in the Latin American insurance industry. Analyzing the distribution of concentration is important given the region's current economic climate (strongly influenced by the normalization of monetary policy in the United States and significant volatility in international financial flows) since it can have significant repercussions on the performance of Non-Life and Life businesses through consumption and savings. As can be observed from the concentration analysis (possible thanks to the high degree of representativeness of the survey used in the ranking), the distribution of concentration in the market influences the capacity of each individual insurance group to absorb and cushion the impact of exchange rate volatility on their balance sheets arising from monetary normalization in the United States.

Furthermore, this edition of the ranking aims to provide a dynamic perspective on the behavior of market agents, both in terms of growth and concentration. The aim is to explain how the current size, market share and concentration levels have been attained. Therefore, a dynamic view of performance metrics is taken from 2006 to 2016. In order to differentiate isolated trends from *more* recent cyclical developments, the analysis is divided into the changes observed over the previous ten years (2006-15) and specific developments in the last year (2015-16).

It is important to bear in mind that the intertemporal analysis (undertaken using U.S. dollars as the reference currency) is not immune from the effects of local currency appreciation/depreciation against the dollar. Accordingly, insurance groups with a greater stake in markets where the currency has experienced differential appreciation or depreciation relative to the U.S. dollar could present skewed concentration metrics. In this regard, a parallel analysis was undertaken to gauge the extent of possible differences. This analysis failed to identify notable differences and is therefore not presented to maintain consistency with previous years.

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1. Analysis of market concentration

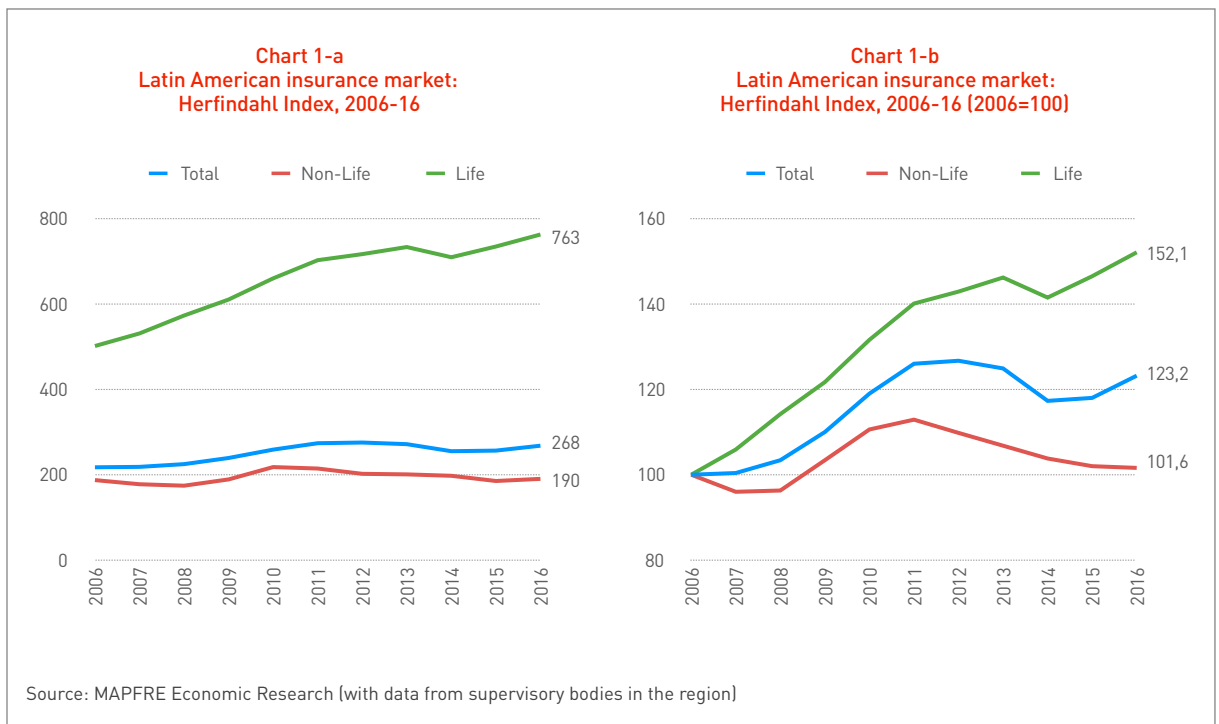
The analysis of concentration developments in the insurance industry in Latin America over the last ten years was performed using the rankings of insurance groups published from 2006 to 2016. Calculations were carried out using the average exchange rate for each year.

As can be seen in Charts 1-a and 1-b, overall concentration is negligible in the insurance industry in Latin America. The Herfindahl (H) index places the sector within the category of an unconcentrated industry in 2016 ($100 \leq H=268 \leq 1500$). This result reflects on the one hand a highly competitive Non-Life business ($100 \approx H=190$) and on the other, a somewhat more concentrated, albeit still not very concentrated, Life segment ($100 \leq H=763 \leq 1500$). The latter has an index value almost four times greater than Non-Life.

The factors driving this pattern in the region (low overall market concentration, but notable differences between the level of concentration in the Life and Non-Life segments) would appear to reflect trends in the development of the insurance industry in the region. These point to a more highly developed Non-Life insurance segment (greater competition) and rapid growth in a still nascent Life insurance segment in recent years.

Indeed, the Life segment, though still not very concentrated ($H=501$), already registered a higher concentration index than the Non-Life segment ($H=187$) in 2006. Furthermore, Life insurance has seen five-times faster rates of growth over the last ten years than Non-Life.

Concentration in the Life market segment grew by 52 percent from 2006 to 2016, while in the Non-Life business it only increased by 1.6 percent. Both trends mean that the overall insurance business registered an increase in concentration of around 23 percent over the period under analysis.



In general terms, past developments suggest that the Latin American insurance business is characterized by a low degree of concentration, albeit moderately increasing over the period under analysis (23 percent and 50.6 points in the Herfindahl index). This rise was driven by an increase in concentration in the Life segment of the insurance market, which went up by more than 50 percent over the period. Although the latter remains far from a concentrated industry (the metrics place it well below this threshold) it is almost four times less competitive than the Non-Life business.

The main factors explaining these developments in both market segments are well-known: in terms of the Life insurance business, the *Vida Gerador de Beneficios Livres* (VGBL) product, which is sold on the Brazilian market, has been the driving force behind growth in Life insurance in the region in recent years. Sales of this product are the main factor positioning the leading Brazilian bankassurance companies among the top ten insurers in Latin America. Alongside Brazil, most Latin American markets registered a considerable increase in Life business in 2016, which supported growth in this segment despite the impact of a depreciation of local currencies against the U.S. dollar.

In terms of Non-Life insurance, most markets in the region also saw an increase in premiums albeit to a lesser degree than in Life. Thus, the overall decline in Non-Life premiums (11 percent) is primarily attributable to exchange rate effects. Underlying premium growth was mainly boosted by Health Insurance in Venezuela, which has registered exceptional growth in recent years due to the State's double role as insurer and insured party.

Given the above, in broad terms the conclusions regarding concentration in the insurance industry in Latin America can be summarized as follows:

- At the end of 2016, the overall size of the sector amounted to slightly more than 145 billion dollars, with 54.2 percent in the Non-Life insurance segment and the remaining 45.8 percent in the Life segment.
- As set out in detail in the following sections of this report, in 2016, the 25 largest insurance groups operating in Latin American accounted for 63.7 percent of the region's overall market, 60.3 percent of the Non-Life market and 82.8 percent of the Life market.
- Based on observed market shares, the overall concentration of the insurance business in Latin America is low (H=268). This is due to the near absence of concentration in the highly competitive Non-Life segment (H=190), which is partially compensated by four-times greater concentration in the Life insurance segment (H=763). Even so, concentration is classed as low in both segments.
- Against this backdrop, the involvement of certain companies in the sector's concentration is relatively significant. Three groups account for two-thirds of sectoral concentration. This is due to the two previously mentioned diverging trends in the Non-Life and Life segments. In the Non-Life insurance segment, the three insurance groups leading the ranking in 2016 represent only a 15.3 percent share of the regional market, meaning they are responsible for 46.1 percent of market concentration. In contrast, in the Life insurance segment, the three insurance groups leading the ranking in 2016 amassed a 42 percent share of the regional market, making them responsible for 84 percent of market concentration.

