Fundación **MAPFRE**

# THE LATIN AMERICAN INSURANCE MARKET IN 2016

MAPFRE Economic Research

# The Latin American insurance market in 2016

Saturnino Herrán
*La ofrenda ("the offering")*, 1913.

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# MAPFRE Economic Research

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# Introduction

As in previous years the aim of this report is to provide an analysis of the performance of the Latin American insurance industry. The report analyzes the insurance industry's performance from the perspective of the region as a whole, as well each of the individual markets, starting with an overview of the economic and demographic backdrop. The report presents information on the main indicators and trends in Latin American insurance markets, analyzing issues such as premium growth, the main items on the consolidated sector-level balance sheet, investment, technical provisions, as well as the technical performance, results and profitability of the insurance industry.

As was the case for last year's report, this study not only focuses on the insurance market's performance in 2016 but also includes a medium-term analysis reviewing the sector's evolution over the last ten years. Thus the report contains a review of the main structural trends in each insurance market in the region, analyzing the evolution of indicators on insurance penetration, density and depth, and updating estimates of the Insurance Protection Gap and the Market Development Index both for the region as a whole as well as for each individual market.

It includes a ranking of the main insurance groups in each country in the region in 2016, both for the overall market as well as for the Life and Non-Life segments, and also contains an analysis of trends in concentration in the industry in each country. Finally, the report provides a brief overview of the main regulatory changes that took place in 2016, as well as insights into the main ammendments to the regulatory framework planned this year.

We hope that this report will provide an overview of the development and performance of the insurance industry in the region and thereby help the insurance industry to continue advancing toward achieving greater involvement in the economy to the benefit of societies across Latin America.

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# Executive summary

2016 represented a turning point for the economic outlook, marked by a nascent pick up in global growth. The global economy grew by around 3.1 percent, slightly above the previous year, albeit with differences across regions. Developed economies grew by 1.9 percent, while emerging economies expanded by 4.6 percent. These developments testify to the change of cycle in both regions of the world, against a backdrop of an economic policy stance which is gradually shifting away from easy monetary policy toward a looser fiscal policy stance. This has supported a new context of global reflation which appears to be moving the global economy away from fears of a liquidity trap and secular stagnation.

According to the latest estimates, the global insurance market grew by 2.9 percent in nominal terms in 2016, reaching a value of 4.7 trillion dollars. Global premium volume is set to continue growing in both nominal and real terms over the coming years, driven by strong growth in emerging markets. The global volume of Non-Life insurance premiums, which account for 43 percent of total premiums, increased by 3.7 percent in 2016 in real terms, with emerging market growth of around 9.6 percent, driven by emerging Asia and especially China. Meanwhile, the global Life insurance segment, which accounts for some 57 percent of total premiums, grew by around 2.5 percent in real terms. This was a slightly slower pace of growth than Non-Life premiums, despite a sharp increase in savings insurance premiums in emerging economies, especially Asia.

The Latin American and Caribbean economy contracted by -1.2 percent in 2016 (-2.9 percent including Venezuela) despite some signs of a recovery in the second half of the year. The overall performance was particularly influenced by recessions in Brazil and Argentina. Regional

activity looks set to gain momentum in 2017, underpinned by a pick up in external demand on the back of more vigorous global growth, generalized currency depreciation and public investment support to private demand, with a cyclical recovery on the cards in the main markets.

However, there are two downside risks to Latin American economies. Firstly, a more pronounced slowdown in growth in China could precipitate a fall in commodity prices. Secondly, a more aggressive normalization of U.S. Federal Reserve monetary policy could impact on debt costs for many Latin American economies which finance themselves in dollars.

At an aggregate level insurance market premiums in Latin American and the Caribbean saw modest growth of 1.2 percent, primarily due to an improved performance of the Life insurance segment. The economic contraction in the region in 2016, which involved a weakening of domestic demand, particularly affected the development of the Non-Life business, which is strongly dependent on economic growth and household and corporate consumption capacity, which declined by -3.1 percent in dollar terms. Indeed, the Non-Life insurance segment has not contributed positively to overall market growth since 2013. By contrast, the Life business performed better, registering growth of 7 percent, despite the challenging economic environment, which to a large degree reflects the development of the highly bank-oriented Life insurance business in Brazil.

The total volume of premiums in the region rose to 146.655 billion dollars in 2016. 54.8 percent corresponded to Non-Life insurance, and the remaining 45.2 percent to Life insurance. The industry posted a consolidated net result of 10.855 billion dollars (after 11.261 in 2015), representing a decline of 3.6 percent on the previous year.

However, this perspective changes when growth is measured in local currency terms for each of the markets. An analysis from this point of view shows that most Latin American and Caribbean insurance markets posted growth in real terms, once adjusted for inflation.

It is also worth highlighting that the Latin American insurance market has seen a sustained increase in its presence in the global market over time, both in the Life and Non-Life segments. This participation rose from only 2 percent in 1980 to 3.1 percent in 2016. The trend toward an increasing market share has only been interrupted during periods of economic and financial crisis in the region (the debt crisis of the 1980s, volatility at the turn of the century and the recent 2008-09 financial crisis), amplified by currency devaluations which usually accompany such cyclical events.

In general terms, the Latin American insurance is characterized by low levels of concentration. This is especially true of the Non-Life segment; concentration is somewhat higher in the Life insurance segment. This would appear to reflect trends in the development of the insurance industry in the region. These indicate the presence of a more highly developed Non-Life insurance segment (greater competition) and rapid growth in a still nascent Life insurance segment in recent years.

In 2016, the penetration index (premiums/GDP) stood at slightly over 3 percent, 0.12 percentage points above the 2015 value and 0.9 percentage points higher than in 2006. This continues the growth trend of the last ten years, seen both in the development of the Life insurance segment and to a lesser degree in Non-Life insurance. On an aggregate basis over the last ten years, total penetration in the region has risen by 41.8

percent. Meanwhile the cumulative increase in penetration in the Life insurance segment amounted to 78.9 percent, and the cumulative increase in Non-Life insurance was 21.1 percent.

Meanwhile, density (premiums per capita in dollars) recovered slightly in 2016 after being affected by the loss in value of most Latin American currencies in 2015. Density stood at 241.9 dollars in 2016, 0.1 percent above the previous year. The bulk of insurance spending per person remains focused on the Non-Life segment (132.5 dollars) with a fall of 4.1 percent relative to the previous year. Life insurance density amounted to 109.4 dollars, up 5.8 percent on 2015, underscoring the continued dynamism in this sector of the regional market.

Density has been on a upward path over the medium-term in the region. The overall indicator grew by 88.4 percent between 2006 and 2016. The cumulative increase in the Life insurance market over the period amounted to 137.7 percent (increasing from 36.1 to 103.3 dollars), while cumulative growth in Non-Life insurance was 60.9 percent. The overall trend in density is confirmed by an individual analysis of each of the markets considered in this report, which points to increasing density in recent years when measured on a local currency basis.

Finally, in 2016 the index of insurance depth (Life insurance premiums relative to total premiums) stood at 45.2 percent, up 2.4 percentage points on 2015, recovering from a drop that year. Over the medium-term (2006-16) this indicator registered an improvement amounting to a cumulative increase of 11.1 percentage points and cumulative growth of 26.1 percent over this period.

The development of the Latin American insurance industry has been characterized by a sustained increase in penetration levels (quantitative component of market development) and by a continual rise in depth levels (qualitative dimension reflecting the

degree of market progress). This structural trend is an important distinguishing aspect of the Latin American insurance industry relative to other regions, and is an indicator of the future outlook for insurance development in the region.

The Insurance Protection Gap (IPG) for the Latin American market in 2016 is estimated at 235.5 billion dollars, 8.5 percent less than estimated the previous year. In contrast to the reduction in the IPG between 2014 and 2015, which was primarily due to the devaluation of Latin American currencies over that period, the decline in the IPG in 2016 was driven by different factors in different markets, given that in some the decline in the penetration index was due to a reactivation of the insurance market with a consequent increase in penetration levels.

However, the structure of the IPG has barely changed over the last ten years with Life insurance responsible for the bulk of the gap. In 2016, 63.7 percent of the insurance protection gap related to Life insurance (149.9 billion dollars), while Non-Life insurance accounted for 36.3 percent of the gap (85.6 billion dollars). The potential insurance market in Latin American in 2016 (the sum of the actual insurance market and the IPG) stood at 382.2 billion dollars, 2.6 times larger than the current regional market (146.7 billion dollars).

Over the period 2006-16, the region's insurance market registered an annual average growth rate (in dollars) of 7.8 percent, with average growth of 10.4 percent in Life insurance and 6.1 percent in Non-Life. If the same rate of growth were to be sustained over the next ten years, the combined market growth rate would fall short of closing the IPG in 2016 by -2.2 percent, with the shortfall larger in the case of Life insurance.

The Market Development Index (MDI) for the Latin American insurance industry (indicator of trends and the maturity of insurance markets) has been on clear upward path between 2006 and 2016, registering sustained annual growth. This is another factor underscoring the positive

and balanced growth achieved by the Latin American insurance market.

This report also contains an individual analysis of each of the Latin American insurance markets. These individual reports begin with an initial assessment of the macroeconomic backdrop in each country in 2016 before turning to the main metrics and trends in their insurance markets. The individual reports provide a perspective over the period 2006-16 on premium growth, the main aggregate balance sheet items at a sector level, investment and technical provisions, and the industry's technical performance, results and profitability.

The individual reports include a review of the main structural trends in each market, analyzing developments in insurance penetration, density and depth. In order to provide an accurate reflection of the underlying dynamics behind the main trends, the country analysis is in local currency terms, thereby eliminating exchange rate effects. Similarly, each of the individual reports includes an estimate of the insurance protection gap (IPG) in terms of size and characteristics, as well as an approximation of the MDI providing a comparison between individual country sector developments and the trend for the region as a whole.

The individual reports are complemented with rankings of insurance groups in each market in 2016, at an aggregate level, as well as in the Life and Non-Life segments. They also include an analysis of industry concentration levels based on the Herfindahl index and the market share coefficient of the top insurance companies in each country (CR5).

Finally, the report includes a brief description of the main regulatory changes in each country in 2016, as well as providing some insights into expected regulatory change in 2017, on the basis of information provided by the region's supervisory organizations.

In general terms, most Latin American countries have implemented or are making progress in implementing - to a greater or lesser degree - elements of prudential supervision, governance and Solvency-II style risk-based capital requirements.

# 1. Economic and demographic context

## 1.1 Economy

### Global environment

2016 represented a turning point for the economic outlook, marked by a nascent pick up in global growth. The global economy grew by around 3.1 percent, slightly above the previous year, albeit with differences across regions.

Developed economies grew by 1.9 percent, while emerging economies expanded by 4.6 percent. These developments testify to the change of cycle in both regions of the world, against a backdrop of an economic policy stance which is gradually shifting away from easy monetary policy toward a looser fiscal policy stance. This has supported a new context of global reflation which appears to be moving the global economy away from fears of a liquidity trap and secular stagnation. Likewise, the pace of global activity was uneven not only in terms of developed and emerging economies, but also between the different regions, with stronger momentum in south-east Asia relative to Latin America and emerging Europe.

### Latin America

Although confidence indicators began to recover in the second half of the year, especially for consumption and employment, leading indicators nonetheless remained sluggish at the end of 2016, foreshadowing a negative outturn for the region as a whole. Ultimately, the economy contracted by -1.2 percent over 2016 (-2.9 percent including Venezuela); particularly affected by recessions in Brazil and Argentina.

Such subdued growth is to a large degree related to political uncertainty in Brazil, growing dissent with President Macri's administration in Argentina and fears in Mexico regarding the Trump administration's foreign, trade and economic policy. In fact, differing responses to growing uncertainty partly explained divergences between the south and north of the region. 2016 represented a turning point for the south after a four year downturn. However, in Mexico, uncertainty coupled with a more restrictive monetary policy aligned to the U.S. Federal Reserve's monetary policy stance and a slowdown in consumption related to a spike in inflation spurred by peso depreciation, likely hampered investment projects. The external sector was unable to compensate for domestic demand weakness, affected by doubts about growth in China and commodity price volatility.

However, the region looks to have gained momentum since the start of 2017, fueled by two factors. Firstly, a renewed impulse from external demand, thanks to stronger global growth and exchange rate depreciation. And, secondly, support from public investment which should help sustain private demand, particularly thanks to the cyclical recovery in large markets against a backdrop in which the downside risks for certain countries (Mexico among others) no longer look likely to materialize in 2017.

In general the Latin American region saw a notable slowdown in price growth in 2016, though inflation spiked in Mexico due to the deregulation of fuel prices and currency depreciation. Meanwhile, exchange rate divergences between north and south will enable inflation rates to continue easing toward central bank targets.

The diverging path of inflation in Mexico and South America will also be reflected in the tone of monetary policy, which is set to be more

accommodative in South America and more hawkish in Mexico. Accordingly, interest rates are expected to continue falling in South America, while Mexico is likely to tighten monetary conditions.

In line with the previous year, there are two fundamental risks for the region. The first relating to a more pronounced slowdown in China and the second associated with a more aggressive normalization of the U.S. Federal Reserve's monetary policy.

In the case of the former, a more pronounced slowdown in China (inextricably linked to new episodes of financial volatility) could impact the region through a fall in commodity prices and an increase in risk aversion. This would come at a time of limited scope for monetary policy to cushion the shock with counter-cyclical policies and potential further loss of confidence, which is already at very low levels (Brazil, Colombia and Chile would be most affected by this risk).

In the latter scenario, faster than anticipated normalization by the Federal Reserve could provoke a financial overreaction across the yield curve, with contagion to funding costs for many Latin American countries which finance

themselves in dollars and whose currency would further depreciate on the back of outflows of portfolio investment accompanying such a move.

## Economic environment and demand for insurance

According to the latest estimates, the global insurance market grew by 2.9 percent in 2016 in nominal terms, reaching a value of 4.7 trillion dollars. Global premium volume is set to continue growing in both nominal and real terms over the coming years, driven by strong growth in emerging markets.

The global volume of Non-Life insurance premiums, which account for 43 percent of total premiums, increased by 3.7 percent in 2016 in real terms, with emerging market growth of around 9.6 percent, driven by emerging Asia and especially China. Meanwhile, the global Life insurance segment, which accounts for some 57 percent of total premiums, grew by around 2.5 percent in real terms. This was a slightly slower pace of growth than Non-Life premiums, despite a sharp increase in savings insurance premiums in emerging economies, especially Asia.



**Chart 1.1-a**
**Latin America: economic growth and the insurance market, 2006-16**
**(premiums, billions of dollars, nominal annual growth rates, percent)**
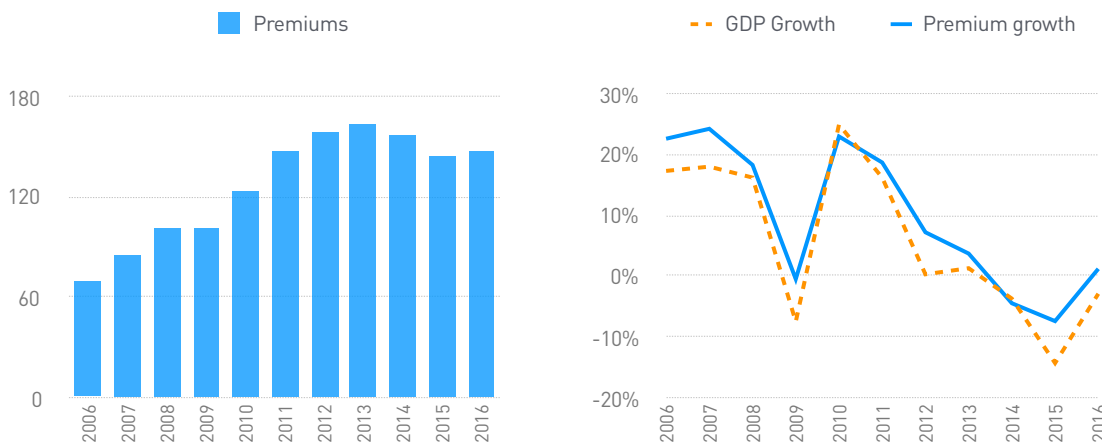
Source: MAPFRE Economic Research (based on supervisory organizations and IMF)

The economic contraction in Latin America in 2016, with still weak domestic demand, affected the performance of the insurance market, which is strongly associated with overall economic growth, as can be seen by comparing developments in insurance premiums over the last ten years with changes in real GDP over the same period (see Chart 1.1-a).

However, despite the inability of the region to leave behind the challenging economic environment of 2015, the decline in GDP was more modest in 2016, pointing to an improvement which was also reflected in the performance of insurance market premiums, which saw modest growth of 1.2 percent in aggregate terms driven primarily by a better Life insurance performance.

## 1.2 Demography

According to the latest population data for Latin America published by the United Nations in 2017, the population of the 19 countries covered by this report reached 614.1 million. Brazil and Mexico account for a significant share of the total, with populations of 209.3 and 129.2 million respectively. Colombia and Argentina both have populations of over forty million, with 49.1 and 44.3 million inhabitants respectively. These are followed by Peru and Venezuela with populations of around 32 million. The remaining countries have populations of below twenty million. Among the latter, Chile, Guatemala and Ecuador have the largest populations, with between 16 and 18 million inhabitants (see Chart 1.2-a.).

In terms of demographics, as in the rest of the world, the UN's projections for Latin America and the Caribbean point toward a trend of increasing population longevity. Life expectancy rose from 51 years in 1950 to 75 years in 2015, an increase of 24 years over this period (see Chart 1.2-c).
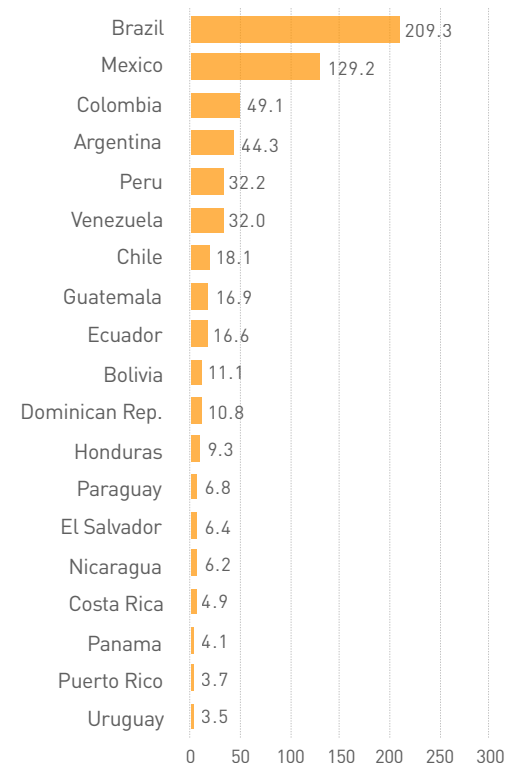
The projections estimate that life expectancy in the region could grow by around two years per decade, reaching over eighty years by 2040.

At the same time, the UN's projections point to a sustained and drastic decline in the birth rate since the 1960s onwards. This birth rate has fallen from an average of seven births per woman to slightly below two during the rest of the century.

Forecasts for the percentage of deaths by age cohort point to a reduction in the share of premature deaths, leading to an increasing proportion of the population reaching older ages (see Chart 1.2-d.).

Overall, this combination of factors foreshadows a progressive aging of the population in Latin America and the Caribbean over the coming decades, giving rise to constrictive population pyramids toward the middle of the century, which are set to converge toward stationary pyramids by around 2100 (see Chart 1.2-b).

**Chart 1.2-a
Latin America: population, 2017
(millions)**

| Country | Population |
|---|---|
| Brazil | 209.3 |
| Mexico | 129.2 |
| Colombia | 49.1 |
| Argentina | 44.3 |
| Peru | 32.2 |
| Venezuela | 32.0 |
| Chile | 18.1 |
| Guatemala | 16.9 |
| Ecuador | 16.6 |
| Bolivia | 11.1 |
| Dominican Rep. | 10.8 |
| Honduras | 9.3 |
| Paraguay | 6.8 |
| El Salvador | 6.4 |
| Nicaragua | 6.2 |
| Costa Rica | 4.9 |
| Panama | 4.1 |
| Puerto Rico | 3.7 |
| Uruguay | 3.5 |

Source: MAPFRE Economic Research (based on UN data)

Chart 1.2-b
Latin America: evolution of the population pyramid, 1950-2100



Source: MAPFRE Economic Research (based on UN data)

Women    Men

## Chart 1.2-c
### Latin America: fertility rate and life expectancy at birth, 1950-2100

FERTILITY RATE

LIFE EXPECTANCY AT BIRTH

Latin America — — World

Latin America — — World

(BIRTHS PER WOMAN)

(YEARS)
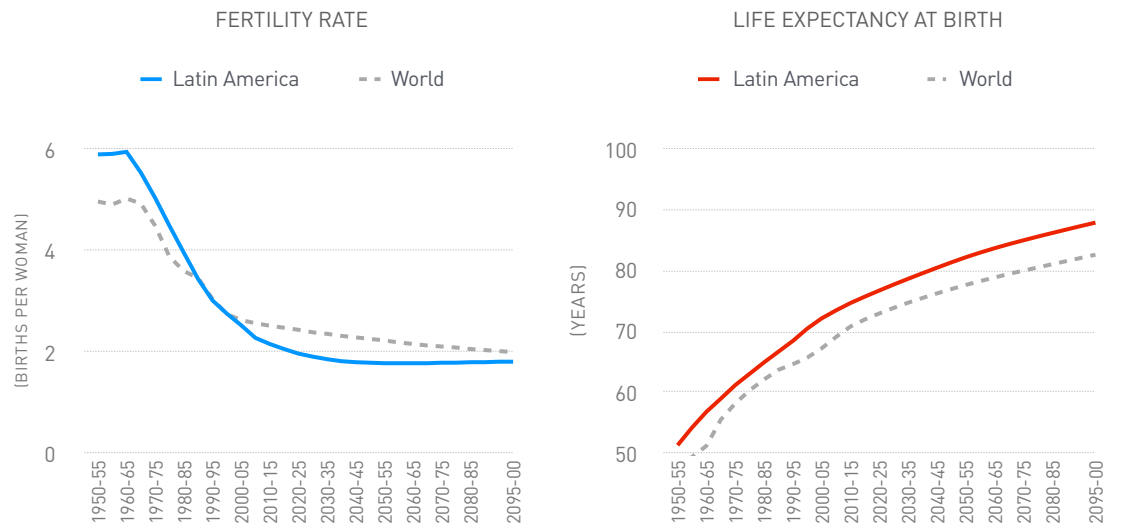
Source: MAPFRE Economic Research (based on UN data)

## Chart 1.2-d
### Latin America: percentage of deaths by age cohort, 1950-2100

0-24 years (LatAm)    25-69 years (LatAm)    70+ years (LatAm)
0-24 years (World)    25-69 years (World)    70+ years (World)

(PERCENTAGE OF DEATHS BY AGE COHORT)
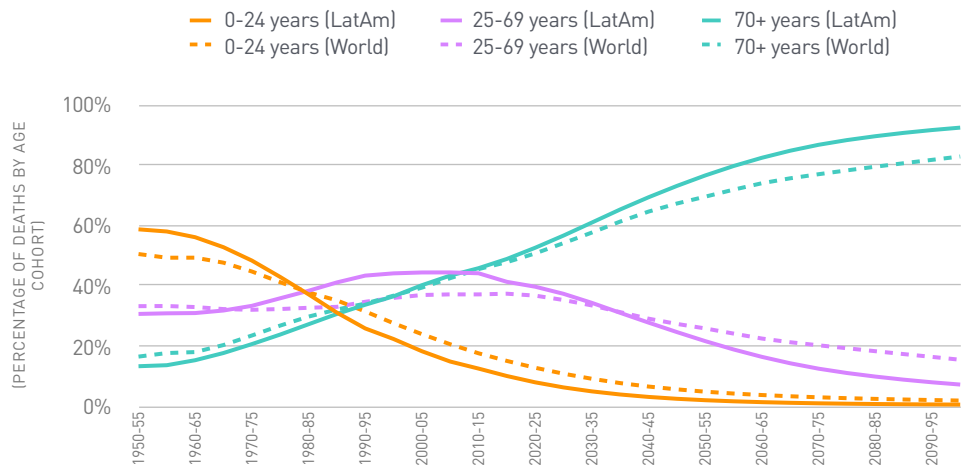
Source: MAPFRE Economic Research (based on UN data)

# 2. The Latin American insurance market in 2016

## 2.1 Insurance market performance

### Growth

In 2016, total premium volume in Latin America and the Caribbean reached 146.655 billion dollars, of which 54.8 percent related to Non-Life insurance and the remaining 45.2 percent to Life insurance (see Chart 2.1-a).

It is worth highlighting that the Latin American insurance market has seen a sustained increase in its presence in the global market over time, both in the Life and Non-Life segments. As illustrated in Chart 2.1-b, this share rose from only 2 percent in 1980 to 3.1 percent in 2016. The trend toward an increase in the share of the global market has only been interrupted during periods of economic and financial crises which have affected the region (the debt crisis of the 1980s, the period of volatility at the turn of the

century and the recent 2008-09 financial crisis) amplified by the currency devaluations which usually accompany such cyclical events.

The economic contraction in the region in 2016, which saw a weakening of domestic demand, affected the development of the insurance market and especially the Non-Life insurance business, which is strongly dependent on economic growth and household and corporate consumption capacity. Accordingly, the Non-Life business contracted by an aggregate -3.1 percent in 2016 in dollar terms. As a result, in 2016 the region remained unable to leave behind the challenging economic backdrop of recession seen in 2015 from which the area is still recovering.

However, the more moderate fall in GDP in 2016 was reflected to some degree in the performance of the Life business which grew in 2016 in dollar terms despite the challenging

**Chart 2.1-a**
**Latin America: growth developments in the insurance market, 2006-16**
(premiums, billions of dollars, nominal annual growth rates, percent)
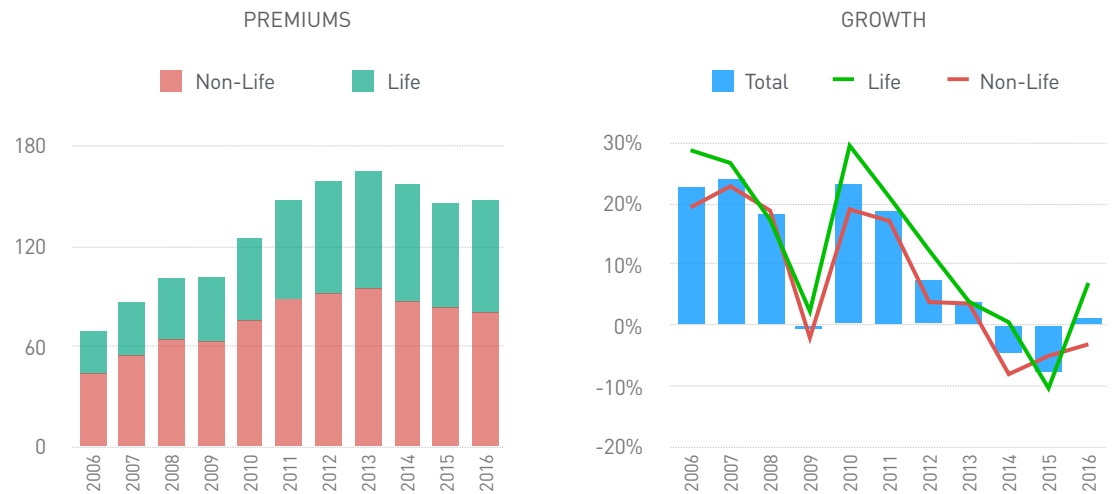


Source: MAPFRE Economic Research (based on supervisory bodies)

economic environment. However, it is important to note that this growth was largely linked to developments in the Life insurance business in Brazil, whose insurance companies account for more than a third of the region's premium volume and where there is strong entrenchment of the bancassurance distribution channel.

Thus, in aggregate dollar terms, the Latin American insurance industry registered growth of 1.2 percent during 2016. The Life insurance made a positive contribution of 3 percentage points, while Non-Life insurance contributed negatively to growth by -1.8 percentage points. Chart 2.1-c highlights how the Non-Life insurance segment has not contributed positively to overall market growth since 2013.

However, this perspective changes when growth is measured in local currency terms for each of the markets. An analysis on this basis shows that most Latin American insurance markets saw growth in real terms, once adjusted for inflation.

The performance of the different insurance markets in local currencies varies according to the country. Most markets posted positive premium growth in local currency and real terms, except for Argentina, Ecuador, Panama, Peru and Venezuela (see Chart 2.1-d and Table 2.1-a). Many of these markets also reported growth in premium volume in dollar terms, with premium volume declining in Argentina, Colombia, Ecuador, Mexico, Paraguay and Peru (see Table 2.1-b).

### Premiums by Line of business (LOB)

Non-Life insurance premiums declined by -3.1 percent in 2016, while Life insurance premiums grew by 7 percent relative to 2015 (see Table 2.1-b). Premiums fell across all Non-Life insurance lines except for Health. The most important line, Automobiles, which accounts for 19.2 percent of total premiums, shrunk by -4.9 percent. However, the Life insurance segment saw premiums rise both in individual as well as group Life insurance such as Welfare and Pension insurance. Individual and group Life



Chart 2.1-b
Latin America: share of global premiums, 1980-2016
(percent)
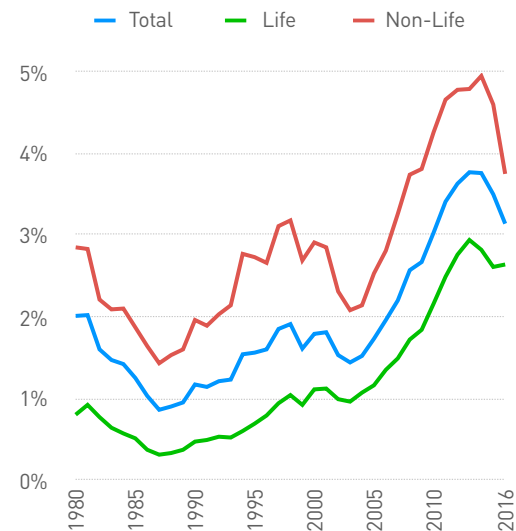
Source: MAPFRE Economic Research (based on Swiss Re data)

insurance, which account for 39.8 percent of total premiums, registered 7.5 percent growth, largely explained by growth in Brazil (see Table 2.1-c).



Chart 2.1-c
Latin America: contribution to insurance market growth, 2006-16
(percentage points, ppts)
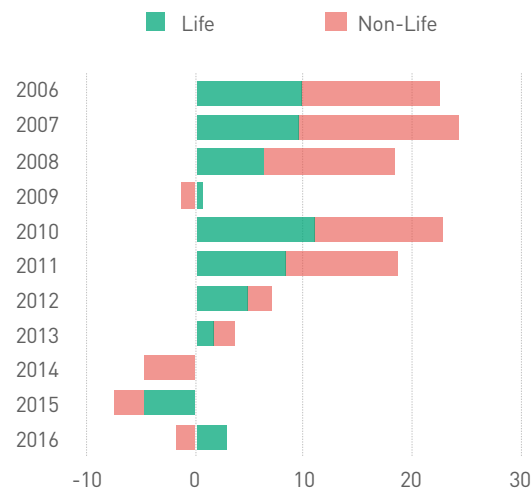
Source: MAPFRE Economic Research (with data from supervisory bodies in the region)

### Table 2.1-a
### Latin America: change in premium volume, 2015-16
#### (growth in local currency, percent)

| Country | Nominal growth | Real growth | Country | Nominal growth | Real growth |
|---|---|---|---|---|---|
| Argentina | 34.8 | -4.6 | Mexico | 13.4 | 10.3 |
| Bolivia | 4.0 | 0.4 | Nicaragua | 12.5 | 9.1 |
| Brazil | 11.6 | 2.6 | Panama | 0.5 | -0.2 |
| Chile | 12.1 | 8.0 | Paraguay | 5.5 | 1.3 |
| Colombia | 10.9 | 3.1 | Peru | -4.2 | -7.5 |
| Costa Rica | 16.1 | 16.1 | Puerto Rico | 6.2 | 6.0 |
| Ecuador | -2.8 | -4.5 | Dominican Republic | 13.9 | 12.1 |
| El Salvador | 2.0 | 1.4 | Uruguay | 10.4 | 0.7 |
| Guatemala | 5.8 | 1.3 | Venezuela | 164.5 | -25.5 |
| Honduras | 9.8 | 6.9 | | | |

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

### Chart 2.1-d
### Latin America: premiums and real insurance market growth, 2016
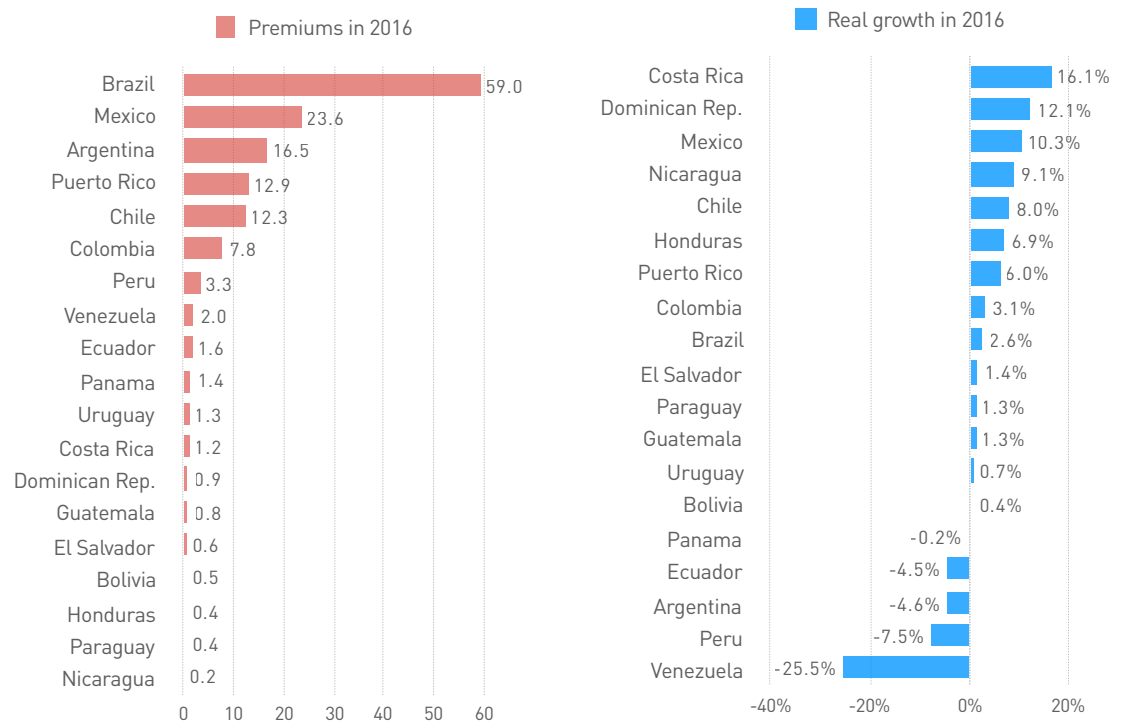#### (billions of dollars; real growth in local currency, percent)



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

Table 2.1-b
Latin America: premium volume by country, 2016
(premiums, millions of dollars: growth in dollars, percent)

| Line | Non-Life | | Life | | Total | |
|---|---|---|---|---|---|---|
| | Premiums | Growth 2015-16 (percent) | Premiums | Growth 2015-16 (percent) | Premiums | Growth 2015-16 (percent) |
| Argentina | 13,926 | -15.3 | 2,572 | -15.8 | 16,498 | -15.4 |
| Bolivia | 335 | 1.4 | 132 | 11.2 | 467 | 4.0 |
| Brazil | 21,453 | -2.2 | 37,513 | 12.7 | 58,965 | 6.8 |
| Chile | 4,495 | 2.5 | 7,777 | 12.1 | 12,273 | 8.4 |
| Colombia | 5,370 | -2.9 | 2,445 | 6.4 | 7,816 | -0.2 |
| Costa Rica | 1,013 | 10.3 | 187 | 38.5 | 1,200 | 13.9 |
| Ecuador | 1,271 | -7.2 | 347 | 17.6 | 1,618 | -2.8 |
| El Salvador | 405 | 7.6 | 216 | -6.9 | 621 | 2.0 |
| Guatemala | 663 | 6.0 | 167 | 8.9 | 830 | 6.6 |
| Honduras | 276 | 1.5 | 144 | 12.6 | 420 | 5.0 |
| Mexico | 12,486 | -4.1 | 11,081 | -3.3 | 23,567 | -3.7 |
| Nicaragua | 166 | 5.6 | 39 | 15.8 | 205 | 7.4 |
| Panama | 1,050 | -1.5 | 346 | 7.2 | 1,396 | 0.5 |
| Paraguay | 329 | -3.6 | 53 | -1.1 | 382 | -3.2 |
| Peru | 1,975 | -5.1 | 1,360 | -15.3 | 3,335 | -9.6 |
| Puerto Rico | 11,605 | 6.8 | 1,265 | 1.0 | 12,869 | 6.2 |
| Dominican Republic | 720 | 10.5 | 162 | 15.4 | 882 | 11.4 |
| Uruguay | 792 | -7.1 | 489 | 14.2 | 1,280 | 0.1 |
| Venezuela[1] | 2,007 | 20.9 | 23 | 13.5 | 2,031 | 20.8 |
| Total | 80,336 | -3.1 | 66,319 | 7.0 | 146,655 | 1.2 |

Source: MAPFRE Economic Research (based on data from supervisory bodies in the region)
1/ For the purposes of calculating changes, 2015 premiums in Venezuela have been recalculated to align them with the exchange rate used in this report.

## Results and profitability

Table 2.1.-d shows the composition of the income statements of the insurance markets in Latin America in 2016. As can be seen, all countries posted positive aggregate net results.

The consolidated net result of the Latin American insurance market amounted to 10.855 billion dollars in 2016 (excluding Panama), representing a decline of 3.6 percent on the 11.261 billion dollars reported in 2015 (see Table 2.1-e). As previously mentioned, this decline was largely due to the unfavorable performance of local currency exchange rates relative to the dollar over 2016. Bolivia, Chile, Colombia, Ecuador, Honduras, Mexico, Nicaragua, Puerto Rico and Venezuela reported an increase in

profits, while profits declined in the remaining countries.

Table 2.1-f provides information on return on equity (ROE) and return on assets (ROA) in the different markets. Argentina (24.1 percent), Brazil (22 percent), Nicaragua (20.8 percent), Mexico (21 percent) and Guatemala (19.7 percent) posted the highest ROEs, in Argentina's case accompanied by a double-digit inflation rate. By contrast, insurance markets in Puerto Rico (6.8 percent), Costa Rica (6.4 percent), Uruguay (4.8 percent) and Venezuela (2.5 percent) recorded the lowest levels of profitability; in the case of the latter, amid triple digit inflation.

Table 2.1-c
Latin America: premium volume by insurance line*, 2016
(premiums, millions of dollars)

| Lines of business | 2015 | 2016 | Percent growth | Percent share |
|---|---|---|---|---|
| **Life** | **61,940** | **66,295** | | **45.8** |
| Group and individual Life | 53,491 | 57,497 | 7.5% | 39.8 |
| Private Pension Plan | 8,449 | 8,799 | 4.1% | 6.1 |
| **Non-Life** | **81,229** | **78,329** | | **54.2** |
| Workplace Accidents | 7,426 | 6,207 | -16.4% | 4.3 |
| Personal Accidents | 3,992 | 3,949 | -1.1% | 2.7 |
| Automobiles | 29,251 | 27,810 | -4.9% | 19.2 |
| Credit and/or Surety | 1,822 | 1,802 | -1.1% | 1.2 |
| Fire and/or Allied Lines | 7,464 | 7,091 | -5.0% | 4.9 |
| Other Damage | 11,259 | 10,857 | -3.6% | 7.5 |
| Third-Party Liability | 2,208 | 2,058 | -6.8% | 1.4 |
| Health | 14,867 | 15,797 | 6.2% | 10.9 |
| Transport | 2,938 | 2,759 | -6.1% | 1.9 |
| **Total** | **143,169** | **144,624** | **1.0%** | **100.0** |

Source: MAPFRE Economic Research (based on data from supervisory bodies in the region)
*Note: this table does not include the Venezuela market due to the current absence of an available breakdown by lines.

## Capital levels

Meanwhile, Chart 2.1.-e shows the aggregate capital level of the insurance industries in each of the Latin American countries (measured as shareholders' equity over total assets).

In general, relatively smaller markets report higher levels of capital, while capital levels are lower in the relatively more developed markets in the region (Mexico, Chile and Brazil). It is worth noting that in Venezuela (the market with the highest capitalization on this metric), a large part of equity corresponds to unrealized gains on property investments and other financial assets, boosted by an average inflation rate of 254.9 percent in 2016.

Table 2.1-f compares capital levels (equity/assets) to two indicators of profitability: return on equity (ROE) and return on assets (ROA).

## Market concentration

The degree of concentration in an industry provides an insight into the level of competition in a market. In general, the lower the concentration, the greater the competitive stimulus, which is an added spur to market development.

Costa Rica and Uruguay had the most highly concentrated markets in Latin America in 2016, with a Herfindahl index significantly above the threshold associated with a highly concentrated industry (HHI>1800). Meanwhile Nicaragua, Honduras, Peru, the Dominican Republic and Guatemala achieved values equating to markets with a moderate level of concentration (1000<HHI<1800). The remaining Latin American markets reported indexes below 1000 points, i.e. below the threshold associated with moderate levels of concentration.

These conclusions are underpinned by an analysis of concentration based on the market share of the five biggest insurance companies (CR5), which is not an issue for other markets (see Chart 2.1-f).

Table 2.1-d
Latin America: income statement by country, 2016
(millions of dollars)

| Country | Earned premiums | Operating expenses | Claims ratio | Technical result | Financial result | Other revenues and expenses | Net result |
|---|---|---|---|---|---|---|---|
| Argentina | 13,482.7 | -5,924.5 | -9,995.5 | -2,437.3 | 3,525.5 | 231.8 | 1,320.1 |
| Bolivia | 289.6 | -171.0 | -120.1 | -1.6 | 40.5 | -4.6 | 34.3 |
| Brazil | 24,678.7 | -11,941.4 | -11,568.4 | 1,168.9 | 5,432.8 | -1,482.4 | 5,119.3 |
| Chile | 9,658.8 | -2,501.8 | -8,991.5 | -1,834.5 | 2,765.3 | -196.2 | 734.7 |
| Colombia | 5,487.3 | -2,649.5 | -3,487.0 | -649.2 | 697.0 | 498.0 | 545.9 |
| Costa Rica | 945.7 | -392.4 | -604.3 | -51.1 | 165.5 | -14.4 | 100.1 |
| Ecuador | 994.9 | -297.2 | -448.2 | 249.5 | 40.0 | -226.0 | 63.6 |
| El Salvador[1] | 391.2 | -161.0 | -225.6 | 4.7 | 24.9 | - | 39.9 |
| Guatemala | 556.3 | -172.7 | -346.2 | 37.4 | 51.2 | -2.5 | 86.1 |
| Honduras | 212.6 | -75.6 | -104.0 | 33.1 | 25.9 | -12.8 | 46.1 |
| Mexico | 16,320.5 | -5,014.0 | -11,981.3 | -674.7 | 3,408.9 | -663.3 | 2,070.9 |
| Nicaragua | 128.9 | -54.4 | -60.4 | 14.1 | 12.1 | -5.7 | 20.6 |
| Panama | 872.6 | -332.9 | -474.0 | 65.7 | - | - | - |
| Paraguay | 296.3 | -148.0 | -135.2 | 13.2 | 14.9 | 0.1 | 28.1 |
| Peru | 1,950.6 | -1,130.8 | -1,140.4 | -320.5 | 655.8 | -31.7 | 303.6 |
| Puerto Rico | - | - | - | - | - | - | 170.4 |
| Dominican Republic | 473.1 | -211.8 | -259.4 | 2.0 | 45.1 | 11.7 | 58.8 |
| Uruguay | 1,167.7 | -444.4 | -792.2 | -68.9 | 154.2 | -60.0 | 25.3 |
| Venezuela | - | - | - | - | - | - | 88.7 |

Source: MAPFRE Economic Research (based on data from supervisory bodies in the region)
1/ Data for El Salvador reflect the result before taxes

## 2.2 Structural trends

### Penetration, density and depth

Chart 2-2-a summarizes the structural changes in the aggregate Latin American insurance industry over the period 2006-16.

In 2016, the penetration index (premiums/GDP) stood at slightly over 3 percent, 0.12 percentage points above the 2015 value and 0.9 percentage points higher than in 2006. This continues the growth trend of the last ten years, seen both in the development of the Life insurance segment and to a lesser degree in Non-Life insurance.

As in previous years, Puerto Rico continued to have the highest penetration (premiums/GDP) and density (premiums per capita) indexes in the region, reaching 12.7 percent and 3,496 dollars respectively in 2016. This is because Puerto Rican premium volume includes Health insurance for the poorest populations, which are managed by the private insurance sector and borne by the government's budget (see Chart 2.2-b).

After Puerto Rico (12.7 percent), Chile (5 percent), Brazil (3.3 percent), Venezuela (3.1 percent) and Argentina (3 percent) achieved the highest values for penetration indexes in 2016. Excluding Argentina and Venezuela, the others

**Table 2.1-e**
**Latin America: net result by country, 2016**
**(millions of dollars)**

| Country | 2015 | 2016 | Growth 2015-16 (percent) |
|---|---|---|---|
| Argentina | 1,939.3 | 1,320.1 | -31.9 |
| Bolivia | 34.1 | 34.3 | 0.5 |
| Brazil | 5,944.1 | 5,119.3 | -13.9 |
| Chile | 656.2 | 734.7 | 12.0 |
| Colombia | 386.6 | 545.9 | 41.2 |
| Costa Rica | 102.0 | 100.1 | -1.9 |
| Ecuador | 50.8 | 63.6 | 25.1 |
| El Salvador[1] | 43.9 | 39.9 | -9.0 |
| Guatemala | 86.8 | 86.1 | -0.8 |
| Honduras | 41.5 | 46.1 | 11.2 |
| Mexico | 1,336.2 | 2,070.9 | 55.0 |
| Nicaragua | 20.2 | 20.6 | 1.7 |
| Panama[2] | 86.7 | - | - |
| Paraguay | 39.5 | 28.1 | -28.8 |
| Peru | 324.5 | 303.6 | -6.5 |
| Puerto Rico | 117.9 | 170.4 | 44.5 |
| Dominican Republic | 59.2 | 58.8 | -0.8 |
| Uruguay | 31.8 | 25.3 | -20.4 |
| Venezuela | 46.5 | 88.7 | 90.7 |
| **Total** | 11,348.1 | 10,856.4 | -4.3 |

Source: MAPFRE Economic Research (based on data from supervisory bodies in the region)
1/ Data for El Salvador reflect the result before taxes
2/ Data for Panama for 2016 not included due to lack of available information

**Table 2.1-f**
**Latin America: profitability by country, 2016**
**(in local currency)**

| Country | Equity/ assets | ROE | ROA | Average inflation |
|---|---|---|---|---|
| Argentina | 21.3% | 24.1% | 5.1% | 41.4% |
| Bolivia | 25.7% | 13.2% | 3.4% | 3.6% |
| Brazil | 9.3% | 22.0% | 2.0% | 8.7% |
| Chile | 10.0% | 12.3% | 1.2% | 3.8% |
| Colombia | 19.1% | 14.9% | 2.9% | 7.5% |
| Costa Rica | 40.2% | 6.4% | 2.6% | 0.0% |
| Ecuador | 26.6% | 10.3% | 2.7% | 1.7% |
| El Salvador | 45.1% | 8.1% | 3.7% | 0.6% |
| Guatemala | 36.3% | 19.7% | 7.2% | 4.5% |
| Honduras | 36.6% | 19.0% | 7.0% | 2.7% |
| Mexico | 14.0% | 21.0% | 3.0% | 2.8% |
| Nicaragua | 29.5% | 21.0% | 6.0% | 3.1% |
| Panama[1] | 40.4% | 8.0% | 3.0% | 0.1% |
| Paraguay | 37.9% | 14.0% | 5.0% | 4.1% |
| Peru | 16.9% | 14.0% | 2.0% | 3.6% |
| Puerto Rico | 30.4% | 7.0% | 2.0% | 0.2% |
| Dominican Republic | 28.6% | 18.0% | 5.0% | 1.6% |
| Uruguay | 13.6% | 5.0% | 1.0% | 9.6% |
| Venezuela | 63.7% | 2.0% | 2.0% | 254.9% |

Source: MAPFRE Economic Research (based on data from supervisory bodies in the region)
1/ Data for Panama and Venezuela relate to 2015

saw an increase in penetration relative to 2015. The lowest levels of penetration were recorded in Guatemala and the Dominican Republic with a penetration index of 1.2 percent.

The increase in penetration between 2015 and 2016 was focused in the Life insurance segment, which accounted for the entire increase in penetration.

On an aggregate basis over the last ten years, total penetration in the region has risen by 41.8 percent. The cumulative increase in penetration in the Life insurance segment amounted to 78.9 percent, while the cumulative increase in Non-Life insurance was 21.1 percent.
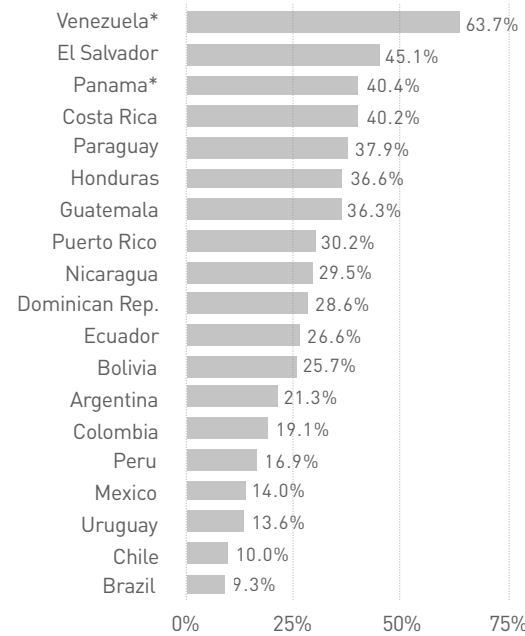
Meanwhile, density (premiums per capita in dollars) recovered slightly in 2016 after being affected by the loss in value of most Latin American currencies in 2015. Density stood at 241.9 dollars in 2016, 0.1 percent above the previous year. The bulk of insurance spending per person remains focused on the Non-Life segment (132.5 dollars) with a fall of 4.1 percent relative to the previous year. Life insurance density amounted to 109.4 dollars, up 5.8 percent on 2015, underscoring the continued dynamism in this sector of the regional market.

Density has been on a upward path over the medium-term in the region. The overall indicator grew by 88.4 percent between 2006 and 2016. The cumulative increase in the Life insurance market over the period amounted to 137.7 percent (increasing from 36.1 to 103.3 dollars), while cumulative growth in the Non-Life insurance segment was 60.9 percent.

The overall trend in density is confirmed by an individual analysis of each of the markets considered in this report, which points to a trend toward increasing density over recent years when measured on a local currency basis.

Finally, in 2016 the index of insurance depth (Life insurance premiums relative to total premiums) stood at 45.2 percent, up 2.4 percentage points on 2015, recovering from a drop in 2015. Over the medium-term (2006-16) this indicator has registered an improvement with a cumulative increase of 11.1 percentage points and cumulative growth of 26.1 percent over this period.

**Chart 2.1-e**
**Latin America: capital level, 2016**
**(equity/assets, percent)**

| Country | Value |
|---|---|
| Venezuela* | 63.7% |
| El Salvador | 45.1% |
| Panama* | 40.4% |
| Costa Rica | 40.2% |
| Paraguay | 37.9% |
| Honduras | 36.6% |
| Guatemala | 36.3% |
| Puerto Rico | 30.2% |
| Nicaragua | 29.5% |
| Dominican Rep. | 28.6% |
| Ecuador | 26.6% |
| Bolivia | 25.7% |
| Argentina | 21.3% |
| Colombia | 19.1% |
| Peru | 16.9% |
| Mexico | 14.0% |
| Uruguay | 13.6% |
| Chile | 10.0% |
| Brazil | 9.3% |

Source: MAPFRE Economic Research (with data from supervisory bodies in the region)
* Data for Panama and Venezuela relate to 2015, latest available data.

**Chart 2.1-f**
**Latin America: Herfindahl and CR5 indexes, 2016**
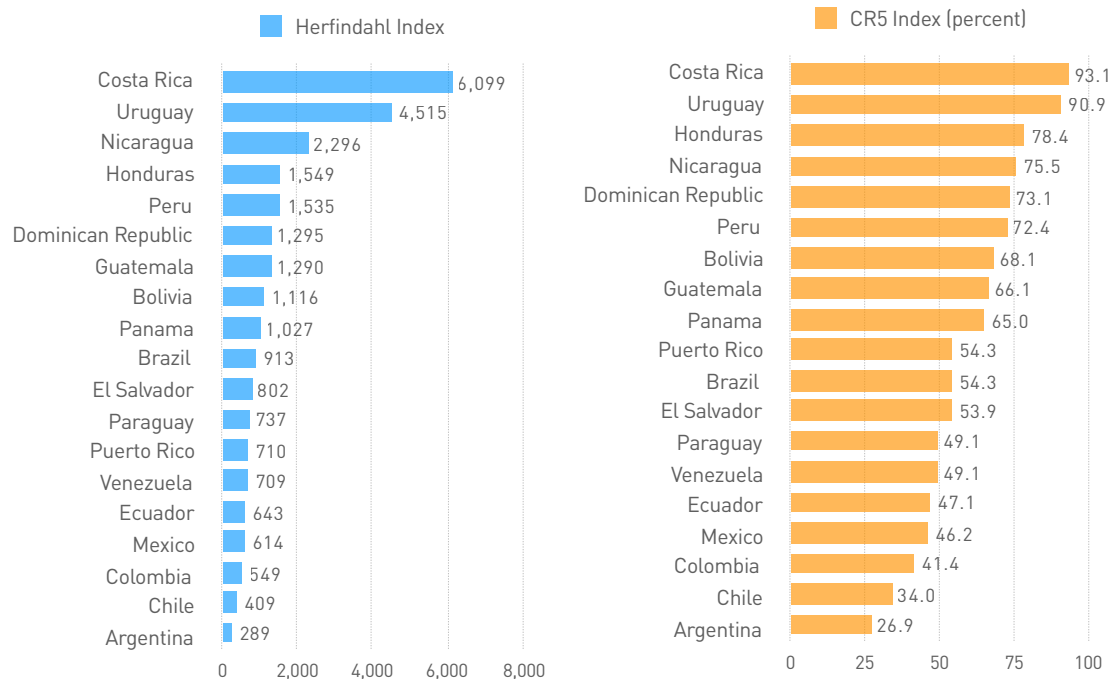
Herfindahl Index

| Country | Value |
|---|---|
| Costa Rica | 6,099 |
| Uruguay | 4,515 |
| Nicaragua | 2,296 |
| Honduras | 1,549 |
| Peru | 1,535 |
| Dominican Republic | 1,295 |
| Guatemala | 1,290 |
| Bolivia | 1,116 |
| Panama | 1,027 |
| Brazil | 913 |
| El Salvador | 802 |
| Paraguay | 737 |
| Puerto Rico | 710 |
| Venezuela | 709 |
| Ecuador | 643 |
| Mexico | 614 |
| Colombia | 549 |
| Chile | 409 |
| Argentina | 289 |

CR5 Index (percent)

| Country | Value |
|---|---|
| Costa Rica | 93.1 |
| Uruguay | 90.9 |
| Honduras | 78.4 |
| Nicaragua | 75.5 |
| Dominican Republic | 73.1 |
| Peru | 72.4 |
| Bolivia | 68.1 |
| Guatemala | 66.1 |
| Panama | 65.0 |
| Puerto Rico | 54.3 |
| Brazil | 54.3 |
| El Salvador | 53.9 |
| Paraguay | 49.1 |
| Venezuela | 49.1 |
| Ecuador | 47.1 |
| Mexico | 46.2 |
| Colombia | 41.4 |
| Chile | 34.0 |
| Argentina | 26.9 |

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

Chart 2.2-a
Latin America: evolution of penetration, density and depth, 2006-16
(premiums/GDP, percent; premiums per capita, dollars; Life insurance premiums / total premiums, percent, index 2006=100)
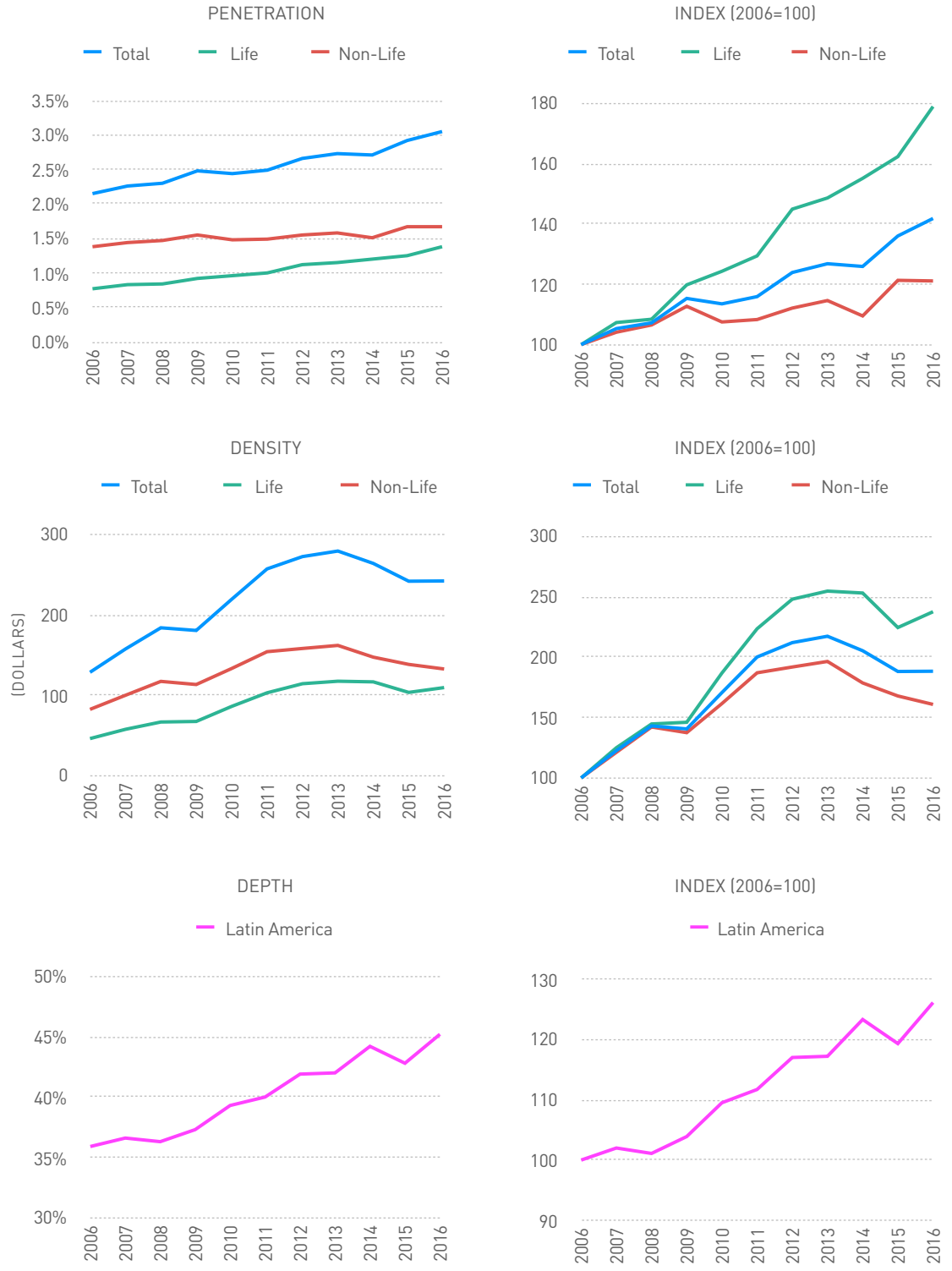
Source: MAPFRE Economic Research (based on supervisory organizations)

**Chart 2.2-b**
**Latin America: Penetration, density and depth indexes, 2016**
**(premiums/GDP, percent; premiums per capita, dollars; Life insurance premiums / total premiums, percent)**

Penetration | Density | Depth

| Penetration | | Density | | Depth | |
|---|---|---|---|---|---|
| Puerto Rico | 12.7% | Puerto Rico | 3,496 | Brazil | 63.6% |
| Chile | 5.0% | Chile | 679 | Chile | 63.4% |
| Brazil | 3.3% | Uruguay | 378 | Mexico | 47.0% |
| Venezuela | 3.1% | Argentina | 377 | Peru | 40.8% |
| Argentina | 3.0% | Panama | 350 | Uruguay | 38.2% |
| Colombia | 2.8% | Brazil | 282 | El Salvador | 34.9% |
| Panama | 2.5% | Costa Rica | 250 | Honduras | 34.3% |
| Uruguay | 2.4% | Mexico | 187 | Colombia | 31.3% |
| El Salvador | 2.3% | Colombia | 161 | Bolivia | 28.3% |
| Mexico | 2.3% | Peru | 105 | Panama | 24.8% |
| Costa Rica | 2.1% | Ecuador | 99 | Ecuador | 21.4% |
| Honduras | 2.0% | El Salvador | 98 | Guatemala | 20.1% |
| Peru | 1.7% | Dominican Rep. | 83 | Nicaragua | 19.0% |
| Ecuador | 1.7% | Venezuela | 66 | Dominican Rep. | 18.4% |
| Nicaragua | 1.6% | Paraguay | 57 | Argentina | 15.6% |
| Paraguay | 1.4% | Honduras | 51 | Costa Rica | 15.6% |
| Bolivia | 1.4% | Guatemala | 50 | Paraguay | 13.9% |
| Dominican Rep. | 1.2% | Bolivia | 43 | Puerto Rico | 9.8% |
| Guatemala | 1.2% | Nicaragua | 33 | Venezuela | 1.2% |

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

Chart 2.2-c provides an analysis of dispersion aimed at identifying trends in the development of the Latin American insurance market over the period 2006-16, based on the performance of penetration indexes (as a quantitative indicator of growth of this activity) and insurance depth (as a *proxy* for the level of maturity of market development).

Overall, the dispersion analysis confirms that the aggregate Latin American insurance industry has developed in a balanced and consistently positive way over the period under analysis. This development has been characterized by a sustained increase in penetration levels (quantitative component of market development) and by a continual increase in depth levels (qualitative dimension reflecting the degree of market progress).

As indicated in previous reports, this structural trend is an important distinguishing aspect of the Latin American insurance industry relative to other regions and is an indicator of the future outlook for insurance development in the region.

**Estimate of the Insurance Protection Gap**

The Insurance Protection Gap (IPG) represents the difference between the insurance coverage that is economically necessary and beneficial to society and the amount of coverage which is actually acquired. Estimating the IPG not only helps to determine the gap in terms of societal under-insurance but also the potential market for insurance, which is the market size that could be achieved if the gap were to be eradicated.[1]

The IPG in the Latin American insurance market is estimated[2] at 235.5 billion dollars in 2016, 8.5 percent lower than estimated in the previous year (see Chart 2.2-d). In contrast to the reduction seen between 2014 and 2015, which was primarily explained by the devaluation of Latin American currencies over that period, the

**Chart 2.2-c**
**Latin America: evolution of insurance market, 2006-16**
**(penetration vs depth)**

Source: MAPFRE Economic Research
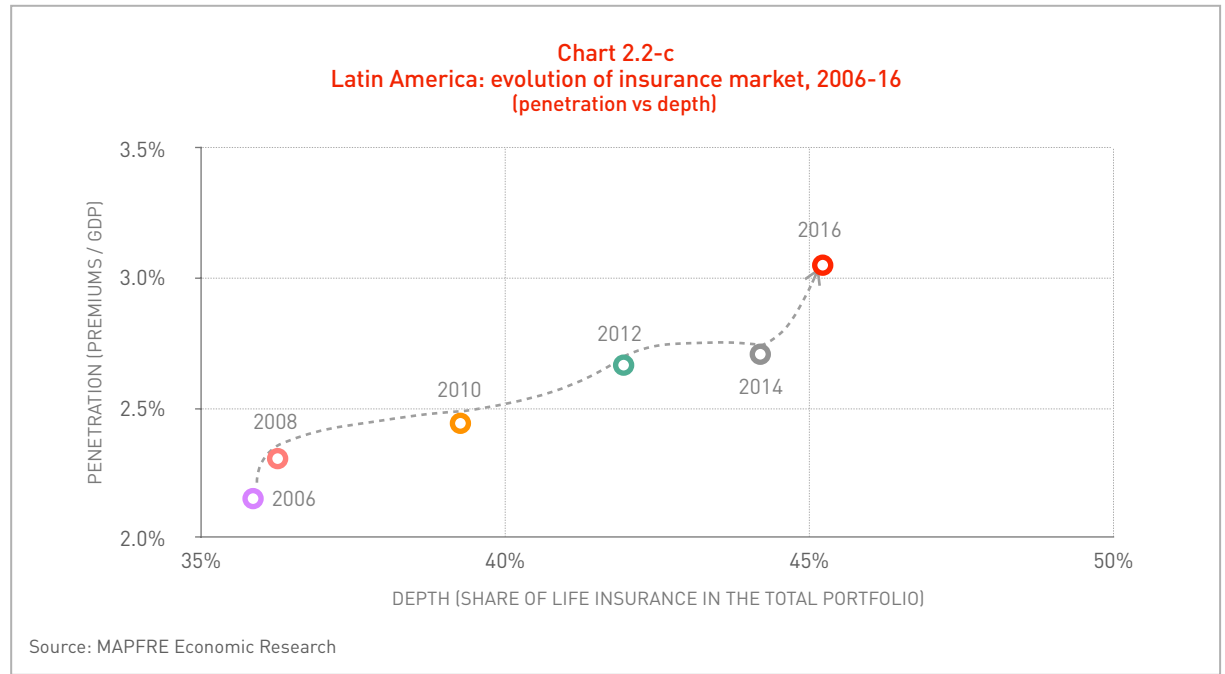
decline in the IPG in 2016 reflected a mixed performance across different markets. In some markets the decline in the IPG was explained by a revival of the insurance market with a subsequent increase in penetration levels.

There have been no major changes in the structure of the IPG over the last ten years relative to the previous report, confirming that the bulk of the gap is in Life insurance. In 2016, 63.7 percent of the IPG related to Life insurance (149.9 billion dollars), while Non-Life insurance accounted for 36.3 percent of the gap, amounting to 85.6 billion dollars.

Accordingly, the potential insurance market in Latin America in 2016 (the sum of the actual insurance market and the IPG) stood at 382.2 billion dollars i.e. the potential market is 2.6 times larger than the current regional market (146.7 billion dollars).

Chart 2.2-e shows a comparison of the IPG as a multiple of the real market between 2006 and 2016. As can be seen, the region's insurance protection gap has been on a downward path, both at an aggregate level and in terms of Life and Non-Life segments. Thus, while in 2006 the IPG was 3.1 times the actual insurance market in the region, by 2016, it had narrowed to 1.6

times. Similarly, in the Life insurance segment the multiple fell from 5.4 to 2.3, while the Non-Life insurance multiple declined from 1.5 to 1.1 over the period.

Chart 2.2-f shows both the structure of the IPG for each of the countries in the region and the size of the insurance protection gap relative to the total current market. In general, the development of insurance markets - alongside structural dynamics - is associated with the IPG, which could be used to identify areas of under-development. Likewise, the degree of progress in market development is linked to the ratio of the insurance gap to the current market. In addition to the summary shown in this chart, the next section of the report provides an estimate of the individual IPGs in each Latin American market.

Finally, Chart 2.2-g provides an assessment of the capacity of the Latin American insurance industry to close the insurance gap. This has been obtained on the basis of a comparative analysis of the growth rates observed over the period 2006-16 relative to the growth rates that would be required to close the 2016 IPG over the next ten years.

**Chart 2.2-d**
**Latin America: Insurance Protection Gap and potential market, 2006-16**
(billions of dollars)
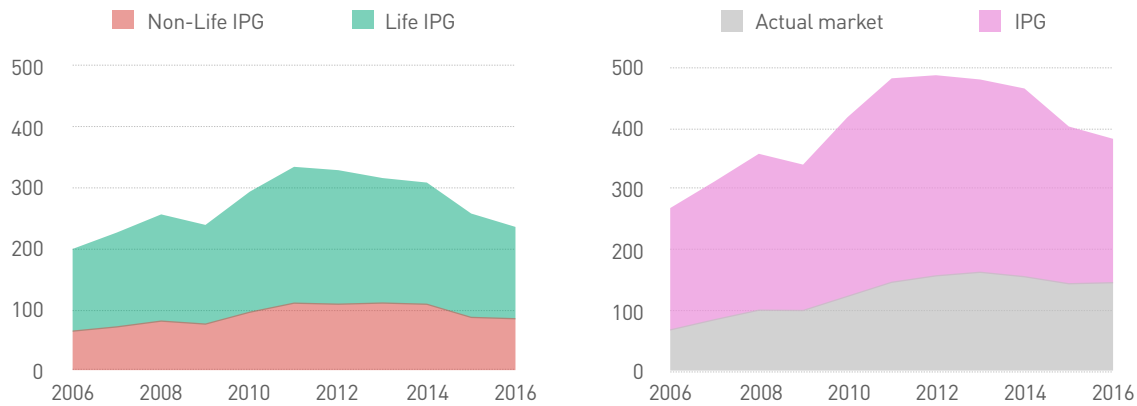


Source: MAPFRE Economic Research

Over the period 2006-16, the region's insurance market posted annual average growth (in dollars) of 7.8 percent, underpinned by average growth of 10.4 percent in the Life insurance segment and 6.1 percent in the Non-Life segment.

Accordingly, if this same growth dynamic were to be sustained over the next ten years, the aggregate market growth rate would fall short of covering the IPG estimated in 2016 by -2.2 percentage points. The same applies to both Life

(-2.2 percentage points shortfall) and Non-Life insurance (-1.4 percentage points shortfall).

## Market development index (MDI)

Chart 2.2-h provides an estimate of the Market Development Index (MDI) for the Latin American insurance industry. The aim of the MDI is to summarize the trends in development and maturity of insurance markets.[3] For the purposes of this report, the indicator is also used as a metric for comparison, providing a

**Chart 2.2-e**
**Latin America: the IPG as a multiple of the actual market, 2006-16**
(number of times actual insurance market)



Source: MAPFRE Economic Research

Chart 2.2-f
Latin America: structure and relative size
of the Insurance Protection Gap, 2016
(structure, percent; IPG as a proportion of the total market, number of times)

IPG structure

| Country | Green | Pink |
|---|---|---|
| Chile | 45% | 55% |
| Brazil | 52% | 48% |
| Venezuela | 59% | 41% |
| Mexico | 60% | 40% |
| Peru | 61% | 39% |
| Bolivia | 62% | 38% |
| Guatemala | 63% | 37% |
| Dominican Rep. | 64% | 37% |
| Honduras | 64% | 36% |
| Uruguay | 65% | 36% |
| El Salvador | 66% | 34% |
| Paraguay | 66% | 34% |
| Ecuador | 66% | 34% |
| Nicaragua | 66% | 34% |
| Colombia | 70% | 30% |
| Costa Rica | 71% | 29% |
| Panama | 72% | 29% |
| Argentina | 82% | 18% |
| Puerto Rico | 100% | |

IPG as a multiple of total market

| Country | Value |
|---|---|
| Puerto Rico | 0.3 |
| Chile | 0.6 |
| Brazil | 1.4 |
| Argentina | 1.6 |
| Colombia | 1.9 |
| Panama | 2.1 |
| Uruguay | 2.3 |
| El Salvador | 2.4 |
| Venezuela | 2.5 |
| Mexico | 2.5 |
| Costa Rica | 2.8 |
| Honduras | 3.1 |
| Peru | 3.6 |
| Ecuador | 3.8 |
| Nicaragua | 4.1 |
| Paraguay | 4.7 |
| Bolivia | 4.9 |
| Dominican Rep. | 5.5 |
| Guatemala | 5.6 |
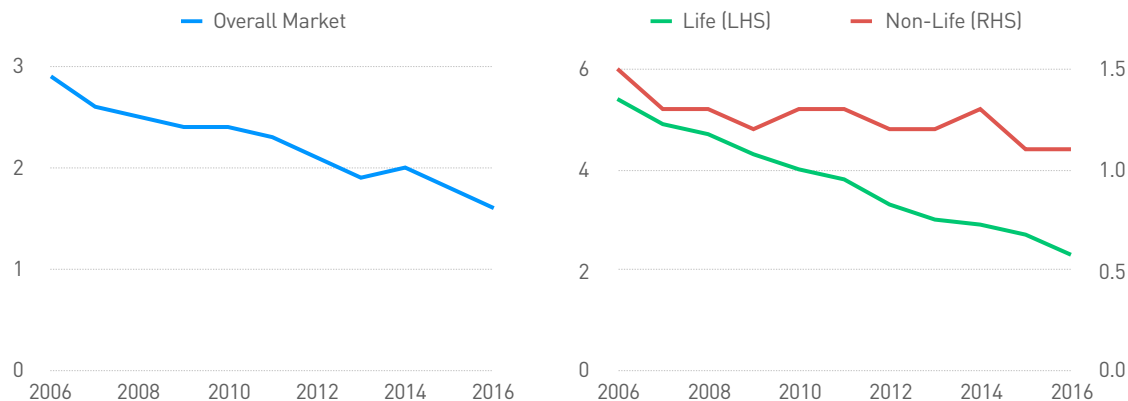
Source: MAPFRE Economic Research (with data from supervisory bodies in the region)
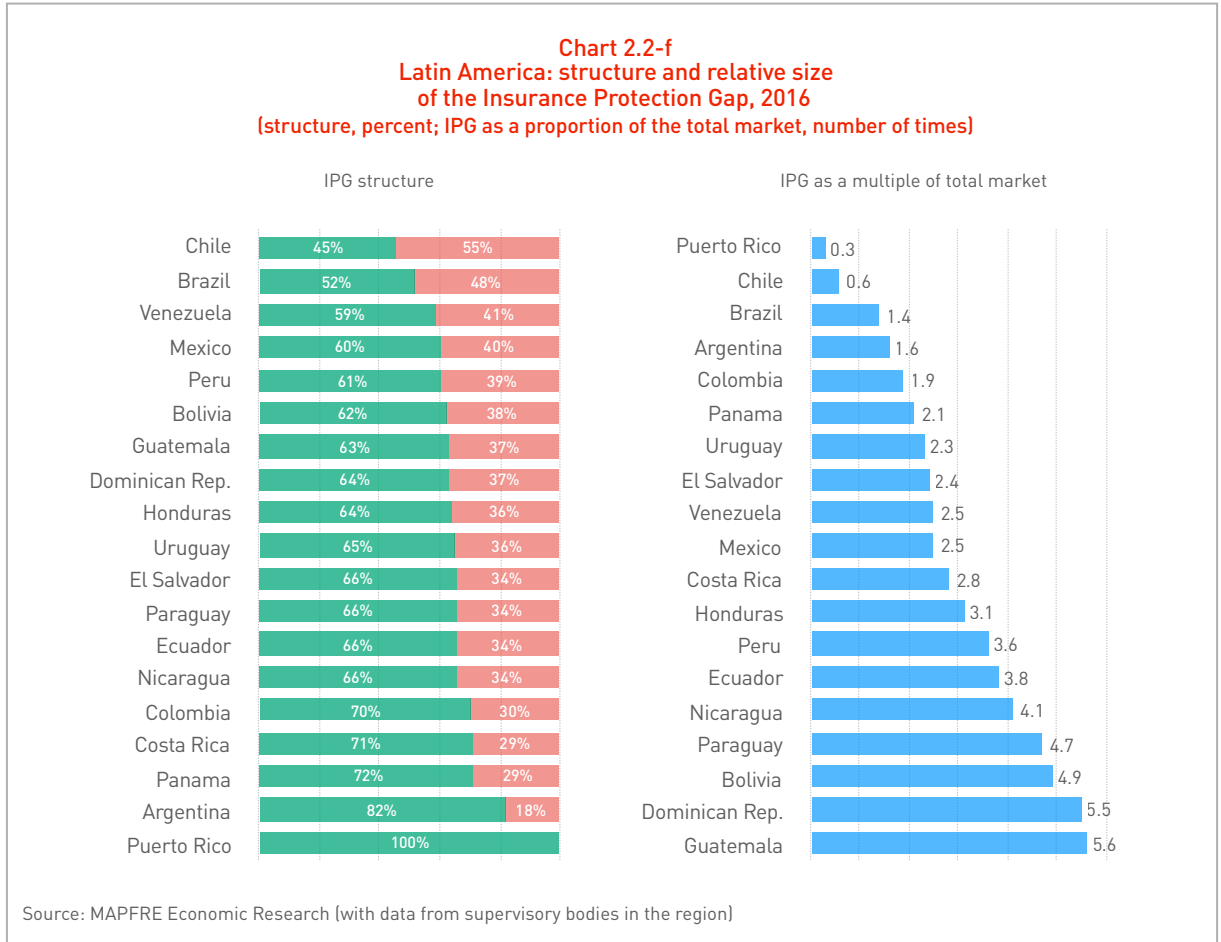
way to analyze trends in development in each of the insurance markets in the region on an individual basis.

The MDI has been on a clear positive trend between 2006 and 2016 for the region as a whole. The indicator points to progress on an annual basis over the last ten years, which is consistent with the dispersion analysis shown in Chart 2.2-c and further highlights the pattern of positive, balanced growth attained by the Latin American insurance market.

### Summary of commercial operations

As in previous reports, this section provides information on commercial operations that took place in the Latin American market in 2016. In this regard, it is worth nothing that the growth posted by insurance groups operating in Latin America in 2016 was primarily organic, in contrast to 2015, given there were no significant commercial operations.

The groups that had already announced acquisitions in the previous year, received the necessary authorizations in 2016 from relevant national insurance supervisors to proceed with their mergers.

The ACE group announced in January 2016 that it had completed the acquisition of Chubb and that it will use the Chubb name at a global level. In Latin America, the group operates in

**Chart 2.2-g**
**Latin America: capacity to close IPG, 2006–16**
**(annual growth rate, percent; sufficiency or insufficiency, percentage points)**
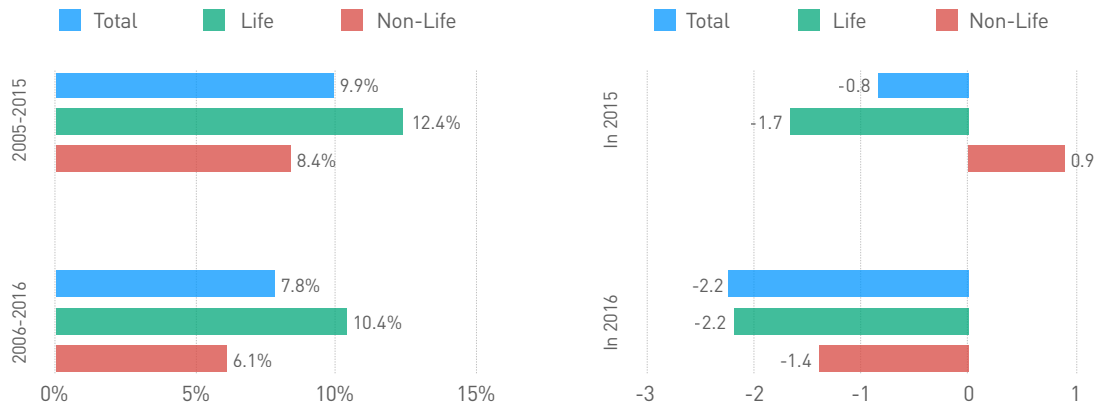


Source: MAPFRE Economic Research

Argentina, Brazil, Panama, Chile, Colombia, Ecuador, Mexico, Peru and Puerto Rico. Over the year the company received the necessary authorizations for the mergers and name changes in each of these countries. In Mexico this procedure remains subject to approval from the National Insurance and Bonding Commission.

At the same time, in the first half of 2016 Suramericana successfully completed its acquisition of RSA's operations in Latin America, which include Mexico, Colombia, Brazil, Chile, Argentina and Uruguay.

**Chart 2.2-h**
**Latin America: Market Development Index (MDI), 2005–16**
**(index 2005=100; annual change)**
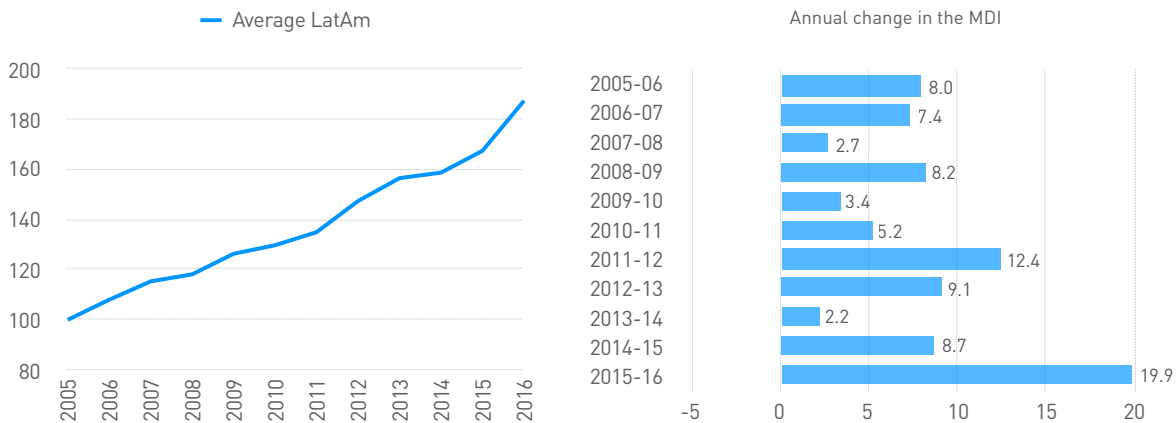


Source: MAPFRE Economic Research

## Individual analysis of Latin American insurance markets

The next section of the report includes detailed analysis for each of the Latin American insurance markets. These individual reports begin with an initial assessment of the macroeconomic backdrop in each country in 2016 before turning to the main metrics and trends in their insurance markets. In general terms, the individual reports provide a perspective for the period 2006-16 on premium growth, the main items of the aggregate balance sheet at a sector level, the technical performance and results and profitability of the insurance industry.

This is followed by a review of the main structural trends in each market, analyzing developments in penetration, density and insurance depth. In order to appropriately portray the dynamics underlying the main trends in each market, the country analysis uses local currency in order to remove the effect of the widespread 2016 currency depreciation. Furthermore, each of the individual reports includes an estimate of the IPG - both in terms of magnitude and structure.[4]

# 3. Country analysis

## 3.1 North America, Central America and the Caribbean

### 3.1.1. Mexico

#### Macroeconomic environment

The Mexican economy grew by 2.3 percent in 2016 in real terms, 0.3 percentage points less than the previous year. This slowdown was primarily due to the negative performance of the U.S. manufacturing sector (strongly linked to Mexican exports), international economic and financial instability, declining revenues (mainly from oil) and public investment, which led to an easing of domestic consumption in the second part of the year.

GDP for primary activities grew by 2.4 percent in 2016 on average, and tertiary activities by 3.1 percent, while secondary activities stagnated.

Meanwhile, gross fixed investment grew by a mere 0.2 percent over the first nine months of the year and internal consumption showed signs of slowing, primarily due to anemic growth in consumption and public investment. Against a backdrop of Mexican peso depreciation, the average inflation rate increased by 0.1 percentage points in 2016 to reach 2.8 percent (see Chart 3.1.1-a). The unemployment rate decreased by 0.1 percentage points to 4.3 percent.

In terms of the external sector, the current account deficit narrowed by 0.2 percentage points in 2016 to reach 2.7 percent of GDP, supported by strong growth in remittances and a significant adjustment in the non-oil trade balance, despite a deterioration in the oil trade balance.

The Economic Commission for Latin America and the Caribbean (ECLAC) estimates that the Mexican economy will grow by around 1.9 percent in 2017. Meanwhile, the International



Chart 3.1.1-a
Mexico: evolution of economic growth and inflation, 2006-16
(GDP in local currency, billions of pesos; real growth rate, percent; annual inflation rate, percent)
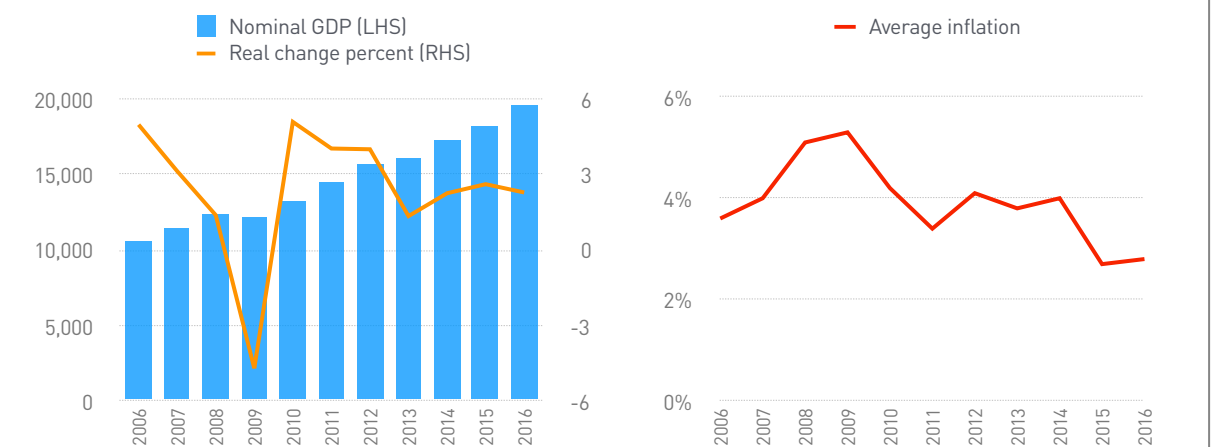
Source: MAPFRE Economic Research (based on IMF data)

Monetary Fund estimate is only 0.2 percentage points lower at around 1.7 percent.

## Insurance Market

### Growth

The Mexican insurance market achieved a premium volume of 440.512 billion pesos (23.567 billion dollars) in 2016, representing nominal growth of 13.4 percent and real growth of 10.3 percent (see Table 3.1.1 and Chart 3.1.1-c). 47 percent of premiums relate to Life and Pension insurance with the remaining 53 percent in Non-Life insurance. The latter has continually lost weight in recent years. 2016 growth was underpinned by a balanced profile: Life insurance contributed 6.5 percentage points (ppts) to overall market growth of 13.4 percent, while Non-Life insurance contributed 6.9 ppts (see Chart 3.1.1-b).



**Chart 3.1.1-b**
**Mexico: contribution to insurance market growth, 2006-16**
**(percentage points, ppts)**
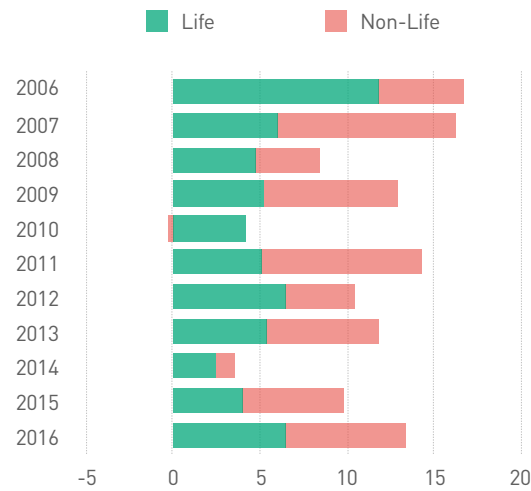
Source: MAPFRE Economic Research (based on data from National Insurance and Bonding Commission)

**Table 3.1.1**
**Mexico: premium volume[1] by line of business (lob) 2016**

| Line of business | Millions of pesos | Millions of dollars | Increase | |
|---|---|---|---|---|
| | | | Nominal (percent) | Real (percent) |
| **Total** | **440,512** | **23,567** | **13.4** | **10.3** |
| **Life** | **207,125** | **11,081** | **13.9** | **10.7** |
| Individual Life | 120,171 | 6,429 | 18.0 | 14.8 |
| Group Life | 67,668 | 3,620 | 12.1 | 9.0 |
| Pensions | 19,286 | 1,032 | -2.2 | -4.9 |
| **Non-Life** | **233,388** | **12,486** | **13.0** | **9.8** |
| Automobiles | 91,117 | 4,875 | 20.4 | 17.1 |
| Health[2] | 63,530 | 3,399 | 17.6 | 14.4 |
| Fire | 13,131 | 702 | 3.5 | 0.7 |
| Earthquakes and Other Catastrophic Risks | 15,726 | 841 | -3.4 | -6.1 |
| Miscellaneous | 17,933 | 959 | -9.1 | -11.6 |
| Transport | 10,885 | 582 | 0.3 | -2.5 |
| Third-Party Liability | 9,216 | 493 | 3.2 | 0.4 |
| Personal Accidents[3] | 6,094 | 326 | 13.4 | 10.3 |
| Agrarian | 4,067 | 218 | 153.5 | 146.5 |
| Credit | 1,688 | 90 | 13.8 | 10.7 |

Source: MAPFRE Economic Research (based on data from National Insurance and Bonding Commission)

1/ Direct premium
2/ Accidents and Illness Line
3/ 2016 includes information relating to the insurance company, Protección Agropecuaria. Excluding the company from all periods, nominal growth would be 9 percent and real growth 6 percent.

**Chart 3.1.1-c**
**Mexico: growth developments in the insurance market, 2006-16**
(premiums, billions of pesos, nominal annual growth rates, percent)



Source: MAPFRE Economic Research (based on data from National Insurance and Bonding Commission)
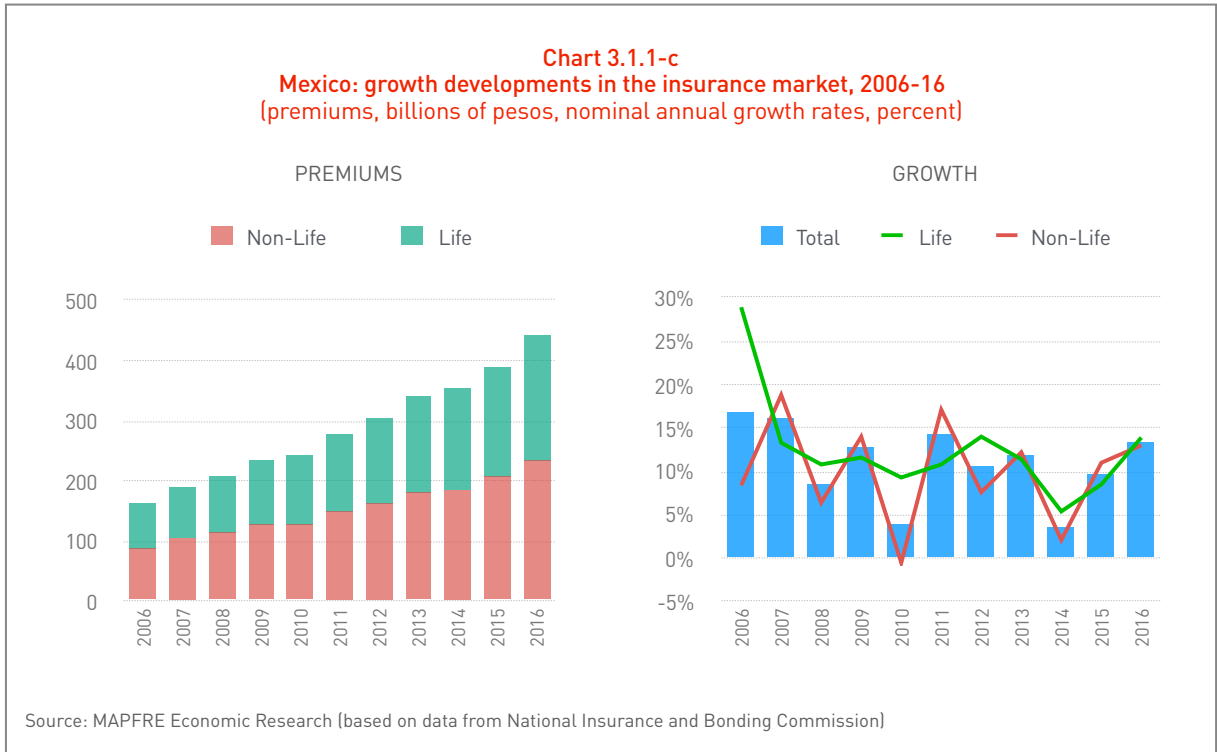
Life insurance premiums grew by 13.9 percent in nominal terms and 10.7 percent in real terms, reaching 207.125 billion pesos (11.081 billion dollars). Both individual (18 percent nominal) and group Life (12.1 percent) insurance saw strong growth, but Pension insurance continued to decline (-2.2 percent), reaching 19.286 billion pesos (1.032 billion dollars). Overall, recent developments in the Life insurance market confirm that the reform introduced some years ago to create tax incentives for long-term saving is bearing fruit.

Meanwhile, Non-Life insurance premiums rose by 13 percent in nominal terms in 2016 and 9.8 percent in real terms, reaching 233.388 billion pesos (12.486 billion dollars). All of the main insurance types posted growth, except for Earthquake and Miscellaneous Risk insurance.

The two most important Non-Life lines (Automobile and Health) grew by 20.4 and 17.6 percent respectively. Growth in Health insurance was particularly noteworthy, which appears to have been driven in part by a price effect stemming from so-called "medical inflation".

**Balance sheet and equity**

Chart 3.1.1-d shows developments in the overall balance sheet at the sector level over the period 2006-16. The Mexican insurance industry's total assets reached 1.3335 trillion pesos (71.342 billion dollars) while equity stood at 186.08 billion pesos (9.955 billion dollars), up 24 percent on 2015, partly explained by the increase in share capital at Banorte Generali.

**Investment**

Chart 3.1.1-e shows developments in investment, while Chart 3.1.1-f provides a breakdown of the aggregate investment portfolio at a sector level in 2016.

Investment reached 1.023 trillion pesos (54.726 billion dollars) in 2016, concentrated in fixed income (79.8 percent) with a significantly smaller proportion (12.9 percent) in equity instruments (see Chart 3.1.1-g). The increase in the relative weight of fixed income relative to the previous year was particularly notable in 2016, reverting the downward trend observed in recent years,

Chart 3.1.1-d
Mexico: evolution of insurance industry's aggregate balance sheet, 2006-16
(amounts in local currency, change in equity, percentage points)
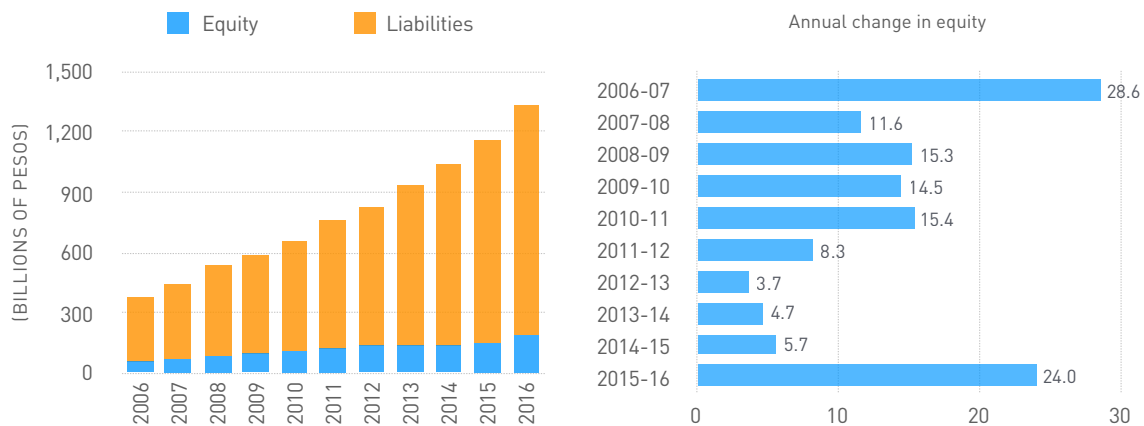
Source: MAPFRE Economic Research (based on data from National Insurance and Bonding Commission)

especially in sovereign debt, with the other financial investment heading losing weight in the overall portfolio and declining from 11.6 percent in 2015 to 5.3 percent. This development might partially be explained by implementation of the new Solvency II-style prudential regulation in Mexico. This system establishes capital surcharges according to insurers' differing levels of risks and promotes matching of assets and liabilities and hence use of debt instruments.

**Technical provisions**

Chart 3.1.1-h shows the evolution of technical provisions in the Mexican insurance industry. Total technical provisions amounted to 1.0276 trillion pesos (54.974 billion dollars) in 2016.

As illustrated in Charts 3.1.1-i and 3.1.1-j, 67.5 percent of total provisions related to Life insurance, 12.4 percent to provisions for unearned premiums and unexpired risks in Non-Life insurance, 13.7 percent to technical provisions for claims, 3.9 percent for catastrophe reserves and 2.4 percent for other technical provisions.

It is worth noting that over the period 2006-16 there was an increase in the relative weight of Life insurance provisions from 65.2 percent in

2006 to 67.5 percent in 2016, although the upward trend flattened from 2012 onward. The share of provisions for claims in 2016 reached its highest since 2007 - at 13.7 percent.



Chart 3.1.1-e
Mexico: Insurance market technical provisions, 2006-16
(billions of pesos)
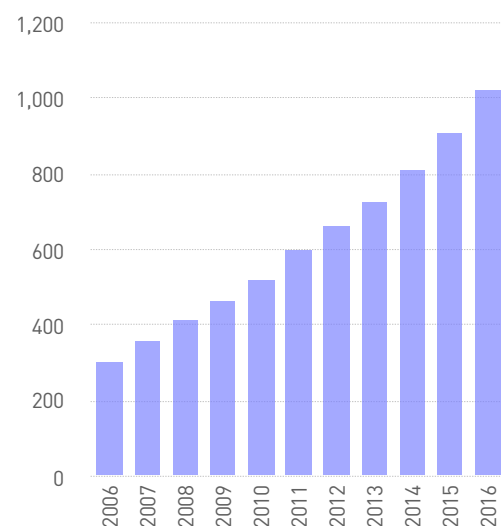
Source: MAPFRE Economic Research (based on data from National Insurance and Bonding Commission)

### Chart 3.1.1-f
### Mexico: structure of investment, 2006-16
### (%)



Source: MAPFRE Economic Research (based on data from National Insurance and Bonding Commission)

### Chart 3.1.1-g
### Mexico: structure of investment, 2016
### (%)



Source: MAPFRE Economic Research (based on data from National Insurance and Bonding Commission)
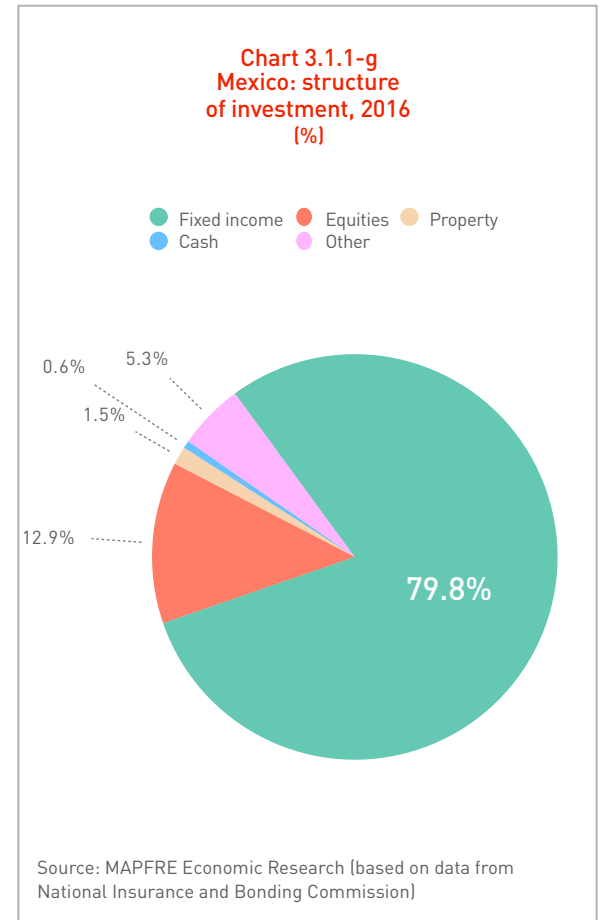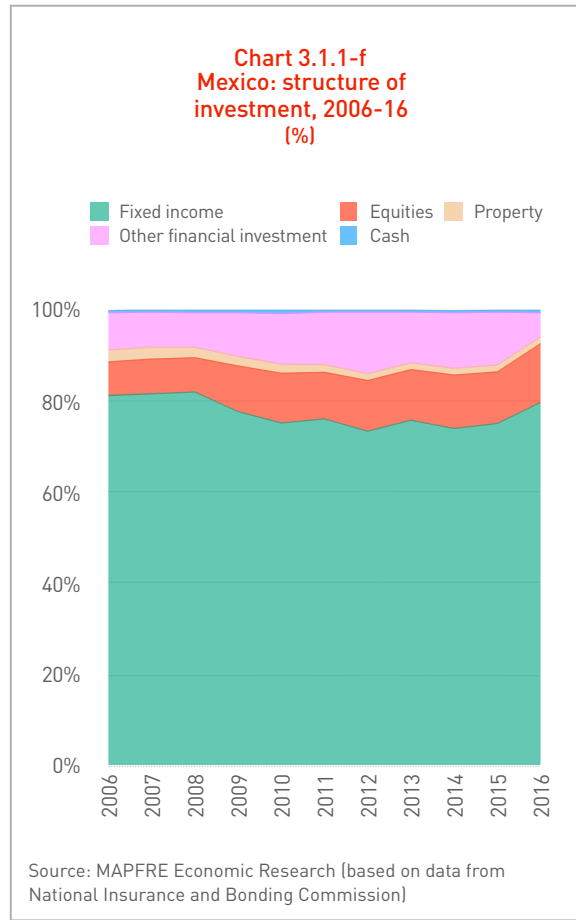
**Technical performance**

Chart 3.1.1-k shows developments in the Mexican insurance industry's technical performance over 2006-16.