2. Overall ranking

Size and growth

The insurance market in Latin America represented a total premium volume of 145.2 billion dollars in 2016. This was down 3.7 percent (-5.6 billion dollars) on the previous year; a result not of a fall in premium issuing but primarily the depreciation of most Latin American currencies.

Brasilprev led the ranking in 2016, overtaking Bradesco in second position. These two companies were followed by MAPFRE which held on to the same position as in 2015, albeit with a smaller market share. The ranking of different groups (see Table 2-a) is explained by organic growth, given that there were no significant commercial transactions in 2016.

However, the 25 largest insurance groups included in the 2016 ranking earned 120 million dollars more in premiums, representing a slight increase of 0.1 percent (in dollar terms) over the previous year². Reducing the sample to the ten largest groups, the increase from 2015-16 was around 3.3 percent on the same basis.

This apparent contrast between a reduction in the overall market size and an increase in the size of the largest insurance groups by premium value is underpinned by a slight increase in concentration from 232 to 268 points in the Herfindahl index. Even so, the index value remains comfortably within the range of unconcentrated industries as per the classification for this index (see "Data and metrics" appendix).

This is primarily a result of strong growth in Life insurance in Brazil in 2016 (17.7 percent) and, consequently, in the leading Brazilian and multinational groups with subsidiaries in the country (such as Zurich and CNP), which dominate the ranking. Brazilian Life insurance has spent more than a decade posting significant growth, dating back to 2002 when the *Vida Gerador de Benefícios Livres* (VGBL) product entered the market, providing complementary private protection, which is registered by the Superintendence of Insurance as a Life insurance. This insurance product,

which is mainly distributed through banking channels, has seen very strong growth rates over the years and registered premium volumes in 2016 in excess of 30 billion dollars, accounting for 45 percent of total premiums in the Life segment of the Latin American market and 21 percent of the region's total market. In fact, the ranking is led by Brasilprev, an institution owned by the Bank of Brazil and Principal Financial Group, whose portfolio consists entirely of this product.

Growth in Health insurance in Puerto Rico also contributed - albeit to a lesser extent - to an increase in concentration of the 25 largest insurance groups in Latin America. This is reflected in the positive performance of the major Health insurance companies in this country: Triple-S, Innovacare and MCS.

Market shares

In 2016, MAPFRE and Liberty Mutual reported a reduction in total premiums relative to the previous year (in the case of Liberty Mutual affected by the size of its subsidiary in Venezuela, where it is the leading insurer). Overall, both groups reduced their issuing by nearly 3 billion dollars³, meanwhile the remaining members of the ranking, especially those with the highest market shares, have seen their relative position increase slightly. Thus, Brasilprev leads the overall market with a share of close to 8.8 percent, followed by Bradesco (7.7 percent) and MAPFRE (5.6 percent). The market shares of the members of the 2016 ranking are shown in Chart 2-a, while their premium values and performance over time are displayed in Chart 2-b.

Table 2-a
Total market: overall ranking of insurance groups in Latin America 2016
Ranking by premium volume

| No. | Group | Country | Premiums (millions of \$) | | | | | 2016 market share [2] |
|-----|---------------------------|---------------|---------------------------|--------|--------|-----------------|-----------------|-----------------------|
| | | | 2006 | 2015 | 2016 | Δ 2006-2015 [1] | Δ 2015-2016 [1] | |
| 1 | BRASILPREV ¹ | Brazil | 524 | 10,232 | 12,795 | 9,707.5 | 2,563.6 | 8.8% |
| 2 | BRDESCO | Brazil | 5,351 | 10,759 | 11,148 | 5,407.9 | 388.4 | 7.7% |
| 3 | MAPFRE | Spain | 3,075 | 9,674 | 8,096 | 6,599.8 | -1,577.9 | 5.6% |
| 4 | ITAÚ | Brazil | 2,957 | 6,067 | 6,382 | 3,110.0 | 314.8 | 4.4% |
| 5 | ZURICH | Switzerland | 1,226 | 5,656 | 5,984 | 4,430.3 | 327.4 | 4.1% |
| 6 | METLIFE | United States | 2,900 | 5,045 | 4,830 | 2,145.3 | -214.7 | 3.3% |
| 7 | SURAMERICANA | Colombia | 604 | 4,551 | 4,469 | 3,947.1 | -81.9 | 3.1% |
| 8 | PORTO SEGURO | Brazil | 1,450 | 3,597 | 3,463 | 2,146.5 | -133.9 | 2.4% |
| 9 | CNP ASSURANCES | France | 973 | 2,919 | 3,423 | 1,946.3 | 504.2 | 2.4% |
| 10 | GRUPO NACIONAL PROVINCIAL | Mexico | 2,359 | 3,140 | 3,060 | 781.2 | -80.2 | 2.1% |
| 11 | TRIPLE-S | Puerto Rico | 1,492 | 2,839 | 2,939 | 1,347.2 | 99.6 | 2.0% |
| 12 | CHUBB | Switzerland | 678 | 2,617 | 2,418 | 1,938.4 | -199.0 | 1.7% |
| 13 | AXA | France | 95 | 2,411 | 2,310 | 2,315.9 | -101.1 | 1.6% |
| 14 | INNOVACARE | United States | 1,004 | 2,248 | 2,300 | 1,244.5 | 51.4 | 1.6% |
| 15 | ALLIANZ | Germany | 1,228 | 2,363 | 2,274 | 1,134.8 | -89.2 | 1.6% |
| 16 | BBVA | Spain | 1,521 | 2,294 | 2,123 | 773.9 | -171.6 | 1.5% |
| 17 | MCS | United States | 1,019 | 1,835 | 2,066 | 816.2 | 230.5 | 1.4% |
| 18 | LIBERTY MUTUAL | United States | 1,493 | 3,215 | 1,812 | 1,722.6 | -1,402.9 | 1.2% |
| 19 | SANCOR | Argentina | 290 | 1,957 | 1,700 | 1,667.4 | -257.4 | 1.2% |
| 20 | TALANX | Germany | 386 | 1,703 | 1,603 | 1,317.4 | -100.7 | 1.1% |
| 21 | QUÁLITAS | Mexico | 512 | 1,228 | 1,565 | 715.9 | 337.0 | 1.1% |
| 22 | CARDIF | France | 309 | 1,642 | 1,564 | 1,333.2 | -78.1 | 1.1% |
| 23 | NEW YORK LIFE | United States | 703 | 1,316 | 1,408 | 613.6 | 92.3 | 1.0% |
| 24 | BANORTE | Mexico | 0 | 1,532 | 1,380 | 1,531.8 | -151.5 | 1.0% |
| 25 | GENERALI | Italy | 1,395 | 1,494 | 1,345 | 98.9 | -148.8 | 0.9% |

| | | | | | | |
|--------------------------------|--------|---------|---------|----------|----------|--------|
| Total Top 10 | 21,420 | 61,642 | 63,651 | 40,222.0 | 2,009.8 | 43.8% |
| Total Top 25 | 33,544 | 92,337 | 92,458 | 58,793.7 | 120.5 | 63.7% |
| Total sector | 68,565 | 150,818 | 145,190 | 82,253.0 | -5,628.9 | 100.0% |
| Herfindahl [3] | 169.8 | 232.1 | 268.0 | | | |
| % Representativeness of Top-10 | 31.2 | 40.9 | 43.8 | | | |
| % Representativeness of Top-25 | 48.9 | 61.2 | 63.7 | | | |

Source: MAPFRE Economic Research (with data from supervisory bodies in the region)