The combined ratio (calculated relative to net accrued premium) stood at 104.1 percent in 2016, representing an improvement of 1.4 percentage points relative to 2015 (105.5 percent). This change reflects a reduction in the claims ratio in 2016 (0.9 percentage points) and an improvement in the expense ratio (0.5 percentage points).

**Results and profitability**

The Mexican insurance industry posted a consolidated net result of 38.709 billion pesos (2.070 billion dollars) in 2016, up 82.5 percent on the previous year, primarily due to an improvement in the financial result.
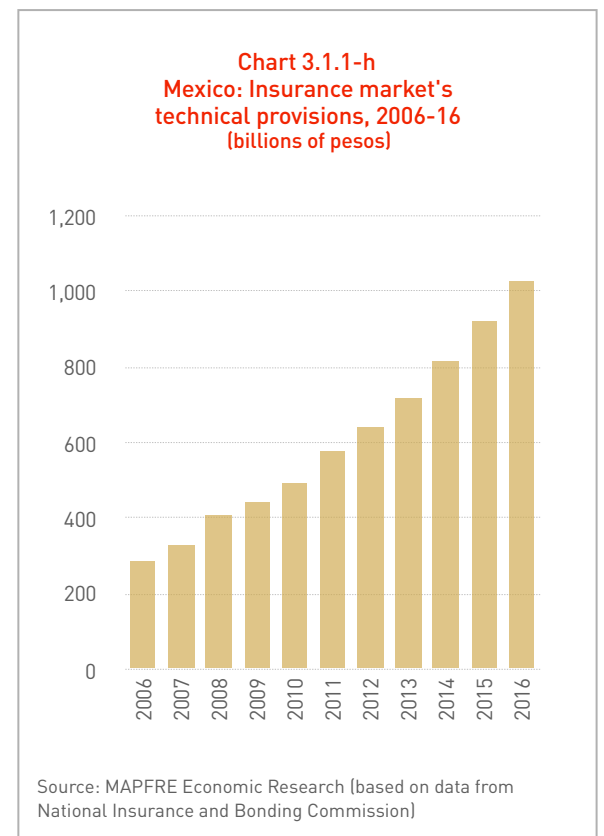
### Chart 3.1.1-h
### Mexico: Insurance market's technical provisions, 2006-16
### (billions of pesos)



Source: MAPFRE Economic Research (based on data from National Insurance and Bonding Commission)

**Chart 3.1.1-i**
**Mexico: structure of technical provisions, 2006-16**
**(%)**

Other technical provisions
Catastrophic risk provisions
Provisions for outstanding claims
Unearned premiums and ongoing risks
Life insurance provisions

Source: MAPFRE Economic Research (based on data from National Insurance and Bonding Commission)

**Chart 3.1.1-j**
**Mexico: structure of technical provisions, 2016**
**(%)**

Life          Non-Life
For claims    Catastrophic risks
Other

2.4%
3.9%
13.7%
67.5%
12.4%

Source: MAPFRE Economic Research (based on data from National Insurance and Bonding Commission)
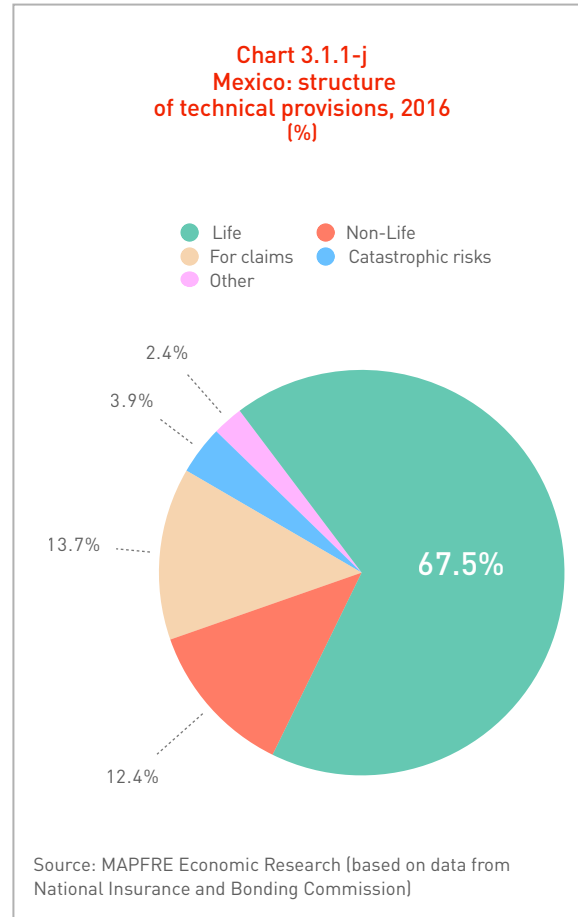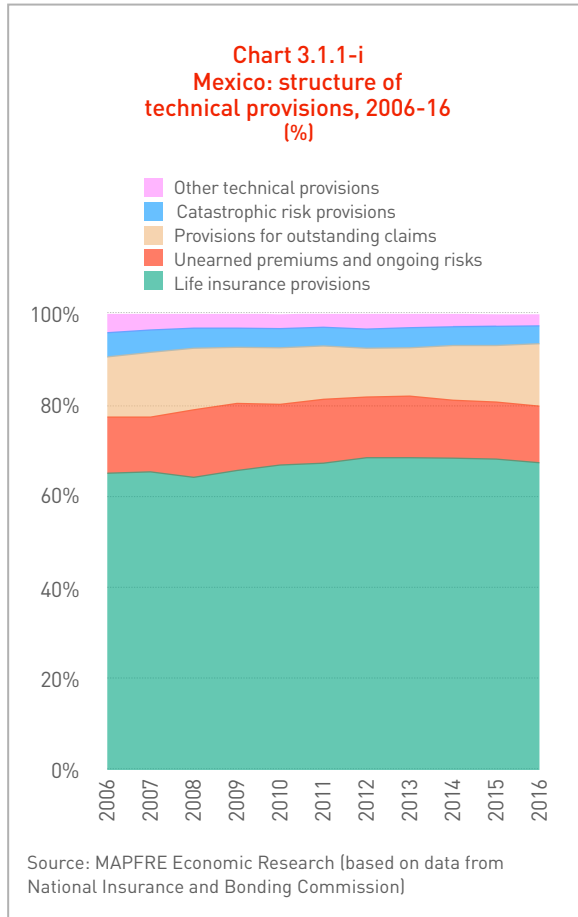
The claims ratio has been on a downward trend over the last six years from a peak in 2009, with a corresponding improvement in the combined ratio albeit remaining above 100 percent.

Simultaneously, the financial result (as a percentage of net accrued premium) stood at 20.9 percent in 2016, 2.8 percentage points above the level reached in 2015 (see Chart 3.1.1-I).
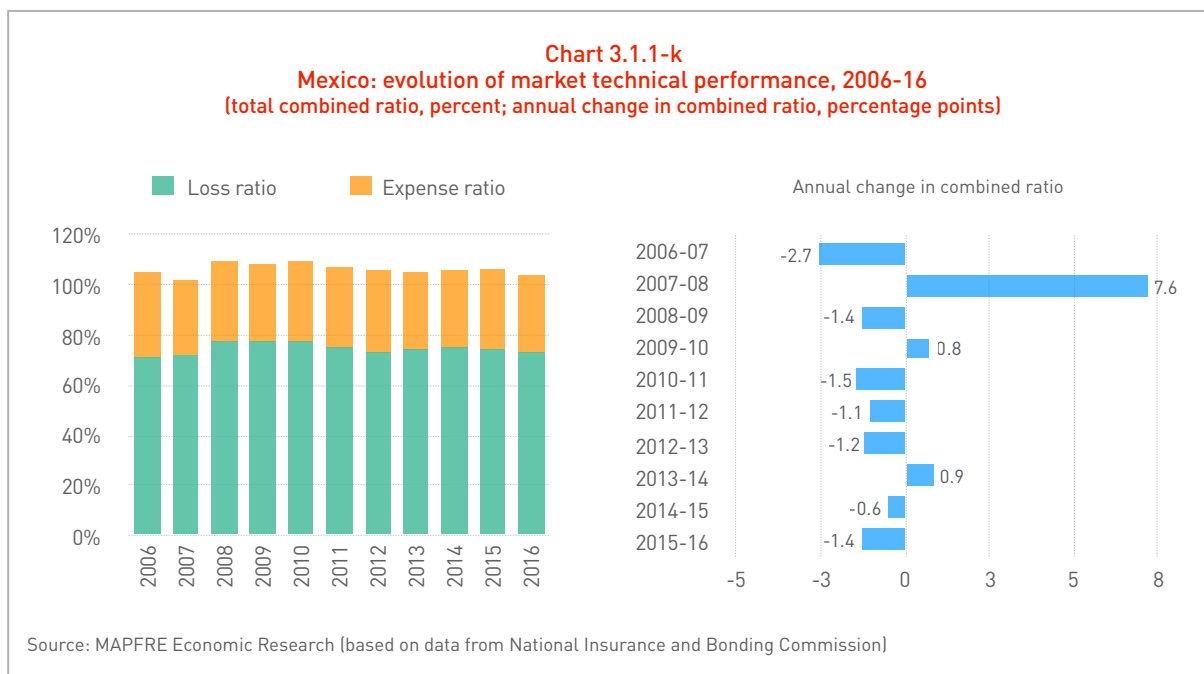
**Chart 3.1.1-k**
**Mexico: evolution of market technical performance, 2006-16**
**(total combined ratio, percent; annual change in combined ratio, percentage points)**

Loss ratio     Expense ratio

Annual change in combined ratio

| Period | Value |
|--------|-------|
| 2006-07 | -2.7 |
| 2007-08 | 7.6 |
| 2008-09 | -1.4 |
| 2009-10 | 0.8 |
| 2010-11 | -1.5 |
| 2011-12 | -1.1 |
| 2012-13 | -1.2 |
| 2013-14 | 0.9 |
| 2014-15 | -0.6 |
| 2015-16 | -1.4 |

Source: MAPFRE Economic Research (based on data from National Insurance and Bonding Commission)

**Chart 3.1.1-l**
**Mexico: evolution of results and profitability, 2006-16**
**(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)**

Source: MAPFRE Economic Research (based on data from National Insurance and Bonding Commission)
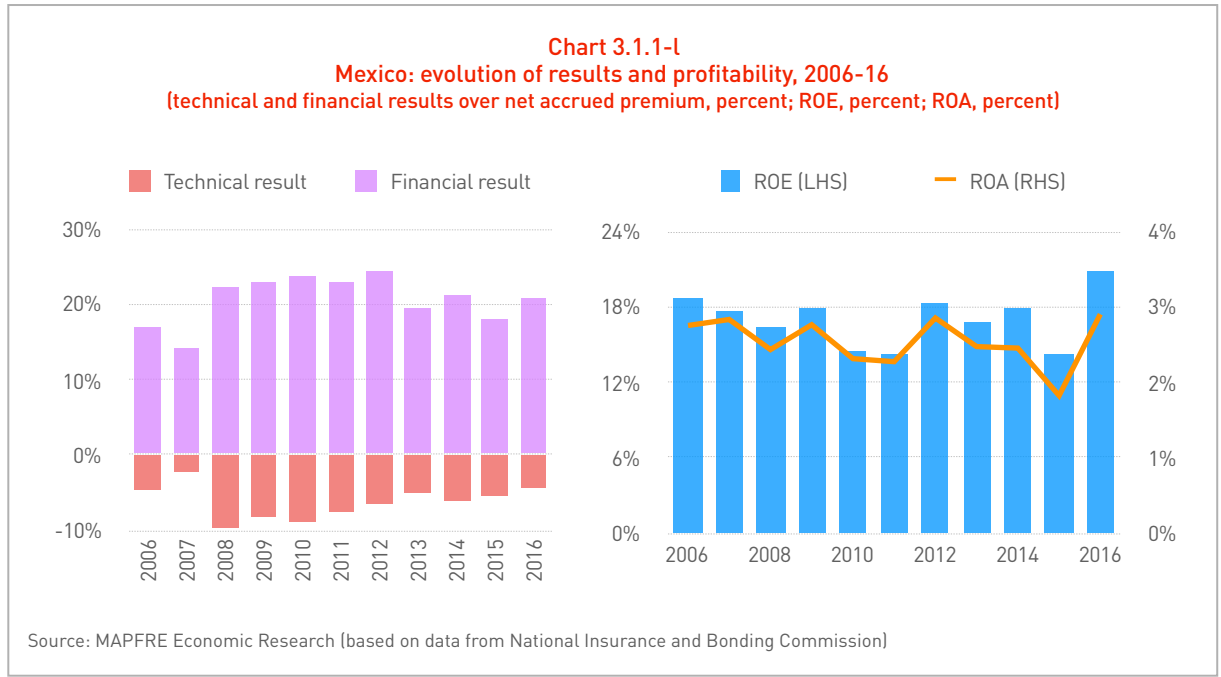
In terms of profitability, the industry achieved a return on equity (ROE) of 20.8 percent in 2016, representing an increase of 6.6 percentage points on 2015. In a similar vein, return on assets (ROA) reached 2.9 percent in 2016, an increase of 1.1 percentage points on 2015.

**Insurance penetration, density and depth**

Chart 3.1.1-m shows the main structural trends in the development of the insurance industry in Mexico over the period 2006-16. The penetration index (premiums/GDP) stood at 2.3 percent in 2016, a record high for the Mexican insurance industry. This indicator has generally been on an upward trend over the period 2006-16, in accordance with the general pattern across the Latin American region. Nonetheless, penetration remains below the absolute average for Latin America.

Insurance density in 2016 (premiums per capita) amounted to 3,489.3 pesos (186.6 dollars), an increase of 11.9 percent on 2015 (3,118 pesos). As in the case of penetration, density has shown clear signs of improvement over the last ten years, with cumulative growth in local currency terms of 133 percent.

Depth (measured for the purposes of this report as the ratio of Life insurance premiums to total premiums) stood at 47 percent, some 1.9 percentage points above 2006. In this regard, depth has increased more rapidly in Mexico than on average across other Latin American insurance markets, underscoring the ever greater market maturity.

Chart 3.1.1-n provides an analysis of dispersion, illustrating overall progress in the Mexican insurance market from the perspective of changes in penetration and depth over the period 2006-16.

This analysis (which is used for each of the markets analyzed in this report) further illustrates the general development of the Mexican market, which - following a setback during the financial crisis - has advanced in both quantitative (increases in the penetration index) and qualitative (due to increases in the depth index) terms.

**Estimate of the Insurance Protection Gap**

Chart 3.1.1-o provides an estimate of the Insurance Protection Gap (IPG) for the Mexican insurance market over the period 2006-16.

**Chart 3.1.1-m**
**Mexico: evolution of penetration, density and depth, 2006-16**
**(premiums/GDP, percent; premiums per capita, pesos and dollars; Life insurance premiums / total premiums, percent, index 2006=100)**
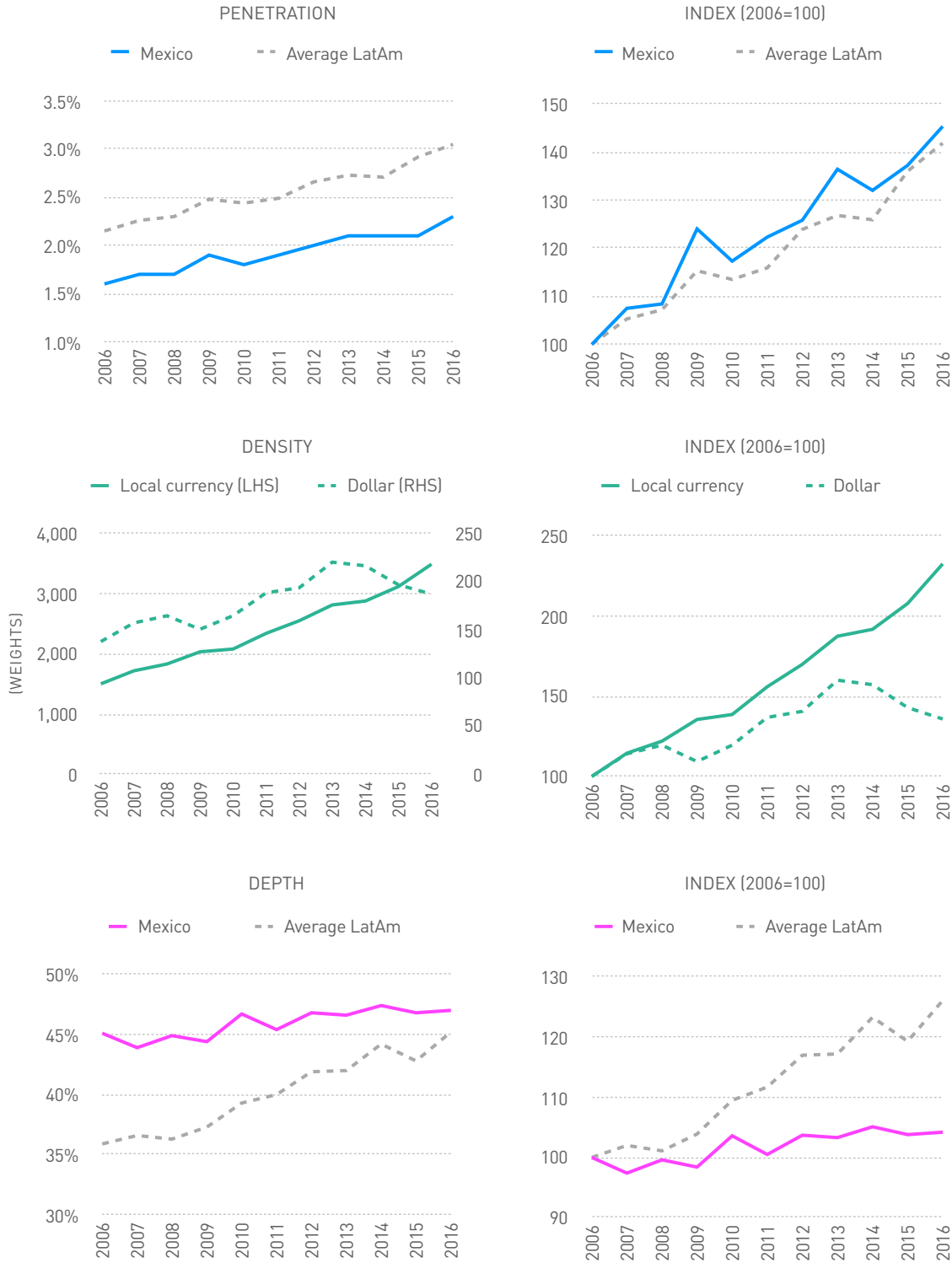


Source: MAPFRE Economic Research (based on data from National Insurance and Bonding Commission)

**Chart 3.1.1-n**
**Mexico: evolution of insurance market, 2006-16**
**(penetration vs depth)**
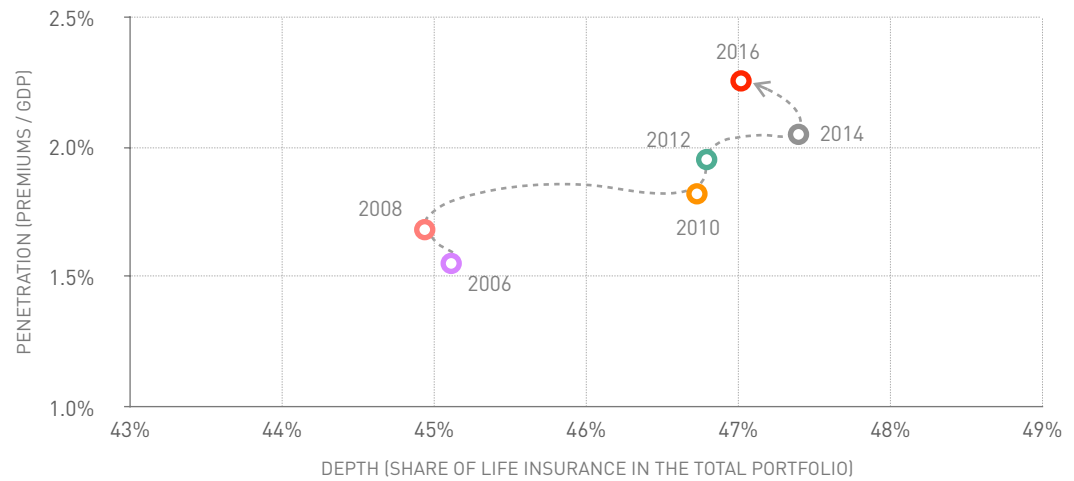


Source: MAPFRE Economic Research

The IPG stood at 1.1104 trillion pesos (59.4036 billion dollars) in 2016, equivalent to 2.5 times the actual insurance market at the close of 2016. Life insurance is the key segment accounting for the structure and evolution of the IPG over the last ten years. In 2016, 60 percent of the IPG related to Life insurance, the equivalent of 670.4 billion pesos. By contrast, Non-Life insurance accounted for 40 percent of the gap, some 440 billion pesos.

Accordingly, the potential insurance market in Mexico (the sum of the actual market and the IPG) amounted to 1.5509 trillion pesos (82.9698 billion dollars), i.e. 3.5 times the current Mexican market, reducing the gap from 3.8 times in 2015.

Chart 3.1.1-p shows an estimate of the IPG as a multiple of the actual market in each year. This comparison provides an insight into how the gap has changed over time. As a multiple, the IPG has been on a clear downward trend in the Mexican market over the last ten years, both when considering the overall market, as well as the Life and Non-Life segments.

Accordingly in 2006 the IPG was 4.4 times the actual insurance market in Mexico compared to

2.5 times in 2016. The same is true for the Life and Non-Life segments. In the case of the former, the multiple fell from 6.2 to 3.2 while for the latter it shrunk from 3.0 to 1.9 over ten years. In both cases, the 2016 multiple was lower than in 2015.

Finally, Chart 3.1.1-q provides a summary of an assessment of the Mexican insurance market's capacity to close the IPG. As in our previous year's report, this analysis was carried out on the basis of a comparison of growth rates in the Mexican market over the last ten years in relation to the growth rates that would be required in order to close the IPG established in 2016 over the next ten years.

According to this analysis, the Mexican insurance market posted an average growth rate of 10.4 percent between 2006-16. This was underpinned by average growth of 10.9 percent in the Life insurance sector, and 10 percent in the Non-Life insurance sector. If the same growth pattern were to be maintained over the next ten years, the growth rate for the market as a whole would fall short of covering the IPG established in 2016 by 3 percentage points. This means that the Mexican insurance market would need average

**Chart 3.1.1-o**
**Mexico: Insurance Protection Gap and potential market, 2006-16**
(billions of pesos)
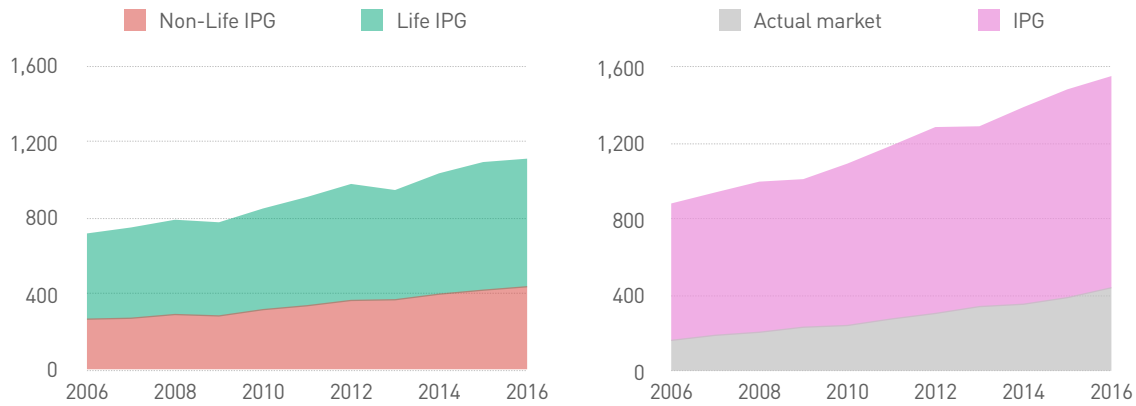


Source: MAPFRE Economic Research

growth of 13.4 percent over the next ten years in order to close the IPG calculated for 2016. Similar conclusions emerge from an individual analysis of the Life and Non-Life segments. The shortfall for Life insurance would be 4.7 percentage points and 1.2 percentage points for Non-Life insurance. In order to cover these gaps the Mexican insurance market would need to achieve annual average growth of 15.5 and 11.2 percent respectively over the next ten years.

However, it is worth noting that, as shown in the chart, this shortfall fell relative to 2015 (-3 in 2016 vs. -3.6 in 2015), though due to a mixed performance with the deficit declining for Non-Life insurance (from -2.2 to -1.2) and rising slightly for Life insurance (from -4.5 to -4.7).

**Chart 3.1.1-p**
**Mexico: the IPG as a multiple of the actual market, 2006-16**
(number of times actual insurance market)
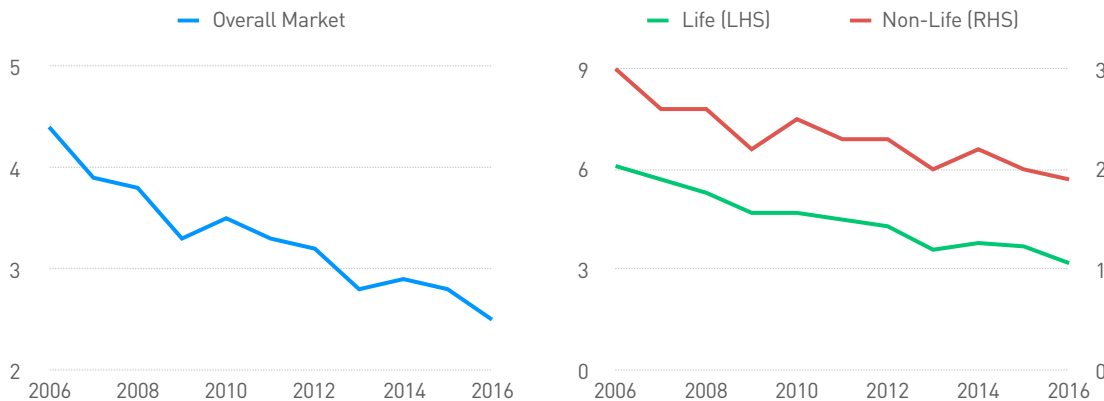


Source: MAPFRE Economic Research

Chart 3.1.1-q
Mexico: capacity to close IPG, 2006-16
(average annual growth rate, percent; sufficiency or insufficiency, percentage points)
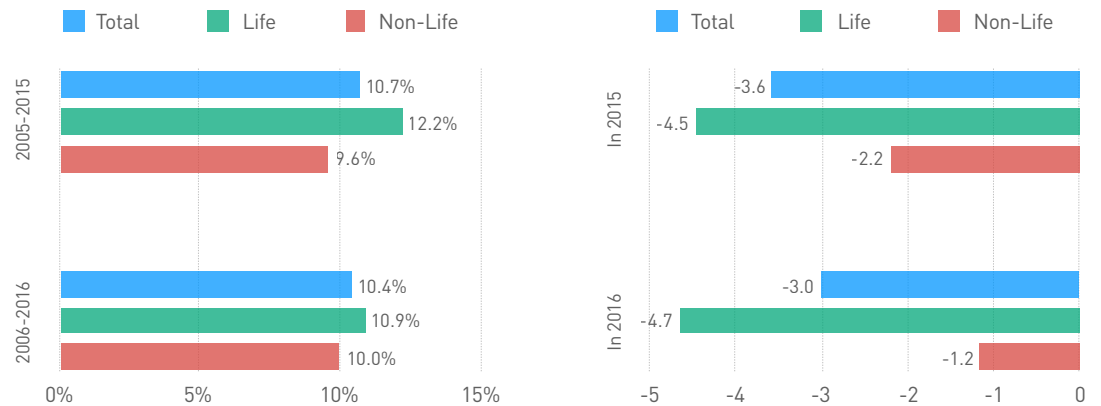
Source: MAPFRE Economic Research

### Market Development Index (MDI)

Chart 3.1.1-r provides an estimate of the Market Development Index (MDI) for the Mexican insurance industry. As previously highlighted, the aim of the MDI is to summarize trends in the evolution and maturity of insurance markets. The indicator performed positively over the last ten years, albeit with the Mexican insurance market developing at a slightly slower rate than the regional average. The indicator performed positively over all of the last ten years, except for 2010 and 2014.

### Insurance market rankings

#### Overall ranking

At the end of 2016, the Mexican insurance industry was formed of 99 institutions, 53 of which were majority foreign-owned.

The top five insurers collectively represented 46 percent of total premiums, up 1.2 percentage points on the previous year. Market concentration has generally tracked downward over the last ten years (albeit with a trend toward greater concentration in the Life insurance segment), with a clear decline in 2016 as illustrated by developments in the Herfindahl and CR5 indexes. Overall, competition levels in the Mexican insurance industry are below thresholds associated with potential competition problems (see Chart 3.1.1-s).

In terms of the overall ranking of insurance groups in 2016, the four leading insurance groups in Mexico were unchanged from the previous year. MetLife occupied first position with 13.3 percent of premiums, followed by Grupo Nacional Provincial (13 percent) and AXA (8 percent). Both Quálitas (rising from tenth to fifth place with a 6.5 percent share) and Monterrey New York Life (see Chart 3.1.1-t) improved their relative positions. Meanwhile, MAPFRE dropped out of the ranking in 2016 with a 3.2 percent market share, due to the accounting effect from underwriting a multi-year contract in 2015.

**Chart 3.1.1-r**
**Mexico: Market Development Index (MDI), 2005-16**
**(index 2005=100; annual change)**
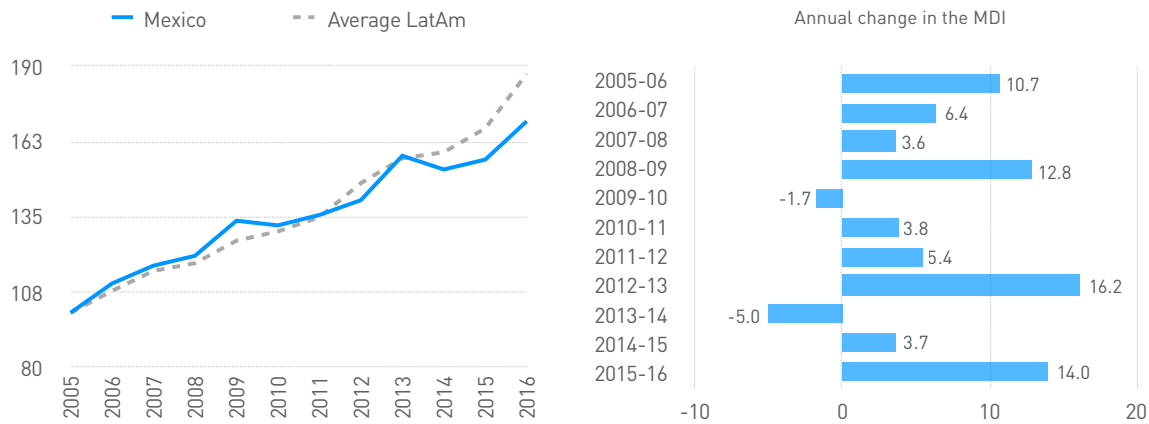


Source: MAPFRE Economic Research

**Non-Life Ranking**

At the end of 2016, 81 insurance companies were operating in the Mexican Non-Life market. Grupo Nacional Provincial (GNP) continued to lead the ranking with 13.9 percent of total premiums, followed by AXA (12.4 percent) and Quálitas (12.3 percent). Meanwhile, Inbursa and Chubb improved their position by one and three places respectively, while MAPFRE fell to seventh position. Lastly, Atlas entered the ranking in tenth place, displacing BBVA Bancomer (see Chart 3.1.1-u).

**Graph 3.1.1-s**
**Mexico: insurance industry concentration, 2006-16**
**(Herfindahl index; CR5 index, percent)**
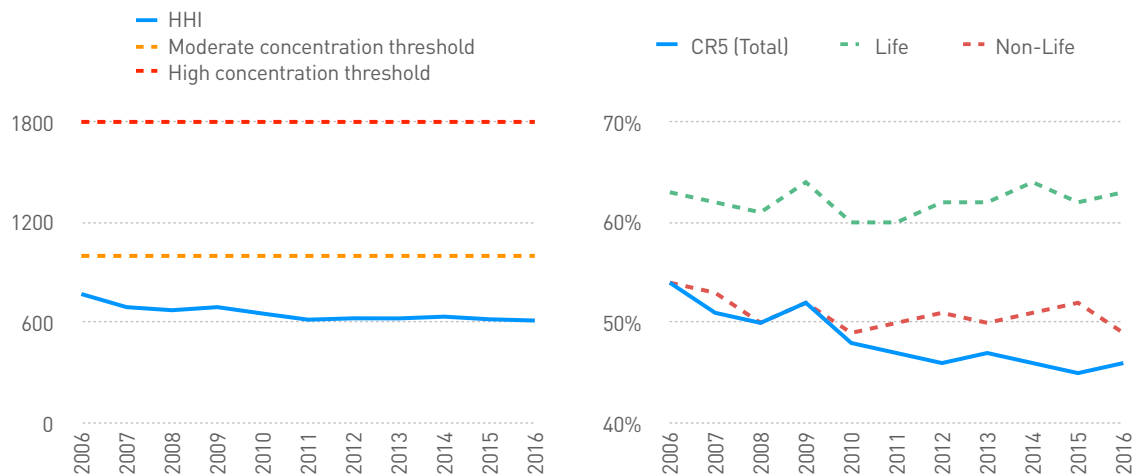


Source: MAPFRE Economic Research (based on data from National Insurance and Bonding Commission)

**Chart 3.1.1-t**
**Mexico: overall ranking, 2015-16**
**(market shares, percent)**
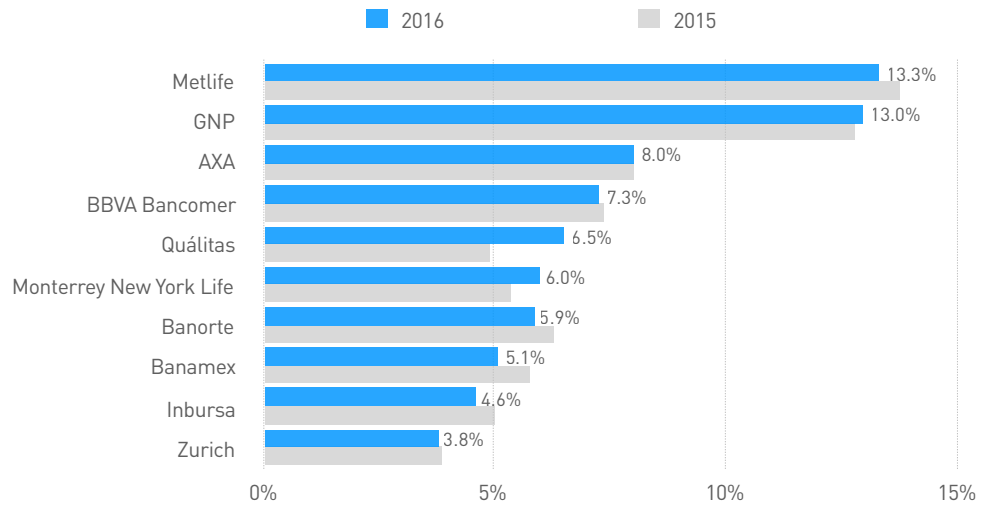
■ 2016    ■ 2015



| | 2016 |
|---|---|
| Metlife | 13.3% |
| GNP | 13.0% |
| AXA | 8.0% |
| BBVA Bancomer | 7.3% |
| Quálitas | 6.5% |
| Monterrey New York Life | 6.0% |
| Banorte | 5.9% |
| Banamex | 5.1% |
| Inbursa | 4.6% |
| Zurich | 3.8% |

Source: MAPFRE Economic Research (based on data from National Insurance and Bonding Commission)

**Chart 3.1.1-u**
**Mexico: Life and Non-Life ranking, 2015-16**
**(market shares, percent)**
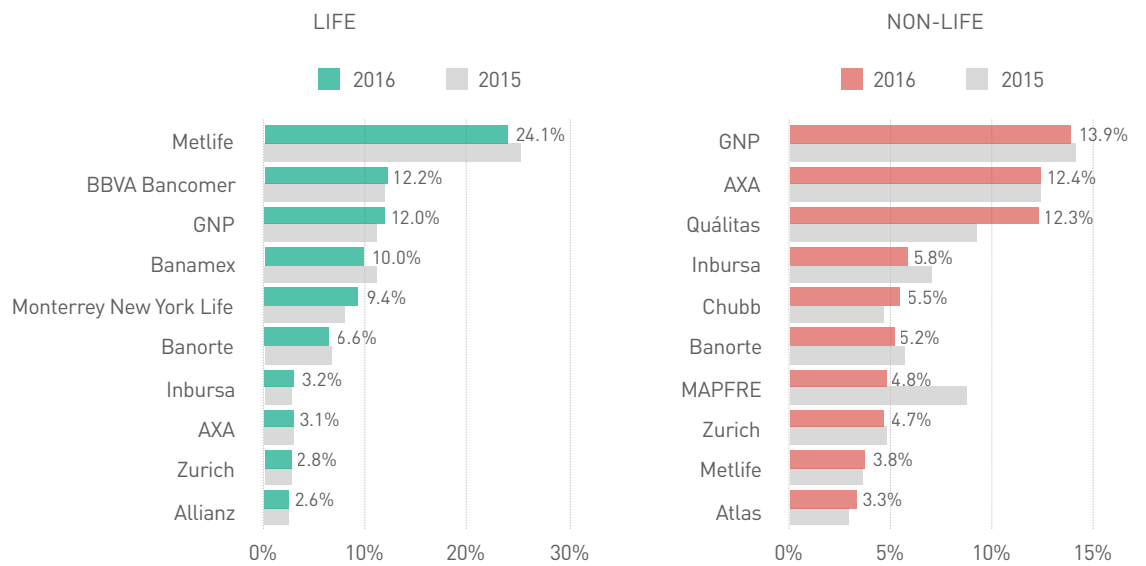
LIFE

■ 2016    ■ 2015

| | 2016 |
|---|---|
| Metlife | 24.1% |
| BBVA Bancomer | 12.2% |
| GNP | 12.0% |
| Banamex | 10.0% |
| Monterrey New York Life | 9.4% |
| Banorte | 6.6% |
| Inbursa | 3.2% |
| AXA | 3.1% |
| Zurich | 2.8% |
| Allianz | 2.6% |

NON-LIFE

■ 2016    ■ 2015

| | 2016 |
|---|---|
| GNP | 13.9% |
| AXA | 12.4% |
| Quálitas | 12.3% |
| Inbursa | 5.8% |
| Chubb | 5.5% |
| Banorte | 5.2% |
| MAPFRE | 4.8% |
| Zurich | 4.7% |
| Metlife | 3.8% |
| Atlas | 3.3% |

Source: MAPFRE Economic Research (based on data from National Insurance and Bonding Commission)

**Life Ranking**

54 insurance companies were operating in the Mexican Life market at the end of 2016. The top ten groups were unchanged from the previous year, albeit with some switching of relative positions. MetLife once again led the ranking with a market share of 24.1 percent, followed by BBVA Bancomer on 12.2 percent. GNP and Banamex swapped positions (third with 12 percent and fourth with 10 percent respectively) as did Inbursa and AXA, with the latter dropping to eighth place. (see Chart 3.1.1-u).

**Key regulatory aspects**

2016 saw the conclusion of the process to implement a new Solvency II-style regulatory framework in Mexico applicable to the insurance and surety industry, which was brought into effect by the Insurance and Surety Institutions Law (LISF).

This regulatory framework is based on the three pillar solvency regime: Pillar I, which consists of technical reserves based on Best Estimate Liability (*B*EL) approaches and the concept of risk margin, as well as a standard model (stochastic[1]) for calculating capital requirements[2] based on the concepts of pooling and risk mitigation, equity for covering solvency capital requirements and the generation of an economic balance sheet; Pillar II, which reinforces corporate governance practices and introduces a Self-Assessment of Institutions' Solvency and Risk (ORSA); and Pillar III, based on transparency and information disclosures as a means to enhancing market discipline.

The following key regulatory and legislative changes applicable to the Mexican insurance and surety sector took place during 2016 and the first half of 2017:

No changes were made in relation to the **Insurance and Surety Institutions Law (LSIF)**, which forms the main legal framework underpinning regulation of the Mexican market.

The following changes were made in relation to the **Insurance and Bond Circular (CUSF),** which embodies secondary and technical aspects of the regulatory framework in Mexico. In 2016:

- **Amending circular 1/16; provisions 23.1.13., 23.1.14., 23.1.15., 24.1.7. and 24.2.2.; Annexes 22.1.2., 22.5.1. and 22.6.1.; Sixty-Ninth Transitory provision**: General provisions applying to Holding Companies of Financial Groups, aimed at eliminating differences in the accounting criteria used by the various institutions making up financial groups. The changes were the result of meetings between the National Banking and Securities Commission (CNBV), the National Insurance and Bonding Commission (CNSF) and the National Retirement Savings Commission (CONSAR).

- **Amending circular 11/16, Seventy-Fifth Transitory provision:** which established the start date for the three-year deadline for the operator responsible for control and logging of Financial Derivative Transactions to ensure renewal of the certification granted by an independent third party. This provision is contained within the CUSF which requires institutions engaged in financial derivative transactions to have an operator responsible for the transaction and its recording. These operators will be authorized by the CNSF for which they will need a certification granted by an independent third party. This certification will be renewable every three years.

- **Amending circular 15/16; provisions 5.6.1., 6.4.4., 6.4.5., 6.4.11., 6.8.2., 6.8.3., 8.19.5., 9.5.6.; Seventy-Sixth Transitory provision: e**stablishingan alternative transitional arrangement for the calculation of the maximum expected loss and deductions applicable to the Agriculture and Animals business.

25

- **Amending circular 17/16; provision 20.1.1.:** setting out an interpretative standard which requires that the special funds identified in the LISF - whose objective is to ensure there are sufficient financial resources to support institutions' compliance with their obligations to contractors, insured parties and beneficiaries of insurance policies - will only be able to support compliance with obligations deriving from the existence of an insurance contract, without this provision making reference to obligations arising from reinsurance contracts. The objective of this provision is to ensure that resources to be provided to private trusts relate exclusively to contributions deriving from direct insurance contracts and not from reinsurance contracts.

During the first half of 2017 the following adaptation was made to the secondary regulation established in CUSF:

- **Amending circular 1/17; Annex 6.5.7.:** noting that measurement parameters must be updated for the calculation of the solvency capital requirement for the mismatch between assets and liabilities.

Finally, as part of the process of implementing the LISF, working groups from the Ministry of Finance and Public Credit, the Fiscal Attorney's Office and the Public Treasury were formed in 2016 to issue regulations and administrative provisions arising from the new regulatory framework. During 2016 these groups worked on preparing the following regulation:

- Regulation of Insurance and Surety Agents.

- Regulation on the Inspection and Monitoring of the National Insurance and Bonding Commission.

- Rules for the setting up of mutual insurance companies.

- Draft Amendment and Addition to the Internal Regulation of the National Insurance and Bonding Commission in relation to Insurance Funds (agricultural).

- Amending circular relating to surety insurance.

- Amending circular relating to electronic transactions.

### 3.1.2. Guatemala

### Macroeconomic environment

Guatemala's economy grew by 3 percent in real terms in 2016, down from 4.1 percent in 2015. The slowdown was primarily due to weaker external demand and a decrease in public spending, partially offset by stronger private consumption (see Chart 3.1.2-a).

Economic activity was driven by financial services, trade, manufacturing and agriculture. Average inflation rose to 4.5 percent (2.4 percent in 2015) within the target range set by the Central Bank, while unemployment remained practically unchanged at 2.3 percent.

The value of exports fell by 4 percent in 2016 due to a reduction both in average prices (-1 percent) and volume (-3.7 percent), with a relatively significant impact from the fall in the price of sugar (-10.5 percent). The value of imports also fell sharply by 5.2 percent after a decline of 2.9 percent in 2015, driven by a fall in international prices, including a decrease in the oil bill. According to ECLAC and the IMF, the Guatemalan economy is set to grew by 3.3 percent in 2017 driven by momentum in domestic demand, mainly private consumption and increases in public spending on infrastructure and social programs, with more subdued external demand.

**Chart 3.1.2-a**
**Guatemala: evolution of economic growth and inflation, 2006-16**
(GDP in local currency, billions of quetzals; real growth rate, percent; annual inflation rate, percent)
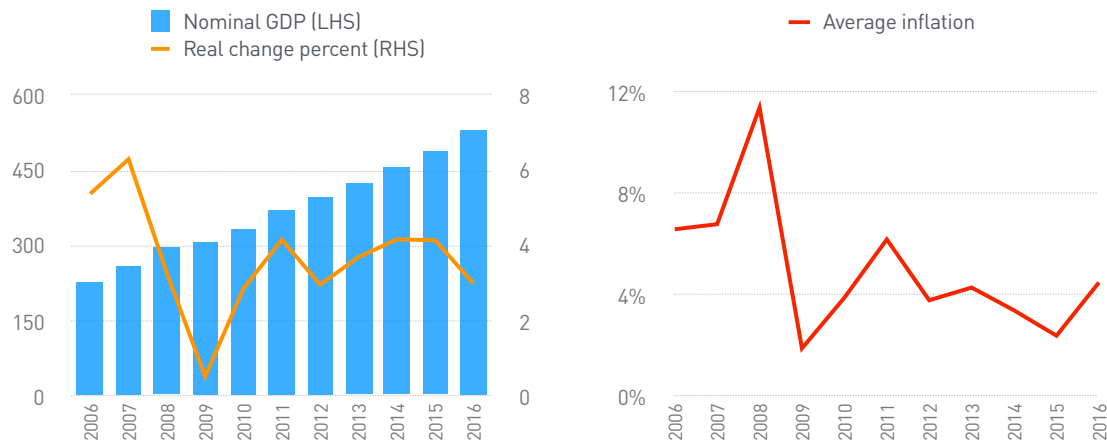
Source: MAPFRE Economic Research (based on IMF data)

## Insurance Market

### Growth

The Guatemalan insurance market achieved premiums of 6.313 billion quetzals in 2016 (830 million dollars), representing nominal growth of 5.8 percent and real growth of 1.3 percent. The market continued to grow at a similar pace as in 2015 when it expanded by 6 percent. The performance across business line was positive. Non-Life premiums (which represent 79.8 percent of the overall market) posted growth albeit slowing, and Life insurance also increased after a significant fall in the previous year (see Table 3.1.2 and Chart 3.1.2-b).

Life insurance premiums increased by 8.1 percent in nominal terms to 1.271 billion quetzals (167 million dollars), rebounding after a fall of 1 percent in the previous year. Non-Life insurance premiums rose by 5.3 percent in 2016 percent in nominal terms (after 7.6 percent in 2015), reaching 5.042 billion quetzals (663

million dollars). The two most important lines, Automobile and Health, increased by 17 and 7 percent respectively.

As illustrated in Chart 3.1.2-c, 1.6 percentage points of the total 5.8 percent nominal growth in the Guatemalan market in 2016 was accounted for by the Life insurance segment and the remaining 4.2 percentage points by the Non-Life business. This represents a return to a more balanced growth profile with positive contributions from both insurance businesses.

### Balance sheet and equity

Chart 3.1.2-d shows developments in the overall balance sheet of the Guatemalan insurance industry over the period 2006-16. Total insurance industry assets in Guatemala reached 9.1315 billion quetzals in 2016 (1.2009 billion dollars), while equity stood at 3.3143 billion quetzals (435.9 million dollars), up 8.1 percent on the previous year.

Table 3.1.2
Guatemala: premium volume[1] by Line of business (lob), 2016

| Line of business | Millions of quetzals | Millions of dollars | Increase | |
|---|---|---|---|---|
| | | | Nominal (percent) | Real (percent) |
| **Total** | **6,313** | **830** | **5.8** | **1.3** |
| **Life** | **1,271** | **167** | **8.1** | **3.5** |
| Individual Life | 199 | 26 | -0.8 | -5.1 |
| Group Life | 1,071 | 141 | 9.8 | 5.1 |
| Pensions | 1 | 0 | n.a. | n.a. |
| **Non-Life** | **5,042** | **663** | **5.3** | **0.8** |
| Health | 1,574 | 207 | 17.0 | 12.0 |
| Automobiles | 1,330 | 175 | 7.0 | 2.5 |
| Fire and Allied Lines | 388 | 51 | -11.6 | -15.4 |
| Earthquake | 467 | 61 | -8.7 | -12.6 |
| Other Lines | 418 | 55 | 13.4 | 8.6 |
| Transport | 237 | 31 | -5.3 | -9.3 |
| Surety | 197 | 26 | -6.8 | -10.8 |
| Technical Risks | 174 | 23 | 4.6 | 0.1 |
| Personal Accidents | 157 | 21 | 13.8 | 9.0 |
| Third-Party Liability | 100 | 13 | -14.9 | -18.6 |

Source: MAPFRE Economic Research (based on data from Banking Superintendence)
1/ Net direct reinsurance premium

Chart 3.1.2-b
Guatemala: growth developments in the insurance market, 2006-16
(premiums, millions of quetzals, nominal annual growth rates, percent)

PREMIUMS

Non-Life    Life

GROWTH

Total    Life    Non-Life
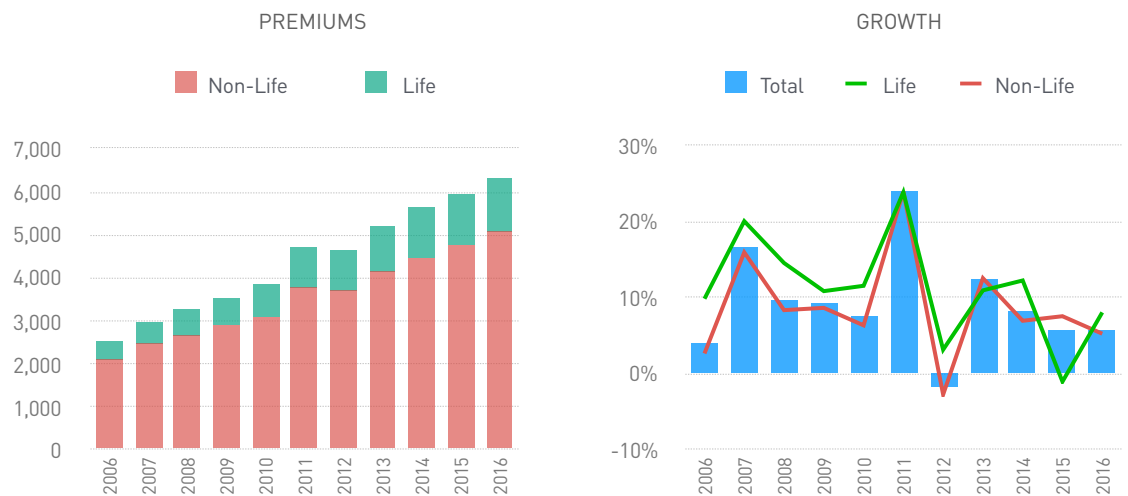


Source: MAPFRE Economic Research (based on data from Banking Superintendence)

Capital levels are high in the Guatemalan insurance industry. Capital stood at over 27 percent of total assets during the period 2006-11 and in excess of 30 percent from 2012-16. At the end of 2016 capital represented 36.3 percent of total assets.