¹ Owned by Banco de Brasil and Principal Financial Group

Table 2-b
Total market: overall ranking of insurance groups in Latin America 2016
Contribution to Herfindahl index

| No. | Group | Country | 2016 market share [2] | Herfindahl Cont. 2016 [4] | %Δ Herfindahl Cont. 2006-16 [5] | %Δ Herfindahl Cont. 2015-16 [5] | %Δ Herfindahl Cont. 2006-15 [5] |
|---------------------|---------------------------|---------------|-----------------------|---------------------------|---------------------------------|---------------------------------|---------------------------------|
| 1 | BRASILPREV ¹ | Brazil | 8.8% | 29.0% | 28.6% | 9.2% | 19.5% |
| 2 | BRADESCO | Brazil | 7.7% | 22.0% | -13.9% | 0.1% | -13.9% |
| 3 | MAPFRE | Spain | 5.6% | 11.6% | -0.2% | -6.1% | 5.9% |
| 4 | ITAÚ | Brazil | 4.4% | 7.2% | -3.7% | 0.2% | -4.0% |
| 5 | ZURICH | Switzerland | 4.1% | 6.3% | 4.5% | 0.3% | 4.2% |
| 6 | METLIFE | United States | 3.3% | 4.1% | -6.4% | -0.7% | -5.7% |
| 7 | SURAMERICANA | Colombia | 3.1% | 3.5% | 3.1% | -0.4% | 3.5% |
| 8 | PORTO SEGURO | Brazil | 2.4% | 2.1% | -0.5% | -0.3% | -0.2% |
| 9 | CNP ASSURANCES | France | 2.4% | 2.1% | 0.9% | 0.5% | 0.4% |
| 10 | GRUPO NACIONAL PROVINCIAL | Mexico | 2.1% | 1.7% | -5.3% | -0.2% | -5.1% |
| 11 | TRIPLE-S | Puerto Rico | 2.0% | 1.5% | -1.3% | 0.0% | -1.3% |
| 12 | CHUBB | Switzerland | 1.7% | 1.0% | 0.5% | -0.3% | 0.7% |
| 13 | AXA | France | 1.6% | 0.9% | 0.9% | -0.2% | 1.1% |
| 14 | INNOVACARE | United States | 1.6% | 0.9% | -0.3% | 0.0% | -0.3% |
| 15 | ALLIANZ | Germany | 1.6% | 0.9% | -1.0% | -0.1% | -0.8% |
| 16 | BBVA | Spain | 1.5% | 0.8% | -2.1% | -0.2% | -1.9% |
| 17 | MCS | United States | 1.4% | 0.8% | -0.5% | 0.1% | -0.7% |
| 18 | LIBERTY MUTUAL | United States | 1.2% | 0.6% | -2.2% | -1.4% | -0.8% |
| 19 | SANCOR | Argentina | 1.2% | 0.5% | 0.4% | -0.2% | 0.6% |
| 20 | TALANX | Germany | 1.1% | 0.5% | 0.3% | -0.1% | 0.4% |
| 21 | QUÁLITAS | Mexico | 1.1% | 0.4% | 0.1% | 0.1% | 0.0% |
| 22 | CARDIF | France | 1.1% | 0.4% | 0.3% | -0.1% | 0.4% |
| 23 | NEW YORK LIFE | United States | 1.0% | 0.4% | -0.3% | 0.0% | -0.3% |
| 24 | BANORTE | Mexico | 1.0% | 0.3% | 0.3% | -0.1% | 0.4% |
| 25 | GENERALI | Italy | 0.9% | 0.3% | -2.1% | -0.1% | -2.0% |
| Total Top 10 | | | 43.8% | 89.7% | 7.0% | 2.5% | 4.5% |
| Total Top 25 | | | 63.7% | 100.0% | 0.0% | 0.0% | 0.0% |
| Total sector | | | 100.0% | | | | |

Source: MAPFRE Economic Research (with data from supervisory bodies in the region)

¹ Owned by Banco de Brasil and Principal Financial Group

As previously mentioned, while the leading Brazilian life insurers, together with Health insurers in Puerto Rico and the Quálitas and New York Life groups gained market share in 2016, the remaining groups under analysis saw their market share decline.

The market shares of the groups making up the 2016 ranking are shown in Chart 2-a, while their premium value and performance over time are displayed in Chart 2-b.

Concentration

The overall market share of the three largest insurance groups in Latin America - Brasilprev, Bradesco and MAPFRE - amounted to the equivalent of nearly three-quarters of the next twelve groups in the ranking.

This means that these three companies alone contributed almost two-thirds to overall market concentration, with Brasilprev making the largest contribution of close to 30 percent resulting from the previously mentioned growth relating to its involvement in the Life insurance segment (see Chart 2-c).

This also explains why this group has seen its share in concentration increase by nearly 8 percent since last year, meanwhile Bradesco and MAPFRE fell by -3 percent and -6 percent respectively (see Chart 2-d).

Performance over time

Chart 2-b also highlights how the current premium value was gradually built up over the course of the last decade, with average growth in value of nearly 6 billion dollars for each of the five biggest market players.

However, there were important differences in the performance of the top three in 2016. Brasilprev has seen a pick up in growth in 2016. In the space of one year its premium have grown (over 3 billion dollars with a high degree of concentration in the Life segment) by the equivalent of a third of the cumulative growth registered over the previous ten years. The pattern is broadly similar - although less pronounced - for Bradesco, meanwhile MAPFRE registered a loss in premium value in 2016 (as explained in the section on Concentration in the Non-Life segment), partially offsetting the strong increase seen in the previous ten years.

Specific developments

As set out in the first part of the report and explained in more detail in the following sections, the overall performance of the insurance market reflects two conflicting developments: on the one hand, an increase in growth and concentration among members in the Life segment, led by Brazilian institutions, and on the other, a decrease in market concentration in the Non-Life segment against the backdrop of a relative decline in market size in dollar terms.