**Investment**

Chart 3.1.2-e shows the evolution of investment over the period 2006-16, as well as the composition of the aggregate investment portfolio at the sector level at close 2016. Investment amounted to 5.9508 billion quetzals (782.6 million dollars), mainly in fixed income (58.3 percent), of which 54 percent related to public fixed income and 4.3 percent to private fixed income instruments.

Other financial investment accounted for a significant proportion (formed primarily of bank deposits) of 32.1 percent of the portfolio. Investment in debt instruments therefore dominates with aggregate investment in equity almost residual (1.9 percent).

The weight of sovereign fixed income investment has increased over the period 2006-16 from 41.2 percent in 2006 to 54 percent in 2016 (see Charts 3.1.2-f and 3.1.2-g). Meanwhile, the percentage
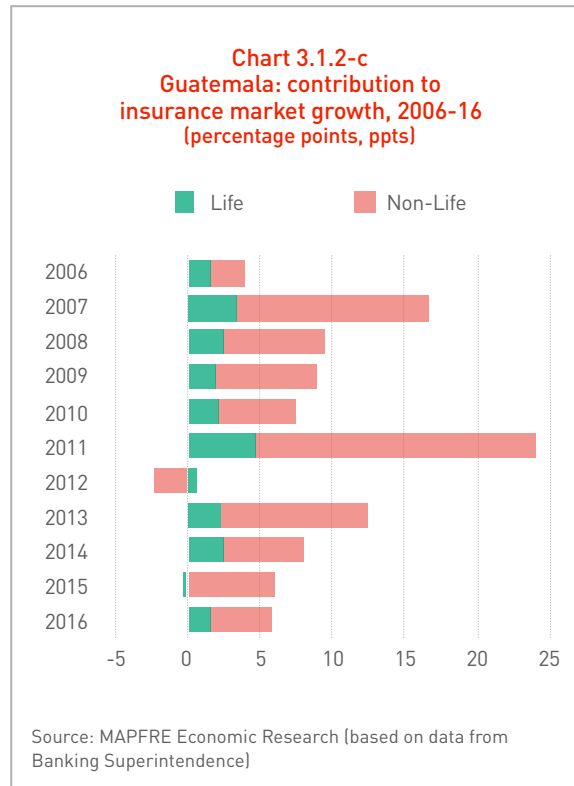
of other financial investments (essentially bank deposits) increased from 36.1 percent in 2006 to 41.2 percent in 2010. This trend has since reversed with other financial investment gradually reducing to 32.1 percent at the end of 2016..
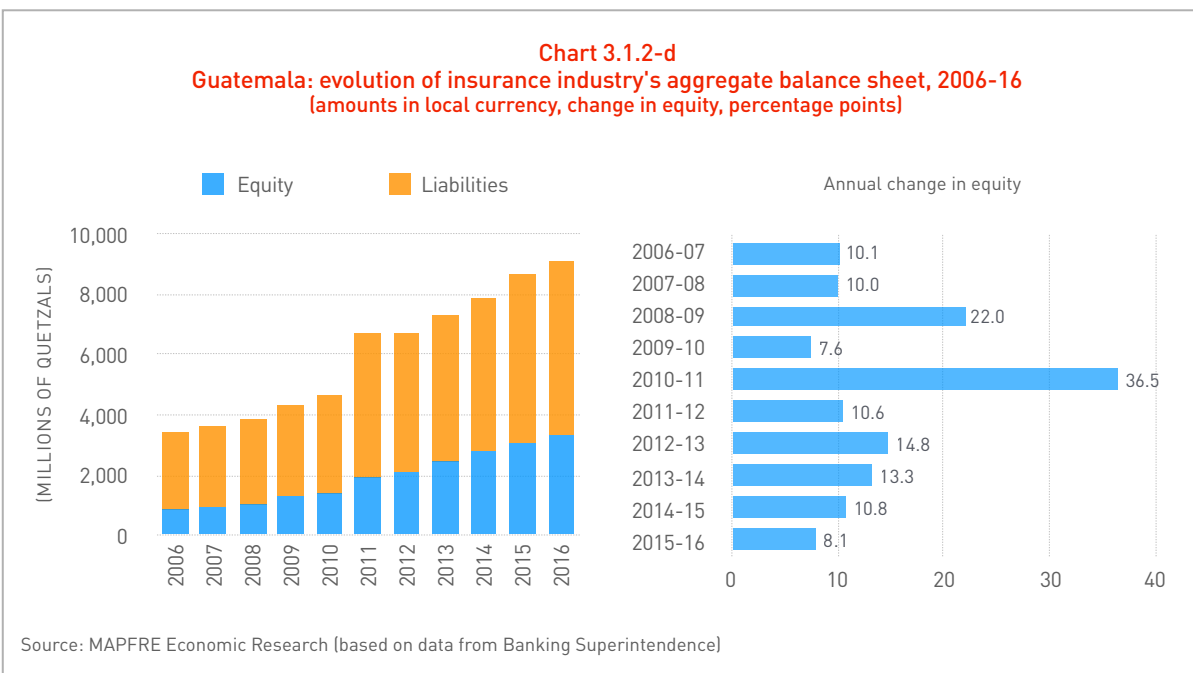


Chart 3.1.2-c
Guatemala: contribution to
insurance market growth, 2006-16
(percentage points, ppts)

Source: MAPFRE Economic Research (based on data from Banking Superintendence)



Chart 3.1.2-d
Guatemala: evolution of insurance industry's aggregate balance sheet, 2006-16
(amounts in local currency, change in equity, percentage points)

Source: MAPFRE Economic Research (based on data from Banking Superintendence)

**Technical provisions**

Charts 3.1.2-h, 3.1.2-i and 3.1.2-j show the evolution and relative composition of the Guatemalan insurance industry's technical provisions at the end of 2016.

Technical provisions amounted to 4.9637 billion quetzals (652.8 million dollars) in 2016. 34.1 percent of the total provisions related to Life insurance, 25.7 percent to provisions for unearned premiums and unexpired risks in Non-Life insurance, 35.2 percent to technical provisions for claims, 4.9 percent to provisions for catastrophic risks and 0.1 percent for other technical provisions.

The volume of technical provisions has grown on a sustained basis in absolute terms over the period 2006-16, both in Life and Non-Life insurance.



Chart 3.1.2-e
Guatemala: Insurance market technical provisions, 2006-16
(millions of quetzals)

Source: MAPFRE Economic Research (based on data from Banking Superintendence)



Chart 3.1.2-f
Guatemala: structure of investment, 2006-16
(%)

Source: MAPFRE Economic Research (based on data from Banking Superintendence)



Chart 3.1.2-g
Guatemala: structure of investment, 2016
(%)

Source: MAPFRE Economic Research (based on data from Banking Superintendence)

However, the weight of Life insurance provisions in total technical provisions fell sharply in 2010 and 2011, subsequently recovering to around 34 percent of total provisions and has remained on a downward path in recent years (Charts 3.1.2-i and 3.1.2-j).

**Technical performance**

Chart 3.1.2-k shows developments in the Guatemalan insurance industry's technical performance over 2006-16. The combined ratio held stable at 93.3 percent in 2016 with a positive technical result and similar values to the previous year both in terms of expenses and the claims ratio. The claims ratio has increased in recent years, although this was partially compensated by a trend toward lower expenses.

**Chart 3.1.2-h**
**Guatemala: Insurance market's technical provisions, 2006-16**
**(millions of quetzals)**
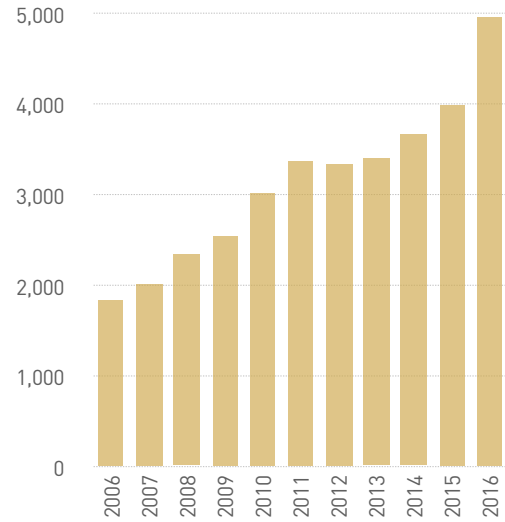
Source: MAPFRE Economic Research (based on data from Banking Superintendence)

**Chart 3.1.2-i**
**Guatemala: structure of technical provisions, 2006-16**
**(%)**

- Other technical provisions
- Catastrophic risk provisions
- Provisions for outstanding claims
- Unearned premiums and ongoing risks
- Life insurance provisions
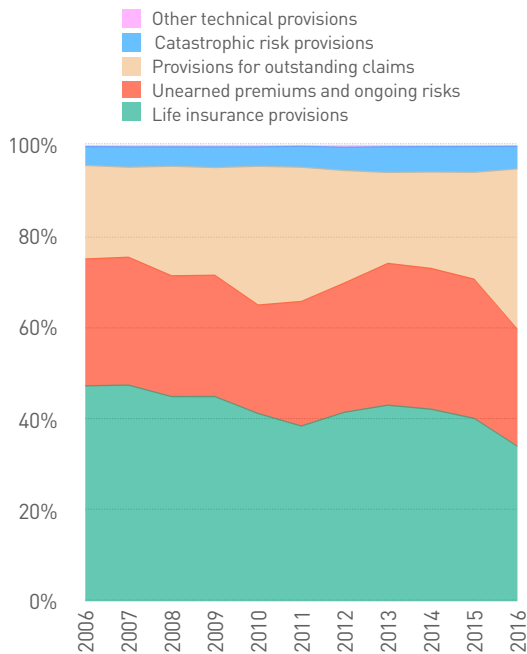
Source: MAPFRE Economic Research (based on data from Banking Superintendence)

**Chart 3.1.2-j**
**Guatemala: structure of technical provisions, 2016**
**(%)**

- Life
- Non-Life
- For claims
- Catastrophic risks
- Other

34.1%
25.7%
35.2%
0.1%
4.9%
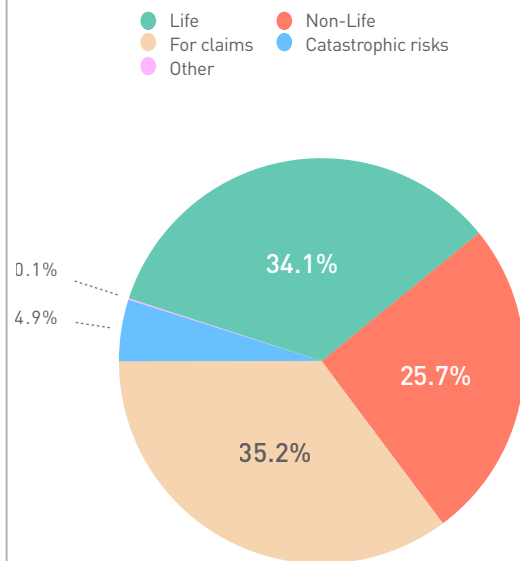
Source: MAPFRE Economic Research (based on data from Banking Superintendence)

Chart 3.1.2-k
Guatemala: evolution of market technical performance, 2006-16
(total combined ratio, percent; annual change in combined ratio, percentage points)
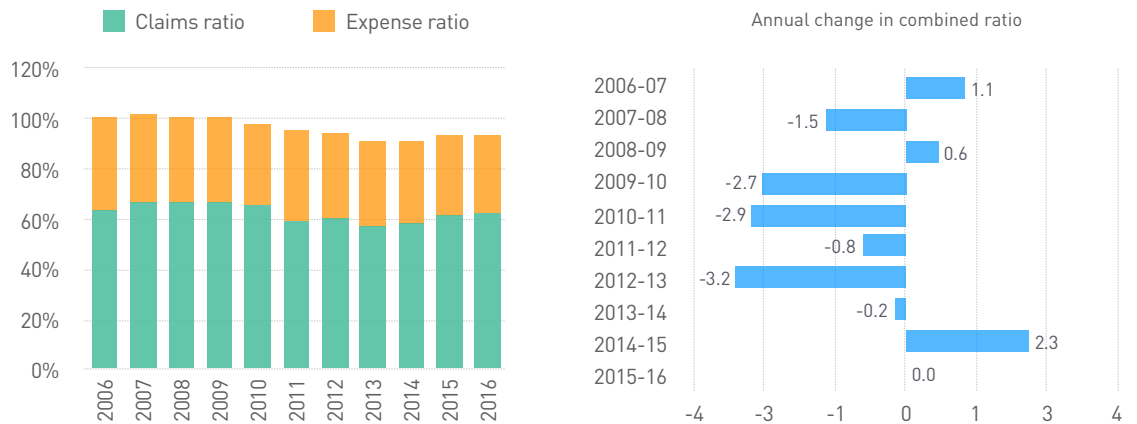


Source: MAPFRE Economic Research (based on data from Banking Superintendence)

## Results and profitability

The Guatemalan insurance business posted a net result of 654 million quetzals (87 million dollars) in 2016, down 2 percent on the previous year due to a modest reduction in the financial result relative to 2015 (see Chart 3.1.2-l).

## Insurance penetration, density and depth

Chart 3.1.2-m shows the performance of the main structural growth indicators for the Guatemalan insurance industry, as well as the pattern over the period 2006-16.

The penetration index (premiums/GDP) stood at 1.2 percent in 2016. This indicator has remained

Chart 3.1.2-l
Guatemala: evolution of results and profitability, 2006-16
(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)
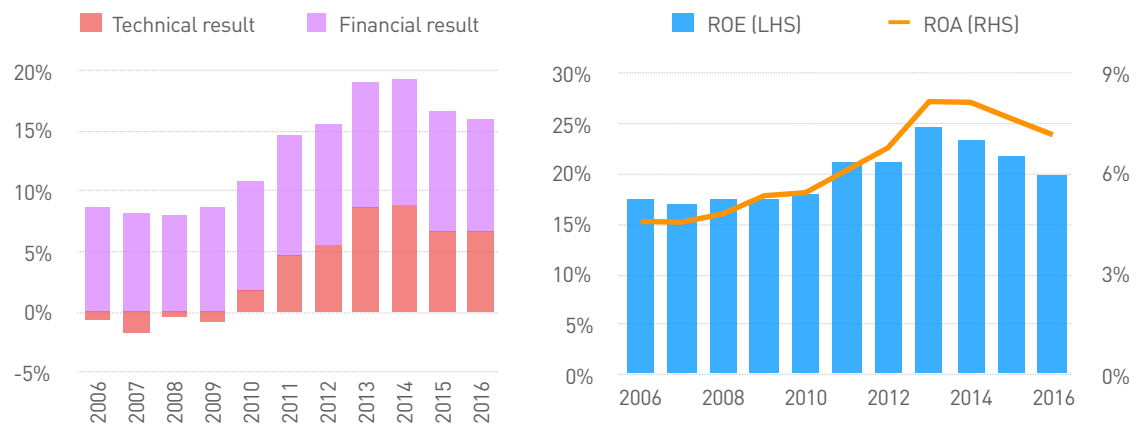


Source: MAPFRE Economic Research (based on data from Banking Superintendence)

**Chart 3.1.2-m**
**Guatemala: evolution of penetration, density and depth, 2006-16**
(premiums/GDP, percent; premiums per capita, quetzals and dollars; Life insurance premiums / total premiums, percent, index 2006=100)
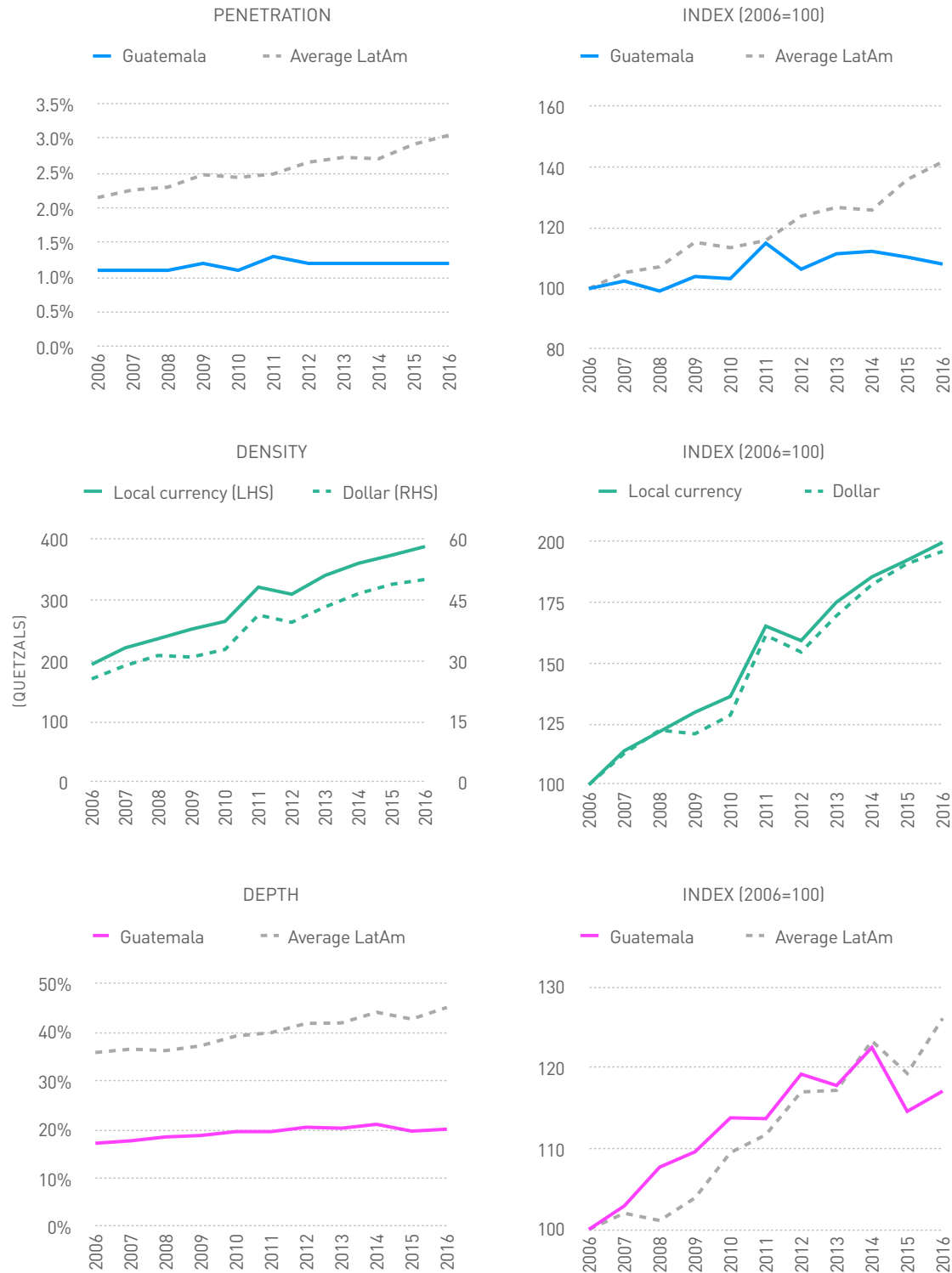
PENETRATION

INDEX (2006=100)

DENSITY

INDEX (2006=100)

DEPTH

INDEX (2006=100)

Source: MAPFRE Economic Research (based on data from Banking Superintendence)

relatively stable over the period 2006-16, meaning that penetration in 2016 was essentially the same as in 2006.

Overall penetration is below the average for Latin American insurance markets and has diverged over the last ten years relative to the rest of the countries in the region where penetration rose by 41.8 percent.

Insurance density in 2016 (premiums per capita) amounted to 389 quetzals (51.2 dollars), 99.9 percent above the 2006 value (194.6 quetzals). In contrast to penetration, density has increased over the last ten years, meaning that while per capita purchases of insurance have grown at a sustained rate (a very significant increase given the relatively small base), the pace of growth has been insufficient to enable insurance to gain a greater weight among total economic activity in the country.

Depth (relationship of Life insurance premiums to total premiums) stood at 20.1 percent, 0.4 percentage points above the 2015 value, albeit some 2.9 percentage points above the depth level in 2006. As is the case for the penetration index, the depth level of the Guatemalan

insurance market is below the Latin American average, though in this case converging.

Finally, Chart 3.1.2-n illustrates progress in the Guatemalan insurance market from the perspective of overall changes in penetration and depth.

This analysis shows how the Guatemalan insurance market remained on an upward development track over the period 2006-14, with increases in both penetration and depth, i.e. growth in quantitative and qualitative dimensions. However, there has been a degree of reversion of the trend from 2014 onward, characterized by both a decrease in the share of insurance in the economy (penetration) as well as maturity levels (depth).

**Estimate of the Insurance Protection Gap**

Chart 3.1.2-o shows an estimate of the IPG for the Guatemalan insurance market over the period 2006-16. The IPG stood at 35.624 billion quetzals in 2016, equivalent to 5.6 times the actual insurance market at the end of 2016.
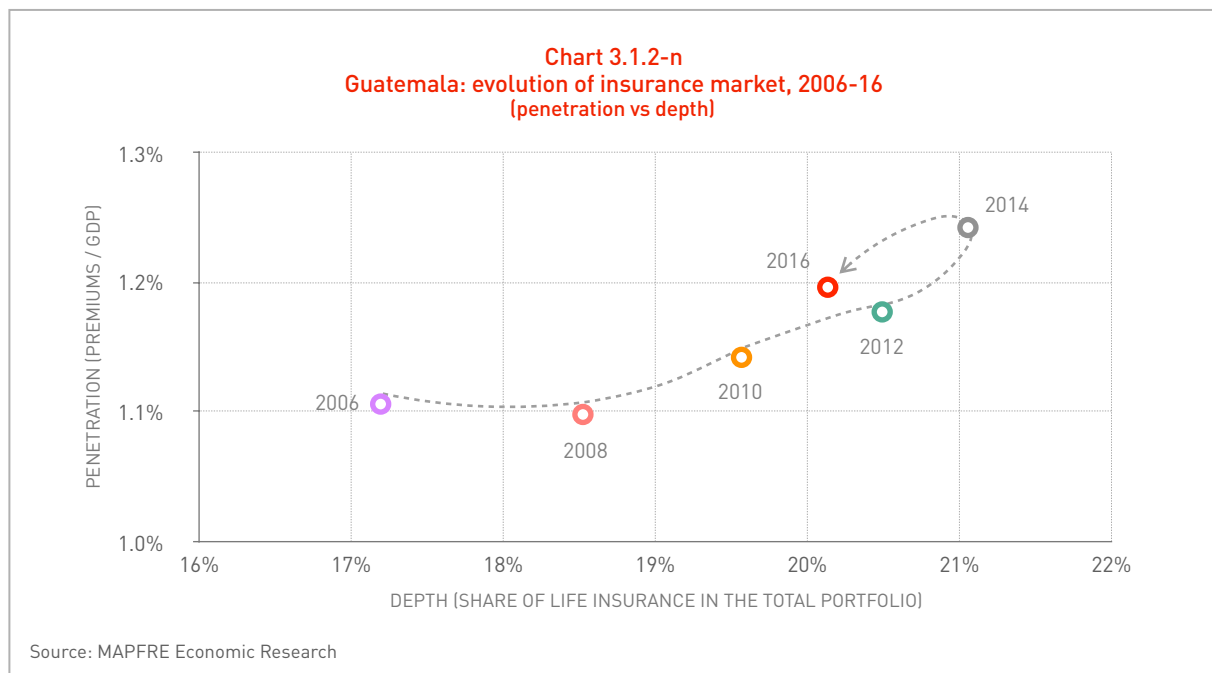


Chart 3.1.2-n
Guatemala: evolution of insurance market, 2006-16
(penetration vs depth)

Source: MAPFRE Economic Research

As is the case for most Latin American insurance markets, the structure and evolution of the IPG is conditioned by Life insurance. In 2016, 63 percent of the gap related to Life insurance, the equivalent of 22.458 billion quetzals. Meanwhile, Non-Life insurance accounted for 37 percent of the IPG (13.165 billion quetzals).

The potential insurance market in Guatemala in 2016 (measured as the sum of the actual market and IPG) stood at 41.937 billion quetzals, i.e. 6.6 times the current market.

Chart 3.1.2-p shows an estimate of the IPG as a multiple of the actual market in each year of the period under analysis. The IPG (measured as a multiple) for the Guatemalan insurance market has been on a gentle downward path over the period 2006-16, both in terms of the overall market and Life segment. Accordingly, in 2006 the Guatemalan market's IPG was 6.6 times the actual insurance market compared to 5.6 times in 2016. The same is true in the Life segment, where the multiple fell from 25 to 17.7 times. However, the IPG has stagnated in relative terms in the Non-Life insurance segment; standing at
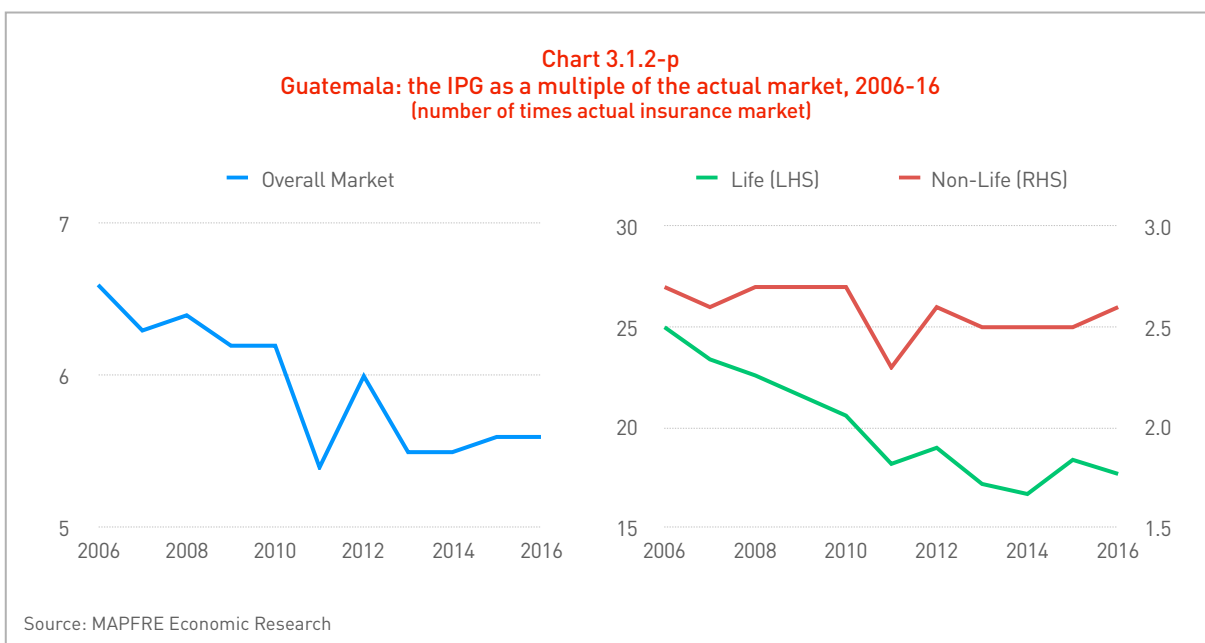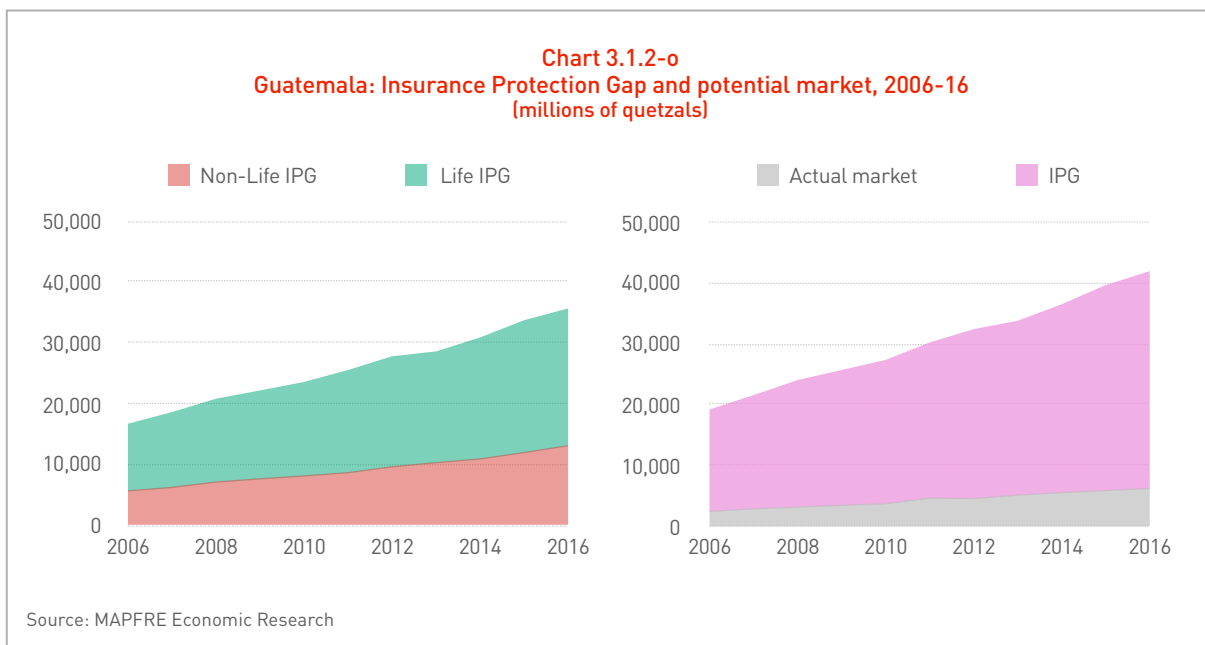


**Chart 3.1.2-o**
**Guatemala: Insurance Protection Gap and potential market, 2006-16**
**(millions of quetzals)**

Source: MAPFRE Economic Research



**Chart 3.1.2-p**
**Guatemala: the IPG as a multiple of the actual market, 2006-16**
**(number of times actual insurance market)**

Source: MAPFRE Economic Research

in the Non-Life insurance segment; standing at 2.6 times in 2016 relative to 2.7 in 2006.

Finally, Chart 3.1.2-q provides an assessment regarding the capacity of the Guatemalan insurance market to close the IPG. This is based on a comparison of growth rates over the last ten years in relation to the growth rates that would be required in order to close the IPG established in 2016 over the next ten years.

Over the period 2006-2016, the insurance market in Guatemala posted average annual growth of 9.5 percent. This was underpinned by average growth of 11.3 percent in the Life insurance sector and 9.1 percent in the Non-Life insurance sector. If the same growth profile were to be maintained over the next ten years, the growth rate for the market as a whole would fall short of the rate needed to cover the IPG established in 2016 by 11.3 percentage points.

This means that the insurance market would need an average growth rate of 20.8 percent over the next ten years in order to close the IPG calculated for 2016.

A similar story is true for the Life and Non-Life segments. The shortfall for Life insurance would be 22.7 percentage points and 4.6 percentage points for Non-Life insurance. Thus, in order to cover these gaps the Guatemalan insurance market would need to achieve annual average growth of 34 percent and 13.7 percent respectively over the next ten years.

The shortfalls have barely changed relative to the calculation made in 2015 for the Guatemalan insurance market.

**Market Development Index (MDI)**

Chart 3.1.2-r provides an estimate of the Market Development Index (MDI) for the Guatemalan insurance industry.

Overall the indicator has been on a positive path over the last ten years with annual declines in 2011-12 and 2014-15. However, the MDI is below the average for the Latin American market with the growth trend petering out from 2011 onward.



Chart 3.1.2-q
Guatemala: capacity to close IPG, 2006-16
(average annual growth rate, percent; sufficiency or insufficiency, percentage points)

Source: MAPFRE Economic Research
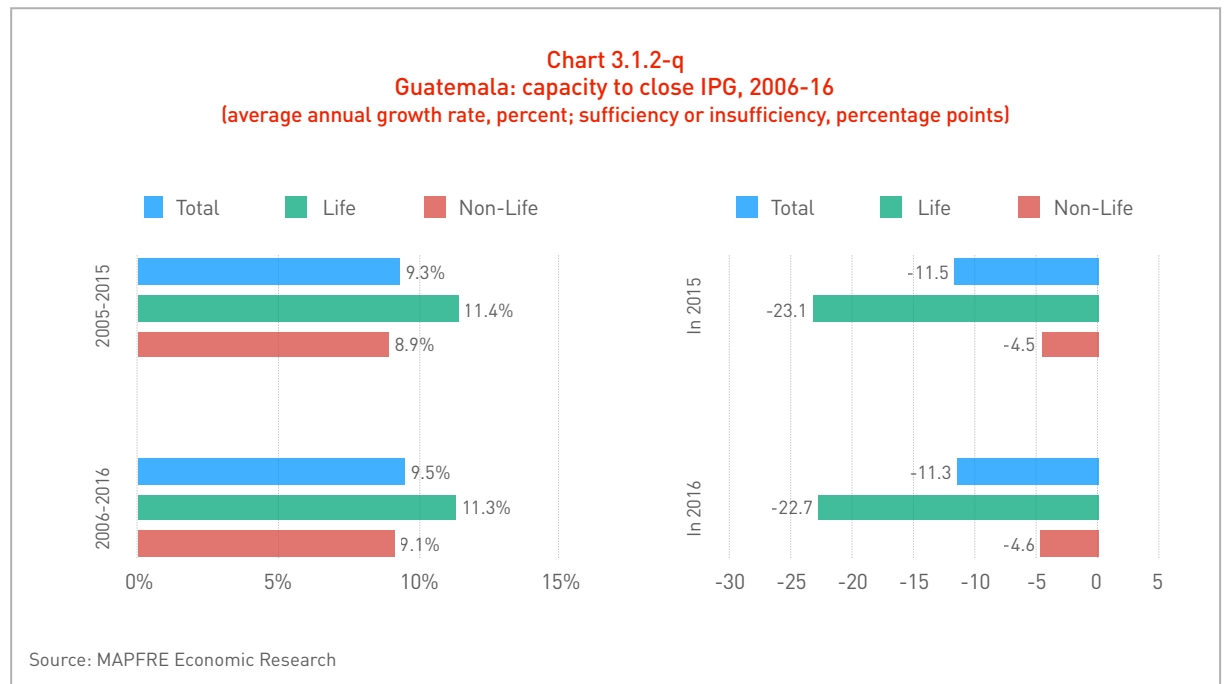
Chart 3.1.2-r
Guatemala: Market Development Index (MDI), 2005-16
(index 2005=100; annual change)
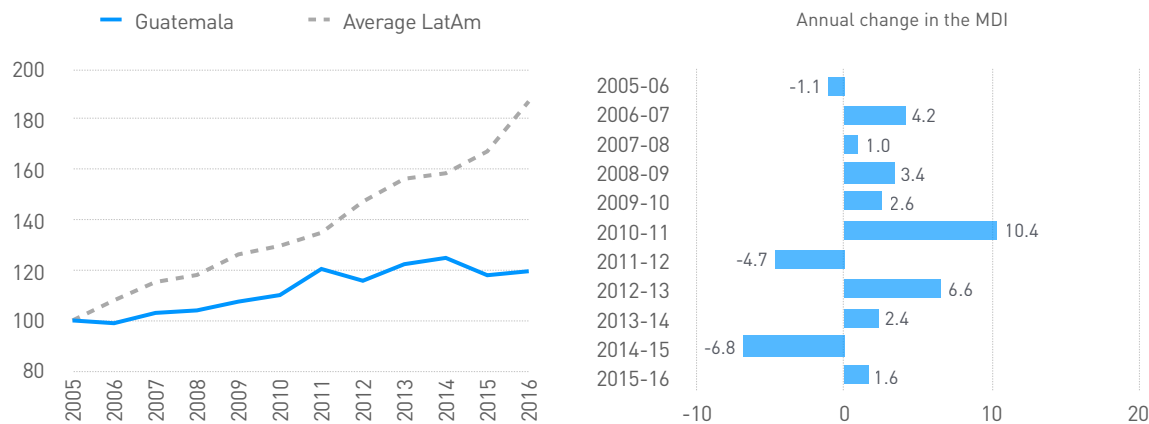


Source: MAPFRE Economic Research

## Insurance market rankings

### Overall ranking

The Guatemalan insurance industry comprised 22 insurance companies in 2016. The top five institutions accounted for 66.1 percent of total premiums, 0.9 percent less than in 2015.

Levels of concentration have fallen slightly over the last ten years. The Herfindahl index (Chart 3.2.1-s) indicates that concentration levels have remained above the theoretical threshold associated with moderate levels of concentration. The situation is identical for the CR5 index, which fell from 67.4 percent in 2006 to 66.1 percent in 2016.

As illustrated in Chart 3.1.2-t, the two most important insurance groups in the Guatemalan market remained El Roble, with 26.9 of market premiums and GT with a market share of 18.2 percent. Followed at some distance by Aseguradora General (8.6 percent), MAPFRE (6.6 percent) and Aseguradora Rural (7.3 percent).

## Key regulatory aspects

There were two key highlights in relation to regulation of insurance in the Guatemalan market in 2016. Firstly, the Resolution of the Monetary Board JM-14-2016 (Group Insurance Regulation) relating to the arrangement of group insurance by insurance companies, group insurance covers, the parties involved in the arrangement, documentation to be included (such as the application and individual certification) and other provisions which insurers must comply with for group insurance. And secondly, Agreement Number 16-2016 of the Superintendence of Banks which sets out the classification of monetary and non-monetary accounts in the catalog of accounts in the Manual of Accounting Instructions for Insurance Companies approved by the Monetary Board in resolution JM-194-95.

**Graph 3.1.2-s**
**Guatemala: insurance industry concentration, 2006-16**
(Herfindahl index; CR5 index, percent)

— HHI
-- Moderate concentration threshold
-- High concentration threshold

— CR5 (Total)
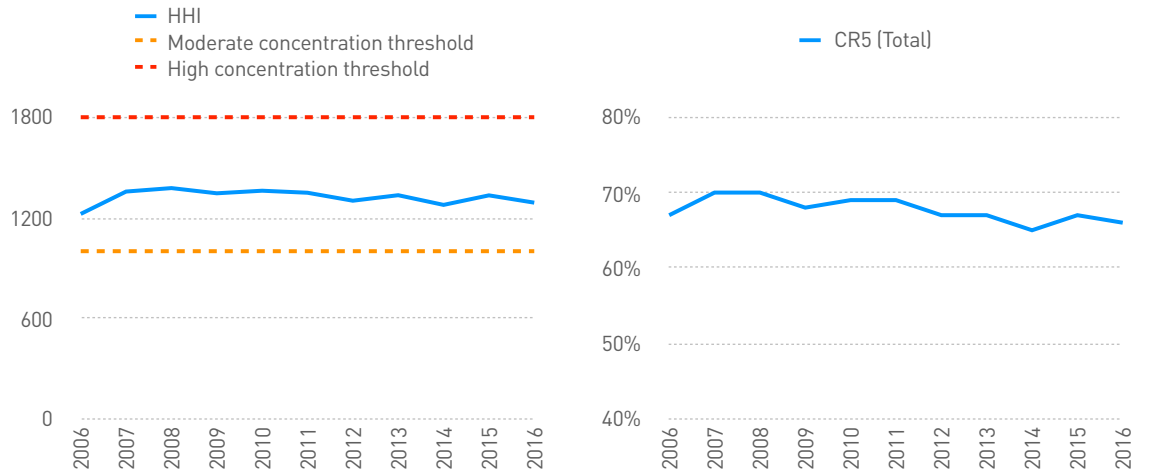
Source: MAPFRE Economic Research (based on data from Banking Superintendence)



**Chart 3.1.2-t**
**Guatemala: overall ranking, 2015-16**
(market shares, percent)

■ 2016    ■ 2015

| | |
|---|---|
| El Roble | 26.9% |
| G&T | 18.2% |
| Aseguradora General | 8.6% |
| MAPFRE | 6.6% |
| Aseguradora Rural | 7.3% |
| Seguros Universales | 6.3% |
| Pan-American Life | 4.5% |
| National | 4.1% |
| Agromercantil | 4.6% |
| Occidente | 3.0% |
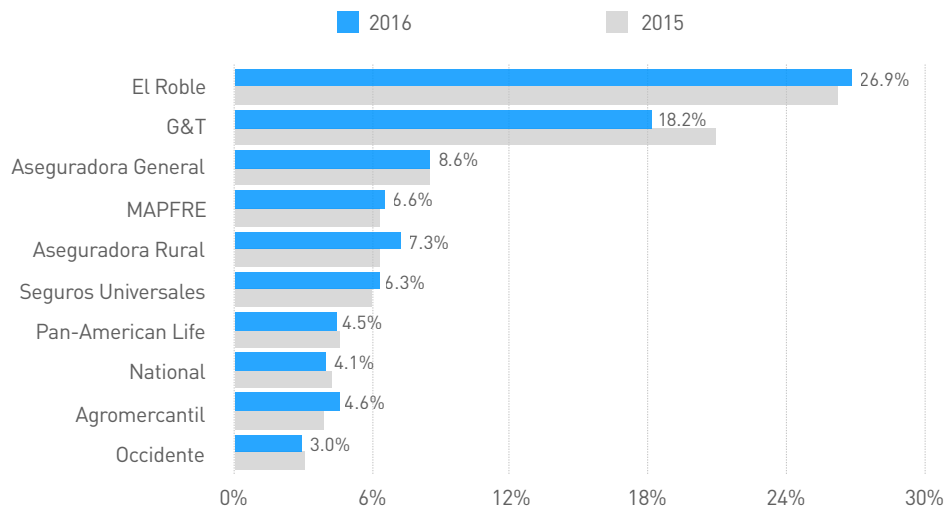
Source: MAPFRE Economic Research (based on data from Banking Superintendence)

### 3.1.3. Honduras

### Macroeconomic environment

The Honduran economy grew by 3.6 percent in real terms in 2016, the same growth rate as the previous year. Growth was supported by domestic consumption underpinned by a sustained increase in remittance flows and low international oil prices, which offset a decrease in external demand (see Chart 3.1.3-a).

The most dynamic sectors were the electricity, financial intermediation, agriculture and construction sectors. In terms of demand, total consumption growth was driven by an increase in private consumption. However, despite an increase in the weight of public investment, gross capital formation slowed notably.

The fall in oil and food prices pushed down the Honduran economy's average inflation rate in 2016 to 2.7 percent (after 3.2 percent in 2015). The unemployment rate decreased by a percentage point to 6.3 percent.

The Honduran economy's current account deficit improved by two percentage points to reach 3.8 percent of GDP, due to a decrease in oil imports,

an increase in remittances and a significant fall in capital goods imports.

Both ECLAC and the IMF see the Honduran economy growing by around 3.4 percent in 2017.

### Insurance Market

#### Growth

The Honduran insurance market achieved a premium volume of 9.581 billion lempiras (420 million dollars) in 2016, with nominal growth of 9.8 percent and real growth of 6.9 percent relative to the previous year (see Table 3.1.3 and Chart 3.1.3-b).

Insurance industry growth was similar to the previous year, when premiums rose by 9.6 percent in nominal terms. Life insurance premiums rose by 17.8 percent in 2016 (after 15.4 percent in 2015), reaching 3.288 billion lempiras (144 million dollars). Non-Life insurance premiums increased by 6.1 percent (after 7.1 percent in 2015), reaching 6.294 billion lempiras (276 million dollars). Group Life insurance performed particularly well within the Life insurance segment, while the two most important types of Non-Life insurance (Health and Automobiles) grew by 14.3 and 11.8 percent



Chart 3.1.3-a
Honduras: evolution of economic growth and inflation, 2006-16
(GDP in local currency, billions of lempiras; real growth rate, percent; annual inflation rate, percent)
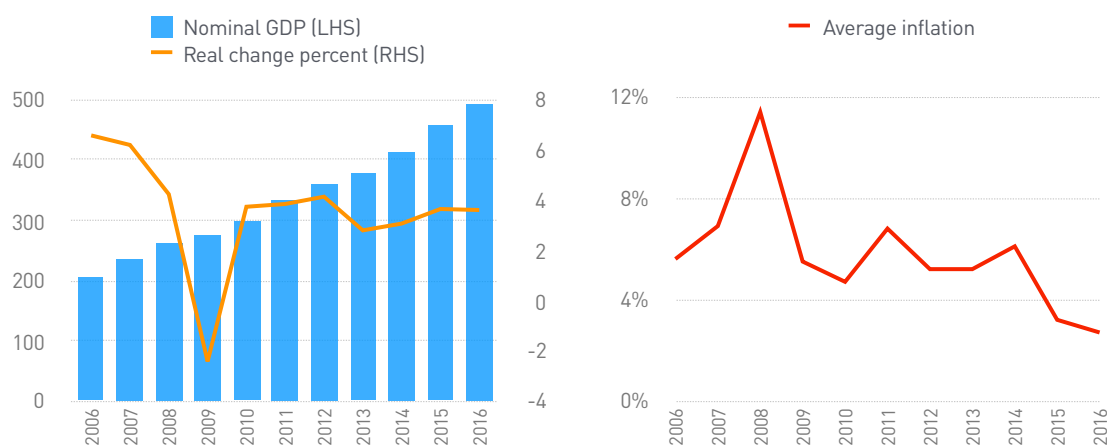
Source: MAPFRE Economic Research (based on IMF data)

Table 3.1.3
Honduras: premium volume[1] by line of business (lob), 2016

| Line of business | Millions of lempiras | Millions of dollars | Increase | |
|---|---|---|---|---|
| | | | Nominal (percent) | Real (percent) |
| **Total** | **9,581** | **420** | **9.8** | **6.9** |
| **Life** | **3,288** | **144** | **17.8** | **14.6** |
| Individual Life | 578 | 25 | 2.1 | -0.6 |
| Group Life | 2,683 | 117 | 22.5 | 19.2 |
| Pensions | 27 | 1 | -24.2 | -26.2 |
| **Non-Life** | **6,294** | **276** | **6.1** | **3.2** |
| Health | 1,726 | 76 | 14.3 | 11.3 |
| Automobiles | 1,466 | 64 | 11.8 | 8.8 |
| Fire and Allied Lines | 1,883 | 82 | -0.5 | -3.2 |
| Other Damage | 468 | 20 | -9.7 | -12.1 |
| Transport | 223 | 10 | -3.8 | -6.4 |
| Surety | 142 | 6 | 16.7 | 13.6 |
| Technical Risks | 45 | 2 | 7.8 | 5.0 |
| Personal Accidents | 246 | 11 | 32.8 | 29.2 |
| Third-Party Liability | 95 | 4 | -21.2 | -23.3 |

Source: MAPFRE Economic Research (based on data from National Commission of Banks and Insurance)

1/ Net premiums of returns and cancelations

Chart 3.1.3-b
Honduras: growth developments in the insurance market, 2006-16
(premiums, millions of lempiras, nominal annual growth rates, percent)
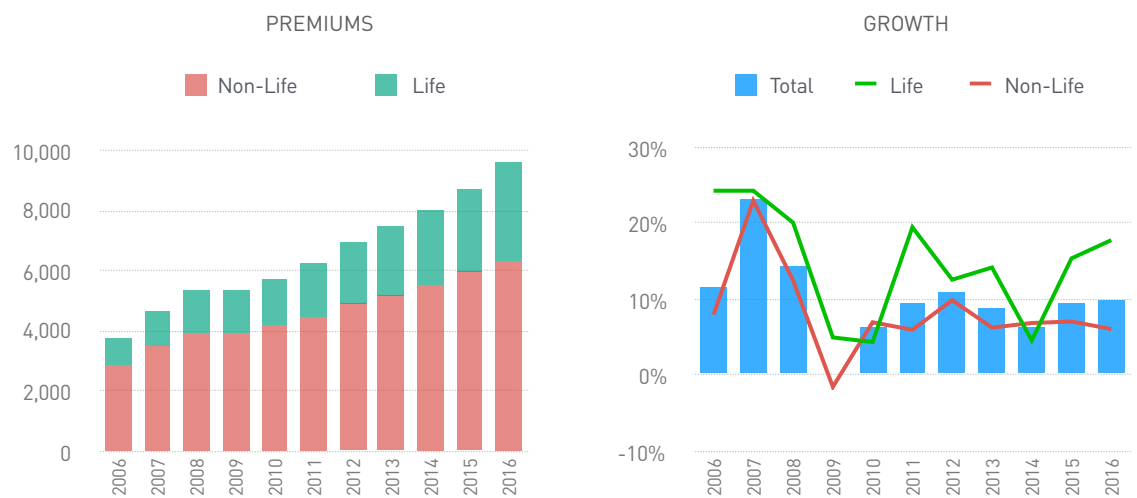


Source: MAPFRE Economic Research (based on data from National Commission of Banks and Insurance)

respectively, with reductions in premiums in Transport (-3.8 percent), Other Damages (-9.7 percent) and Third-Party Liability (-21.2 percent).

Accordingly, Life insurance contributed 5.7 percentage points (ppts) to overall market growth of 9.8 percent, while Non-Life insurance contributed 4.1 percentage points (see Chart 3.1.3-c).