Chart 2-a
Total market: market share in 2016

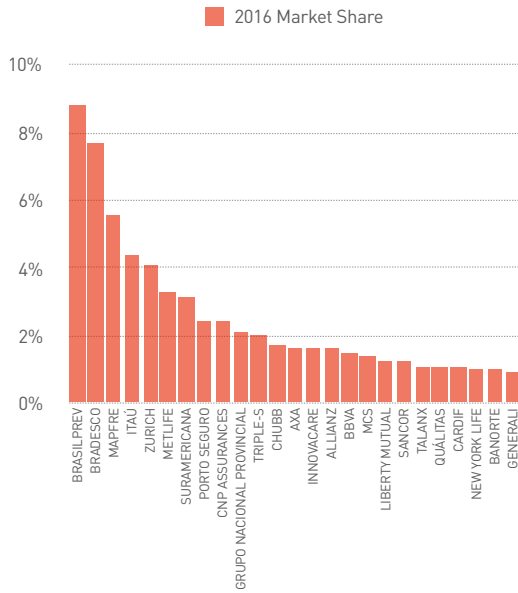


Chart 2-b
Total market: size and market growth in 2016

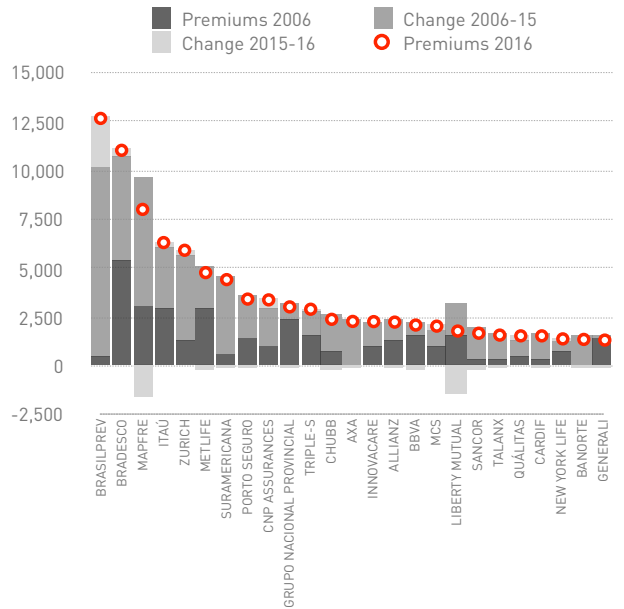


Chart 2-c
Total market: contribution to sector concentration

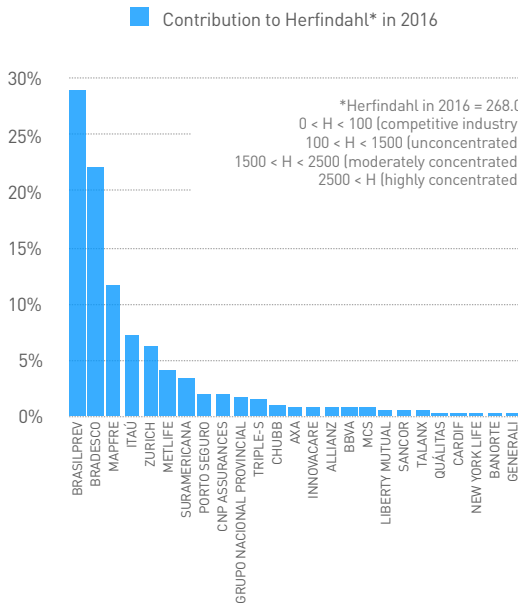
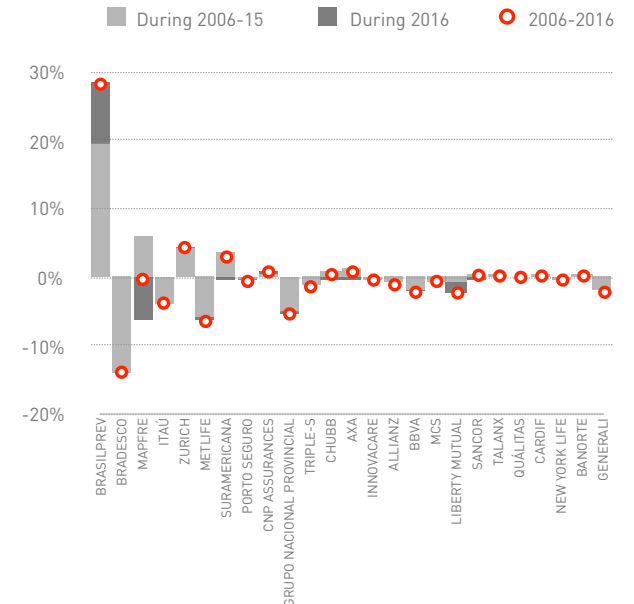


Chart 2-d
Total market: change in contribution to sector concentration



Source: MAPFRE Economic Research (with data from supervisory bodies in the region)

3. Non-Life Ranking

Size and growth

The Non-Life insurance market in Latin America reached a total premium volume of around 78.7 billion dollars in 2016. This is some 11.3 percent lower than the previous year, the equivalent of a reduction in market size of nearly 10 billion dollars. A key part of the explanation for this fall relates to the measurement of the market in dollar terms and the impact of the depreciation of a large proportion of Latin American currencies in 2016 (see Tables 3-a and 3-b).

The 25 largest insurance groups earned 47.5 billion dollars in premiums in 2016, representing a 3.7 percent decline (-7.2 percent) over the previous year. Reducing the sample to the ten largest groups, the decline was close to 5.3 percent. Only a few groups increased their premium income in the Non-Life segment in 2016: Health insurers in Puerto Rico, as well as Quálitas, Tokio Marine and Cardif. The Mexican group Quálitas increased its business in Mexico by 50 percent in local currency terms in 2016, thanks to its Automobile insurance business, which is the sole focus of its operations.

Market shares

MAPFRE led the ranking of Non-Life insurers in 2016, both on an absolute size and market share basis, with a market share of 7.6 percent. This almost doubled the share of the second-placed company in the ranking (Porto Seguro, with a share of 4.1 percent). The Puerto Rican company Triple-S occupied third place in the ranking for this market segment with a share of 3.6 percent.

Notably most participants have a market share within around 2 percent of the average of market shares in the ranking (see Charts 3-a and 3-b).

Concentration

The size of the market leader (MAPFRE) means that it retains around 30 percent of the (limited) sectoral concentration. This is three times greater than its closest rival (Porto Seguro), which has a 10 percent share in concentration (see Chart 3-c). It is notable that MAPFRE has reduced its share in market concentration by 7.5 percent over the last ten years, due to the decline in premiums experienced in 2016 (see Chart 3-d). The decline in MAPFRE's premiums in the Non-Life segment reflects unfavorable currency developments (Argentinian peso, Brazilian real and Mexican peso), as well as the accounting effect of the multi-annual contract issued in Mexico in 2015 for Petróleos Mexicanos.

Performance over time

The previously mentioned redistribution in market shares has had a relatively limited impact on the concentration of this segment, given the sector remains essentially stable and within the scope of a competitive industry as defined by the Herfindahl index ($H=190$). However, it is important in qualitative terms since concentration has shifted from companies in the highest echelons of the ranking to companies in the lowest percentiles, meaning that overall concentration remained broadly unchanged between 2015 and 2016.

Table 3-a
Non-Life Market: overall ranking of insurance groups in Latin America 2016
 Ranking by premium volume

| No. | Group | Country | Premiums (millions of \$) | | | | | 2016 market share [2] |
|-----|-----------------------------|---------------|---------------------------|-------|-------|-----------------|-----------------|-----------------------|
| | | | 2006 | 2015 | 2016 | Δ 2006-2015 [1] | Δ 2015-2016 [1] | |
| 1 | MAPFRE | Spain | 2,482 | 7,299 | 5,980 | 4,817.3 | -1,319.1 | 7.6% |
| 2 | PORTO SEGURO | Brazil | 1,360 | 3,427 | 3,267 | 2,066.7 | -160.3 | 4.1% |
| 3 | TRIPLE-S | Puerto Rico | 1,414 | 2,737 | 2,831 | 1,322.8 | 94.1 | 3.6% |
| 4 | SURAMERICANA | Colombia | 361 | 2,874 | 2,825 | 2,513.8 | -49.1 | 3.6% |
| 5 | ZURICH | Switzerland | 917 | 2,748 | 2,662 | 1,830.8 | -86.0 | 3.4% |
| 6 | INNOVACARE | United States | 1,004 | 2,248 | 2,300 | 1,244.5 | 51.4 | 2.9% |
| 7 | CHUBB | Switzerland | 578 | 2,257 | 2,119 | 1,679.0 | -137.6 | 2.7% |
| 8 | MCS | United States | 1,017 | 1,833 | 2,063 | 815.9 | 230.6 | 2.6% |
| 9 | AXA | France | 3 | 2,035 | 1,923 | 2,032.1 | -112.1 | 2.4% |
| 10 | BRADESCO | Brazil | 1,679 | 1,993 | 1,912 | 313.2 | -80.2 | 2.4% |
| 11 | ALLIANZ | Germany | 1,119 | 1,935 | 1,846 | 815.8 | -88.8 | 2.3% |
| 12 | GRUPO NACIONAL PROVINCIAL | Mexico | 1,610 | 1,850 | 1,736 | 239.7 | -114.1 | 2.2% |
| 13 | LIBERTY MUTUAL | United States | 1,425 | 3,096 | 1,709 | 1,670.3 | -1,386.9 | 2.2% |
| 14 | SANCOR | Argentina | 276 | 1,823 | 1,605 | 1,546.9 | -217.4 | 2.0% |
| 15 | TALANX | Germany | 384 | 1,664 | 1,596 | 1,280.1 | -68.9 | 2.0% |
| 16 | QUÁLITAS | Mexico | 512 | 1,228 | 1,565 | 715.9 | 337.0 | 2.0% |
| 17 | TOKIO MARINE | Japan | 652 | 1,106 | 1,142 | 453.7 | 36.1 | 1.5% |
| 18 | FEDERACION PATRONAL SEGUROS | Argentina | 289 | 1,280 | 1,141 | 990.9 | -139.4 | 1.4% |
| 19 | AIG | United States | 2,328 | 1,230 | 1,122 | -1,098.2 | -107.6 | 1.4% |
| 20 | SUL AMÉRICA | Brazil | 1,318 | 1,211 | 1,113 | -106.4 | -98.2 | 1.4% |
| 21 | GENERALI | Italy | 797 | 1,212 | 1,089 | 415.1 | -123.1 | 1.4% |
| 22 | PROVINCIA | Argentina | 170 | 1,216 | 1,050 | 1,046.2 | -165.6 | 1.3% |
| 23 | FIRST MEDICAL HEALTH PLAN | United States | 419 | 883 | 1,049 | 463.3 | 166.2 | 1.3% |
| 24 | SAN CRISTOBAL | Argentina | 212 | 1,111 | 911 | 899.0 | -200.3 | 1.2% |
| 25 | CARDIF | France | 115 | 830 | 907 | 714.8 | 77.6 | 1.2% |

| | | | | | | |
|--------------------------------|--------|--------|--------|----------|-----------|--------|
| Total Top 10 | 10,814 | 29,450 | 27,882 | 18,636.1 | -1,568.2 | 35.4% |
| Total Top 25 | 22,441 | 51,124 | 47,462 | 28,683.2 | -3,661.8 | 60.3% |
| Total sector | 43,834 | 88,784 | 78,725 | 44,950.6 | -10,058.9 | 100.0% |
| Herfindahl [3] | 161.9 | 184.9 | 190.3 | | | |
| % Representativeness of Top-10 | 24.7 | 33.2 | 35.4 | | | |
| % Representativeness of Top-25 | 51.2 | 57.6 | 60.3 | | | |