**Balance sheet and equity**

Chart 3.1.3-d shows developments in the Honduran insurance industry's technical performance over 2006-16.

The sector's total assets reached 14.9105 billion lempiras (653 million dollars) in 2016, while equity stood at 5.456 billion lempiras (239 million dollars), rising consistently over the period, except in 2013. A highlight of the Honduran insurance industry is the high level of capital (measured in relation to total assets). Capital levels stood at around 40 percent over the period 2006-12. Since then capital levels have fallen moderately, reaching 36.59 percent of total assets in 2016.



Chart 3.1.3-c
Honduras: contribution to insurance market growth, 2006-16
(percentage points, ppts)
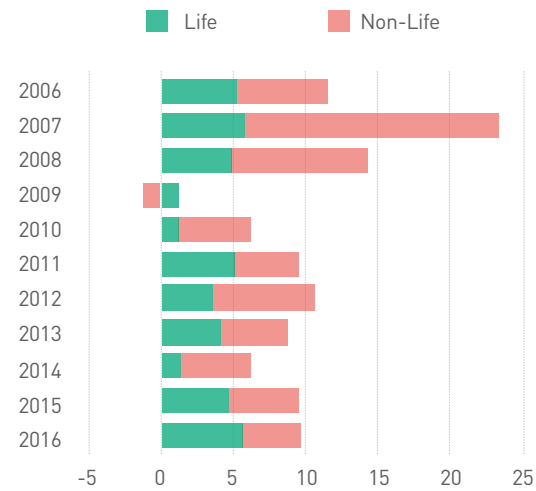
Source: MAPFRE Economic Research (based on data from National Commission of Banks and Insurance)

**Investment**

Chart 3.1.3-e shows developments in the Honduran insurance industry's investment over the period 2006-16, while Charts 3.1.3-f and 3.1.3-g provide a breakdown of the composition of the aggregate sector-level investment portfolio over the period and in 2016.



Chart 3.1.3-d
Honduras: evolution of insurance industry's aggregate balance sheet, 2006-16
(amounts in local currency, change in equity, percentage points)
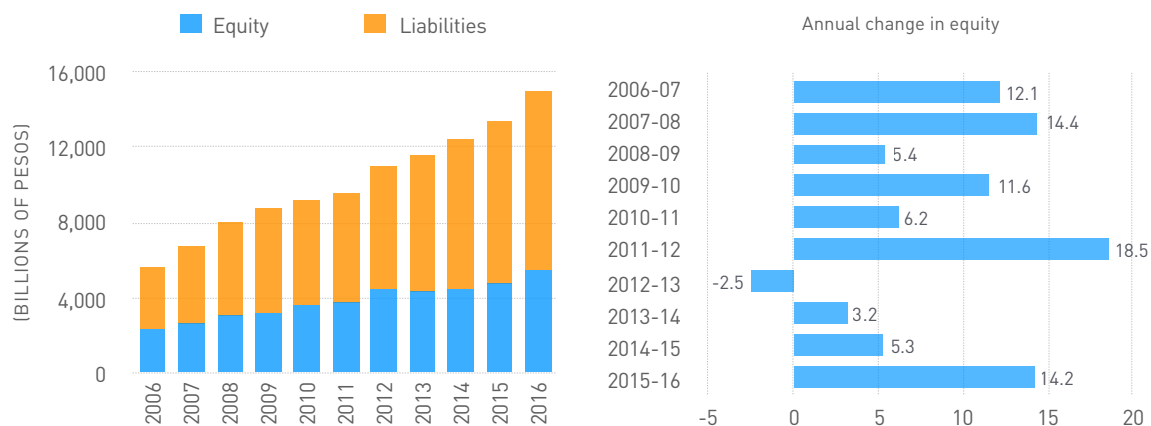
Source: MAPFRE Economic Research (based on data from National Commission of Banks and Insurance)

Investment reached 9.6477 billion lempiras (423 million dollars) in 2016, with 81.1 percent focused in debt and equity instruments, 11.9 percent cash, 2.6 percent property and the remaining 4.5 percent other financial investment. In general, the trend over the period has been toward an increase in the share of debt and equity investment (which after stagnating from 2013 rose again in 2016), as well as an increasing cash share.

**Technical provisions**

Chart 3.1.3-h shows the evolution of technical provisions in the Honduran insurance industry. Total technical provisions amounted to 6.1647 billion lempiras (270 million dollars) in 2016. Is is not possible on the basis of available data to undertake an analysis at a more detailed level of granularity of the composition of technical provisions at a sector level. However, in aggregate terms technical provisions

**Chart 3.1.3-e**
**Honduras: Insurance market technical provisions, 2006-16**
**(millions of lempiras)**



Source: MAPFRE Economic Research (based on data from National Commission of Banks and Insurance)

**Chart 3.1.3-f**
**Honduras: structure of investment, 2006-16**
**(%)**



Source: MAPFRE Economic Research (based on data from National Commission of Banks and Insurance)

**Chart 3.1.3-g**
**Honduras: structure of investment, 2016**
**(%)**



Source: MAPFRE Economic Research (based on data from National Commission of Banks and Insurance)

experienced sustained absolute growth over the period 2006-16, with the exception of a slight fall in 2010. In 2006 total technical provisions amounted to some 2.3522 billion lempiras (103 million dollars).

**Technical performance**

Chart 3.1.3-i shows the technical performance of the Honduran insurance industry over the period 2006-16 on the basis of an analysis of the market's combined ratio.

The combined ratio was 84.5 percent in 2016, 0.9 percentage points below the level reached in 2015 (85.3 percent). This slight improvement was mainly due to a decline in the expense ratio, which fell from 36.6 percent in 2015 to 35.5 percent in 2016. Meanwhile the claims ratio remained at broadly similar levels to the previous two years - at 48.9 percent.

**Results and profitability**

The Honduran insurance industry posted a net result of 1.053 billion lempiras in 2016 (46 million dollars), representing an increase of 16.2 percent on the previous year. The 2016 net result was mainly underpinned by an improvement in the sector's technical result.



Chart 3.1.3-h
Honduras: Insurance market's
technical provisions, 2006-16
(millions of lempiras)

Source: MAPFRE Economic Research (based on data from National Commission of Banks and Insurance)
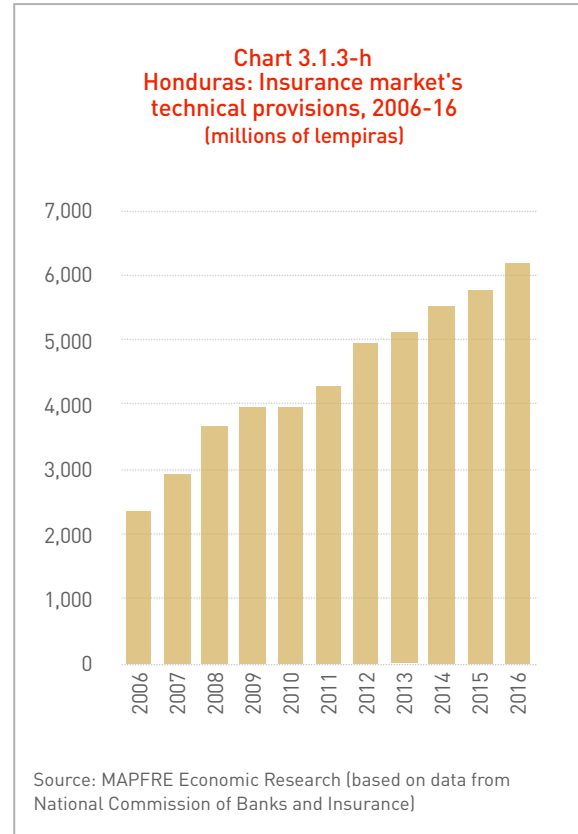
In terms of profitability, the sector posted a return on equity (ROE) of 19.3 percent in 2016, representing a modest increase of 0.34 percentage points on 2015. In a similar vein, return on assets (ROA) amounted to 7.1 percent in 2016, a slight increase of 0.3 percentage points on 2015 (see Chart 3.1.3-j).



Chart 3.1.3-i
Honduras: evolution of market technical performance, 2006-16
(total combined ratio, percent; annual change in combined ratio, percentage points)

Source: MAPFRE Economic Research (based on data from National Commission of Banks and Insurance)
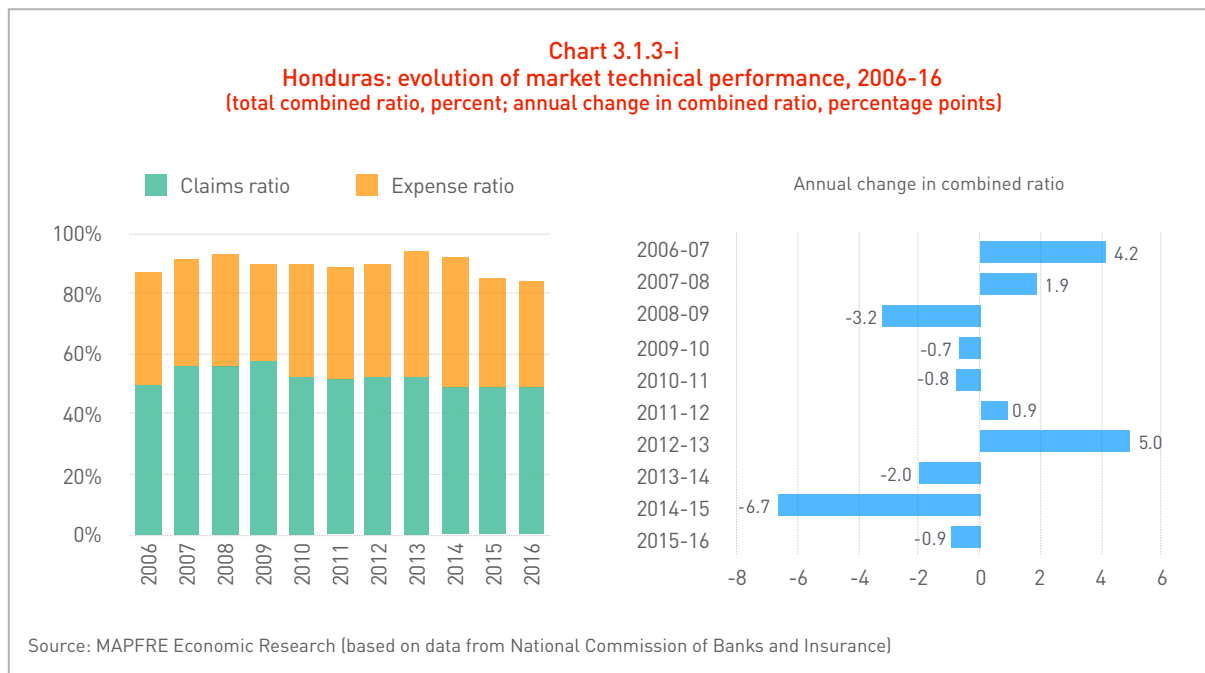
Chart 3.1.3-j
Honduras: evolution of results and profitability, 2006-16
(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)
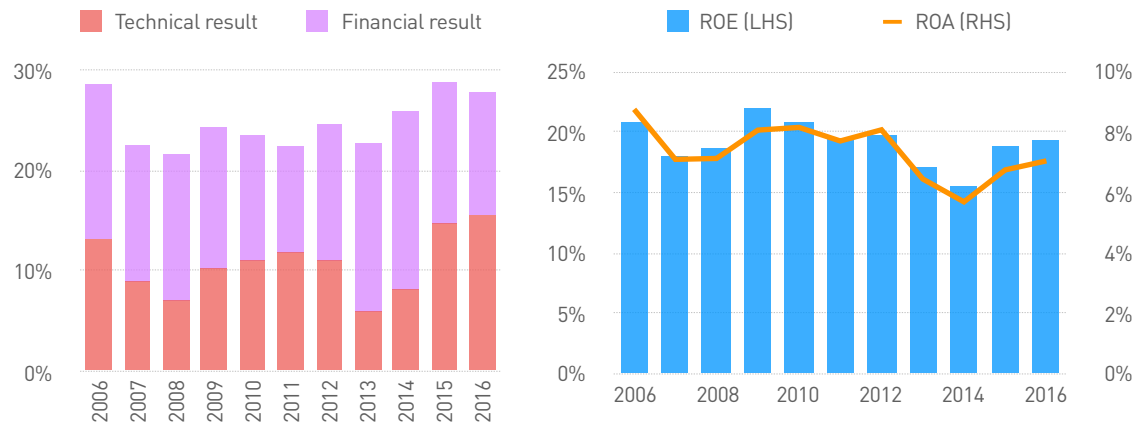
Source: MAPFRE Economic Research (based on data from National Commission of Banks and Insurance)

**Insurance penetration, density and depth**

Chart 3.1.3-k shows the main structural trends in the development of the insurance market in Honduras over the period 2006-16. The penetration index (premiums/GDP) stood at 2 percent in 2016, barely 0.2 percentage points above 2006. The penetration index has stagnated over the course of the last ten years in contrast to the growth in penetration seen on average across the Latin American insurance market.

Insurance density in Honduras (premiums per capita) amounted to 1,171 lempiras (51.3 dollars), representing an increase of 8.3 percent relative to 2015 (1,080.6 lempiras). Density has been on an upward trend (on a local currency basis) over the period, registering cumulative growth of 116.5 percent over the period 2006-16.

Depth (measured in terms of the relationship of Life insurance premiums to total premiums) stood at 34.3 percent in 2016, some 10 percentage points above the 2006 level. This is in line with the overall trend in Latin American markets, albeit below the absolute depth level for the average of countries in the region.

Finally, Chart 3.1.3-l illustrates the overall performance of the Honduran insurance market based on a dispersion analysis which takes account of penetration and depth levels. The analysis shows that the Honduran insurance market has developed broadly in line with the rest of Latin America, developing consistently over the period both on quantitative (penetration) and qualitative dimensions (depth), albeit remaining below the regional average for both.

**Estimate of the Insurance Protection Gap**

Chart 3.1.3-m provides an estimate of the IPG for the Honduran market between 2006 and 2016. The insurance gap amounted to 29.447 billion lempiras in 2016, some 3.1 times the actual insurance market at the end of the year.

As is the case for most Latin American insurance markets, the structure and evolution of the IPG over the period is conditioned by the contribution from Life insurance. Thus, at the end of 2016, 63.8 percent of the IPG related to Life insurance (18.796 billion lempiras), 5.2 percentage points below the share for this segment in 2006. The remaining 36.2 percent of the gap is explained by Non-Life insurance (10.651 billion lempiras). Accordingly, the potential insurance market in Honduras at the end of 2016 (sum of actual market and IPG) is estimated at 39.028 billion lempiras, some 4.1 times the total insurance market in Honduras.

**Chart 3.1.3-k**
**Honduras: evolution of penetration, density and depth, 2006-16**
**(premiums/GDP, percent; premiums per capita, lempiras and dollars; Life insurance premiums / total premiums, percent, index 2006=100)**
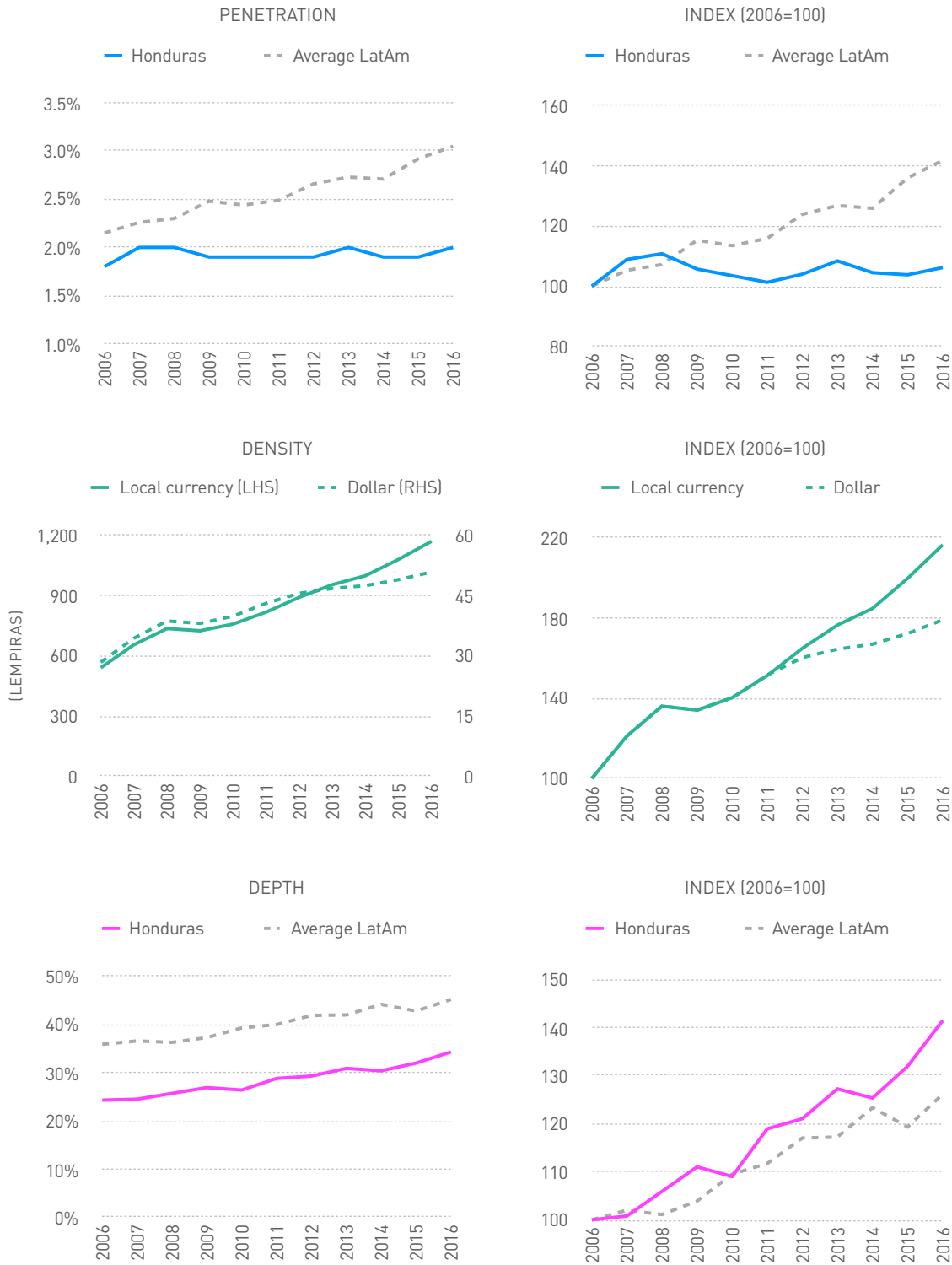


PENETRATION

INDEX (2006=100)

DENSITY

INDEX (2006=100)

DEPTH

INDEX (2006=100)

Source: MAPFRE Economic Research (based on data from National Commission of Banks and Insurance)

**Chart 3.1.3-l
Honduras: evolution of insurance market, 2006-16
(penetration vs depth)**



Source: MAPFRE Economic Research
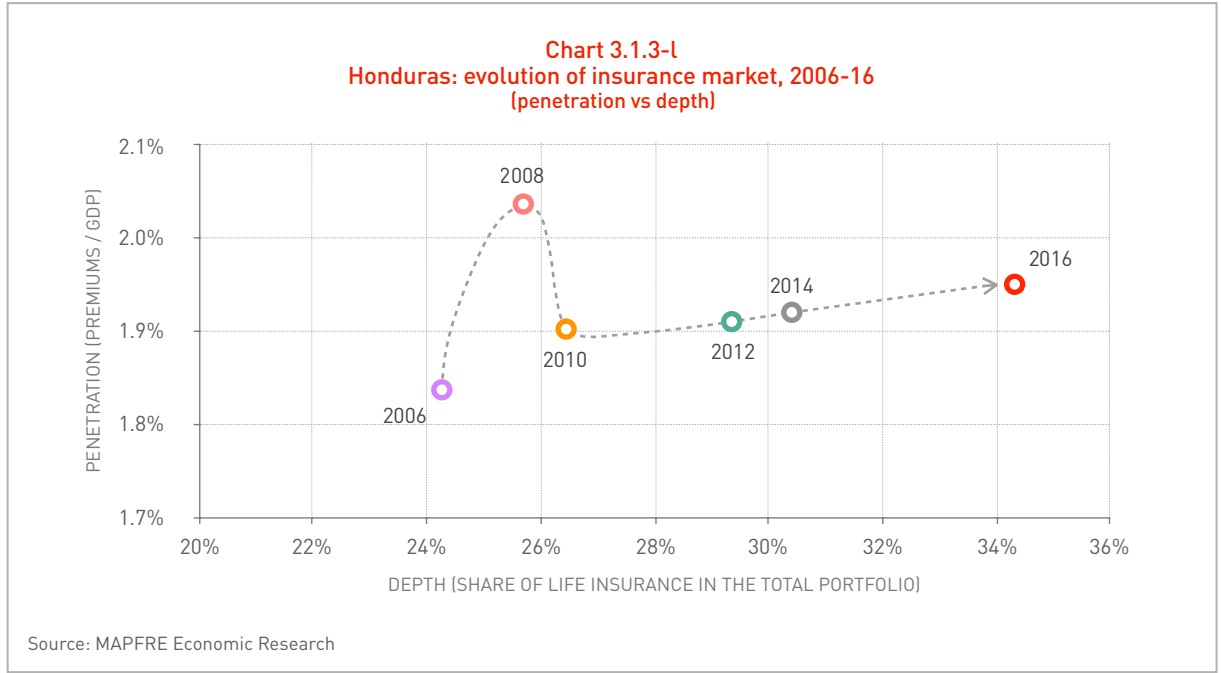
Chart 3.1.3-n shows an estimate of the IPG as a multiple of the actual market in Honduras. The insurance gap multiple for Life insurance has continually declined over the period 2006-16 from 10.1 to 5.7 times. However, in the case of Non-Life insurance, the multiple has been on an upward trend, increasing from 1.4 to 1.7 times over the period.

Finally, Chart 3.1.3-o provides a summary of the assessment regarding the capacity of the Honduran insurance market to close the IPG based on a comparison of growth rates over the last ten years in relation to the growth rates that would be required in order to close the IPG established in 2016 over the next ten years.

The Honduran insurance market grew at an average annual rate of 9.7 percent over the period 2006-16, underpinned by annual growth of 13.6 percent in the Life insurance segment and 8.2 percent average annual growth in the Non-Life business.

**Chart 3.1.3-m
Honduras: Insurance Protection Gap and potential market, 2006-16
(millions of lempiras)**



Source: MAPFRE Economic Research

Chart 3.1.3-n
Honduras: the IPG as a multiple of the actual market, 2006-16
(number of times actual insurance market)
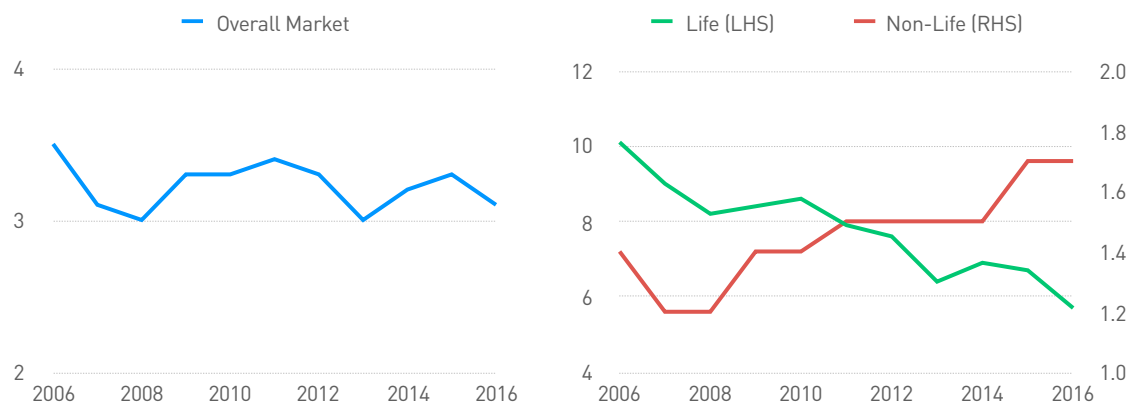
Source: MAPFRE Economic Research

On the basis of the above analysis, if the Honduran insurance market were to maintain the same rates of growth as seen over the last ten years, market growth would prove insufficient to close the IPG. The shortfall for Life insurance would be 7.4 percentage points and 2.2 percentage points for Non-Life insurance. However, in both cases it is worth noting that the shortfall has reduced slightly relative to the analysis performed in our 2015 report.

**Market Development Index (MDI)**

Chart 3.1.3-p provides an estimate of the Market Development Index (MDI) for the Honduran insurance industry. In general terms, the MDI (which is used in this report as an indicator of general trends in the evolution and maturity of the insurance market) has performed positively over the period under analysis.

This trend is broadly similar to the average performance across Latin American insurance markets. However, there were setbacks in some years (2009, 2010 and 2014) and up until 2015 the index grew more slowly than the Latin American average, though since then it appears to be on a similar path to the average MDI for Latin America.

**Insurance market rankings**

**Overall ranking**

Twelve insurance companies were operating in the Honduran insurance market in 2016 - the same companies as in 2015. Concentration levels have remained relatively stable over time, although consistent with non-negligible levels of concentration and increasing from 2010 onward. The Herfindahl index has remained above the threshold for moderate concentration over the last ten years. Likewise, the top five insurers collectively represented 78.4 percent of total premiums in 2016, compared to 76.1 percent in 2015 (see Chart 3.1.3-q).

Chart 3.1.3-r ranks the insurance groups operating in the Honduran market. The ranking continues to be led by Interamericana with a market share of 25.2 percent, followed by MAPFRE (19.5 percent) and Atlántida (16.9 percent). Both of the latter saw their market share decrease relative to 2015.

Chart 3.1.3-o
Honduras: capacity to close IPG, 2006–16
(average annual growth rate, percent; sufficiency or insufficiency, percentage points)



Source: MAPFRE Economic Research

Chart 3.1.3-p
Honduras: Market Development Index (MDI), 2005–16
(index 2005=100; annual change)



Source: MAPFRE Economic Research
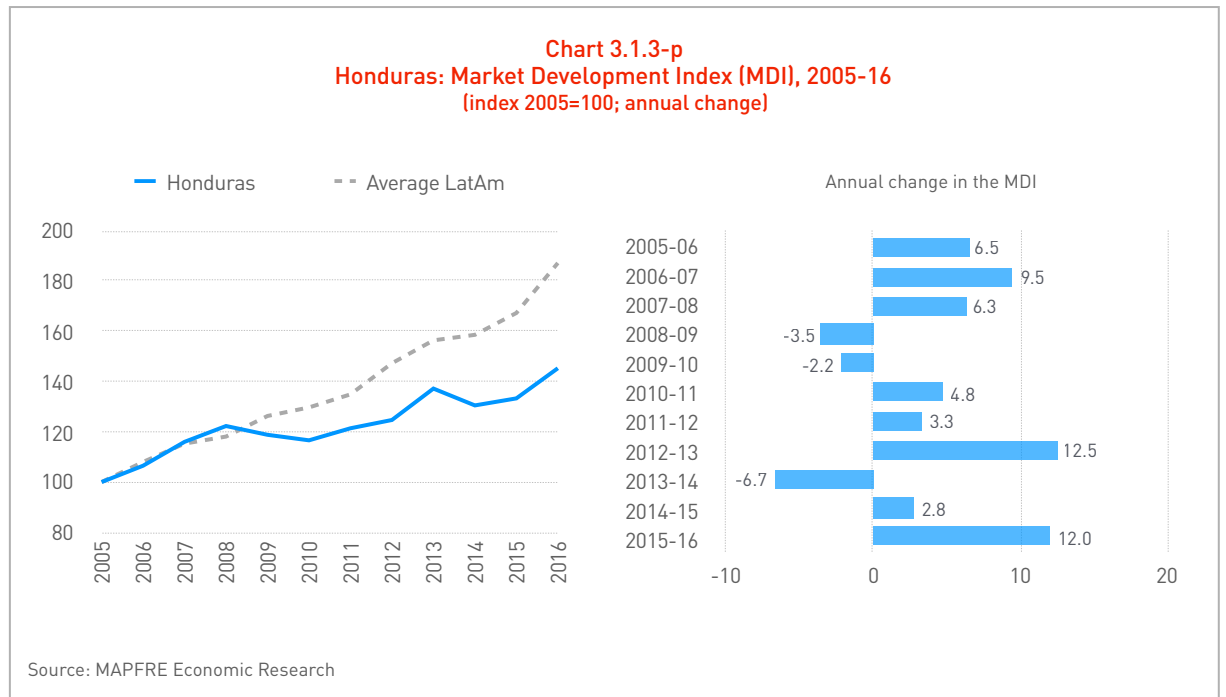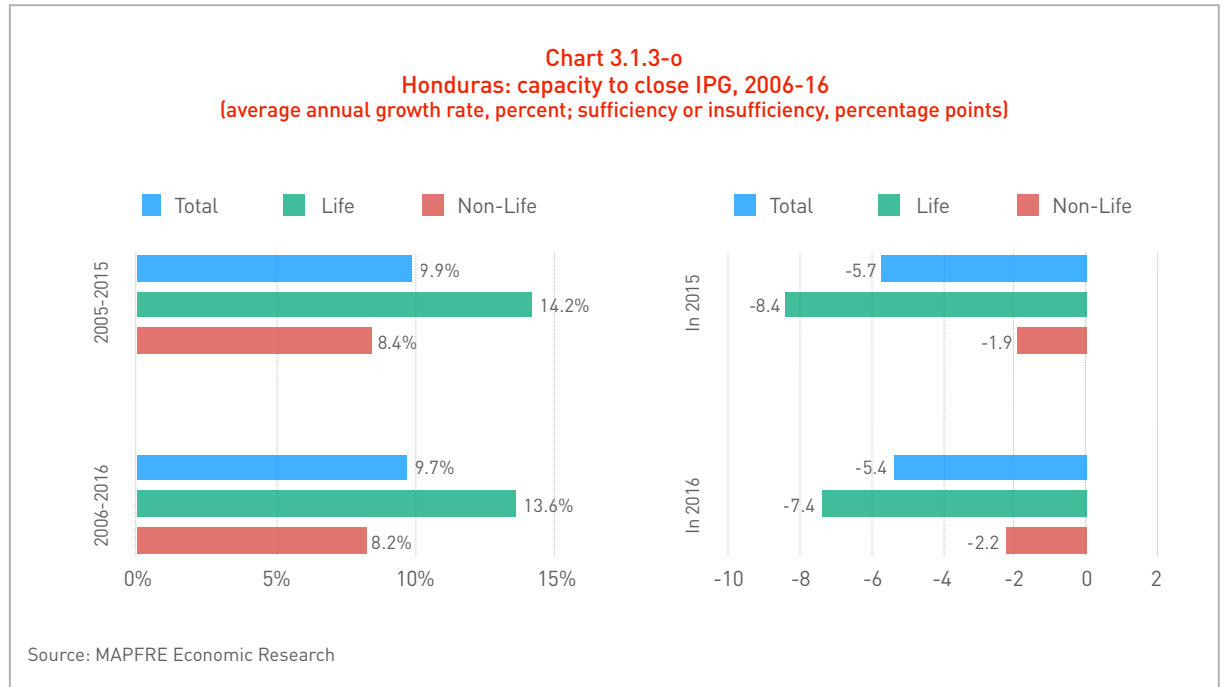
## Non-Life Ranking

The Non-Life ranking was also led by Interamericana with a 28 percent share of premiums. This was followed by MAPFRE with 18 percent, leapfrogging Atlántida with a 17.2 percent market share (see Chart 3.1.3-s).

## Life Ranking

Finally, MAPFRE led the Life ranking with a 22.3 percent share of total premiums followed by Interamericana with a 19.9 percent share. Lastly, Atlántida overtook Palic in 2016, obtaining a 16.3 percent share of premiums in this market segment.

Chart 3.1.3-q
Honduras: insurance industry concentration, 2006-16
(Herfindahl index; CR5 index, percent)
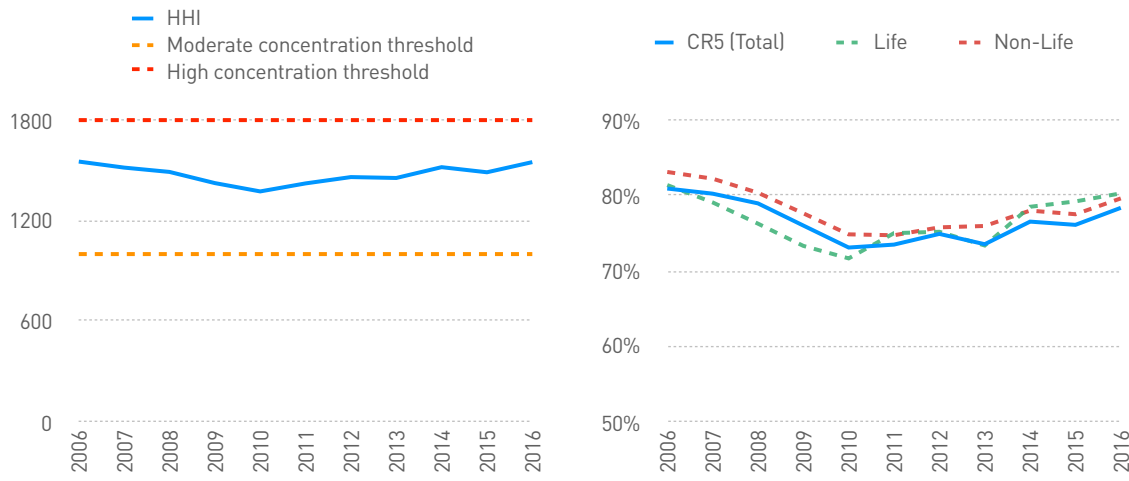
Source: MAPFRE Economic Research (based on data from National Commission of Banks and Insurance)

## Key regulatory aspects

The following key regulatory developments have taken place over 2016 and up to the present moment:

• Circular CNBS No. 018/2016 under which the National Commission of Banks and Insurance requires Public and Private Banking Institutions and Insurance Institutions to publish audited financial accounts, an external auditor's opinion, indicators and supplementary notes; publishing this information in all print media in circulation, national newspapers, electronic media, as well as on their



Chart 3.1.3-r
Honduras: overall ranking, 2015-16
(market shares, percent)
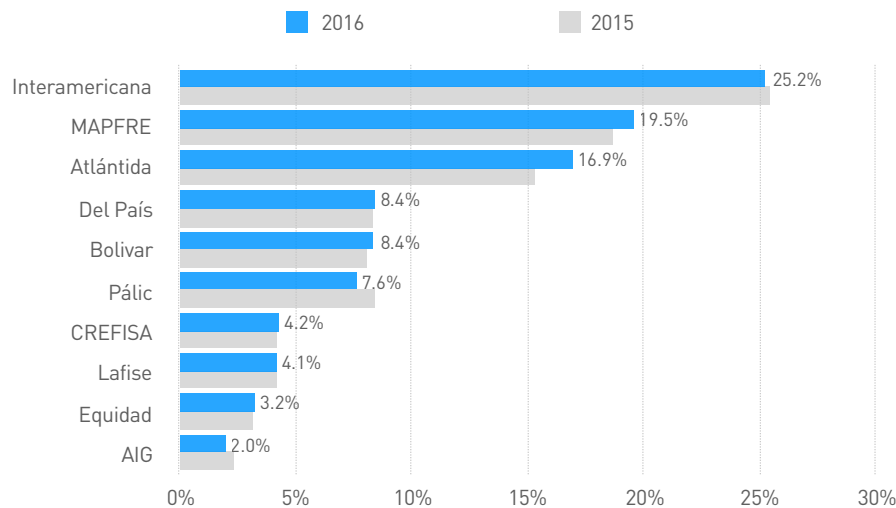
Source: MAPFRE Economic Research (based on data from National Commission of Banks and Insurance)

Graph 3.1.3-s
Honduras: Life and Non-Life ranking, 2015-16
(market shares, percent)
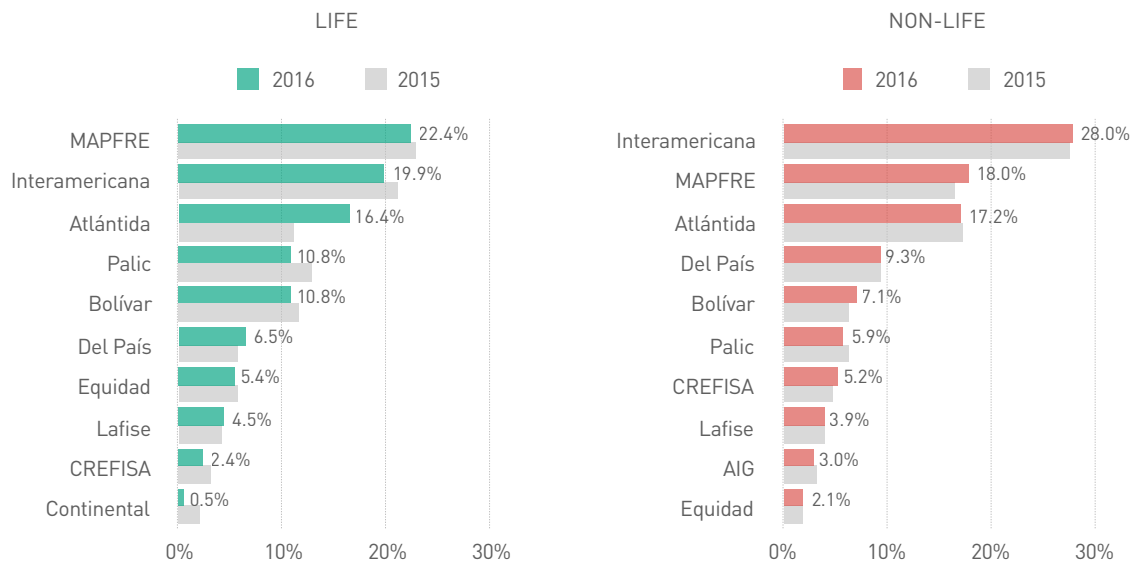
Source: MAPFRE Economic Research (based on data from National Commission of Banks and Insurance)

websites, creating a link enabling the information to be downloaded in readable and printable PDF format with free copies available on request in all branches. The circular will enter into force for publications relating to the year ending December 2015.

- This document was complemented via Circular CNBS No. 013/2017, which sets out standards for presentation and publication.

- Circular CNBS No. 019/2016, dated April 28, 2016, which contains the latest regulation and procedures that must be adopted by supervisory institutions in relation to money laundering and prevention of terrorist financing.

- Circular CNBS No. 003/2016, dated February 16, 2016, which extended the date for implementation of International Financial Reporting Standards (IFRS) at the request of the Honduran Insurance Association (CAHDA). The International

- Financial Reporting Standards (IFRS) will be adopted from January 1, 2018 after a

transition period from January 1, 2017 to December 31, 2017.

- Circular No. 001/2017 of the National Commission of Banks and Insurance (CNBS) with Resolution SSE No. 013 / 01-09-2017, dated January 9, 2017, which establishes the procedure for registering insurance and surety contracts and policies with the CNBS. The procedure also applies to changes and amendments to general conditions, technical bases and marketing approaches. The resolution entered into force on January 25, 2017, substituting Resolution SS no. 1675 / 10-29-2012 dated October 29, 2012.

It is also worth noting that the National Commission of Banks and Insurance is working on projects to reform existing regulation on technical reserves, investment and solvency. The idea is to move toward a risk-based supervision approach amenable to including Solvency II principles where possible. This initiative has been in train for some years and was put to consultation at the start of 2012.

Reforms are also being prepared on regulation of reinsurance and a Law for Mandatory Third-Party Motor Insurance (Mandatory Vehicle Insurance for Third-Party Liability stemming from Damages and Injuries Caused to Third Parties).

### 3.1.4. El Salvador

#### Macroeconomic environment

El Salvador's economy grew by 2.4 percent in real terms in 2016, which was a slight deceleration relative to 2015 growth of 2.5 percent. This was primarily due to a weakening of external demand, which was partially offset by the positive performance of domestic demand with increases in public and private sector consumption and investment. (see Chart 3.1.4-a). All economic sectors performed positively, led by the agriculture sector and trade. An improvement in real wages and an influx of

family remittances also contributed positively to growth.

Average inflation in 2016 rose by 1.3 percentage points to 0.6 percent, after -0.7 percent in 2015. However, inflation remains subdued. In terms of the external sector, during the first ten months of 2016 both exports (-3.9 percent) and imports (-6.6 percent) declined. The decrease in exports was primarily a volume effect (-7 percent) given that the average price increased by 3.4 percent.

The decline in imports was essentially due to a reduction in the oil bill. As a result, the current account deficit came in at 2.2 percent of GDP compared to 3.6 percent in 2015. ECLAC sees the Salvadoran economy growing by 2.2 percent in 2017, while the IMF raises the outlook by 0.1 percentage points to 2.3 percent.



Chart 3.1.4-a
El Salvador: evolution of economic growth and inflation, 2006-16
(GDP in local currency, billions of dollars; real growth rate, percent; annual inflation rate, percent)
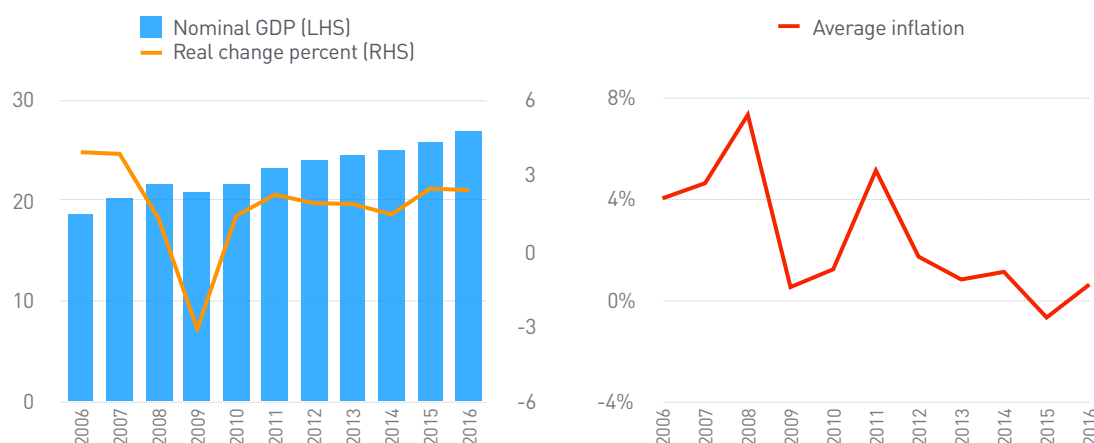
Source: MAPFRE Economic Research (based on IMF data)

Chart 3.1.4-b
El Salvador: growth developments in the insurance market, 2006-16
(premiums, millions of dollars, nominal annual growth rates, percent)
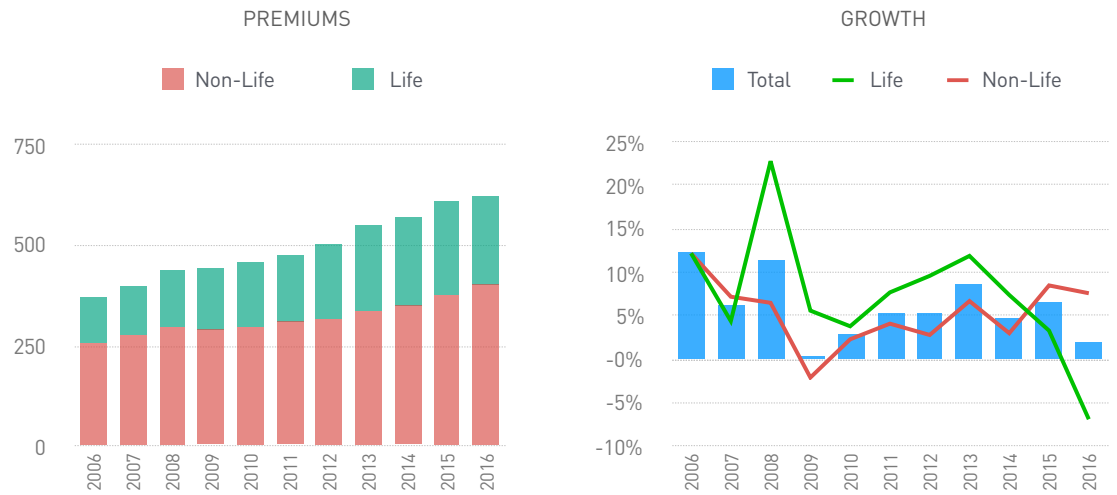
Source: MAPFRE Economic Research (based on data from Superintendence of Financial System)

## Insurance Market

### Growth

The Salvadoran insurance market posted premium volume growth of 2 percent in nominal terms (1.4 percent in real times). This was a more subdued performance than the 6.4 percent registered the previous year, with a total volume of 621 million dollars (see Table 3.1.4 and Chart 3.1.4-b).

Life insurance premiums, which represent 34.9 percent of the total market, fell by -6.9 percent in nominal terms to 216 million dollars. By contrast Non-Life premiums increased by 7.6 percent to 405 million dollars. Individual and group Life insurance declined by -17.6 percent, while Life security and pension insurance premiums contracted by -1.7 percent.

All Non-Life business lines registered growth except for Credit and Surety, led by Fire (10.6 percent) and Accidents and Illness (11.4 percent).

Accordingly, Life insurance made a negative contribution of a little over 2.6 percentage points to overall 2 percent growth in Salvadoran insurance market premiums, while Non-Life

insurance ensured growth remained positive by contributing 4.7 percentage points (see Chart 3.1.4-c).



Chart 3.1.4-c
El Salvador: contribution to insurance market growth, 2006-16
(percentage points, ppts)
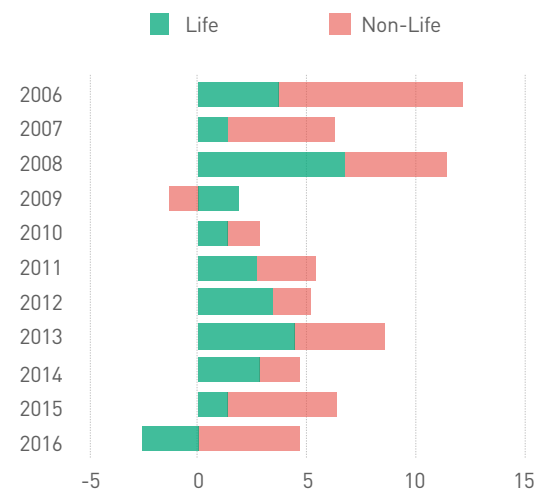
Source: MAPFRE Economic Research (based on data from Superintendence of Financial System)

Table 3.1.4
El Salvador: premium volume[1] by line of business (lob), 2016

| Line of business | Millions of dollars | Increase | |
| --- | --- | --- | --- |
| | | Nominal (percent) | Real (percent) |
| **Total** | **621** | **2.0** | **1.4** |
| **Life** | **216** | **-6.9** | **-7.5** |
| Pensions | 153 | -1.7 | -2.3 |
| Individual and group | 63 | -17.6 | -18.1 |
| **Non-Life** | **405** | **7.6** | **6.9** |
| Fire and/or Allied Lines | 119 | 10.6 | 9.9 |
| Other Damage | 96 | 1.6 | 1.0 |
| Accidents and Illness | 83 | 11.4 | 10.7 |
| Automobiles | 94 | 9.0 | 8.4 |
| Credit and/or Surety | 12 | -6.0 | -6.6 |

Source: MAPFRE Economic Research (based on data from Superintendence of Financial System)
1/ Net premiums of returns and cancelations

### Balance sheet and equity

Chart 3.1.4-d shows developments in the Salvadoran insurance industry's technical performance over 2006-16. This shows that the sector's total assets amounted to 817.1 million dollars in 2016, representing a decline of 2.3 percent relative to the previous year.

High aggregate capital levels over total assets are one of the highlights of the consolidated sector balance sheet. Capital has remained above 40 percent throughout the period 2006-16, reaching a peak of 52.3 percent in 2010, falling thereafter to 45.1 percent of total assets in 2016.

Chart 3.1.4-d
El Salvador: evolution of insurance industry's aggregate balance sheet, 2006-16
(amounts in local currency, change in equity, percentage points)
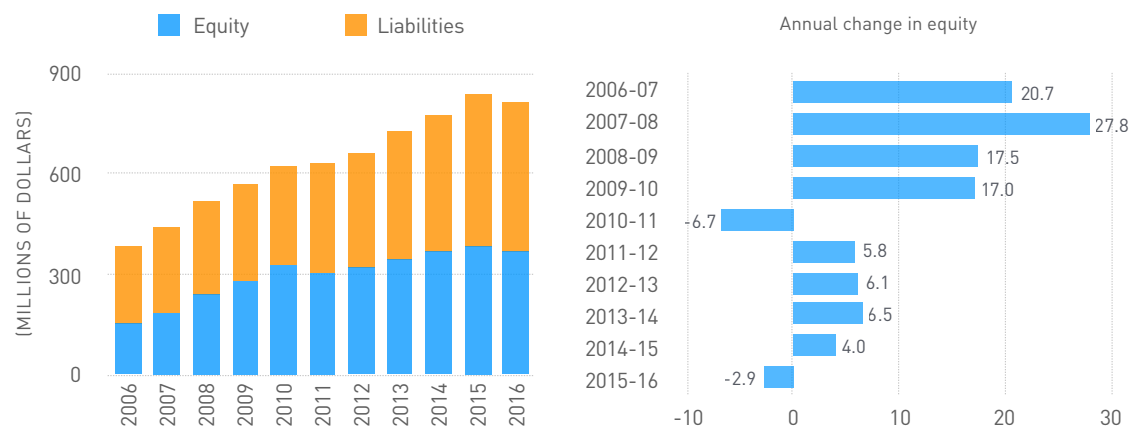


Source: MAPFRE Economic Research (based on data from Superintendence of Financial System)

**Investment**

Chart 3.1.4-e shows the evolution of investment, while Charts 3.1.4-f and 3.1.4-g show the composition of the aggregate investment portfolio at a sector level for the Salvadoran insurance market over the period 2006-16.

On the basis of this information, investment reached 607 million dollars in 2016 (-5.9 percent on 2015). It is notable that this is the first time the Salvadoran insurance industry's total investment has declined in absolute terms for ten years.

Chart 3.1.4-g shows that 80.4 percent of investment in 2016 was focused on debt and equity instruments, 9.1 percent cash, 3.3 percent property and the remaining 7.2 percent other financial investment.

### Chart 3.1.4-e
### El Salvador: Insurance market technical provisions, 2006-16
(millions of dollars)



Source: MAPFRE Economic Research (based on data from Superintendence of Financial System)

### Chart 3.1.4-f
### El Salvador: structure of investment, 2006-16
(%)



Source: MAPFRE Economic Research (based on data from Superintendence of Financial System)

### Chart 3.1.4-g
### El Salvador: structure of investment, 2016
(%)



Source: MAPFRE Economic Research (based on data from Superintendence of Financial System)

It also highlights how over the period 2008-10 investment in debt and equities fell with a concurrent increase in cash (Chart 3.1.4-f). However, the sectoral structure of investment rebalanced thereafter, remaining relatively stable over the period under analysis.

**Technical provisions**

Charts 3.1.4-h, 3.1.4-i and 3.1.4-j show the evolution and relative composition of the Salvadoran insurance industry's technical provisions.

Technical provisions amounted to 298.8 million dollars in 2016. 29.6 percent of the total provisions related to Life insurance, 35.9 percent to provisions for unearned premiums and unexpired risks in Non-Life insurance, 32 percent to provisions for outstanding claims and the remaining 2.5 to provisions for catastrophic risks.

**Chart 3.1.4-h
El Salvador: Insurance market's technical provisions, 2006-16
(millions of dollars)**

Source: MAPFRE Economic Research (based on data from Superintendence of Financial System)

**Chart 3.1.4-i
El Salvador: structure of technical provisions, 2006-16
(%)**
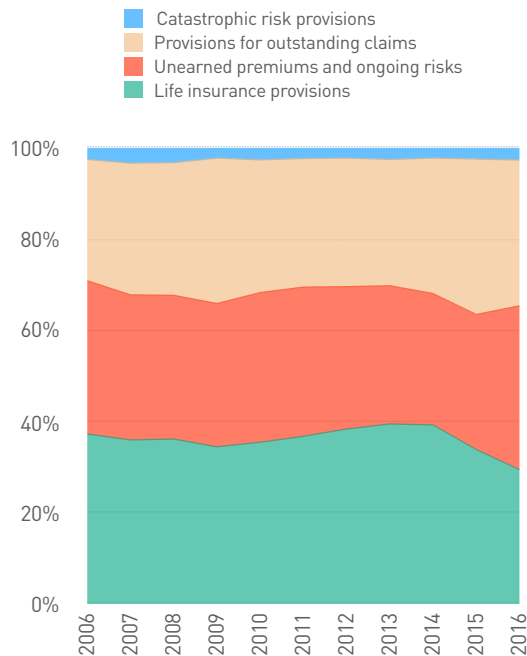
- Catastrophic risk provisions
- Provisions for outstanding claims
- Unearned premiums and ongoing risks
- Life insurance provisions

Source: MAPFRE Economic Research (based on data from Superintendence of Financial System)

**Chart 3.1.4-j
El Salvador: structure of technical provisions, 2016
(%)**
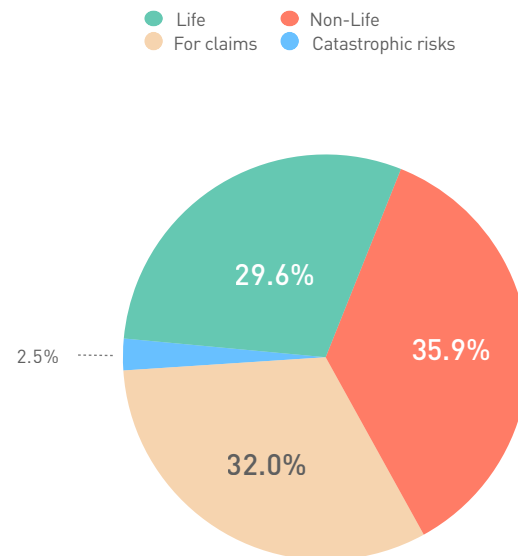
- Life
- For claims
- Non-Life
- Catastrophic risks

29.6%
35.9%
32.0%
2.5%

Source: MAPFRE Economic Research (based on data from Superintendence of Financial System)

Over the period 2006-16 technical provisions have grown on a sustained basis, except for Life insurance provisions which fell slightly in 2009, 2015 and 2016. In 2016, the share of the Life insurance business in technical provisions fell by 4.5 percentage points (from a 34 percent share in 2015).

**Technical performance**

The Salvadoran insurance industry posted a positive consolidated technical result in 2016 in line with the previous year, despite reporting an elevated combined ratio of 98.8 percent in 2016, one percentage point more than the previous year and the highest for the last ten years (see Chart 3.1.4-k).

In contrast to the previous year, the increase in the technical indicator in 2016 was not due to an increase in the claims ratio, which fell by 1.95 percentage points, but rather a 2.7 percentage point increase in the expense ratio. In general, the combined ratio has been on a upward path since 2008 due to increase in both the expense and claims ratios.

**Results and profitability**

The Salvadoran insurance industry posted a pre-tax result of 40 million dollars in 2016, down 9 percent on the previous year. This was mainly due to fewer one-off revenues, despite an

improvement in the financial result and a smaller claims ratio.

As can be seen in Chart 3.1.4-l the technical result has been on a sustained downward path since 2008 which has affected the industry's profitability. In this regard, the Salvador insurance market delivered a return on equity (ROE) of 8.1 percent in 2016, down 1.6 percentage points relative to 2015, extending the decline started in 2011.

A similar story applies to return on assets (ROA). ROA amounted to 3.7 percent in 2016, 0.7 percentage points lower than 2015.

**Insurance penetration, density and depth**

Chart 3.1.4-m shows the main structural trends in the development of the insurance industry in El Salvador over the period 2006-16.

The penetration index (premiums/GDP) stood at 2.3 percent in 2016, in line with the previous year and little more than 0.3 percentage points above 2006. The penetration index has been on a sustained upward path, albeit growing less rapidly and remaining below the average for Latin American markets.

The density indicator (premiums per capita) stood at 98.2 dollars in 2016, an increase of 1.6



**Chart 3.1.4-k**
**El Salvador: evolution of market technical performance, 2006-16**
**(total combined ratio, percent; annual change in combined ratio, percentage points)**

Source: MAPFRE Economic Research (based on data from Superintendence of Financial System)
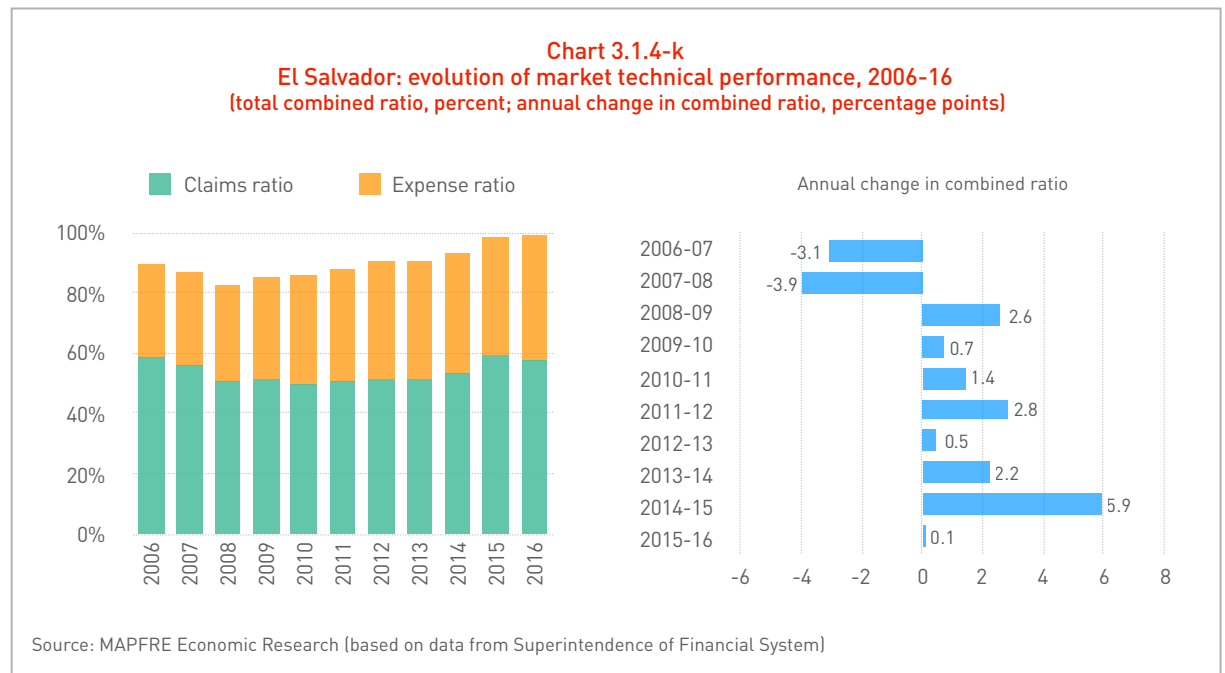
**Chart 3.1.4-l**
**El Salvador: evolution of results and profitability, 2006-16**
**(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)**
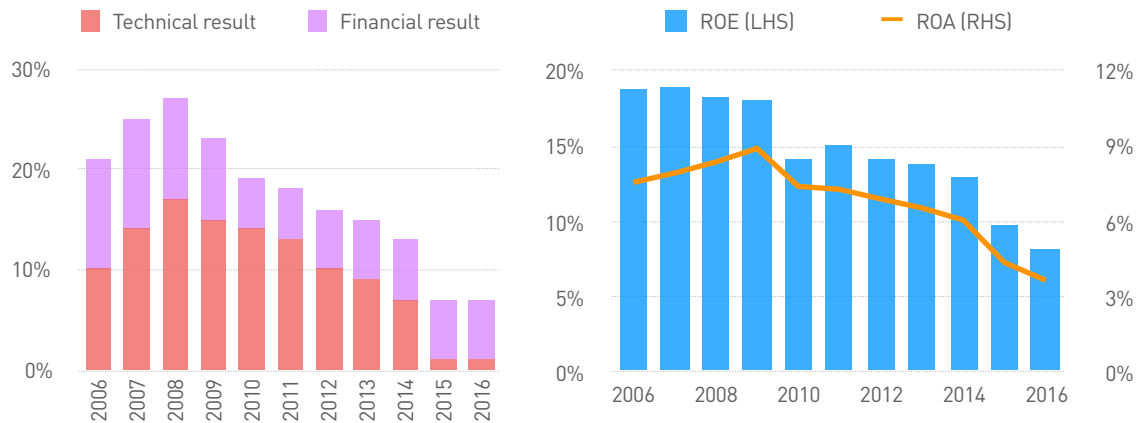


Source: MAPFRE Economic Research (based on data from Superintendence of Financial System)

percent over the previous year (96.6 dollars). The density of the Salvadoran insurance market has been increasing over the period, registering cumulative growth of 60.8 percent between 2006-16.

The depth of the Salvadoran market (measured as the relationship of Life insurance premiums to total premiums) reached 34.9 percent in 2016, 3.4 percentage points below 2015. Density increased up until 2014, but has declined in the last two years and is below the absolute indicator value for the average of countries in the region.

Chart 3.1.4-n provides an illustration of the performance of the insurance market in El Salvador. This performance is illustrated using a dispersion analysis which takes account of penetration and depth levels. The former provides a quantitative characterization of market performance, while the latter is a proxy of market maturity.

This analysis shows a trend toward balanced development over the period 2006-14, followed by a clear reversion thereafter with stagnating penetration levels and a decline in the depth indicator.

**Estimate of the Insurance Protection Gap**

Chart 3.1.4-o provides an estimate of the IPG for the Salvadoran insurance market between 2006 and 2016. The insurance protection gap stood at 1.5009 billion dollars in 2016, equivalent to 2.4 times the actual insurance market at the end of the year.

The structure and evolution of the IPG over the period reflects the contribution from Life insurance. Thus, at the end of 2016, 65.6 percent of the IPG related to Life insurance (984 million dollars), some 2.7 percentage points below the share for this segment in 2006. The remaining 34.4 percent of the gap was explained by Non-Life insurance (517 million dollars).

The potential insurance market in El Salvador at the end of 2016 (sum of actual market and IPG) is estimated at 2.1218 billion dollars, some 3.4 times the total insurance market in El Salvador.

Chart 3.1.4-p shows an estimate of the IPG as a multiple of the actual insurance market in El Salvador over the period 2006-16. As a multiple, the IPG for the Life insurance segment has tracked downward on a sustained basis over the period under analysis (from 7.1 to 4.5 times), though this trend reverted in 2016. The multiple has also declined over time for Non-Life insurance, albeit to a lesser degree (from 1.5 to 1.3 times).

**Chart 3.1.4-m**
**El Salvador: evolution of penetration, density and depth, 2006-16**
(premiums/GDP, percent; premiums per capita, dollars; Life insurance premiums / total premiums, percent, index 2006=100)

PENETRATION

— El Salvador    -- Average LatAm

INDEX (2006=100)

— El Salvador    -- Average LatAm

DENSITY

— Local currency

INDEX (2006=100)

— Local currency

DEPTH

— El Salvador    -- Average LatAm

INDEX (2006=100)

— El Salvador    -- Average LatAm
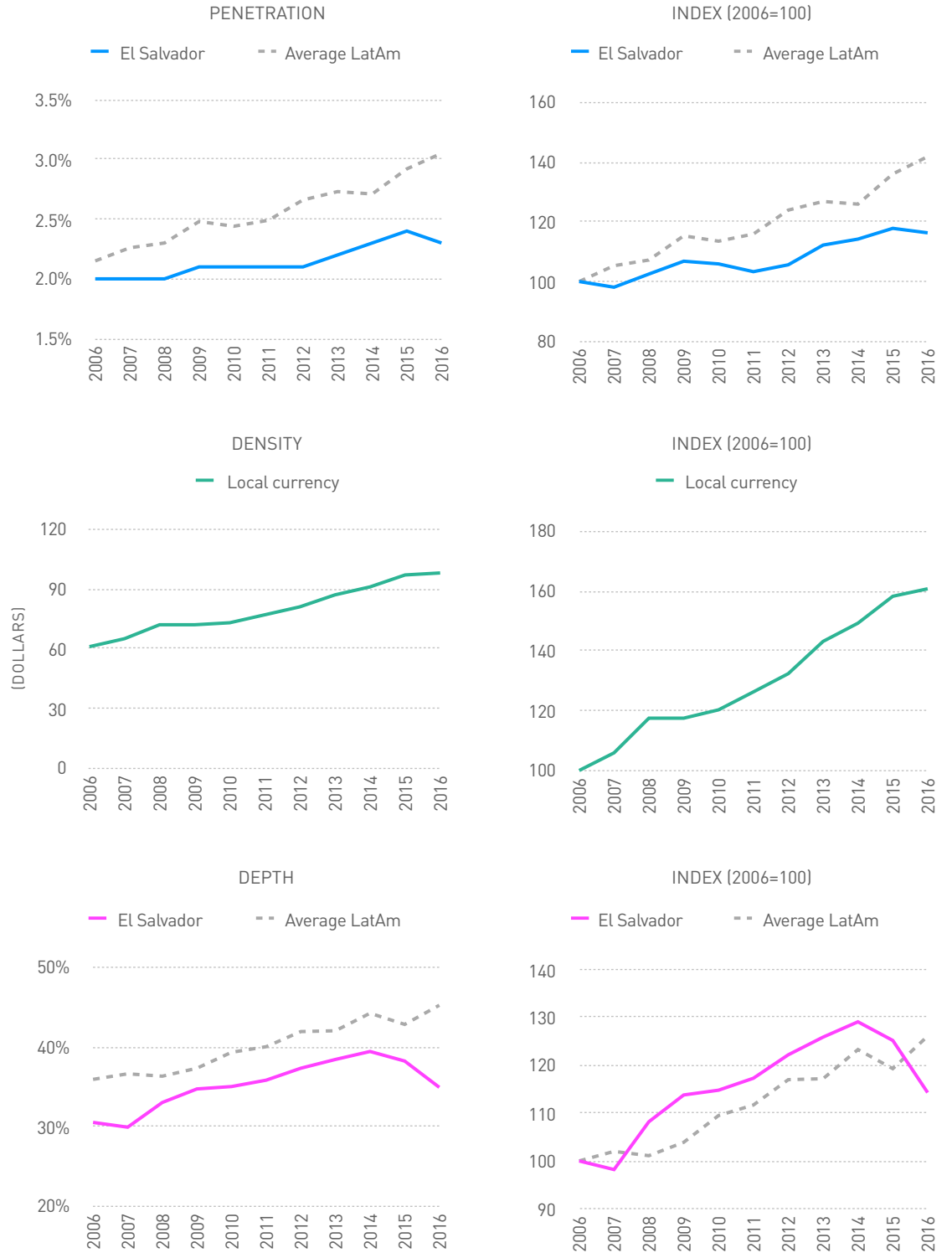
Source: MAPFRE Economic Research (based on data from Superintendence of Financial System)

Chart 3.1.4-n
El Salvador: evolution of insurance market, 2006-16
(penetration vs depth)
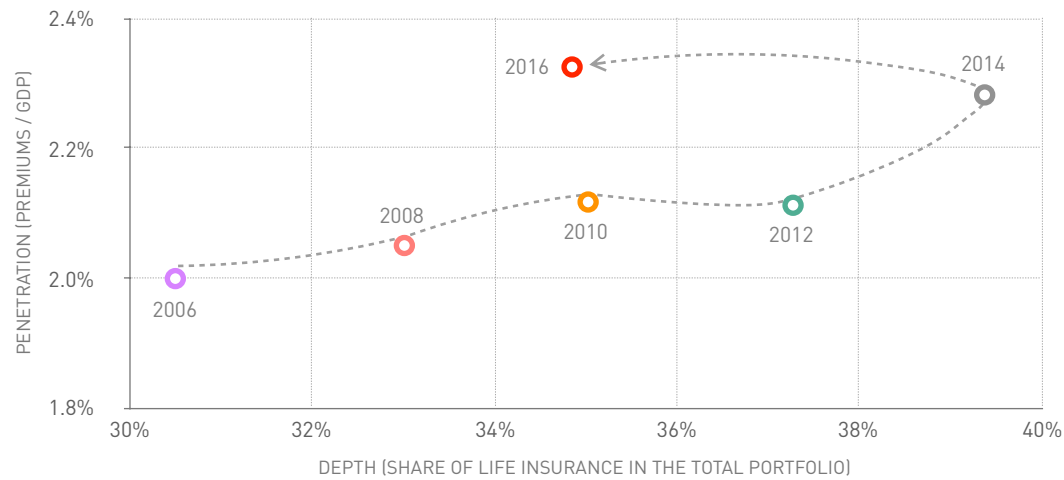


Source: MAPFRE Economic Research

Chart 3.1.4-o
El Salvador: Insurance Protection Gap and potential market, 2006-16
(millions of dollars)
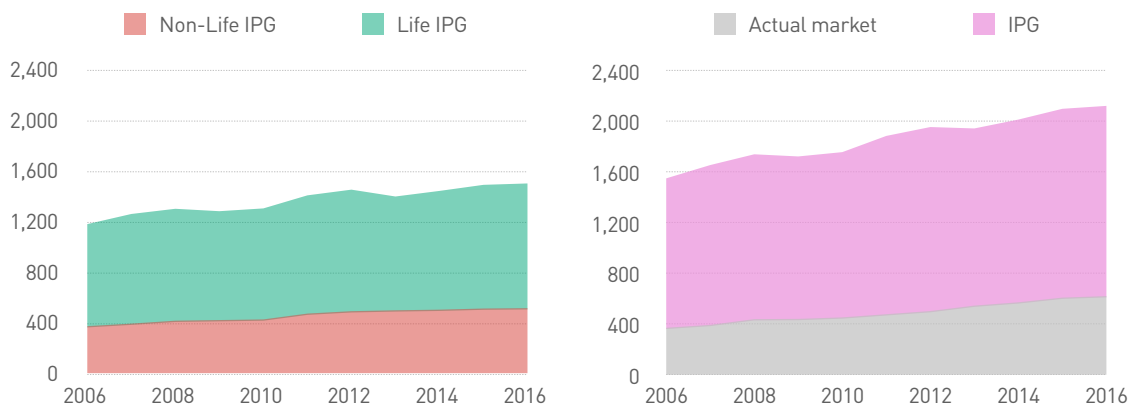


Source: MAPFRE Economic Research

Chart 3.1.4-q provides a summary of the assessment regarding the capacity of the Salvadoran insurance market to close the IPG based on a comparison of growth rates over the last ten years in relation to the growth rates that would be required in order to close the IPG established in 2016 over the next ten years.

The Salvadoran insurance market grew at an average annual rate of 5.3 percent over the period 2006-16, underpinned by average annual growth of 6.7 percent in the Life insurance segment and 4.6 percent annual growth in the Non-Life business. If the same rate of growth seen over the last ten years were to be sustained over the next ten, the aggregate market growth rate would be insufficient to cover the IPG estimated for both the Life segment (shortfall of 11.9 percentage points) and the Non-Life segment (shortfall of 4 percentage points). It is also notable that the shortfall increased for the Life insurance segment relative to the estimates carried out last year.

**Chart 3.1.4-p**
**El Salvador: the IPG as a multiple of the actual market, 2006-16**
**(number of times actual insurance market)**

Source: MAPFRE Economic Research
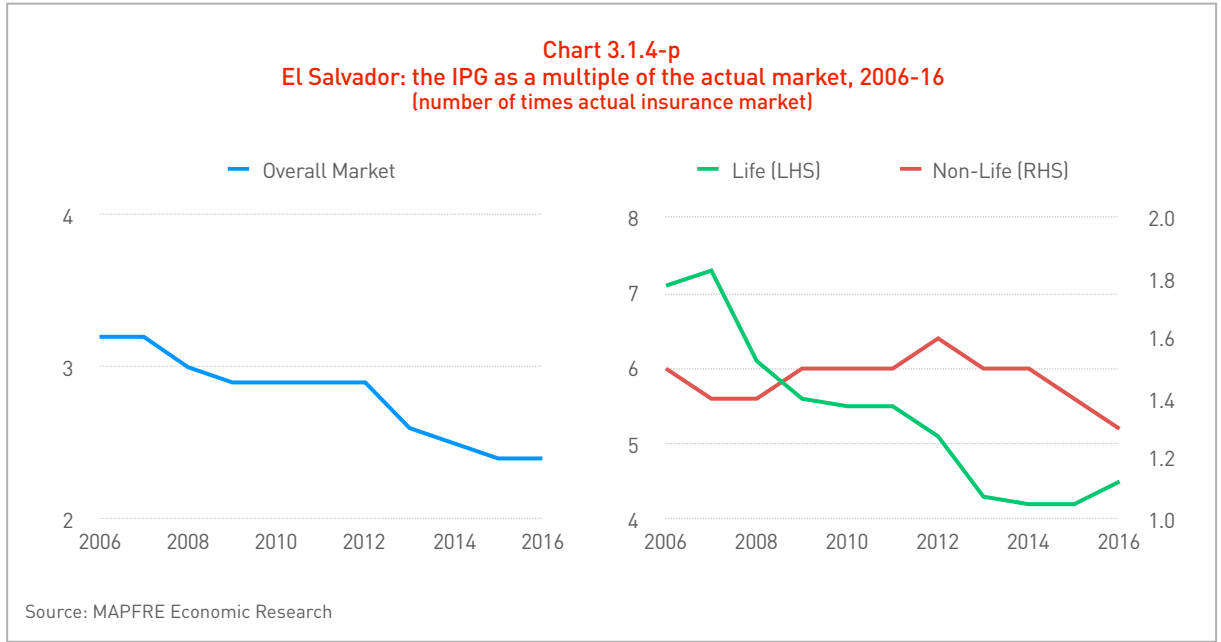
**Market Development Index (MDI)**

As previously discussed the Market Development Index (MDI) is used as an indicator of general trends in the evolution and maturity of the insurance market. Chart 3.1.4-r shows the calculation for the Salvadoran life insurance industry.

In general, the MDI has been on positive and increasing path over the period 2006-16, albeit falling back in 2016. Either way, the MDI is below the average for the Latin American insurance market and has been on a diverging path since 2009.

## Insurance market rankings

**Overall ranking**

24 insurance companies were operating in the El Salvador market in 2016, as was the case in 2015.



**Chart 3.1.4-q**
**El Salvador: capacity to close IPG, 2006-16**
**(average annual growth rate, percent; sufficiency or insufficiency, percentage points)**

Source: MAPFRE Economic Research
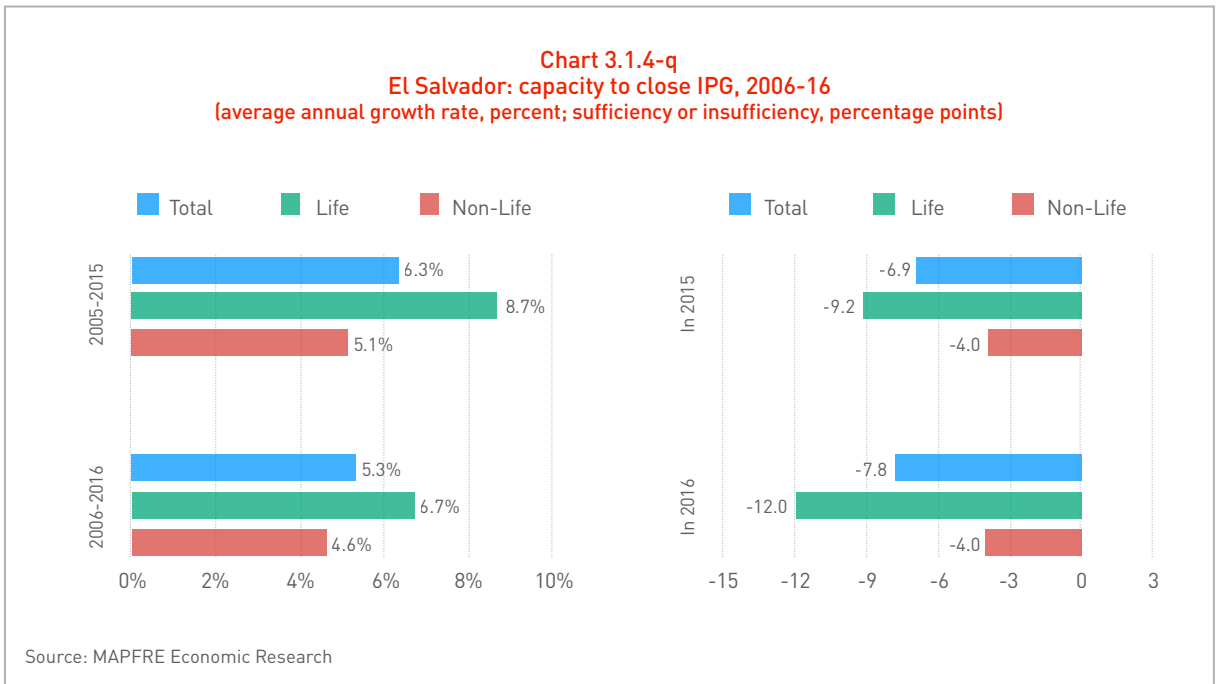
**Chart 3.1.4-r
El Salvador: Market Development Index (MDI), 2005-16
(index 2005=100; annual change)**
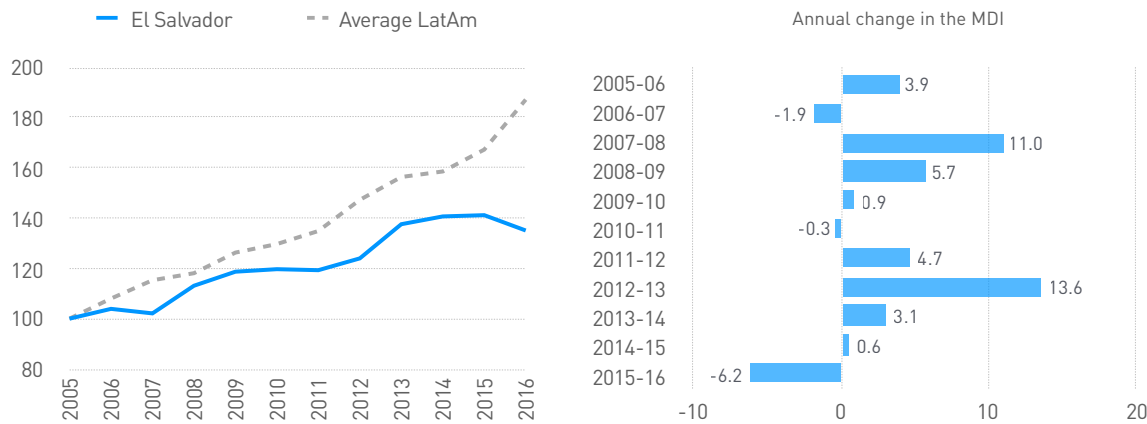


Source: MAPFRE Economic Research

The Herfindahl and CR5 indexes (calculated considering the insurance companies operating on an individual basis in the market) point to a slight decline in the degree of market concentration in El Salvador from 2012 onward. In this regard, it is worth noting that the Herfindahl index has remained practically in line with the theoretical threshold consistent with moderate levels of concentration in the insurance industry, diverging only from 2012 onward (see Chart 3.1.4-s).

Seguros e Inversiones (SISA) led the overall ranking of insurance groups in 2016 (see Chart 3.1.4-t) with a market share of 19.1 percent, followed by Aseguradora Suiza Salvadoreña (16.3 percent) and Aseguradora Agrícola Comercial (14.1 percent).

**Non-Life Ranking**

Meanwhile, Aseguradora Agrícola Comercial led the ranking of Non-Life insurance groups with 20.4 percent of premiums followed by Aseguradora Suiza Salvadoreña on 16.5 percent and MAPFRE with a market share of 13.8 percent (see Chart 3.1.4-u).

**Life Ranking**

Finally, the top three positions in the Salvadoran Life insurance market were occupied by Seguros e Inversiones (SISA) with a 31.4 percent share, ASSA with 16.8 percent of the market and Aseguradora Suiza Salvadoreña on 16.1 percent. The latter two groups switched positions relative to the previous year (see Chart 3.1.4-u).

**Key regulatory aspects**

In terms of the highlights regarding key regulatory developments in the Salvadoran insurance market, it is worth noting that on March 8, 2017 the Central Bank of El Salvador issued a series of technical standards for internal audit for all members of the financial system, replacing the Regulation of the Internal Audit Unit of Banks, Financiers and Insurance Companies (NPB2-04), dated March 5, 1997, of the Superintendence of Financial System, as well as the Instruction from the Internal Audit Unit for Pension Fund Administrators (SAP 04/2000) dated December 28, 2000.

Graph 3.1.4-s
El Salvador: insurance industry concentration, 2006-16
(Herfindahl index; CR5 index, percent)

Source: MAPFRE Economic Research (based on data from Superintendence of Financial System)
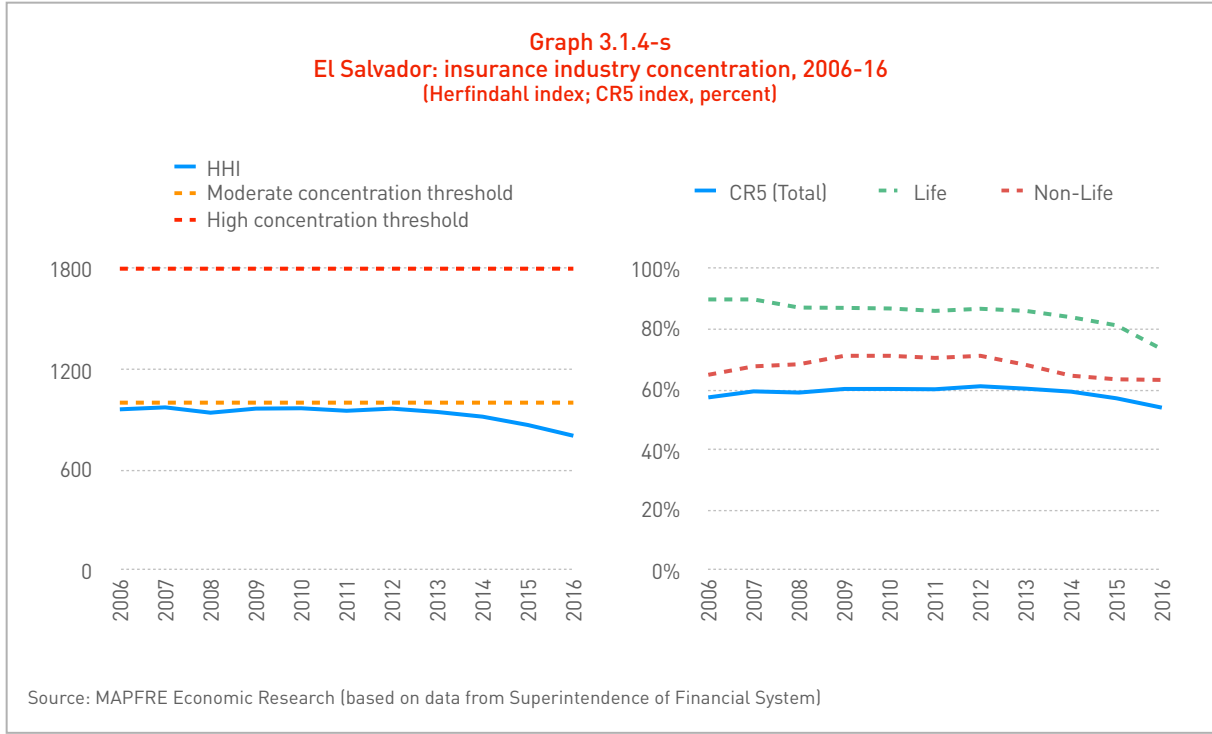
The purpose of the standards is to establish minimum provisions that must be taken into account by institutions for internal audit and thereby promote and strengthen the adoption of procedures and working techniques with a risk-based audit focus, consistent with the size, nature of their operations, business segment and the organizational complexity of each institution.

The Salvadoran financial authorities are working in 2017 to develop new framework guidelines in relation to the General Insurance Law and Insurance Contract Laws.

**Chart 3.1.4-t**
**El Salvador: overall ranking, 2015-16**
(market shares, percent)
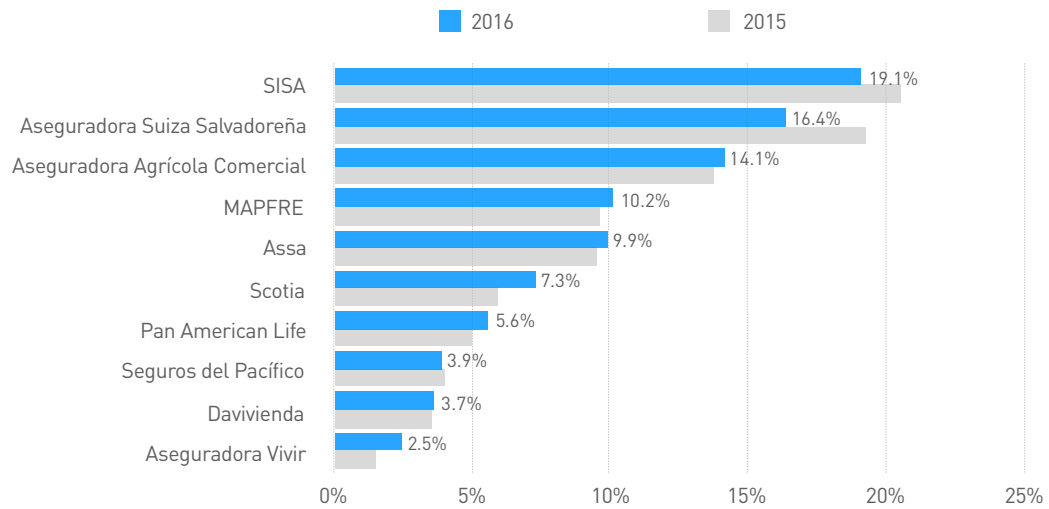
■ 2016   ■ 2015

| Company | 2016 |
|---|---|
| SISA | 19.1% |
| Aseguradora Suiza Salvadoreña | 16.4% |
| Aseguradora Agrícola Comercial | 14.1% |
| MAPFRE | 10.2% |
| Assa | 9.9% |
| Scotia | 7.3% |
| Pan American Life | 5.6% |
| Seguros del Pacífico | 3.9% |
| Davivienda | 3.7% |
| Aseguradora Vivir | 2.5% |

Source: MAPFRE Economic Research (based on data from Superintendence of Financial System)

**Chart 3.1.4-u**
**El Salvador: Life and Non-Life ranking, 2015-16**
(market shares, percent)
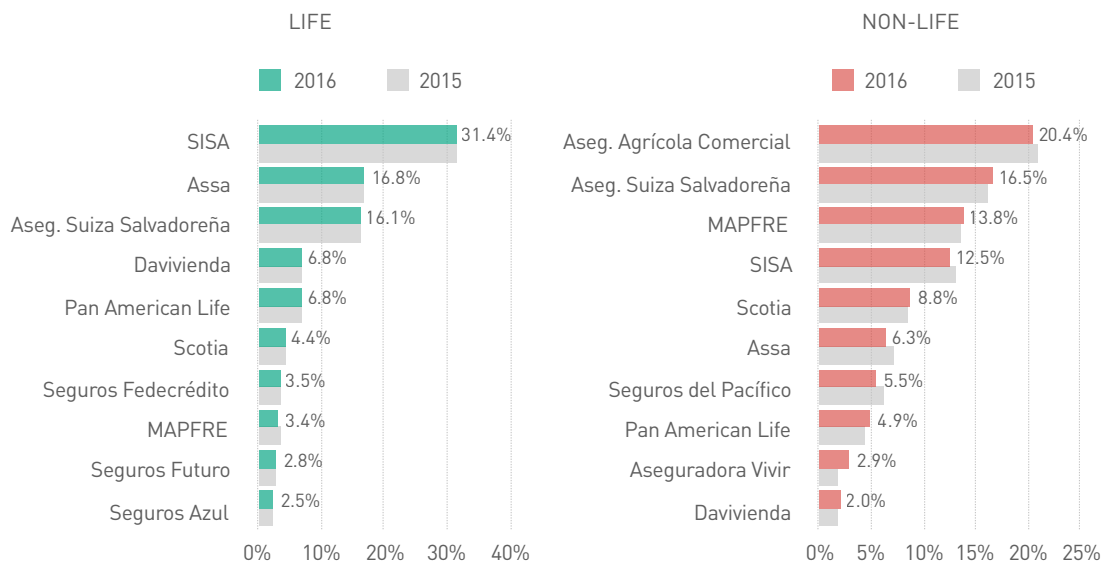
LIFE   ■ 2016 ■ 2015

| Company | 2016 |
|---|---|
| SISA | 31.4% |
| Assa | 16.8% |
| Aseg. Suiza Salvadoreña | 16.1% |
| Davivienda | 6.8% |
| Pan American Life | 6.8% |
| Scotia | 4.4% |
| Seguros Fedecrédito | 3.5% |
| MAPFRE | 3.4% |
| Seguros Futuro | 2.8% |
| Seguros Azul | 2.5% |

NON-LIFE   ■ 2016 ■ 2015

| Company | 2016 |
|---|---|
| Aseg. Agrícola Comercial | 20.4% |
| Aseg. Suiza Salvadoreña | 16.5% |
| MAPFRE | 13.8% |
| SISA | 12.5% |
| Scotia | 8.8% |
| Assa | 6.3% |
| Seguros del Pacífico | 5.5% |
| Pan American Life | 4.9% |
| Aseguradora Vivir | 2.9% |
| Davivienda | 2.0% |

Source: MAPFRE Economic Research (based on data from Superintendence of Financial System)

## 3.1.5. Nicaragua

### Macroeconomic environment

The Nicaraguan economy grew by 4.7 percent in real terms in 2016, 0.2 percentage points slower than the previous year, due to a decline in external sector momentum (see Chart 3.1.5-a). Growth was primarily driven by an acceleration in agriculture, mining and manufacturing activity. In terms of spending, an increase in government spending offset a slight slowdown in household consumption. Meanwhile, a better relative performance by net exports compensated the effect of a marked slowdown in private investment due to the completion of various investment projects.

Inflation in Nicaragua slowed progressively to reach 3.1 percent on average over 2016, compared to 4 percent the year before. The decline in the general price index, which was less pronounced than in 2015, was mainly due to the relative stabilization of food and fuel prices.

The decline in manufacturing exports (largely agroindustry products) led to a little over a one percentage point increase in the current account deficit, which reached 9.5 percent of GDP despite a pick up in family remittances.

The Economic Commission for Latin America and the Caribbean (CEPAL) estimates that the Nicaraguan economy will grow by around 4.7 percent in 2017. Meanwhile, the International Monetary Fund forecasts growth to come in 0.2 percentage points lower at around 4.5 percent.

### Insurance Market

#### Growth

The Nicaraguan insurance market achieved premiums of 5.848 billion córdobas (205 million dollars) in 2016, representing a nominal increase of 12.5 percent and real growth of 9.1 percent relative to the previous year (see Table 3.1.5). As can be seen in Chart 3.1.5-b, the Nicaraguan insurance market grew at a similar rate to 2015, managing to stem the slowdown experienced in the previous year on the back of a recovery in the rate of growth of Life insurance premiums.

The Life insurance business accounted for 18.9 percent of total premiums and saw growth of 21.3 percent (versus 11.3 percent growth in 2015) to reach 1.111 billion córdobas (39 million dollars). Meanwhile, Non-Life insurance premiums increased by 10.6 percent (after 12.9 percent in 2015), reaching 4.737 billion córdobas



Chart 3.1.5-a
Nicaragua: evolution of economic growth and inflation, 2006-16
(GDP in local currency, billions of córdobas; real growth rate, percent; annual inflation rate, percent)

Source: MAPFRE Economic Research (based on IMF data)
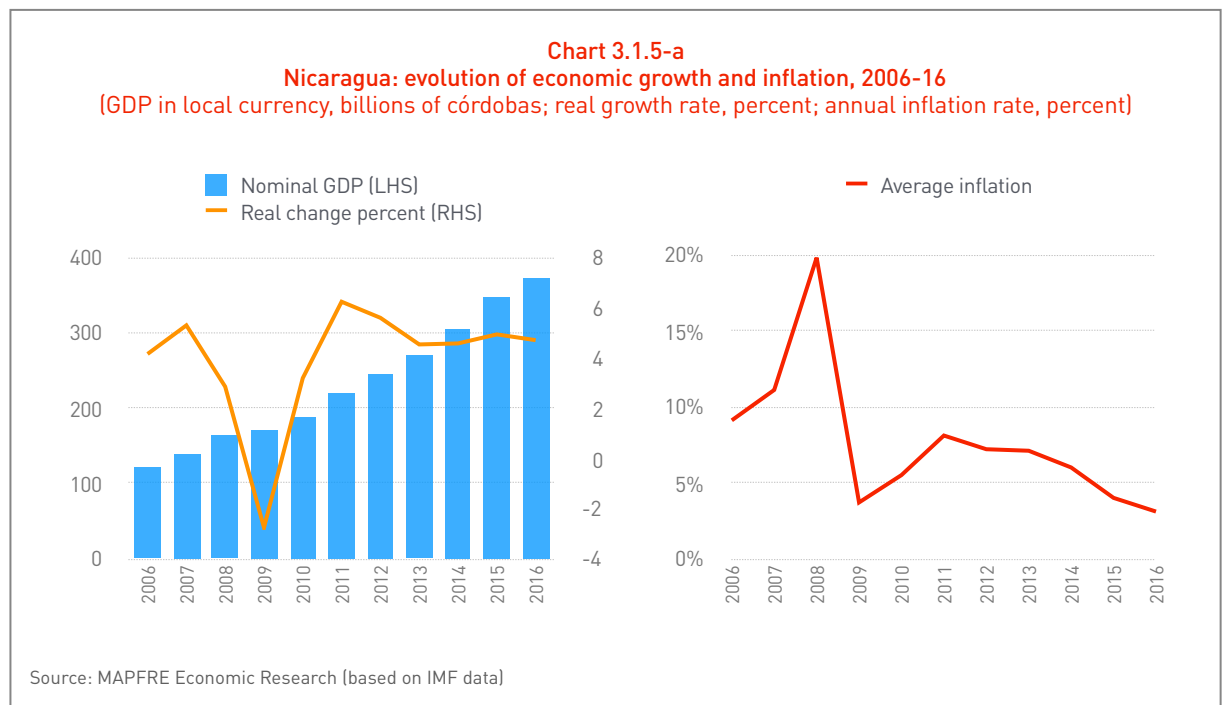
Table 3.1.5
Nicaragua: premium volume[1] by line of business (lob), 2016

| Line of business | Millions of córdobas | Millions of dollars | Increase | |
|---|---|---|---|---|
| | | | Nominal (percent) | Real (percent) |
| **Total** | **5,848** | **205** | **12.5** | **9.1** |
| **Life** | **1,111** | **39** | **21.3** | **17.7** |
| **Non-Life** | **4,737** | **166** | **10.6** | **7.3** |
| Automobiles | 1,408 | 49 | 17.9 | 14.3 |
| Fire and Allied Lines | 1,387 | 49 | 6.0 | 2.8 |
| Other Lines | 1,025 | 36 | 10.1 | 6.8 |
| Health | 389 | 14 | 17.0 | 13.5 |
| Personal Accidents | 167 | 6 | -1.4 | -4.4 |
| Credit and/or Surety | 123 | 4 | -1.2 | -4.2 |
| Transport | 120 | 4 | 10.3 | 6.9 |
| Third-Party Liability | 119 | 4 | 4.1 | 1.0 |

Source: MAPFRE Economic Research (based on data from Superintendence of Banks and Other Financial Institutions)
1/ Net premiums of returns and cancellations

Chart 3.1.5-b
Nicaragua: growth developments in the insurance market, 2006-16
(premiums, millions of córdobas, nominal annual growth rates, percent)
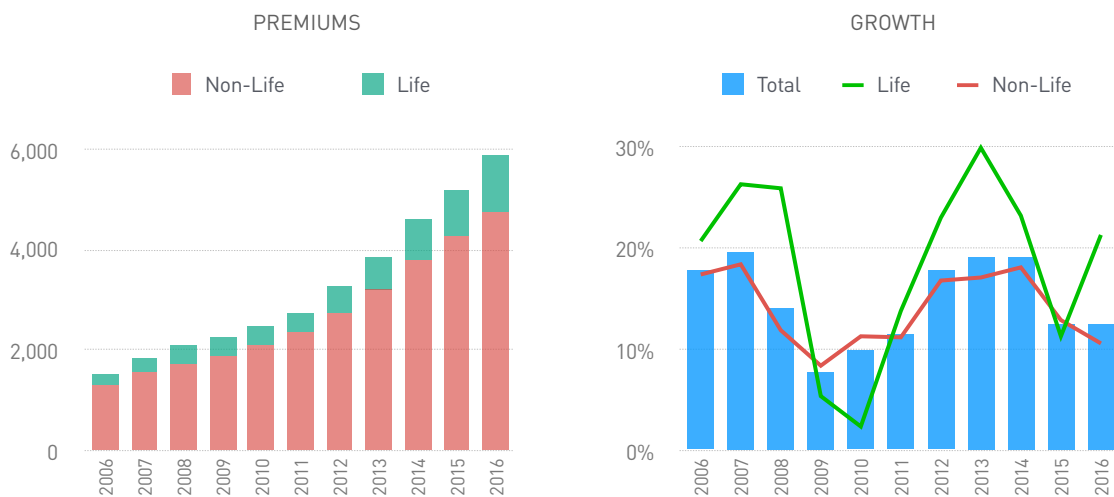


PREMIUMS

GROWTH

Source: MAPFRE Economic Research (based on data from Superintendence of Banks and Other Financial Institutions)

(166 million dollars). The two most important lines, Automobile and Fire, achieved nominal growth of 17.9 and 6 percent respectively. Premiums fell only for Personal Accidents (-1.4 percent) and Credit and Surety insurance (-1.2 percent).

Despite this mixed performance with a recovery in Life insurance, the Life segment only contributed 3.8 percentage points to the overall 12.5 percent premium growth in the Nicaraguan insurance market. The remaining 8.7 percentage points came from growth in Non-Life insurance (see Chart 3.1.5-c).

**Balance sheet and equity**

Chart 3.1.5-d shows developments in the Nicaraguan insurance industry's technical performance over 2006-16. Total assets stood at 9.2675 billion córdobas in 2016, while equity amounted to 2.7382 billion córdobas (up 17.2 percent on 2015).

Aggregate capital levels in the Nicaraguan insurance industry have increased relative to total assets. Capital stood at 20.5 percent in 2006, rising gradually over 2006-16 to reach 29.5 percent of total assets at the end of 2016.



**Chart 3.1.5-c**
**Nicaragua: contribution to insurance market growth, 2006-16**
**(percentage points, ppts)**

Source: MAPFRE Economic Research (based on data from Superintendence of Banks and Other Financial Institutions)
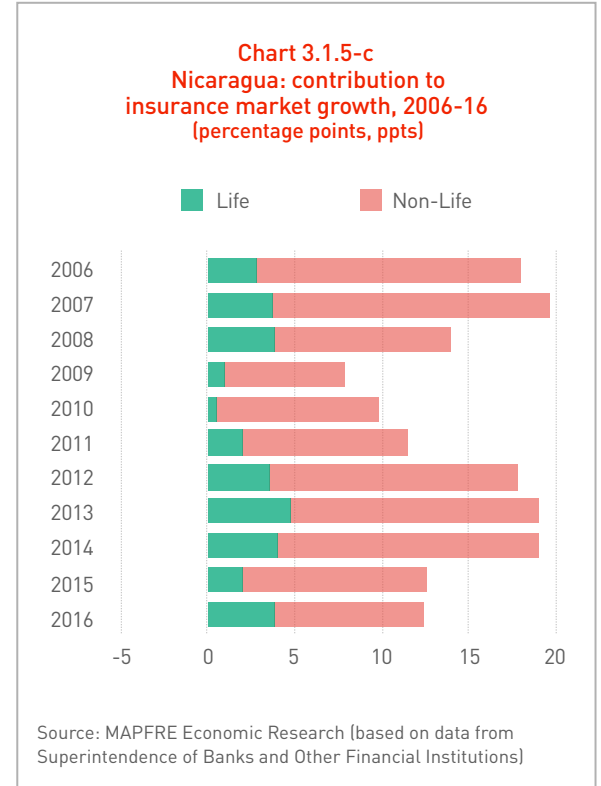
**Investment**

Chart 3.1.5-e illustrates the evolution of investment, while Charts 3.1.5-f and 3.1.5-g show the composition of the aggregate investment portfolio at a sector level over the period 2006-16.