Source: MAPFRE Economic Research (with data from supervisory bodies in the region)

Table 3-b
Non-Life Market: overall ranking of insurance groups in Latin America 2016
 Contribution to Herfindahl index

| No. | Group | Country | 2016 market share [2] | Herfindahl Cont. 2016 [4] | %Δ Herfindahl Cont. 2006-16 [5] | %Δ Herfindahl Cont. 2015-16 [5] | %Δ Herfindahl Cont. 2006-15 [5] |
|---------------------|-----------------------------|---------------|-----------------------|---------------------------|---------------------------------|---------------------------------|---------------------------------|
| 1 | MAPFRE | Spain | 7.6% | 30.3% | 10.5% | -6.2% | 16.7% |
| 2 | PORTO SEGURO | Brazil | 4.1% | 9.0% | 3.1% | 1.0% | 2.1% |
| 3 | TRIPLE-S | Puerto Rico | 3.6% | 6.8% | 0.4% | 1.7% | -1.3% |
| 4 | SURAMERICANA | Colombia | 3.6% | 6.8% | 6.3% | 1.1% | 5.2% |
| 5 | ZURICH | Switzerland | 3.4% | 6.0% | 3.3% | 0.8% | 2.5% |
| 6 | INNOVACARE | United States | 2.9% | 4.5% | 1.2% | 1.0% | 0.2% |
| 7 | CHUBB | Switzerland | 2.7% | 3.8% | 2.7% | 0.3% | 2.4% |
| 8 | MCS | United States | 2.6% | 3.6% | 0.3% | 1.3% | -1.0% |
| 9 | AXA | France | 2.4% | 3.1% | 3.1% | 0.3% | 2.8% |
| 10 | BRADESCO | Brazil | 2.4% | 3.1% | -6.0% | 0.4% | -6.3% |
| 11 | ALLIANZ | Germany | 2.3% | 2.9% | -1.1% | 0.3% | -1.5% |
| 12 | GRUPO NACIONAL PROVINCIAL | Mexico | 2.2% | 2.6% | -5.8% | 0.2% | -6.0% |
| 13 | LIBERTY MUTUAL | United States | 2.2% | 2.5% | -4.1% | -4.1% | 0.0% |
| 14 | SANCOR | Argentina | 2.0% | 2.2% | 1.9% | -0.1% | 2.0% |
| 15 | TALANX | Germany | 2.0% | 2.2% | 1.7% | 0.3% | 1.4% |
| 16 | QUÁLITAS | Mexico | 2.0% | 2.1% | 1.2% | 1.0% | 0.2% |
| 17 | TOKIO MARINE | Japan | 1.5% | 1.1% | -0.3% | 0.3% | -0.5% |
| 18 | FEDERACION PATRONAL SEGUROS | Argentina | 1.4% | 1.1% | 0.8% | 0.0% | 0.9% |
| 19 | AIG | United States | 1.4% | 1.1% | -16.4% | 0.0% | -16.4% |
| 20 | SUL AMÉRICA | Brazil | 1.4% | 1.1% | -4.5% | 0.0% | -4.6% |
| 21 | GENERALI | Italy | 1.4% | 1.0% | -1.0% | 0.0% | -1.0% |
| 22 | PROVINCIA | Argentina | 1.3% | 0.9% | 0.8% | -0.1% | 0.9% |
| 23 | FIRST MEDICAL HEALTH PLAN | United States | 1.3% | 0.9% | 0.4% | 0.4% | 0.0% |
| 24 | SAN CRISTOBAL | Argentina | 1.2% | 0.7% | 0.6% | -0.1% | 0.7% |
| 25 | CARDIF | France | 1.2% | 0.7% | 0.7% | 0.2% | 0.4% |
| Total Top 10 | | | 35.4% | 77.1% | 25.1% | 1.6% | 23.4% |
| Total Top 25 | | | 60.3% | 100.0% | 0.0% | 0.0% | 0.0% |
| Total sector | | | 100.0% | | | | |

Source: MAPFRE Economic Research (with data from supervisory bodies in the region)