**Chart 3.1.5-d**
**Nicaragua: evolution of insurance industry's aggregate balance sheet, 2006-16**
**(amounts in local currency, change in equity, percentage points)**

Source: MAPFRE Economic Research (based on data from Superintendence of Banks and Other Financial Institutions)
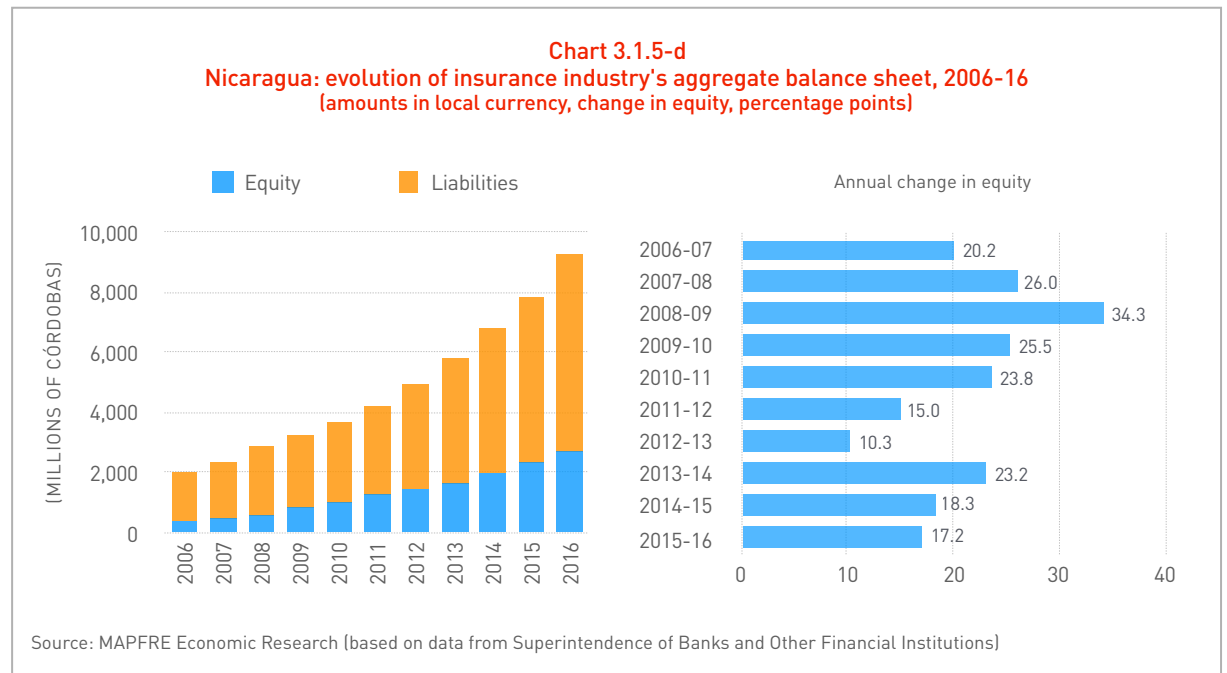
Investment reached 6.493 billion córdobas (227 million dollars) in 2016, with 93.1 percent focused in debt and equity instruments, 2.5 percent cash, and the remaining 4.4 percent other property investment.

In general, investment in debt and equity instruments has dominated the investment portfolio of Nicaragua's insurance market with historically low levels of investment in other financial instruments and property.

**Technical provisions**

Charts 3.1.5-h, 3.1.5-i and 3.1.5-j show the evolution and relative composition of the Nicaraguan insurance industry's technical provisions over the period 2006-16.

Technical provisions amounted to 4.709 billion córdobas (165 million dollars) in 2016. 19.4 percent of total provisions related to Life insurance, 33.7 percent to provisions for unearned premiums and unexpired risks in Non-



Chart 3.1.5-e
Nicaragua: Insurance market
technical provisions, 2006-16
(millions of córdobas)
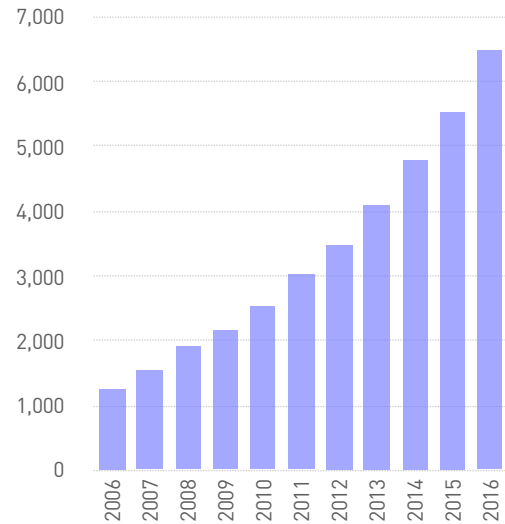
Source: MAPFRE Economic Research (based on data from Superintendence of Banks and Other Financial Institutions)



Chart 3.1.5-f
Nicaragua: structure of
investment, 2006-16
(%)
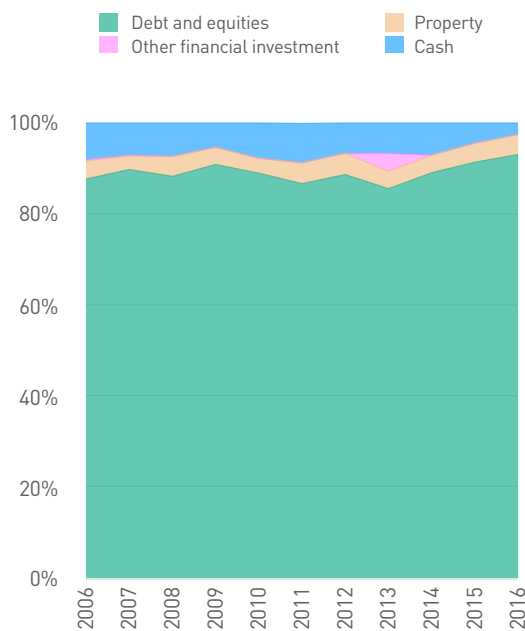
Debt and equities
Other financial investment
Property
Cash

Source: MAPFRE Economic Research (based on data from Superintendence of Banks and Other Financial Institutions)



Chart 3.1.5-g
Nicaragua: structure
of investment, 2016
(%)
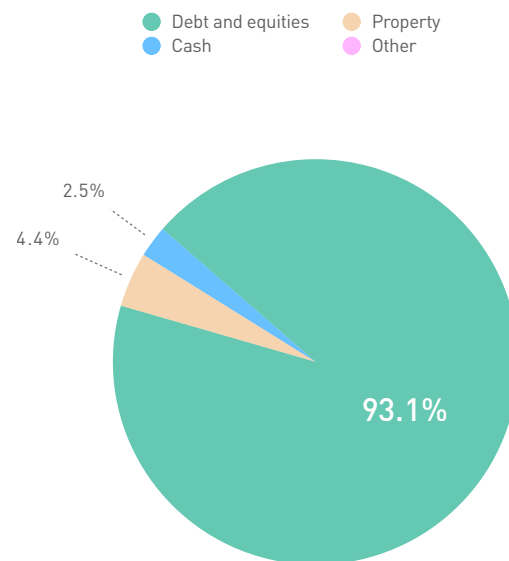
Debt and equities
Cash
Property
Other

2.5%
4.4%
93.1%

Source: MAPFRE Economic Research (based on data from Superintendence of Banks and Other Financial Institutions)

Life insurance, 27.9 percent to technical provisions for claims, 18.7 percent to provisions for catastrophic risks and 0.3 percent to other technical provisions. The volume of technical provisions has grown on a sustained basis in absolute terms over the period 2006-16, both for Life and Non-Life insurance. The relative weight of Life insurance fell in 2008 relative to Non-Life, accounting for 16.8 percent of total provisions, but has since gradually recovered to reach values of around 20 percent in the last three years.

**Technical performance**

Chart 3.1.5-k shows the evolution of the sector's total combined ratio over the period 2006-16. As can be seen, the combined ratio deteriorated by 2.5 percentage points in 2016 to reach 89.1 percent, primarily due to a 1.8 percentage point increase in the claims ratio to 46.8 percent. Meanwhile the expense ratio increased by 0.7 percentage points to 42.2 percent. Despite the



**Chart 3.1.5-h**
**Nicaragua: Insurance market technical provisions, 2006-16**
**(millions of córdobas)**

Source: MAPFRE Economic Research (based on data from Superintendence of Banks and Other Financial Institutions)



**Chart 3.1.5-i**
**Nicaragua: structure of technical provisions, 2006-16**
**(%)**

- Other technical provisions
- Catastrophic risk provisions
- Provisions for outstanding claims
- Unearned premiums and ongoing risks
- Life insurance provisions

Source: MAPFRE Economic Research (based on data from Superintendence of Banks and Other Financial Institutions)



**Chart 3.1.5-j**
**Nicaragua: structure of technical provisions, 2016**
**(%)**

- Life
- Non-Life
- For claims
- Catastrophic risks
- Other

19.4%
33.7%
27.9%
18.7%
0.3%

Source: MAPFRE Economic Research (based on data from Superintendence of Banks and Other Financial Institutions)

return to 2013 values in 2016, in general the sector's technical performance has improved on a sustained basis since 2011.

**Results and profitability**

The Nicaraguan insurance industry posted a net result of 587 million córdobas in 2016 (21 million dollars), representing an increase of 6.5 percent on the previous year, underpinned by positive technical and financial results (see Chart 3.1.5-l).

In terms of profitability, the industry achieved a return on equity (ROE) of 21.5 percent in 2016, down 2.15 percentage points on 2015. In a similar vein, return on assets (ROA) reached 6.3 percent in 2016, representing a fall of 0.69 percentage points relative to 2015. However, overall profitability in Nicaraguan insurance industry has improved consistently since 2012 thanks to an improved technical performance.

Chart 3.1.5-k
Nicaragua: evolution of market technical performance, 2006-16
(total combined ratio, percent; annual change in combined ratio, percentage points)
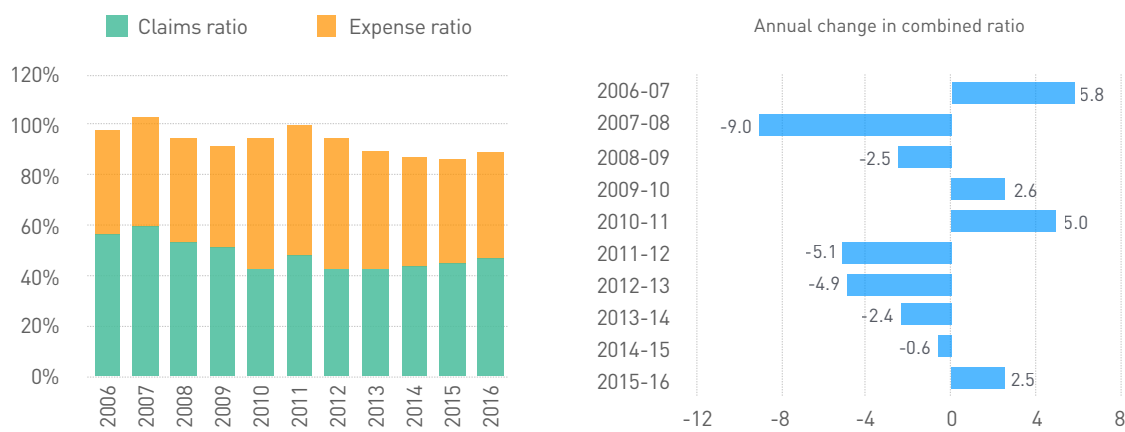


Source: MAPFRE Economic Research (based on data from Superintendence of Banks and Other Financial Institutions)

Chart 3.1.5-l
Nicaragua: evolution of results and profitability, 2006-16
(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)
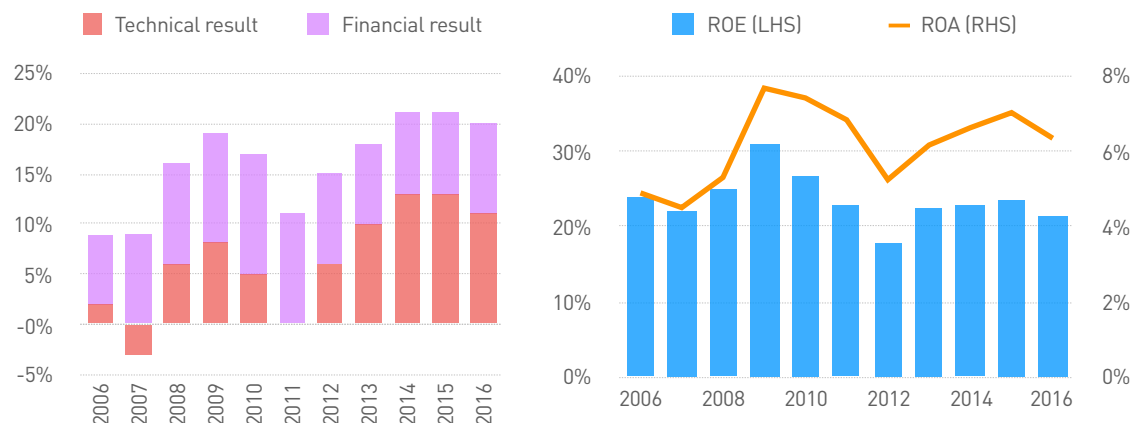


Source: MAPFRE Economic Research (based on data from Superintendence of Banks and Other Financial Institutions)

**Insurance penetration, density and depth**

Chart 3.1.5-m shows the main structural trends in the development of the insurance industry in Nicaragua over the period 2006-16. The penetration index (premiums/GDP) stood at 1.6 percent in 2016, 0.3 percentage points above 2006. As can be observed, the penetration index stagnated until 2012, thereafter rising on average in line with penetration for the Latin American insurance market as a whole.

Insurance density in Nicaragua (premiums per capita) amounted to 950.6 córdobas (33.3 dollars), representing an increase of 11.3 percent relative to 2015 (854.2 córdobas). In contrast to penetration, density (in local currency terms) has clearly increased over time, registering cumulative growth of 237.8 percent over the period 2006-16.

The depth (Life insurance premiums to total premiums) of the Nicaraguan insurance market stood at 19 percent in 2016, some 5 percentage points above the 2006 level. This is broadly in line with the overall trend in Latin American markets, albeit with significant variations in some years (2008 and 2013) due to growth in the Life insurance segment and at absolute levels well below the regional average.

Chart 3.1.5-n illustrates the overall performance of the Nicaraguan insurance market based on a dispersion analysis which takes account of the overall effect of penetration and depth levels. This analysis points to a general positive trend in market development with increases in both penetration and depth throughout the period under analysis, albeit with a drop in depth in 2008-10 before returning to a positive growth path. Nonetheless, levels of penetration and depth in the Nicaraguan market are well below the regional averages.

**Estimate of the Insurance Protection Gap**

Chart 3.1.5-o provides an estimate of the IPG for the Nicaraguan market between 2006 and 2016. The insurance gap amounted to 23.819 billion córdobas in 2016, some 4.1 times the actual insurance market in Nicaragua at the end of the year, continuing the downward trend of the last ten years.

As is the case for most Latin American insurance markets, the structure and evolution of the IPG over the period 2006-16 is conditioned by the contribution from Life insurance.

Thus, at the end of 2016, 65.8 percent of the IPG related to Life insurance (15.676 billion córdobas); 1 percentage point below the share for this segment in 2006. The remaining 34.2 percent of the gap was explained by Non-Life insurance (8.144 billion córdobas). Accordingly, the potential insurance market in Nicaragua at the end of 2016 (sum of actual market and IPG) is estimated at 29.667 billion córdobas, some 5.1 times the total insurance market in that year.

Chart 3.1.5-p shows an estimate of the insurance gap as a multiple of the actual insurance market in Nicaragua. As a multiple, the IPG has continually declined over the period 2006-16, both for Life (26.6 to 14.1 times) and Non-Life insurance (2.1 to 1.7 times).

Finally, Chart 3.1.5-q provides a summary of the assessment regarding the capacity of the Nicaraguan insurance market to close the IPG based on a comparison of growth rates over the last ten years in relation to the growth rates that would be required in order to close the IPG established in 2016 over the next ten years.

Nicaragua's insurance market posted average annual growth of 14.3 percent over the period; with average growth of 17.9 percent in Life insurance and average annual growth of 13.6 percent in Non-Life insurance.

**Chart 3.1.5-m**
**Nicaragua: evolution of penetration, density and depth, 2006-16**
(premiums/GDP, percent; premiums per capita, córdobas and dollars; Life insurance premiums / total premiums, percent, index 2006=100)
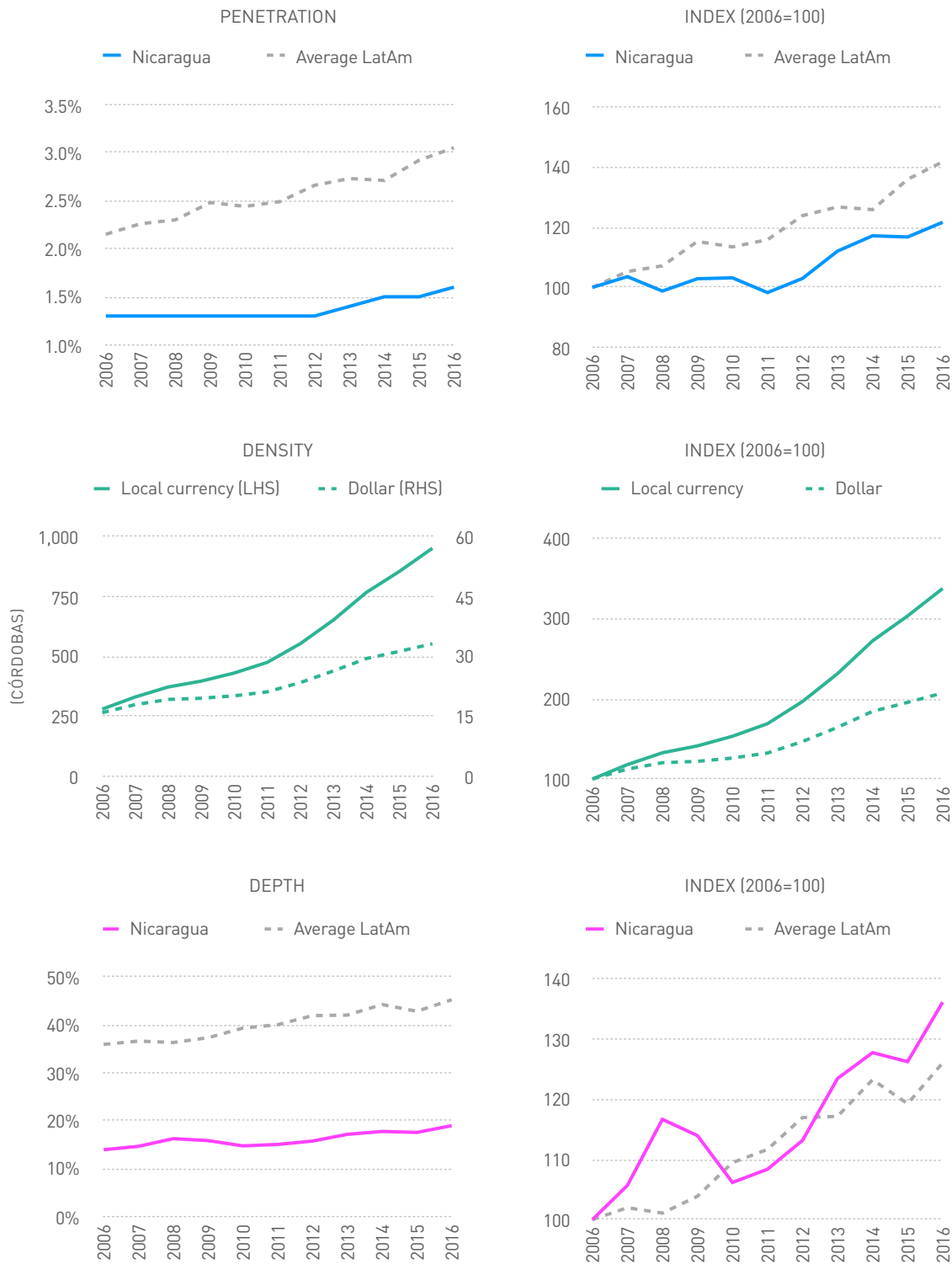
PENETRATION

INDEX (2006=100)

DENSITY

INDEX (2006=100)

DEPTH

INDEX (2006=100)

Source: MAPFRE Economic Research (based on data from Superintendence of Banks and Other Financial Institutions)

**Chart 3.1.5-n**
**Nicaragua: evolution of insurance market, 2006-16**
**(penetration vs depth)**

Source: MAPFRE Economic Research



**Chart 3.1.5-o**
**Nicaragua: Insurance Protection Gap and potential market, 2006-16**
**(millions of córdobas)**

Source: MAPFRE Economic Research
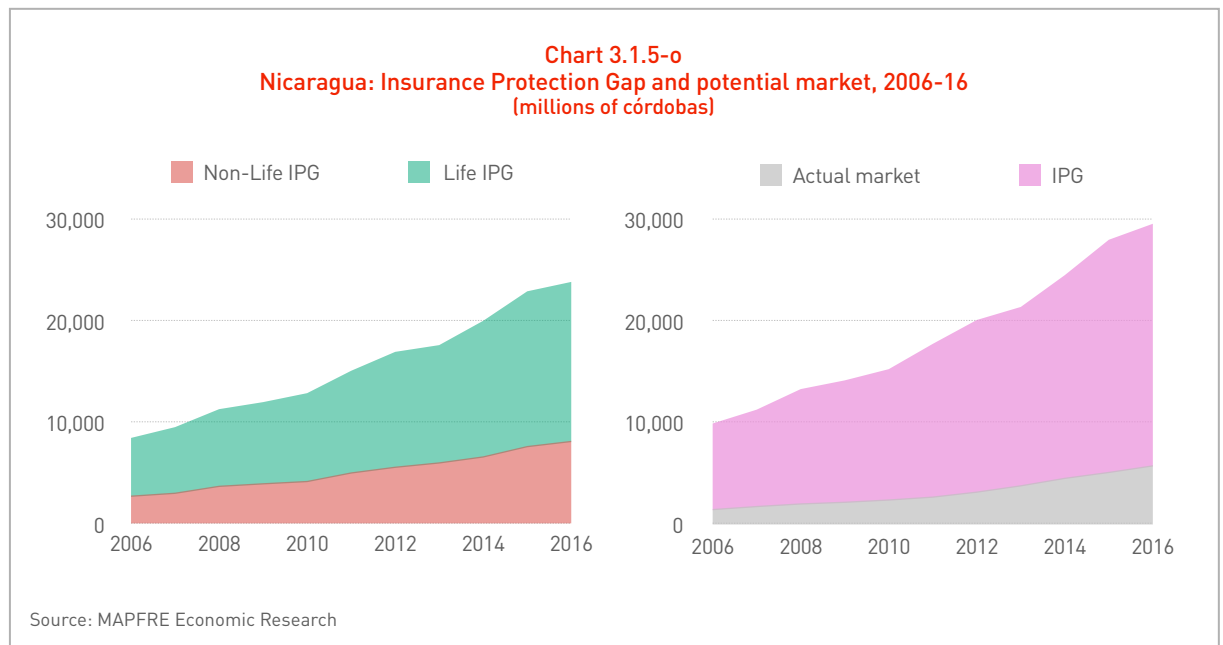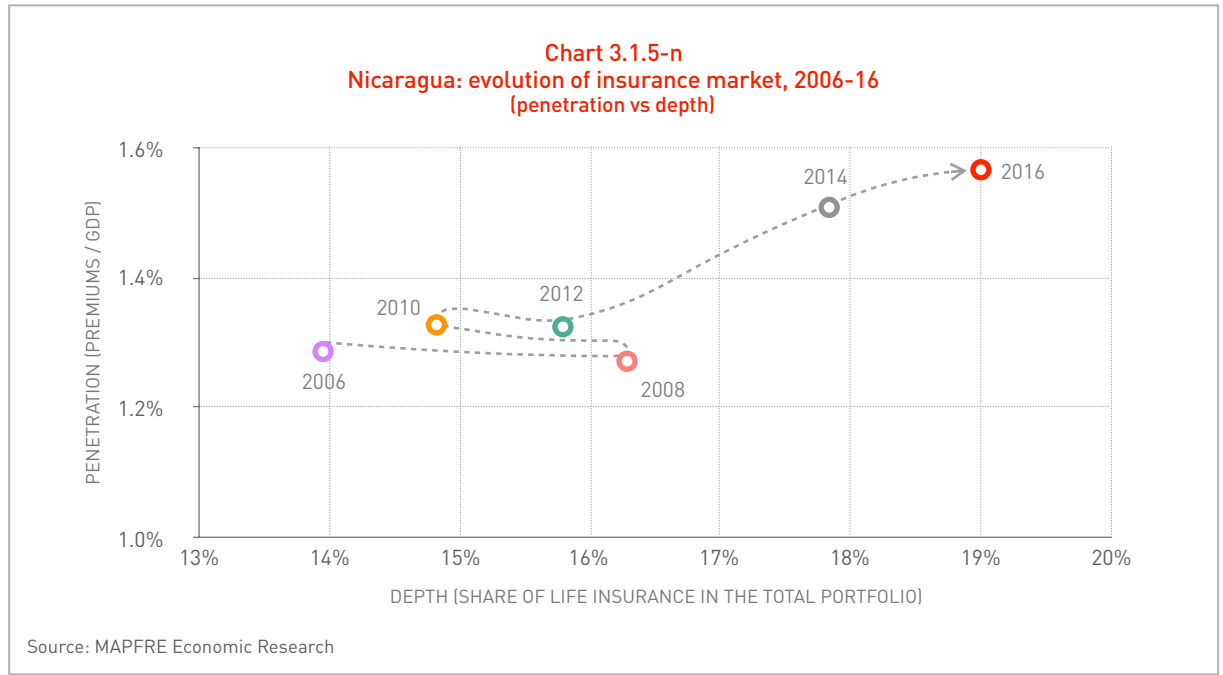
On the basis of the above analysis, if the same rate of growth were to be maintained, the growth rate of the Nicaraguan insurance market would only be sufficient to close the gap in the Non-Life insurance segment. For Life insurance the observed rate would fall short by 13.3 percentage points. It is worth noting that relative to last year's exercise, there has been a slight improvement in the estimated capacity of the Nicaraguan insurance market to close the IPG.

**Market Development Index (MDI)**

Chart 3.1.5-r provides an estimate of the Market Development Index (MDI) for the Nicaraguan insurance industry. The MDI (which is used in this report as an indicator of general trends in the evolution and maturity of the insurance market) has performed positively over the period 2006-16. As can be seen in this chart, the trend is broadly in line with the average of Latin American insurance markets, with a

Chart 3.1.5-p
Nicaragua: the IPG as a multiple of the actual market, 2006-16
(number of times actual insurance market)

Source: MAPFRE Economic Research



Chart 3.1.5-q
Nicaragua: capacity to close IPG, 2006-16
(average annual growth rate, percent; sufficiency or insufficiency, percentage points)

Source: MAPFRE Economic Research
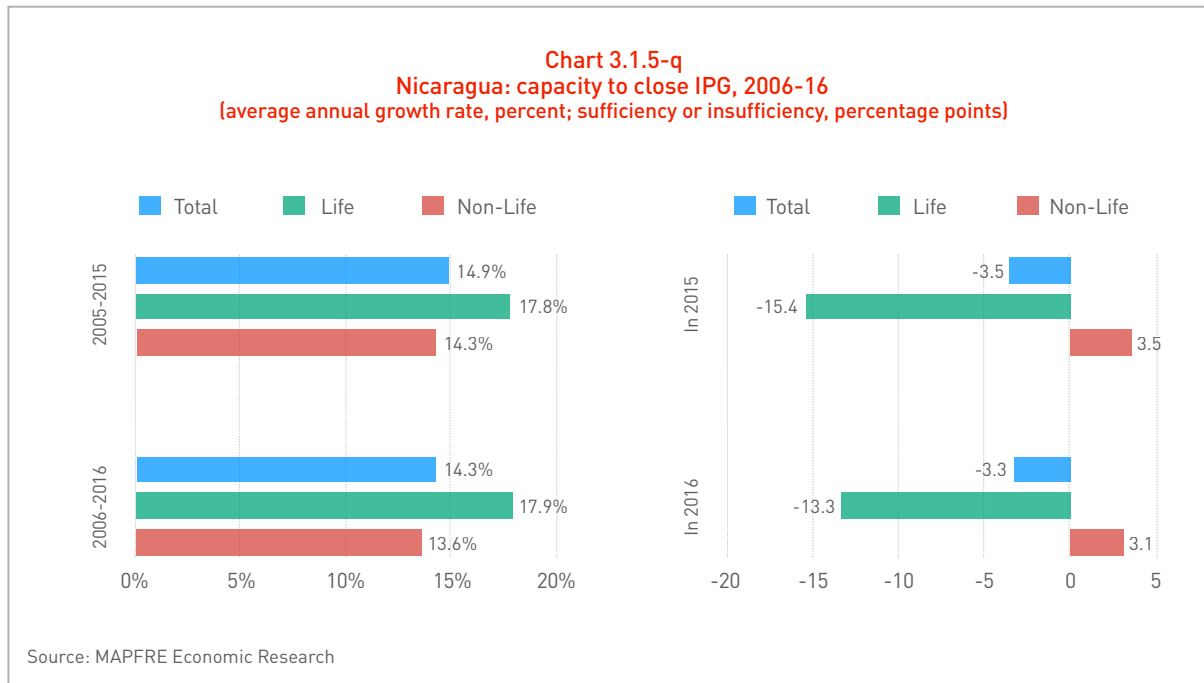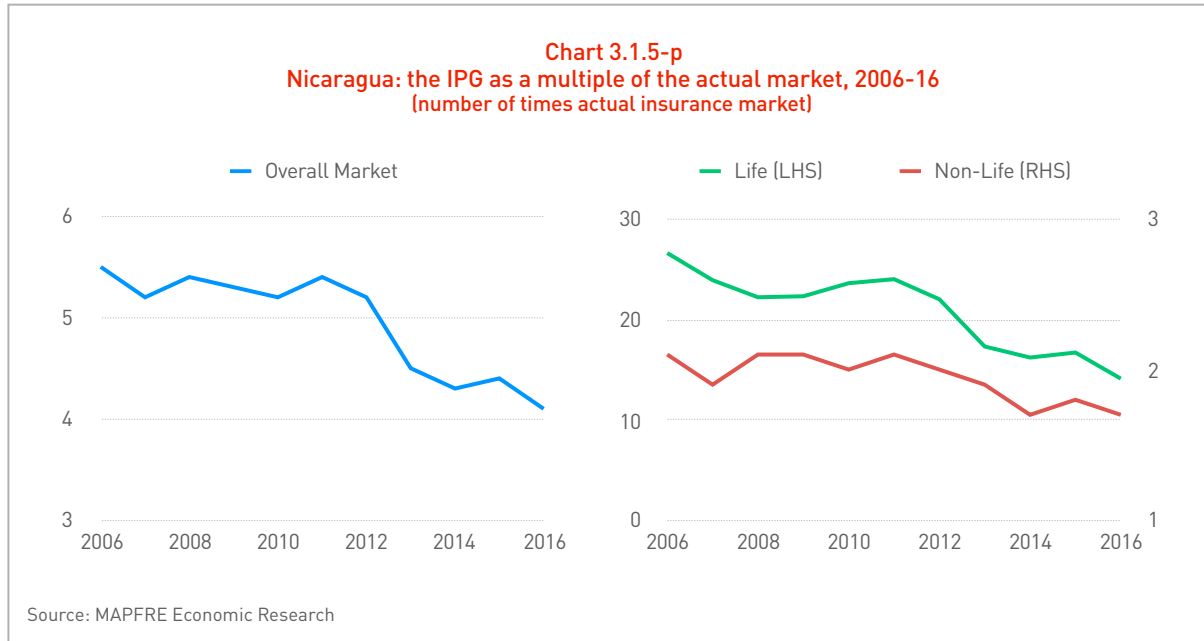
deterioration in 2009-12 followed by a resumption of the positive trend from then on and a better performance in 2016 relative to 2015.

## Insurance market rankings

### Overall ranking

In 2016, the Nicaraguan insurance industry was made up of only five insurance companies. Over the last ten years there has been a slight trend toward a decrease in market concentration levels, although concentration increased slightly in 2016 (see Chart 3.1.5-s). Either way, over the entire period from 2006-16, the Herfindahl index has remained above the theoretical threshold associated with high levels of concentration. The same applies when looking at the CR3 index for the Nicaraguan market. This shows a decrease in industry concentration levels over the period, but remaining at very high levels and even

**Chart 3.1.5-r**
**Nicaragua: Market Development Index (MDI), 2005–16**
(index 2005=100; annual change)
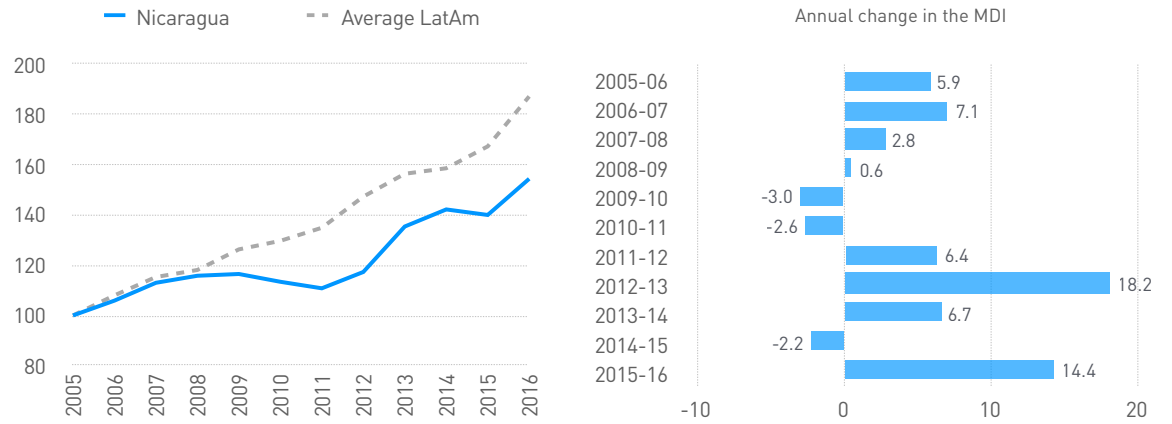


Source: MAPFRE Economic Research

but remaining at very high levels and even increasing in 2016.

América led the overall ranking of the Nicaraguan insurance market in 2016 with a market share of 30.6 percent. The following spots in the ranking were held by Iniser, with a share of 24.5 percent, and Lafise on 20.4 percent (see Chart 3.1.5-t).

**Non-Life Ranking**

América was also the leader in the Non-Life insurance market with a market share of 29.8 percent, while second and third place were held

**Graph 3.1.5-s**
**Nicaragua: insurance industry concentration, 2006–16**
(Herfindahl index; CR5 index, percent)
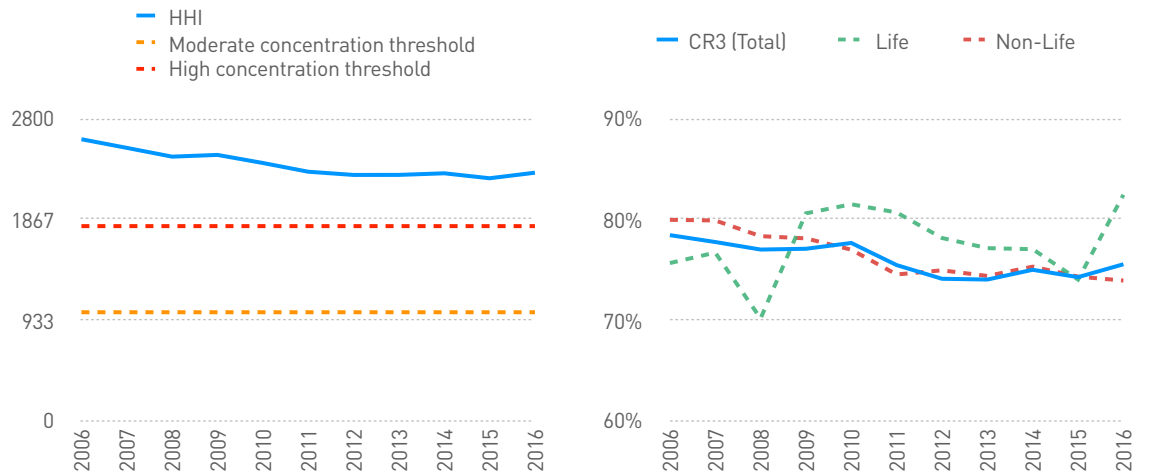


Source: MAPFRE Economic Research (based on data from Superintendence of Banks and Other Financial Institutions)

**Chart 3.1.5-t**
**Nicaragua: overall ranking, 2015-16**
**(market shares, percent)**
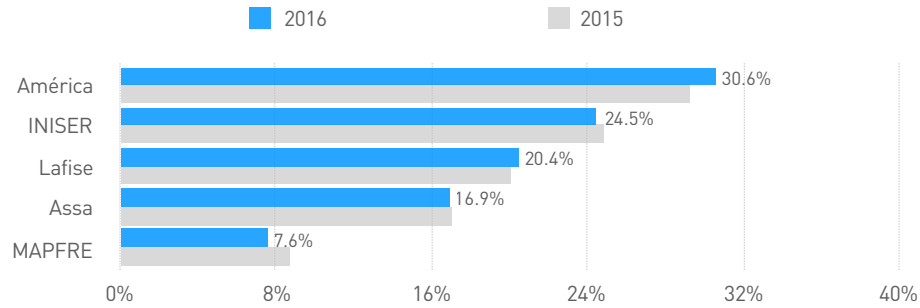


Source: MAPFRE Economic Research (based on data from Superintendence of Banks and Other Financial Institutions)

by Iniser and Lafise with market shares of 24.3 and 19.8 percent respectively (see Chart 3.1.5-u).

**Life Ranking**

Lastly, the Life ranking in 2016 was also led by América with 34.3 percent of the market, overtaking Iniser (25 percent) in 2016, while Lafise occupied third place with a 23.1 percent share.

## Key regulatory aspects

The following key regulatory developments have taken place over 2016 and up to the present moment in the Nicaraguan insurance market:

- Updated standards on the minimum capital required for insurance and reinsurance companies, November 24, 2016.

- Regulation on the Management and Prevention of Terrorism Financing and Financing of the Proliferation of Weapons of Mass Destruction - approved on January 18, 2017.

This regulation which is awaiting publication addresses recommendations from the Financial Action Task Force (FATF) implementing binding resolutions adopted by the United Nations Security Council. It defines the measures that supervised financial institutions should take in terms of prevention, detection and immediate

**Chart 3.1.5-u**
**Nicaragua: Life and Non-Life ranking, 2015-16**
**(market shares, percent)**
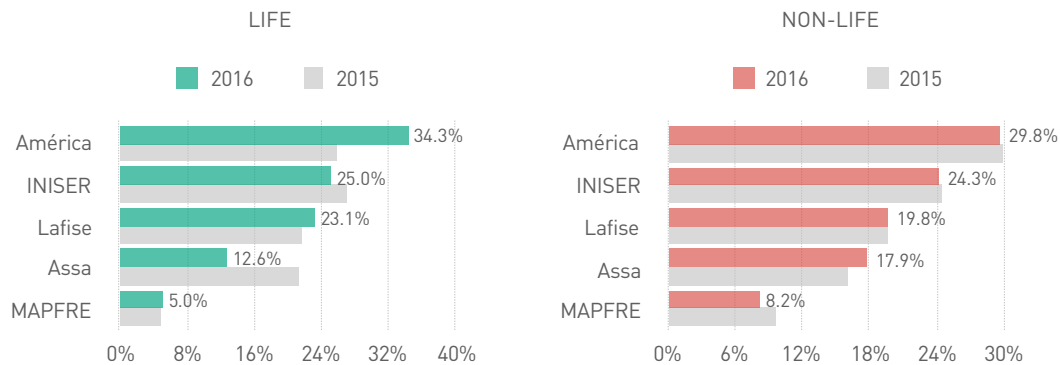


Source: MAPFRE Economic Research (based on data from Superintendence of Banks and Other Financial Institutions)

reporting, as well as expressly prohibiting collaboration with individuals or companies linked to terrorism. The regulation also sets out the sanctions and timelines associated with non-compliance, as well as the people or company risk lists reported by the Financial Analysis Unit in compliance with Decree 17-2014.

It is also worth highlighting that two resolutions are currently being drawn up to reform external audit standards, which were approved in 2012, and to reform regulation on managing credit risk, which were approved in 2008.

### 3.1.6. Costa Rica

### Macroeconomic environment

The Costa Rican economy expanded by 4.3 percent in real terms in 2016, 0.4 percentage points weaker than the previous year, supported by a good overall performance of investment and private consumption (see Chart 3.1.6-a).

Services - particularly financial services and insurance - grew especially robustly in 2016 registering annual growth of 12.3 percent, as well as services to companies (8.4 percent), while industrial manufacturing expanded by 4.4 percent. This helped to offset a contraction in the construction sector.

Average inflation declined by 0.8 percentage points to 0 percent. The Costa Rican economy recorded an unemployment rate of 8.2 percent, down one percentage point on 2015. Imports grew by 0.3 percent due to an increase in commodity purchases and consumer goods. The current account deficit stood at 4.2 percent of GDP at the end of 2016. ECLAC and the IMF forecast the Costa Rican economy to grow by 3.9 and 4 percent respectively in 2017.



**Chart 3.1.6-a**
**Costa Rica: evolution of economic growth and inflation, 2006-16**
(GDP in local currency, billions of córdobas; real growth rate, percent; annual inflation rate, percent)

Source: MAPFRE Economic Research (based on IMF data)
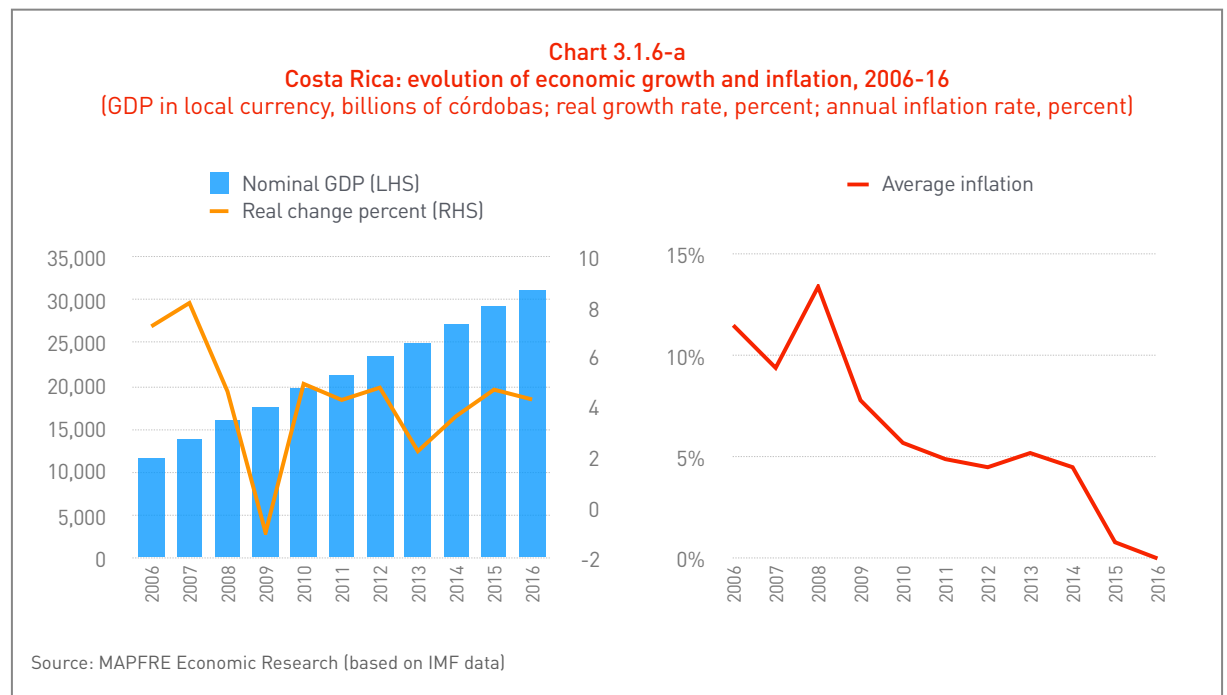
## Insurance Market

### Growth

The Costa Rican insurance market achieved a premium volume of 654.715 billion colons (1.2 billion dollars) in 2016, representing nominal and real growth of 16.1 percent on the previous year (see Table 3.1.6-a).

This growth contrasts with the sharp slowdown in 2015 (-9.4 percent), which coincided with a change in criteria for accounting premiums that was implemented in 2015 by the Instituto Nacional de Seguros de Costa Rica (the insurance company with the largest market share) in order to adapt to current regulation. However, the changes complicate the comparison of statistical data in 2015 and 2016 with previous years both in terms of revenue per premium and the balance sheet and income statements.

Chart 3.1.6-b illustrates how Life insurance premiums, which accounted for 15.6 percent of the total, grew by 41.1 percent in 2016 to reach

101.881 billion colons (187 million dollars) while Non-Life premiums rose by 12.4 percent to 552.835 billion colons (1.013 billion dollars). In the case of the latter, the largest increases were registered in the most important lines, Automobiles (+32.7 percent) and Accidents and Health (20.4 percent), which accounted for 36.3 and 15.6 percent respectively of total Non-Life premiums.

As was the case in the years prior to 2015, the largest contribution to growth in the Costa Rican insurance industry came from Non-Life insurance. This segment contributed 10.8 percentage points to overall sector growth of 16.1 percent in 2016. However, Life insurance (which contributed 5.3 percentage points to growth), made its largest contribution since 2009 (see Chart 3.1.6-c).

### Balance sheet and equity

The Insurance Market Regulatory Law took effect in July 2008, opening up the Costa Rican insurance market, which had previously operated as a monopoly (with a single insurance company, Instituto Nacional de Seguros). This

### Table 3.1.6-a
### Costa Rica: premium volume[1] by line of business (lob), 2016

| Line of business | Millions of colons | Millions of dollars | Increase Nominal (percent) | Increase Real (percent) |
|---|---|---|---|---|
| **Total** | **654,715** | **1,200** | **16.1** | **16.1** |
| **Life** | **101,881** | **187** | **41.1** | **41.1** |
| **Non-Life** | **552,835** | **1,013** | **12.4** | **12.4** |
| Automobiles | 200,956 | 368 | 32.7 | 32.7 |
| Fire and Allied Lines | 81,806 | 150 | 8.6 | 8.6 |
| Accidents and Health | 86,617 | 159 | 20.4 | 20.4 |
| Other Lines | 45,428 | 83 | 40.6 | 40.6 |
| Transport | 9,174 | 17 | -0.4 | -0.4 |
| Third-Party Liability | 10,266 | 19 | -3.1 | -3.1 |
| Credit and Surety | 7,947 | 15 | 29.5 | 29.5 |
| Agriculture and Livestock | 472 | 1 | -27.3 | -27.3 |
| Workplace Accidents | 110,168 | 202 | -18.0 | -18.0 |

Source: MAPFRE Economic Research (based on data from General Superintendence of Insurance)
1/ Net premiums of returns and cancellations

**Chart 3.1.6-b**
**Costa Rica: growth developments in the insurance market, 2006-16**
(premiums, billions of colons, nominal annual growth rates, percent)
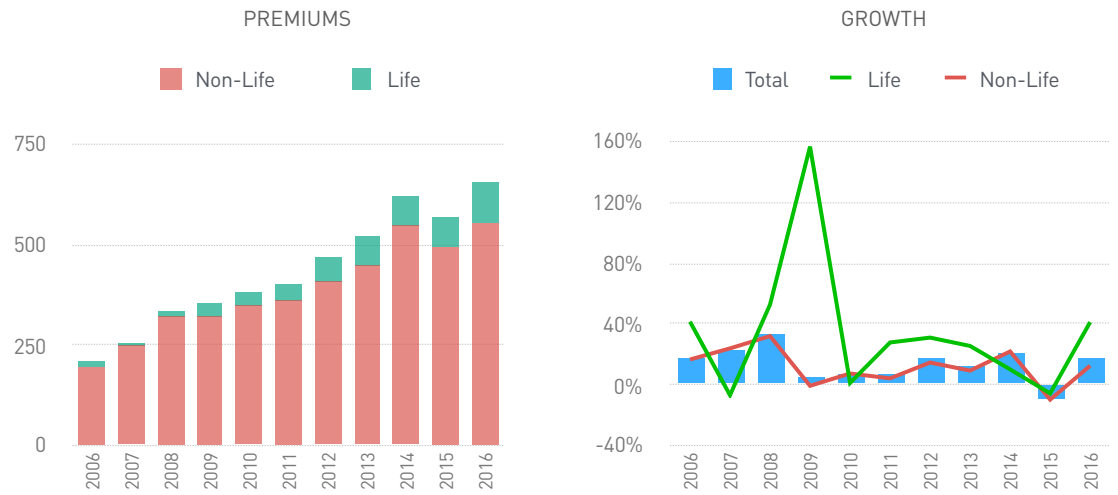
Source: MAPFRE Economic Research (based on data from General Superintendence of Insurance)

law also established the General Superintendence of Insurance (SUGESE). As a result, the Superintendence only began to publish data on the insurance industry's balance sheet and income statement from 2010 onward.

Chart 3.1.6-d shows the aggregate balance sheet of the Costa Rican insurance industry for the period 2010-16. The sector's total assets reached 2.128211 trillion colons (3.9 billion dollars) in 2016, while equity stood at 854.982 billion colons (1.567 billion dollars). The Costa Rican insurance industry has maintained capital levels (over total assets) of around 40 percent over the period 2010-16, reaching 40.2 percent of total assets in 2016.

**Investment**

Chart 3.1.6-e shows the evolution of insurance industry investment, while Charts 3.1.6-f and 3.1.6-g show the composition of the aggregate investment portfolio at a sector level for the Costa Rican insurance industry over the period 2011-16.

Investment reached 1.543 trillion colons (2.828 billion dollars) in 2016, with 87.3 percent

concentrated in debt and equities, 6.5 percent in cash and the remaining 6.3 percent in property investments.