Chart 3-a
Non-Life: market share in 2016

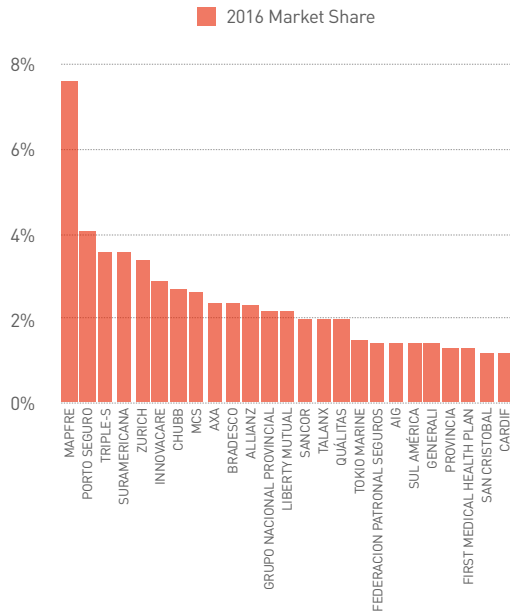


Chart 3-b
Non-Life: size and market growth in 2016

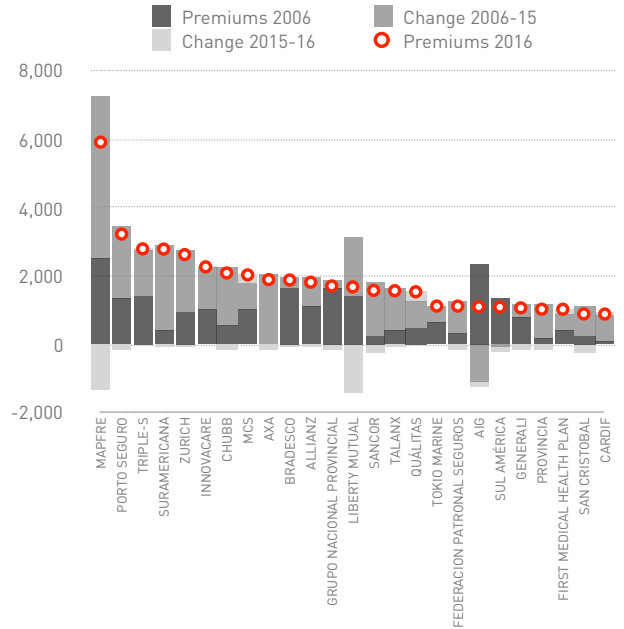


Chart 3-c
Non-Life: contribution to sector concentration

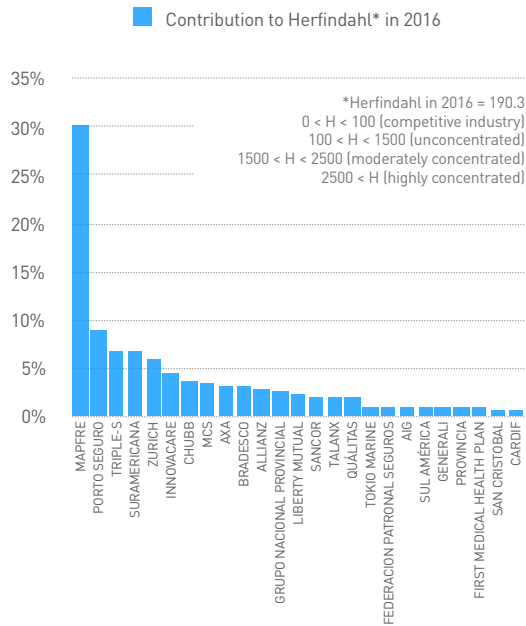
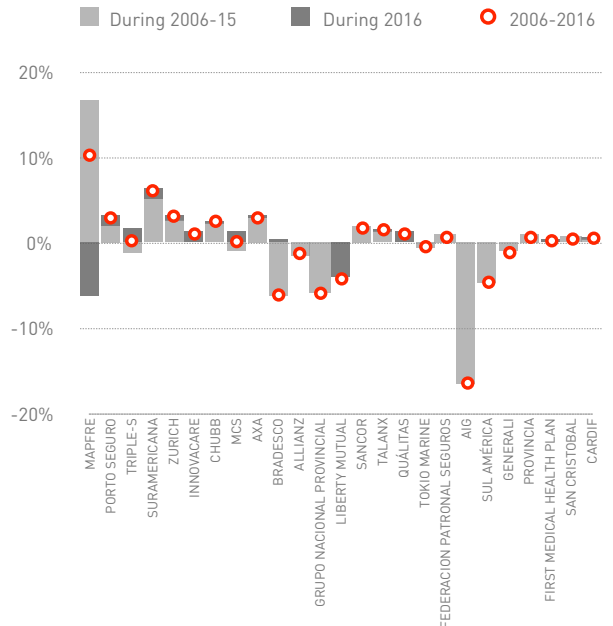


Chart 3-d
Non-Life: change in contribution to sector concentration



Source: MAPFRE Economic Research (with data from supervisory bodies in the region)

4. Life Ranking

Size and growth

The Life market in Latin America amounted to 66.5 billion dollars in December 2016, up 7.1 percent (4.4 billion dollars) over the previous year. up 7.1 percent (4.4 billion dollars) over the previous year. The Brazilian insurers remained the main leaders in this market segment with a combined premium volume amounting to over a third of the market and more than 50 percent of the business volume of the 25 largest insurers in the region. In addition, several multinational insurance groups with subsidiaries in Brazil were strongly influenced by business growth in this area in 2016. The biggest change in premiums compared to the previous year took place at Brasilprev (the market leader), which saw premiums rise by 2.6 billion dollars over the previous year (see Tables 4-a and 4-b).

Market shares

The 25 largest insurance groups represented 82.8 percent of the regional market, with a particularly notable concentration of market share among the three leading insurance groups (42 percent, all Brazilian), which have a larger combined share than the rest of the sample in the ranking. Among these, the Brazilian Life Saving insurance groups account for a third of the market, underscoring the importance of the insurance industry in the welfare system. Thus, Brasilprev leads the ranking (see Chart 4-a) with a market share of 19.3 percent, followed by Bradesco (13.9 percent) and Itaú (8.8 percent).

In addition to the groups operating in the Brazilian insurance market, insurance groups in the Life business in Mexico and Chile also registered strong premium growth, of around 15 percent in local currency terms in 2016.

Concentration

Although the Latin American insurance market is far from concentrated (with a Herfindahl index of $H=763$, below the 1500 threshold for moderate concentration), the sector is clearly more concentrated than the almost perfect competition in the Non-Life insurance segment (see Chart 1-a). The moderately high level of the Herfindahl index (though within the low concentration threshold) is clearly conditioned by the influence of the three leading Brazilian insurers. These three companies together represent 84 percent of market concentration in the region, while the following twelve companies account for 14.8 percent and the final ten a mere 1.0 percent (see Chart 4-c).

Performance over time

The increase in Brasilprev's share in concentration over the last ten years is particularly noteworthy. As can be seen in Chart 4-b, its current premium volume was built up almost entirely over the 2006-15 cycle during which its premiums rose by around 10 billion dollars, followed by a significant increase (+2.5 billion dollars) in 2016. This strong growth is replicated by Bradesco and Itaú: both of whom increased their premiums by 5 and 3.6 billion dollars respectively over the last ten years, although registering more moderate growth in 2016. Accordingly, Brasilprev's contribution to sector concentration has increased.

Chart 4-d illustrates how Brasilprev's 12 billion dollar premium growth from 2006-16 pushed its immediate rival (Bradesco) into second place. Brasilprev's share in market concentration increased by around 25 percent, almost double Bradesco's loss.

Table 4-a
Life Market: overall ranking of insurance groups in Latin America 2016
 Ranking by premium volume

| No. | Group | Country | Premiums (millions of \$) | | | | | 2016 market share [2] |
|-----|---------------------------|----------------|---------------------------|--------|--------|-----------------|-----------------|-----------------------|
| | | | 2006 | 2015 | 2016 | Δ 2006-2015 [1] | Δ 2015-2016 [1] | |
| 1 | BRASILPREV ¹ | Brazil | 524 | 10,232 | 12,795 | 9,707.5 | 2,563.6 | 19.3% |
| 2 | BRADESCO | Brazil | 3,672 | 8,767 | 9,235 | 5,094.8 | 468.6 | 13.9% |
| 3 | ITAÚ | Brazil | 1,831 | 5,432 | 5,860 | 3,601.0 | 427.9 | 8.8% |
| 4 | METLIFE | United States | 2,510 | 4,238 | 4,009 | 1,727.7 | -228.3 | 6.0% |
| 5 | ZURICH | Switzerland | 309 | 2,908 | 3,322 | 2,599.5 | 413.4 | 5.0% |
| 6 | CNP ASSURANCES | France | 546 | 2,065 | 2,537 | 1,518.6 | 472.9 | 3.8% |
| 7 | MAPFRE | Spain | 593 | 2,375 | 2,116 | 1,782.5 | -258.8 | 3.2% |
| 8 | SURAMERICANA | Colombia | 244 | 1,677 | 1,644 | 1,433.4 | -32.8 | 2.5% |
| 9 | BBVA | Spain | 1,123 | 1,754 | 1,643 | 631.9 | -111.4 | 2.5% |
| 10 | GRUPO NACIONAL PROVINCIAL | Mexico | 749 | 1,291 | 1,325 | 541.6 | 33.9 | 2.0% |
| 11 | CONSORCIO FINANCIERO | Chile | 283 | 1,031 | 1,156 | 748.0 | 125.4 | 1.7% |
| 12 | BANAMEX | United States | 545 | 1,298 | 1,107 | 753.0 | -190.7 | 1.7% |
| 13 | NEW YORK LIFE | United States | 529 | 939 | 1,042 | 409.6 | 103.5 | 1.6% |
| 14 | ALFA | Colombia | 111 | 677 | 920 | 565.5 | 243.6 | 1.4% |
| 15 | CÁMARA | Chile | 0 | 775 | 865 | 774.7 | 89.9 | 1.3% |
| 16 | HSBC | United Kingdom | 781 | 812 | 752 | 31.5 | -60.5 | 1.1% |
| 17 | PENTA | Chile | 162 | 534 | 747 | 372.5 | 212.5 | 1.1% |
| 18 | BANORTE | Mexico | 0 | 794 | 729 | 793.5 | -64.6 | 1.1% |
| 19 | CARDIF | France | 194 | 813 | 657 | 618.4 | -155.7 | 1.0% |
| 20 | BICE | Chile | 168 | 538 | 540 | 369.7 | 2.8 | 0.8% |
| 21 | ICATU | Brazil | 156 | 504 | 450 | 347.6 | -53.3 | 0.7% |
| 22 | ALLIANZ | Germany | 109 | 428 | 428 | 319.0 | -0.4 | 0.6% |
| 23 | PRINCIPAL FINANCIAL GROUP | United States | 253 | 384 | 410 | 131.2 | 25.8 | 0.6% |
| 24 | AXA | France | 93 | 376 | 388 | 283.8 | 11.0 | 0.6% |
| 25 | INBURSA | Mexico | 381 | 319 | 354 | -61.2 | 34.9 | 0.5% |

| | | | | | | |
|--------------------------------|--------|--------|--------|----------|---------|--------|
| Total Top 10 | 12,100 | 40,738 | 44,487 | 28,638.4 | 3,749.0 | 66.9% |
| Total Top 25 | 15,864 | 50,959 | 55,032 | 35,095.0 | 4,073.3 | 82.8% |
| Total sector | 24,732 | 62,034 | 66,464 | 37,302.4 | 4,430.0 | 100.0% |
| Herfindahl [3] | 452.2 | 683.3 | 762.8 | | | |
| % Representativeness of Top-10 | 48.9 | 65.7 | 66.9 | | | |
| % Representativeness of Top-25 | 64.1 | 82.1 | 82.8 | | | |

Source: MAPFRE Economic Research (with data from supervisory bodies in the region)

¹ Owned by Banco de Brasil and Principal Financial Group

Table 4-b
Life Market: overall ranking of insurance groups in Latin America 2016
 Contribution to Herfindahl index

| No. | Group | Country | 2016 market share [2] | Herfindahl Cont. 2016 [4] | %Δ Herfindahl Cont. 2006-16 [5] | %Δ Herfindahl Cont. 2015-16 [5] | %Δ Herfindahl Cont. 2006-15 [5] |
|---------------------|---------------------------|----------------|-----------------------|---------------------------|---------------------------------|---------------------------------|---------------------------------|
| 1 | BRASILPREV ¹ | Brazil | 19.3% | 48.6% | 47.6% | 8.8% | 38.8% |
| 2 | BRASESCO | Brazil | 13.9% | 25.3% | -23.4% | -3.9% | -19.5% |
| 3 | ITAÚ | Brazil | 8.8% | 10.2% | -1.9% | -1.0% | -0.9% |
| 4 | METLIFE | United States | 6.0% | 4.8% | -18.0% | -2.1% | -15.9% |
| 5 | ZURICH | Switzerland | 5.0% | 3.3% | 2.9% | 0.1% | 2.9% |
| 6 | CNP ASSURANCES | France | 3.8% | 1.9% | 0.8% | 0.3% | 0.5% |
| 7 | MAPFRE | Spain | 3.2% | 1.3% | 0.1% | -0.8% | 0.9% |
| 8 | SURAMERICANA | Colombia | 2.5% | 0.8% | 0.6% | -0.3% | 0.9% |
| 9 | BBVA | Spain | 2.5% | 0.8% | -3.8% | -0.4% | -3.4% |
| 10 | GRUPO NACIONAL PROVINCIAL | Mexico | 2.0% | 0.5% | -1.5% | -0.1% | -1.4% |
| 11 | CONSORCIO FINANCIERO | Chile | 1.7% | 0.4% | 0.1% | 0.0% | 0.1% |
| 12 | BANAMEX | United States | 1.7% | 0.4% | -0.7% | -0.3% | -0.4% |
| 13 | NEW YORK LIFE | United States | 1.6% | 0.3% | -0.7% | 0.0% | -0.7% |
| 14 | ALFA | Colombia | 1.4% | 0.3% | 0.2% | 0.1% | 0.1% |
| 15 | CÁMARA | Chile | 1.3% | 0.2% | 0.2% | 0.0% | 0.2% |
| 16 | HSBC | United Kingdom | 1.1% | 0.2% | -2.0% | -0.1% | -2.0% |
| 17 | PENTA | Chile | 1.1% | 0.2% | 0.1% | 0.1% | 0.0% |
| 18 | BANORTE | Mexico | 1.1% | 0.2% | 0.2% | -0.1% | 0.2% |
| 19 | CARDIF | France | 1.0% | 0.1% | 0.0% | -0.1% | 0.1% |
| 20 | BICE | Chile | 0.8% | 0.1% | 0.0% | 0.0% | 0.0% |
| 21 | ICATU | Brazil | 0.7% | 0.1% | 0.0% | 0.0% | 0.0% |
| 22 | ALLIANZ | Germany | 0.6% | 0.1% | 0.0% | 0.0% | 0.0% |
| 23 | PRINCIPAL FINANCIAL GROUP | United States | 0.6% | 0.0% | -0.2% | 0.0% | -0.2% |
| 24 | AXA | France | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% |
| 25 | INBURSA | Mexico | 0.5% | 0.0% | -0.5% | 0.0% | -0.5% |
| Total Top 10 | | | 66.9% | 97.5% | 3.4% | 0.5% | 2.8% |
| Total Top 25 | | | 82.8% | 100.0% | 0.0% | 0.0% | 0.0% |
| Total sector | | | 100.0% | | | | |

Source: MAPFRE Economic Research (with data from supervisory bodies in the region)

¹ Owned by Banco de Brasil and Principal Financial Group

Chart 4-a
Life: market share in 2016

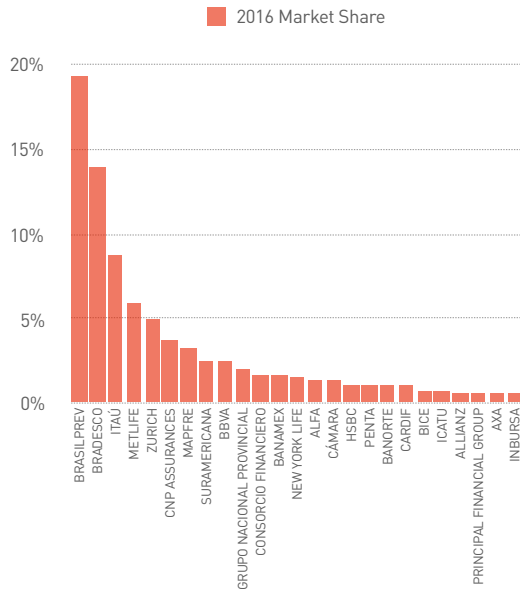


Chart 4-b
Life: size and market growth in 2016

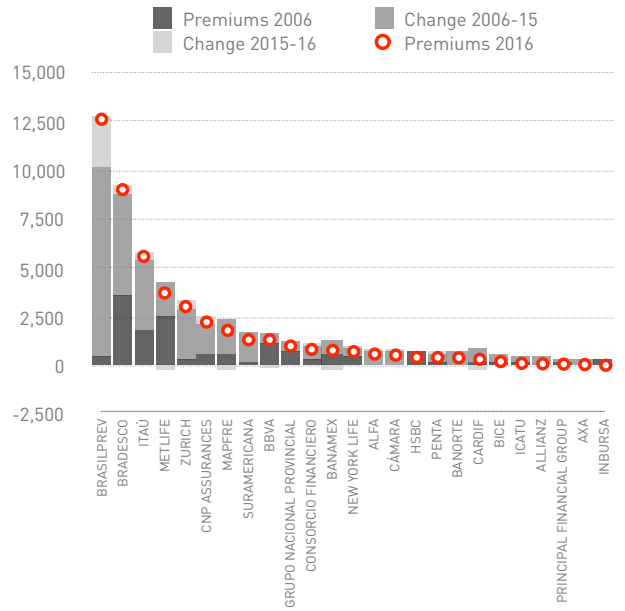


Chart 4-c
Life: contribution to sector concentration

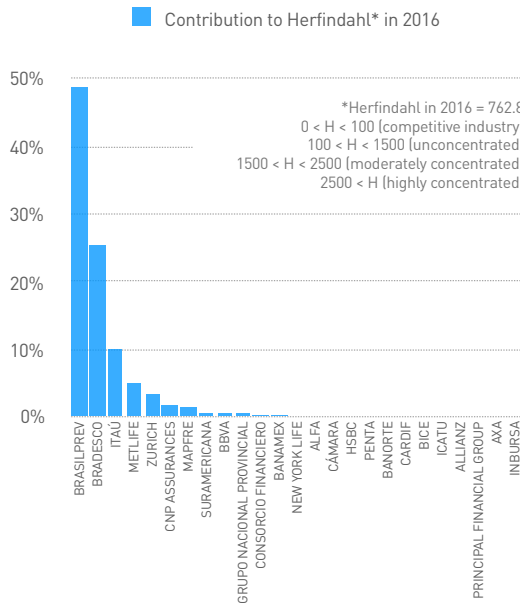
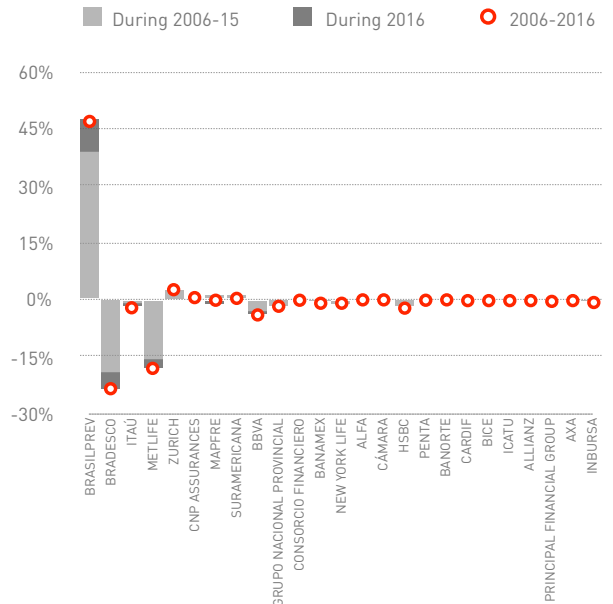


Chart 4-d
Life: change in contribution to sector concentration



Source: MAPFRE Economic Research (with data from supervisory bodies in the region)

Data and metrics

Data sources

As in previous publications, in preparing these rankings, data was obtained from information published by the insurance supervisory bodies in the different countries in Latin America (preliminary data for Mexico and Puerto Rico). The premium volume for each group represents the sum of premiums issued relating to direct insurance in each country. Mergers and acquisitions announced over the course of 2016 were taken into account when calculating the data.

Sample

Over the years in which the ranking has been published (from 2006 to 2016), the sample has systematically been formed of the 25 largest insurance groups in Life and Non-Life. These insurance groups account for nearly 65 percent of the Latin American insurance market, over 60 percent of the Non-Life segment and more than 80 percent of the Life insurance market. The samples are therefore representative of the total population given that the sampling error is 0.2 percent and 0.4 percent in the Non-Life and Life markets respectively, and 0.3 percent in the overall market; negligible errors with 99.9 percent confidence. Consequently, the conclusions reached regarding the overall insurance market in Latin America can be generalized with a high degree of confidence.

Intertemporal comparability

The dynamic analysis was undertaken assuming a constant sample of participants over time. Having obtained the ranking by premium volume for the current year, 2016, the same information was located for each of the groups making up the ranking in 2015 and 2006. This enables the changes in each of the participants under analysis to be reviewed up to the present date. However, the analysis also raised two issues. Both issues are of relatively minor importance, albeit becoming more relevant the further back in time the analysis reaches.

In some instances the groups referred to in the current ranking did not form part of the ranking ten years ago. This has a minor impact when comparing actual concentration to the analytical equivalent in both samples (actual 2006 ranking vs. 2006 ranking-equivalent of the analysis). The Herfindahl index of the actual ranking in 2006 was 47 points above the equivalent used in the analysis (217 vs. 170, primarily due to differences in the Life business, whose real concentration according to the 2006 ranking was 501, while the exercise equivalent is 452). In the Non-Life segment, the differences are negligible (+25.5). This difference between the actual sample and the adjusted-analysis sample essentially relates to the different composition of the various rankings (Total, Life and Non-Life) in previous years. Either way, it does not affect the overall reading of concentration and changes in concentration given that in both cases (adjusted and non-adjusted) the markets still fall well within the Herfindahl index range corresponding to an unconcentrated industry ($100 \leq H \leq 1500$).

The second issue was that in specific cases some groups did not exist in the actual 2006 sample, either because they began operating at a later date, for example the Chilean group, Cámara, which setup in 2009, or the case of Axa which was only operating in Puerto Rico in 2006 and it was not until 2008 when it began to expand in Latin America with the purchase of ING Seguros in Mexico. Banorte is another specific case, where its total premiums in 2006 were included under Generali, which at the time held a 49 percent stake in the Mexican insurer.

Metrics⁴

One of the aims of the analysis included in this version of the ranking is to contribute to understanding the structure of the insurance industry in Latin America, the distribution of weight among its actors and concentration. This can be analyzed from an exclusively static perspective (with a ranking of size based on premiums) and also from a dynamic perspective which provides a view on the concentration process and the role played by the groups covered in the ranking in sectoral concentration. Thus, the **gross weight** (corresponding to point [1]) of each participant in the ranking was measured according to the size of their premiums in American dollars at the current date, in this case 2016, and at two previous points in time, 2006 and 2015. This provides a perspective on the historic changes in premiums ($\Delta 2006-2015$ y $\Delta 2015-2016$) up to the present day, providing a distinct separation between trend developments over the last decade and changes in the last year, which are more closely linked to the economic cycle.

Once the premium value in dollar terms was obtained for these years, each participant's **market share** was calculated (corresponding to point [2] in the tables). The shares are regional and are, as such, the aggregation of shares in different currencies which were later converted into dollars⁵. The regional shares were needed to calculate the market concentration index.

Market concentration (corresponding to point [3]) was calculated using the Herfindahl index which is the sum of squared market shares [$H = \sum_{n=1}^{25} (share_n)^2$]. The index is higher when there are a smaller number of players with large shares (which increases the degree of concentration) and lower when the number of participants increases and the shares are better distributed among them (reducing the degree of concentration). The Herfindahl index necessitates a degree of confidence regarding the population under analysis. In this case it was considered appropriate given that the representation error in the analysis is 0.2 percent overall at 95 percent confidence (0.3 percent at 99.9 percent confidence). In the absence of this level of confidence in the sample (for example if there had been a notably lower level of representativeness of the ranking) it would have been necessary to apply percentile concentration criteria such as the *Concentration Ratio* (CR), which would have ruled out any attempt to draw conclusions about the overall population.

The Herfindahl index provides a perspective on overall concentration for all elements of the sample. However, to determine each participant in the ranking's influence or - in the extreme case - market power, it was necessary to calculate their **contribution to concentration in accordance with the Herfindahl index** (corresponding to point [4]). This was measured as the contribution ratio of each group to the index.

Finally, market influence also depends on historical and cyclical developments in the growth of each of the participant's operations. Above market growth in market share leads to greater levels of concentration. As a result, it was necessary to review **changes over time in each group's share in concentration** (corresponding to point [5]) in order to distinguish trend developments from those related to the economic cycle or exchange rate.

Specificities

As in previous years, in Brazil, the study did not consider contributions from private retirement plans, Health insurance premiums, which are under the control of the Agência Nacional de Saúde Suplementar (ANS), or Capitalization premiums. However, the study did consider life annuity premiums and pension fund insurance premiums in Argentina and pension fund insurance premiums in Mexico (in both cases managed by insurance institutions).

Finally, the average annual exchange rate was used to convert data from other currencies to dollars. Growth rates were calculated on income in dollars.

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1/ The changes introduced last year have been maintained. For example, the incorporation of welfare insurance premiums in Life, and Death and Health insurance in Non-Life, use of U.S. dollars instead of euros, and consistency with international accounting rules.

2/ This increase is the result of calculating total premiums in 2015 for the same 25 insurance groups representing the top-25 in the 2016 ranking (92.5 billion dollars) and does not necessarily coincide with the ranking of the top-25 obtained in the previous year (which amounted to 92.3 billion dollars). This is to ensure intertemporal comparability as explained in the "Data and metrics" appendix to this report.

3/ For Liberty and MAPFRE this decrease is primarily explained by depreciation of the region's currencies.

4/ These metrics were used in Tables 2-a, 2-b, 3-a, 3-b, 4-a and 4-b of this report.

5/ For this reason it is possible that the estimate could be affected by the bias toward regional involvement in each market by different agents (*e.g.* MetLife in Mexico or MAPFRE, Brasilprev and Bradesco in Brazil). This effect is of particular relevance when studying the developments of premiums, since it can be affected by exchange rate fluctuations. As a result, as part of the process of preparing this report, a parallel contrasting exercise (not included in this report) was performed to identify possible abnormalities.

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