**Chart 3.1.6-c**
**Costa Rica: contribution to insurance market growth, 2006-16**
(percentage points, ppts)
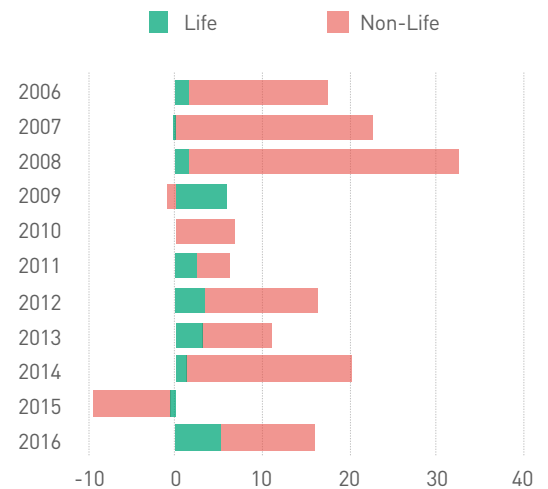
Source: MAPFRE Economic Research (based on data from General Superintendence of Insurance)

**Chart 3.1.6-d**
**Costa Rica: evolution of insurance industry's aggregate balance sheet, 2006-16**
(amounts in local currency, change in equity, percentage points)
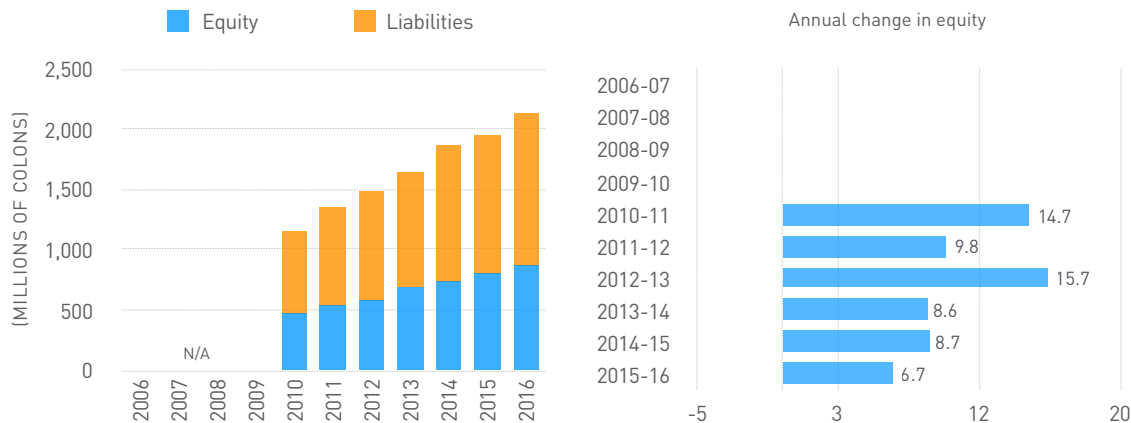
Source: MAPFRE Economic Research (based on data from General Superintendence of Insurance)

There have not been any substantial changes in the structure of insurance industry investments over the period 2011-16 with debt and equity remaining the main instrument.

**Technical provisions**

Chart 3.1.6-h shows the evolution of technical provisions in the Costa Rican insurance industry.

Technical provisions amounted to 827.3 billion colons (1.516 billion dollars) in 2016, compared to 545.8 billion colons (1 billion dollars) in 2010.

Technical provisions grew consistently over the period 2010-16 on aggregate terms, with the exception of a slight decline (of 2.1 percent) in 2015.

**Technical performance**

Graph 3.1.6-i illustrates the Costa Rican insurance industry's technical performance over the period 2010-16.

During this period there was a marked increase in the claims ratio in 2014 and 2015. However, in 2016 the claims ratio fell six percentage points to 63.9 percent. Even so, the high expense ratio

means that the combined ratio exceeded 100 percent, amounting to 105.4 percent in 2016 with a negative technical result, which was ultimately offset by the financial result.



**Chart 3.1.6-e**
**Costa Rica: Insurance market technical provisions, 2006-16**
(billions of colons)
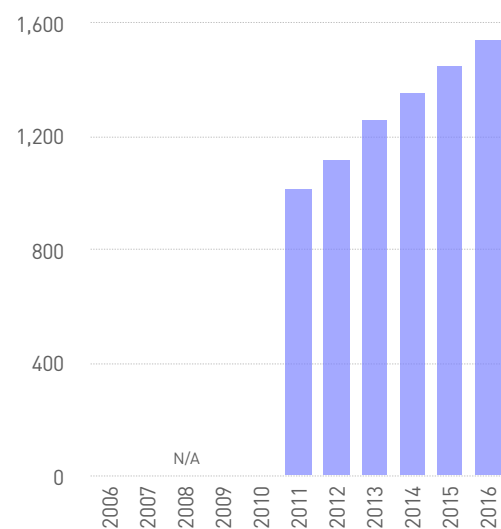
Source: MAPFRE Economic Research (based on data from General Superintendence of Insurance)

**Chart 3.1.6-f
Costa Rica: structure of investment, 2006-16
(%)**



Source: MAPFRE Economic Research (based on data from General Superintendence of Insurance)

**Chart 3.1.6-g
Costa Rica: structure of investment, 2016
(%)**



Source: MAPFRE Economic Research (based on data from General Superintendence of Insurance)
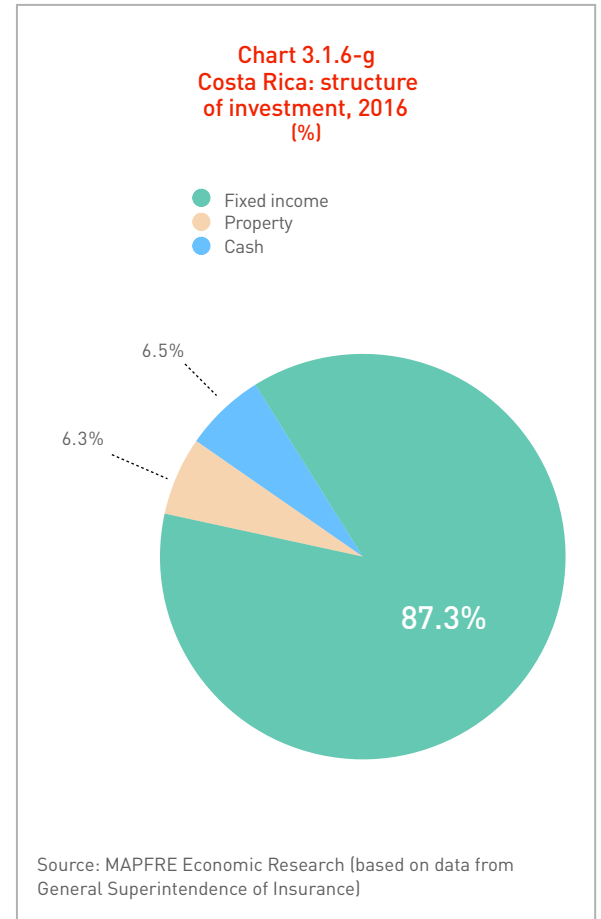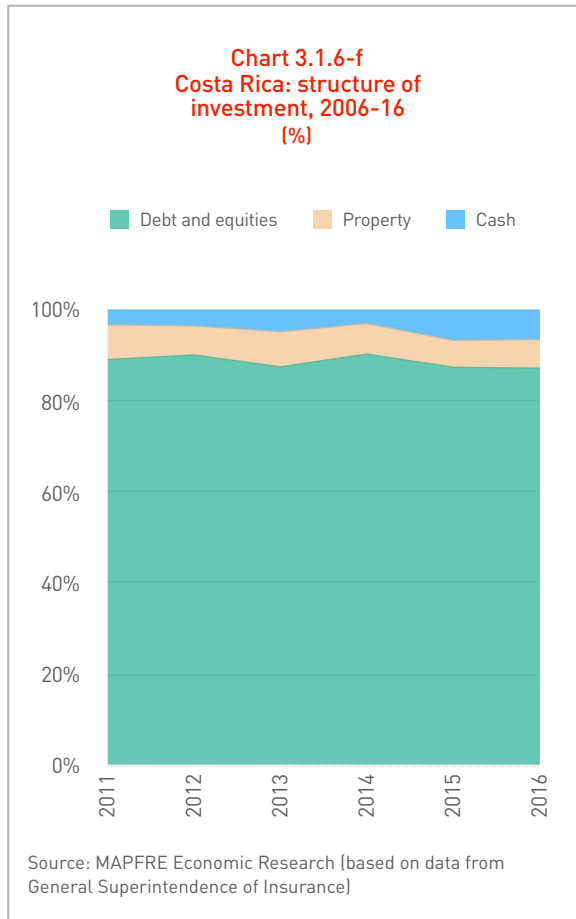
### Results and profitability

The Costa Rican insurance industry posted a net result of 54.616 billion colons in 2016 (101 million dollars), unchanged from the previous year. Meanwhile, the financial result remained very strong at 17.5 percent of premiums and - despite easing over the last three years - continued to offset the negative impact of the technical result (see Chart 3.1.6-j).

2016 broke the trend toward rising profitability observed since 2013. The industry achieved a return on equity (ROE) of 6.4 percent in 2016, down 0.43 percentage points on 2015. The same applies to return on assets (ROA) which was 2.6 percent in 2016, representing a fall of 0.24 percentage points on 2015.

**Chart 3.1.6-h
Costa Rica: insurance market's technical provisions, 2006-16
(billions of colons)**



Source: MAPFRE Economic Research (based on data from General Superintendence of Insurance)
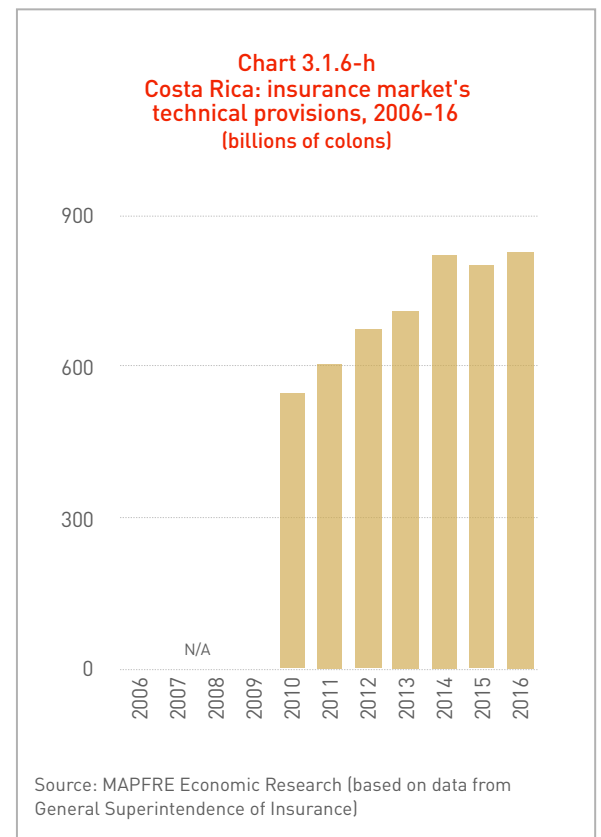
Chart 3.1.6-i
Costa Rica: evolution of market technical performance, 2006-16
(total combined ratio, percent; annual change in combined ratio, percentage points)
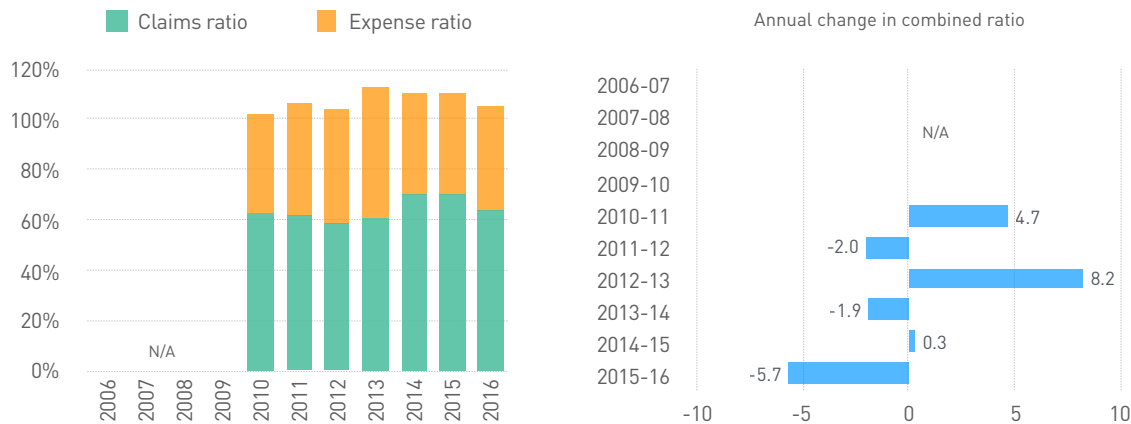


Source: MAPFRE Economic Research (based on data from General Superintendence of Insurance)

**Insurance penetration, density and depth**

Chart 3.1.6-k shows the main structural trends in the development of the insurance industry in Costa Rica over the period 2006-16.

The penetration index (premiums/GDP) stood at 2.1 percent in 2016, registering an increase of 0.3 percentage points over the last ten years and an increase on 2015. The penetration index for the Costa Rican market has barely changed over

the period, proving to be less dynamic than other Latin American insurance markets and below the average absolute penetration for Latin America.

Density (premiums per capita) stood at 134,443 colons (246.4 dollars), representing an increase of 14.9 percent on 2015 (117,005 colons), recovering lost ground relative to 2014. The density of the Costa Rican market (measured in local currency) has generally been on an upward

Chart 3.1.6-j
Costa Rica: evolution of results and profitability, 2006-16
(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)
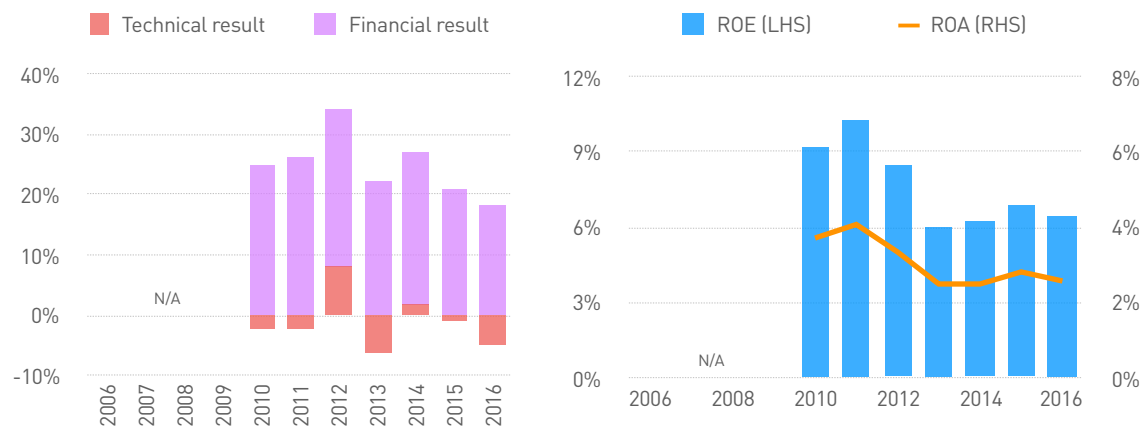


Source: MAPFRE Economic Research (based on data from General Superintendence of Insurance)

path over the period 2006-16 with the exception of a 9.4 percent fall in market premium volume in 2015, essentially resulting from the previously mentioned changes to the accounting of premiums.

Depth (Life insurance premiums to total premiums) stood at 15.6 percent in 2016, some 11.2 percentage points above the 2006 level. Depth has grown through the entire period, albeit remaining consistently below the absolute values for the average across Latin American countries.

Chart 3.1.6-l illustrates the performance of the Costa Rican insurance market, using a dispersion analysis, which takes account of the combined effect of penetration and depth levels. The former (penetration) considers the quantitative effect of the development process, while the latter (depth) is a proxy for the degree of maturity obtained by the industry.

The analysis shows that the Costa Rican insurance market has generally been on a positive development track over the period 2006-16, which is in line with the average trend for Latin America. However, some sub-periods (2006-08 and 2010-14) saw abrupt increases in penetration (due to accounting changes), albeit with penetration and depth levels well below the regional average.

**Estimate of the Insurance Protection Gap**

Chart 3.1.6-m provides an estimate of the Insurance Protection Gap (IPG) for the Costa Rican insurance market between 2006 and 2016. The insurance gap in Costa Rica stood at 1.8308 trillion colons in 2016, some 2.8 times the actual insurance market in 2016.

The structure and evolution of the IPG over the period 2006-16 reflects the major contribution of Life insurance. At the end of 2016, 71.3 percent of the IPG related to Life insurance (1.3045 trillion colons), which was 2.9 percentage points below the share for this segment in 2006. The remaining 28.7 percent of the IPG was explained by Non-Life insurance (526.2 billion colons).

Accordingly, the potential insurance market in Costa Rica at the end of 2016 (calculated as the sum of the actual market and the insurance gap) stood at an estimated 2.4855 trillion colons, equivalent to 3.8 times the total insurance market in Costa Rica, compared to 4.1 times in 2015.

Chart 3.1.6-n provides an estimate of the IPG as a multiple of the actual market in Costa Rica over the period 2006-16. The gap, measured as a multiple of the actual market, has remained stable over time for the Non-Life insurance segment (at around 1), while the IPG for life insurance segment has declined throughout the period under analysis (falling from 62.4 to 12.8 times the actual market).

Finally, Chart 3.1.6-o provides a summary of the analysis of the capacity of Costa Rica's insurance market to close the insurance gap. This has once again been performed using a comparative analysis of growth rates observed over the last ten years and the growth rates that would be required in order to close the IPG established in 2016 over the next ten years.

Costa Rica's insurance market posted average annual growth of 12.2 percent over the period; with annual growth of 27.4 percent in Life insurance and average annual growth of 10.8 percent in Non-Life insurance. On the basis of the above analysis, if the same rate of growth were to be maintained over the next ten years, the current growth rate of the Costa Rican insurance market would only be sufficient to close the insurance gap in the Non-Life insurance segment.

For Life insurance the observed rate would be insufficient of the order of 2.6 percentage points, down from a shortfall of 6.8 points in 2015.

## Chart 3.1.6-k
## Costa Rica: evolution of penetration, density and depth, 2006-16
### (premiums/GDP, percent; premiums per capita, colons and dollars; Life insurance premiums / total premiums, percent. index 2006=100)
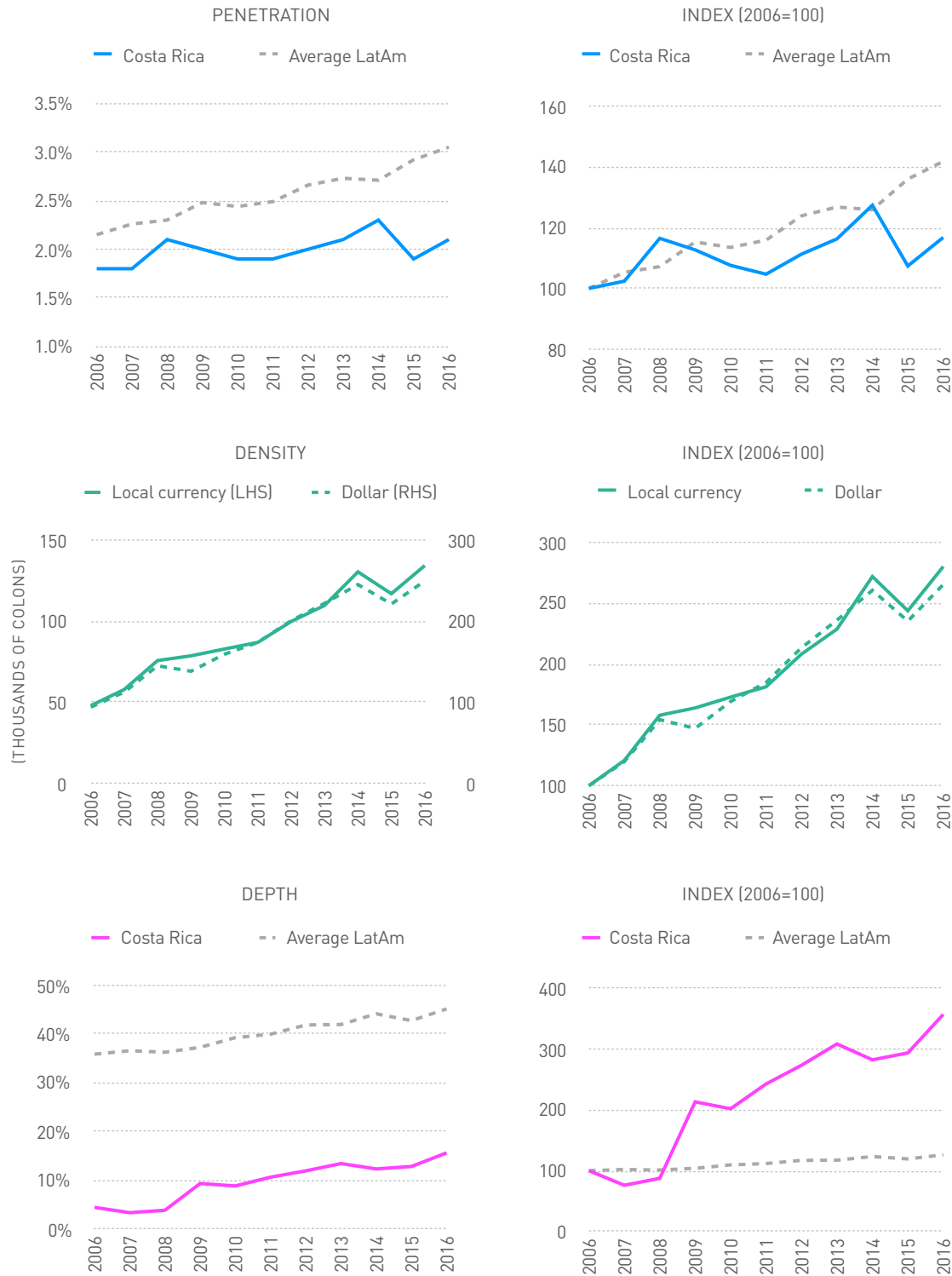
PENETRATION

INDEX (2006=100)

DENSITY

INDEX (2006=100)

DEPTH

INDEX (2006=100)



Source: MAPFRE Economic Research (based on data from General Superintendence of Insurance)

**Chart 3.1.6-l
Costa Rica: evolution of insurance market, 2006-16
(penetration vs depth)**
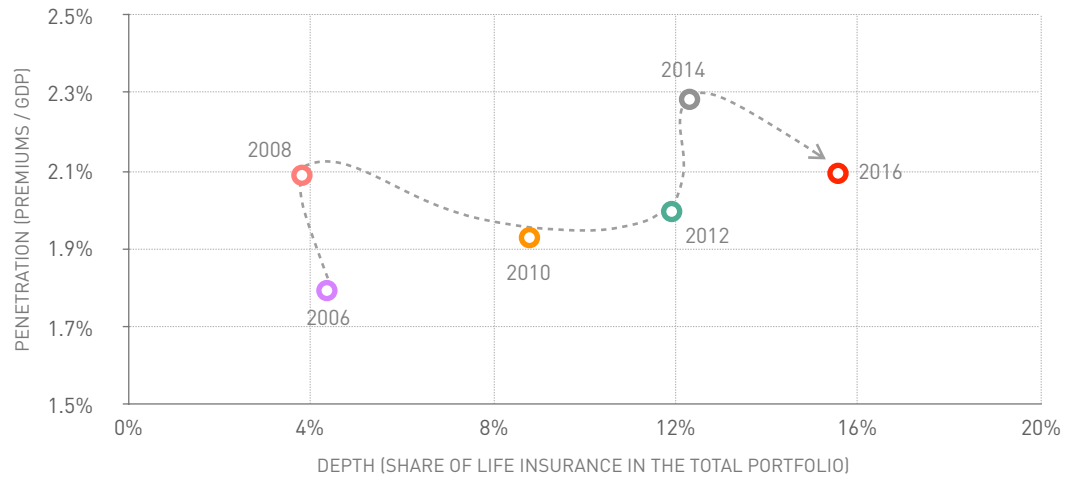


Source: MAPFRE Economic Research

**Market Development Index (MDI)**

Chart 3.1.6-p provides an estimate of the Market Development Index (MDI) for the Costa Rican insurance industry. As previously discussed, the MDI is used as an indicator of general trends in the evolution and maturity of the insurance market.

The MDI for the Costa Rican insurance industry has performed positively over the period under analysis. However, it is important to note that the trend may be overestimated due to the rapid growth in the Life insurance market, which started from a relatively small base in 2005. As a result, Chart 3.1.6-p also shows an adjusted MDI in order to eliminate this over-estimate and thus perceive the underlying trend in market performance. On the basis of this adjustment, the Costa Rican insurance market has developed in line with the average across markets in the region.

**Chart 3.1.6-m
Costa Rica: Insurance Protection Gap and potential market, 2006-16
(billions of colons)**
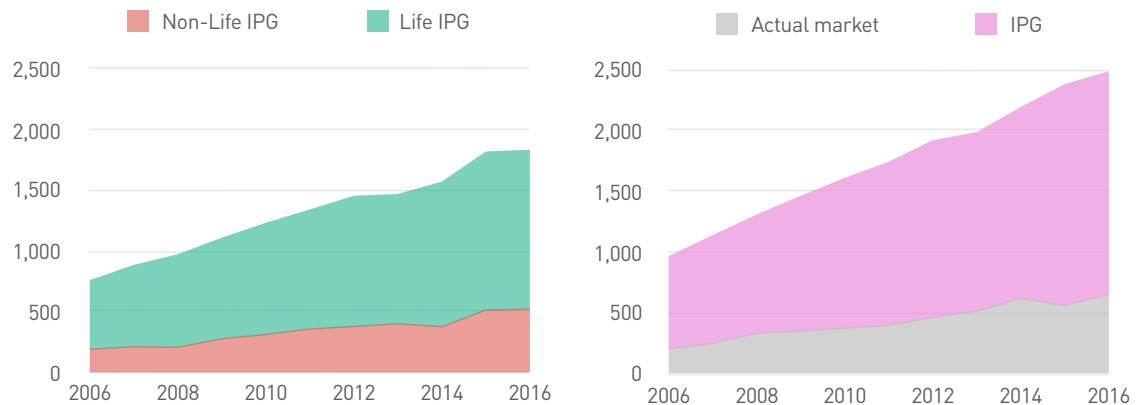


Source: MAPFRE Economic Research

**Chart 3.1.6-n**
**Costa Rica: the IPG as a multiple of the actual market, 2006-16**
(number of times actual insurance market)



Source: MAPFRE Economic Research
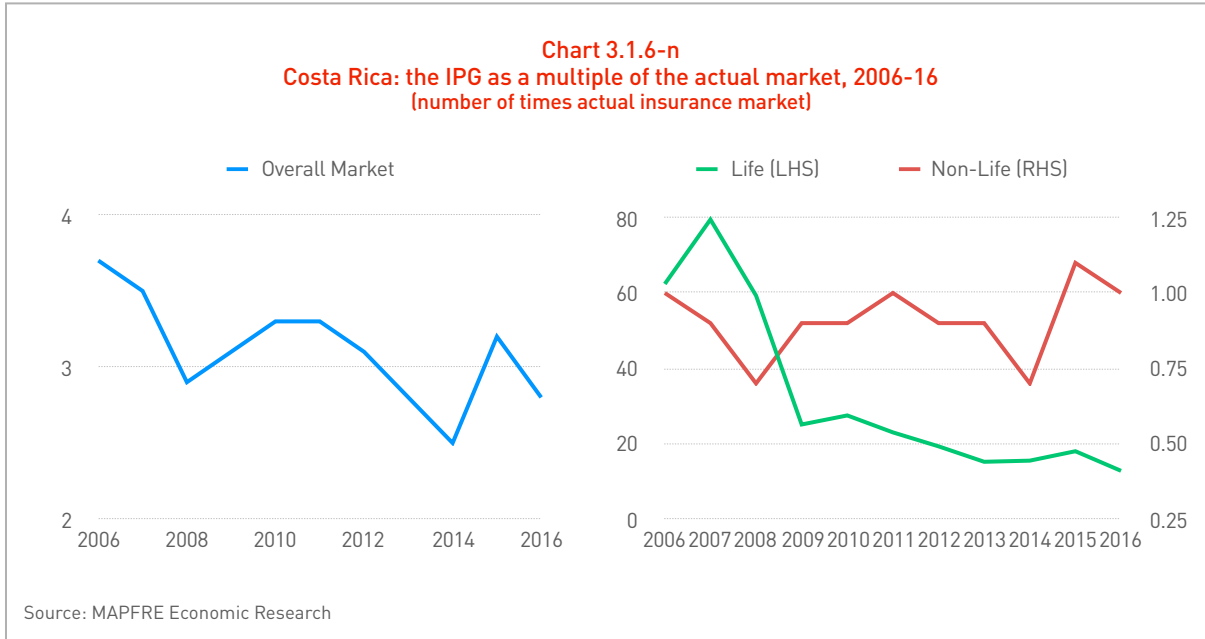
## Insurance market rankings

### Overall ranking

In 2016 there were 13 insurance companies operating in Costa Rica, the same as in the previous year. The market, which only opened to competition in 2008, remains highly concentrated with a single company (INS) accounting for the bulk of premiums.

Chart 3.1.6-q shows the Herfindahl and CR5 indexes for the Costa Rican insurance industry. As can be seen, levels of concentration are well above the theoretical threshold associated with a high degree of market concentration.

The top five insurance groups in 2016 were the same as in 2015, with only a few changes in relative positions. The ranking continued to be led by Instituto Nacional de Seguros (INS) with a 77.6 percent market share, with ASSA (5.4

**Chart 3.1.6-o**
**Costa Rica: capacity to close IPG, 2006-16**
(average annual growth rate, percent; sufficiency or insufficiency, percentage points)



Source: MAPFRE Economic Research
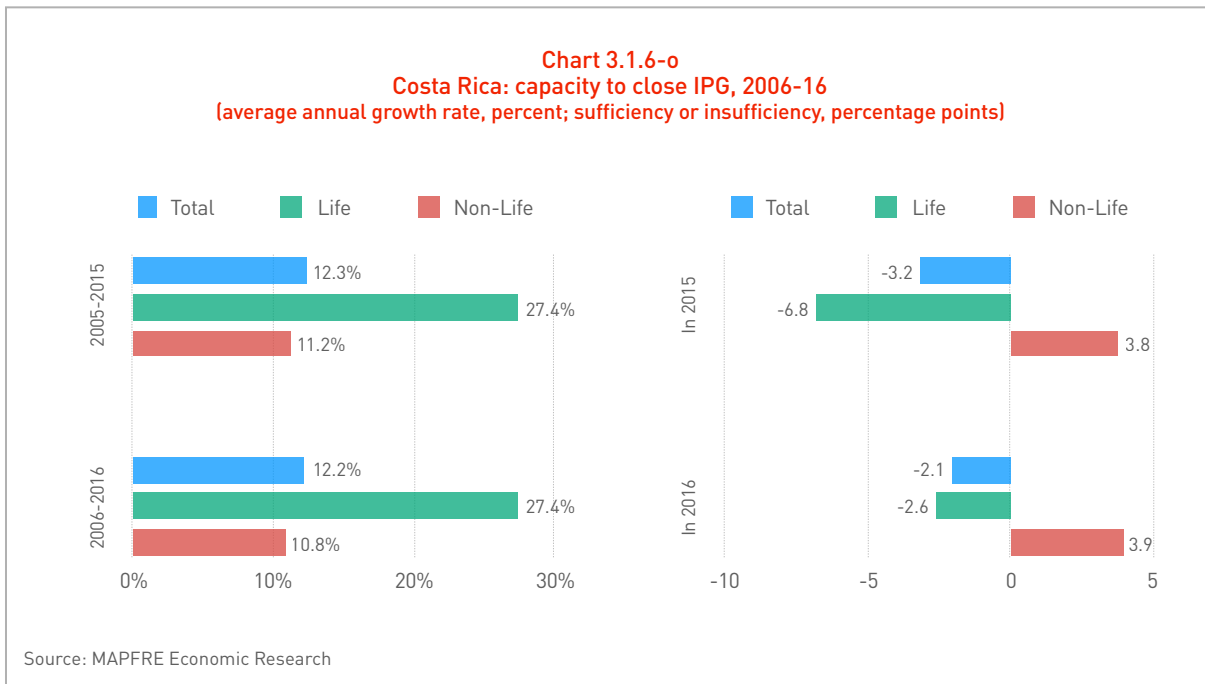
Chart 3.1.6-p
Costa Rica: Market Development Index (MDI), 2005-16
(index 2005=100; annual change)
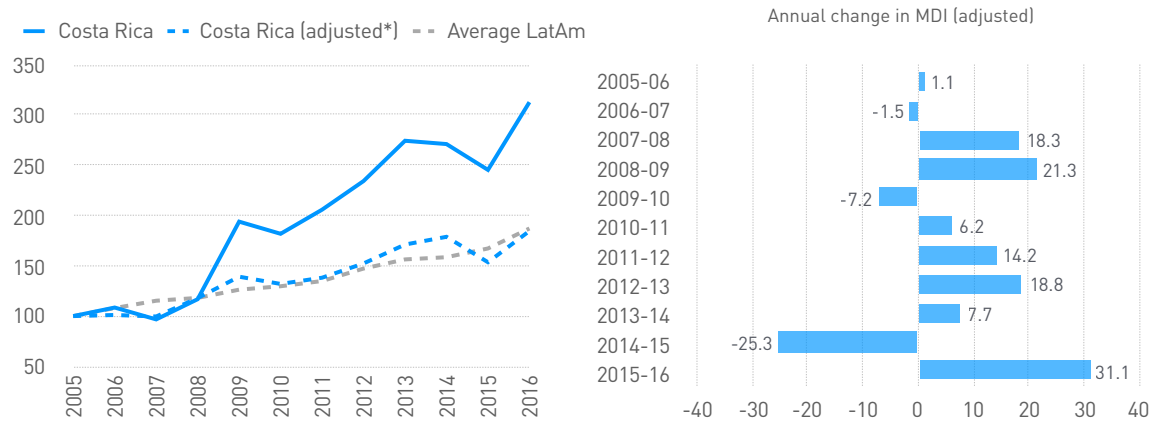
Source: MAPFRE Economic Research
* Adjustment to eliminate the over estimate of the speed of closure of the Life IPG

percent), Pan American (4.6 percent), Adisa (3.1 percent) and MAPFRE (2.4 percent) a long way behind (see Chart 3.1.6-r).

**Non-Life Ranking**

As shown in Chart 3.1.6-s, the ranking of Non-Life groups was also led by INS with a 79.2 percent market share. ASSA (5.6 percent), Pan American (4.4 percent), and MAPFRE (2.4 percent) were the next bigger players, albeit with significantly smaller market shares.

**Life Ranking**

Similarly, INS was also the lead insurance company in the Costa Rican Life market with a market share of 69.1 percent, followed by ADISA (8.3 percent), which rose from third to second place and Pan American (6.2 percent), which increased from fifth to third (see Chart 3.1.6-s).

**Key regulatory aspects**

In 2016 the General Superintendence of Insurance of Costa Rica (SUGESE) focused its efforts on developing regulation to implement risk-based supervision (RBS).

The Superintendence, alongside other financial system supervisors, financial, securities and pension institutions, drove forward a comprehensive reform of the Regulation on Corporate Governance applicable across the Costa Rican financial system. This regulation, which entered into force on June 7, 2017, was approved by the National Council for Supervision of the Financial System (CONASSIF) on November 8, 2016. It marks the first step in changing existing regulation toward a principle-based system, which is also present in the regulation on risk management and the integrated supervisory framework referred to below.

The new Regulation on Corporate Governance reflects the principles and standards issued by international organizations such as the International Association of Insurance Supervisors (IAIS), the Basel Committee on Banking Supervision (BCBS) and the Organization for Economic Co-operation and Development (OECD). It applies to all companies active in the financial market, taking account of their size, ownership structure and legal form, the scope and complexity of their operations, corporate strategy and risk profile.

**Chart 3.1.6-q**
**Costa Rica: insurance industry concentration, 2006-16**
(Herfindahl index; CR5 index, percent)
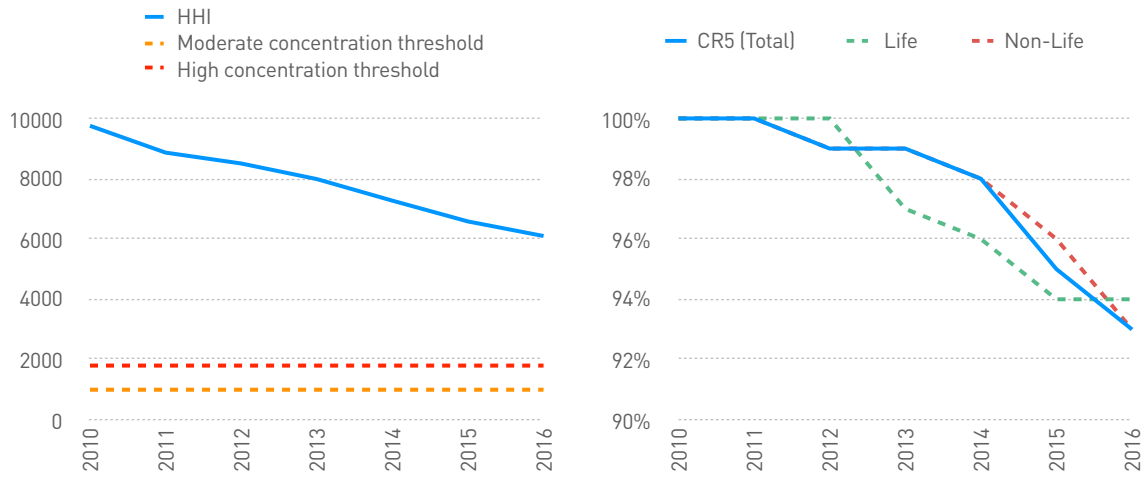


Source: MAPFRE Economic Research (based on data from General Superintendence of Insurance)

**Chart 3.1.6-r**
**Costa Rica: overall ranking, 2015-16**
(market shares, percent)
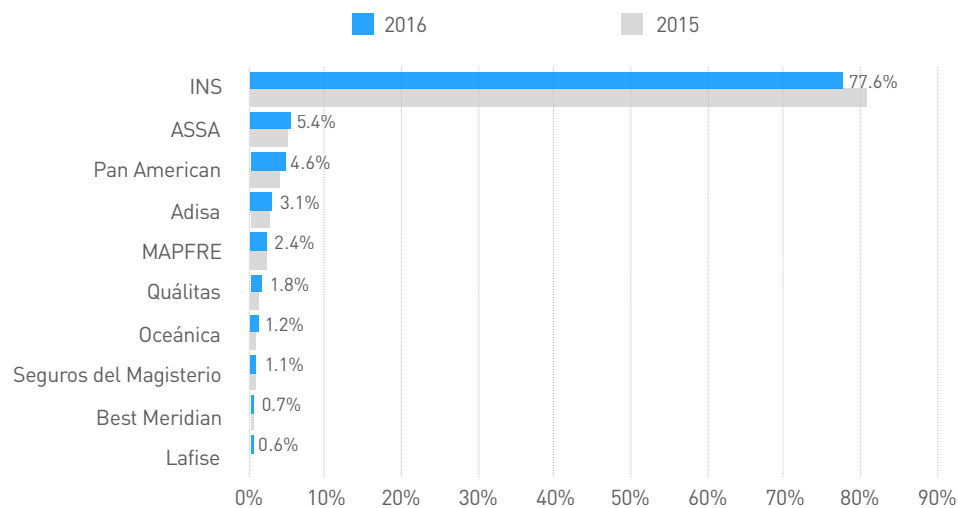


Source: MAPFRE Economic Research (based on data from General Superintendence of Insurance)

**Graph 3.1.6-s**
**Costa Rica: Life and Non-Life ranking, 2015-16**
**(market shares, percent)**
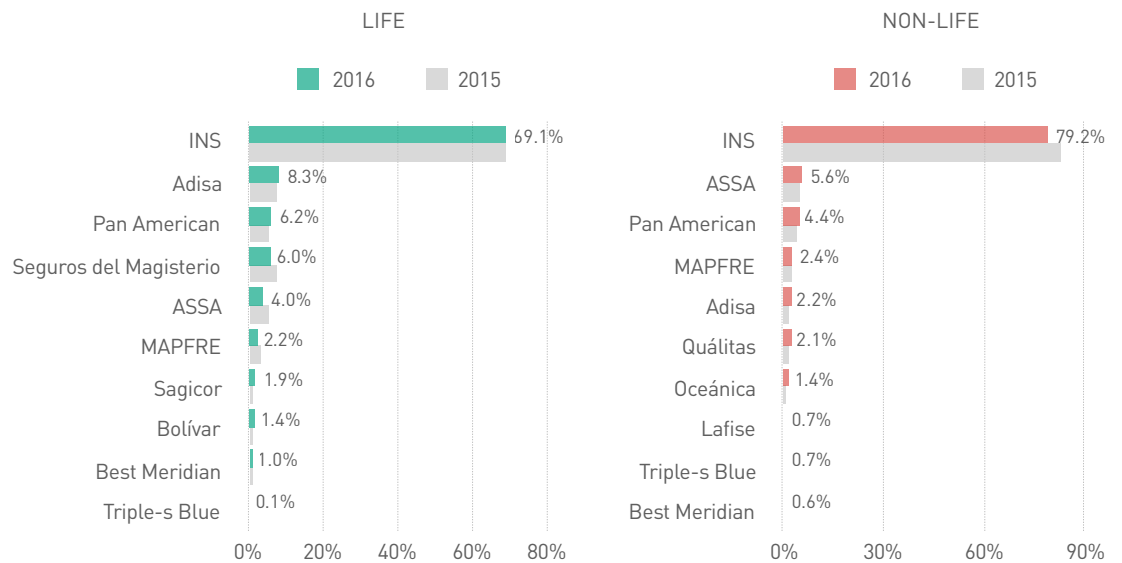
LIFE

NON-LIFE

Source: MAPFRE Economic Research (based on data from General Superintendence of Insurance)

This regulation covers principles on the following issues:

a) Responsibilities and functions of the management board.

b) Composition of the management board and profile of its members.

c) Organizational structure and the formation of committees supporting the management board.

d) Corporate culture and values.

e) Risk management, compliance and control functions.

f) Responsibilities and functions of senior management.

g) Control of conflicts of interest.

h) Transparency and accountability.

i) Corporate governance of groups and financial conglomerates.

At the same time, the proposal includes a methodology for constructing a risk matrix in the RBS model, establishing the actions to be carried out by supervisors in response to different level of risks identified in insurers and reinsurers, forming a flexible scheme in terms of action measures.

The respective regulation was approved by CONASSIF through article 12 of the minutes of session 1328-2017, held on May 2, 2017 and which entered into force on May 19, 2017.

The proposal and issuing of the Regulation on Risk Management Systems and Internal Control sets out the principles that insurers should abide by in designing their risk management system and implementing control functions.

This Regulation also defines supervisory expectations regarding the role to be performed by the management board and senior management in implementing an effective risk management system.

These provisions are complementary to the corporate governance framework which applies to the whole financial system across the board and emphasizes particular issues of interest for the supervision of insurance companies, including the actuarial function.

The regulation was approved by CONASSIF through article 12 of the minutes of session 1328-2017, held on May 2, 2017 and entered into force on June 7, 2017.

Table 3.1.6-b shows the regulation currently being developed by the SUGESE. This looks to address both short-term regulatory needs as well as strategic issues of interest which may require various years to reach full application. These projects are at different stages of progress.

In addition, SUGESE worked to develop different regulatory texts, applicable to all supervised financial institutions, which are summarized in Table 3.1.6-c.

### Table 3.1.6-b
### Costa Rica: regulatory developments on insurance issues

| Regulation | Objective |
|---|---|
| Amendment of Regulation on solvency of insurance companies | Amendment to the treatment of catastrophic risk caused by earthquake and volcanic eruption in the solvency regime. Establishment of a technical provision for dealing with catastrophic events, endowed with part of the risk premium from earthquake and volcanic eruption covers. Amendment of the capital requirements for this risk, which will be determined according to location and type of insured good. Capital requirements also consider the reinsurance conditions for the ceded portion of these risks.<br><br>This proposal is well advanced and is scheduled for approval in the third quarter of 2017, having already been put out to industry consultation. |
| Regulations on surety insurance | Given the individual risks that have been identified in the placement of surety insurance, the General Superintendence of Insurance (SUGESE) is working to develop a new regulation on management of risks, capital and specific technical provisions for this type of insurance.<br><br>According to the SUGESE's regulatory development plan, these provisions should be issued in 2017; the proposal is currently being presented to authorities before being sent out for industry consultation. |
| Regulations on self-issue insurance | The project is framed within the objective established in article 1 of the Insurance Market Regulation Law which seeks "to create conditions for the development of the insurance market and effective competition among participating companies".<br><br>The proposal aims to generate optimal regulatory and supervisory conditions so that the insurance industry sells inclusive insurance which increases insurance penetration in the economy. According to SUGESE's regulatory development plan, these provisions should be issued in 2017. |

Source: General Superintendence of Insurance

Table 3.1.6-c
Costa Rica: cross-cutting regulatory developments in the financial system

| Regulation | Objective |
|---|---|
| Regulation on the capital adequacy of groups and financial conglomerates | Wholesale reform of the regulation, which applies to the whole financial system. The amendment was approved by the National Council for Financial System Supervision (CONASSIF) through articles 7 and 10 of the minutes of sessions 1275-2016 and 1276-2016 held on August 30, 2016 and entered into effect as of March 31, 2017. The objective of this regulation is to define the methodology for calculating the capital adequacy of groups and other financial conglomerates.<br><br>In terms of the insurance market, the objective of this amendment was to align these provisions with insurance industry group structures through the inclusion of a series of specific regulations relating to the calculation of the cost of capital and risks at individual company level. |
| Regulation for compliance with Law 8204* | This standard applies to the whole financial system and forms part of a set of rules aimed at preventing and controlling the risk of money laundering and terrorist financing.<br><br>The main objective of the latter reform was to bring the regulatory framework in line with international standards issued by the Financial Action Task Force (FATF) and thus close regulatory gaps identified in assessments of Costa Rica carried out by international organizations. |

Source: General Superintendence of Insurance

* Law on narcotics, psychotropic substances, non-authorized use of drugs, related activities, money laundering and terrorist financing

## 3.1.7. Panama

### Macroeconomic environment

The Panamanian economy grew by 5 percent in real terms in 2016, after 5.8 percent in 2015 and even stronger growth in previous years (see Chart 3.1.7-a). The economy continues to grow but at a slower pace, with a notable expansion in construction and mining and quarrying activities (9.4 percent), mainly driven by public infrastructure works. Financial intermediation also remained dynamic (6.8 percent). The slowdown was primarily the result of a contraction in fishing (-11.5 percent) and manufacturing (-2.1 percent) activity.

Average inflation stood at 0.7 percent in 2016 after 0.1 percent the year before and unemployment rose by 0.4 percentage points to 5.5 percent. In terms of the external sector, imports fell sharply by 13.2 percent. As a result, the current account deficit to the end of the first half of 2016 amounted to 4.6 percent, representing a reduction of 20.7 percent compared to the same period of 2015.

ECLAC forecasts the Panamanian economy to grow by 5.9 percent in 2017 with the IMF 0.1 percentage points weaker at 5.8 percent.

### Insurance Market

#### Growth

The Panamanian insurance market posted a premium volume in 2016 of 1.396 billion balboas (par with the U.S. dollar). Nominal growth amounted to 0.5 percent in 2016, representing a contraction in real terms of -1.1 percent on the previous year, when premiums grew by 3.4 percent (see Table 3.1.7-a and Chart 3.1.7-b).

Life insurance premiums, which account for 24.8 percent of the market, grew by 7.2 percent in 2016 (5.5 percent real) to reach 346 million balboas. Meanwhile, Non-Life insurance premiums (75.2 percent of the portfolio) fell by -1.5 percent (-3 percent in real terms) to 1.050 billion balboas. The Automobile line, which remains the most important in the Panamanian market, posted positive growth in 2016 (6.1 percent nominal and 4.4 percent real), but the strongest momentum was in Health (10.5 percent nominal and 8.7 percent real) on the back of an increase in individual dental insurance and company insurance offering this cover. Premiums fell in the remaining Non-Life lines, except for Personal Accidents and Multiperil.

Chart 3.1.7-a
Panama: evolution of economic growth and inflation, 2006-16
(GDP in local currency, billions of balboas; real growth rate, percent; annual inflation rate, percent)
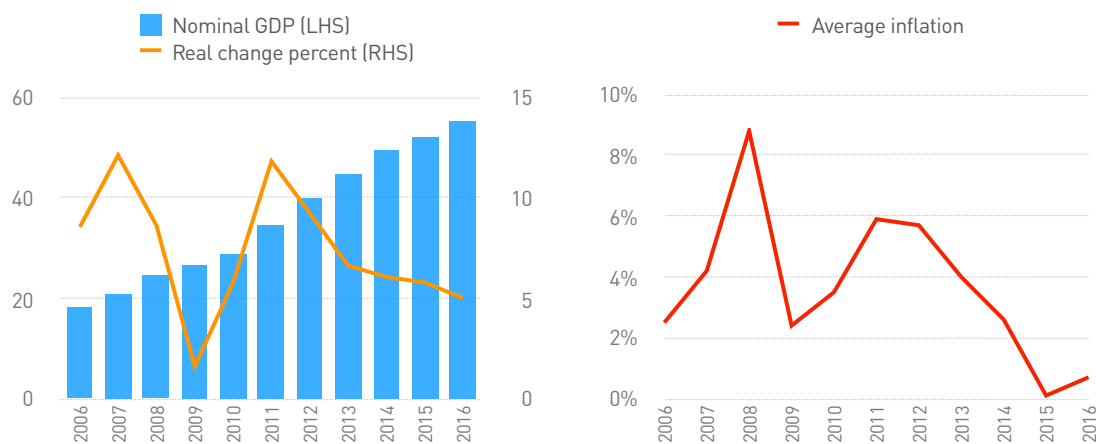


Source: MAPFRE Economic Research (based on IMF data)

### Table 3.1.7-a
### Panama: premium volume[1] by line of business (lob) 2016

| Line of business | Millions of balboas (= U.S. dollar) | Increase | |
|---|---|---|---|
| | | Nominal (percent) | Real (percent) |
| **Total** | **1,396** | **0.5** | **-1.1** |
| **Life** | **346** | **7.2** | **5.5** |
| **Non-Life** | **1,050** | **-1.5** | **-3.0** |
| Automobiles | 283 | 6.1 | 4.4 |
| Health | 262 | 10.5 | 8.7 |
| Other Damage | 97 | -18.5 | -19.7 |
| Surety | 116 | -15.9 | -17.2 |
| Fire and Allied Lines | 123 | -3.4 | -4.9 |
| Third-Party Liability | 50 | -18.9 | -20.2 |
| Transport | 51 | -8.0 | -9.4 |
| Technical Risks | 34 | -1.1 | -2.6 |
| Personal Accidents | 26 | 41.2 | 39.0 |
| Multiperil | 7 | 0.9 | -0.7 |

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance and Reinsurance)
1/ Net premiums of returns and cancelations

### Chart 3.1.7-b
### Panama: growth developments in the insurance market, 2006-16
### (premiums, millions of balboas, nominal annual growth rates, percent)
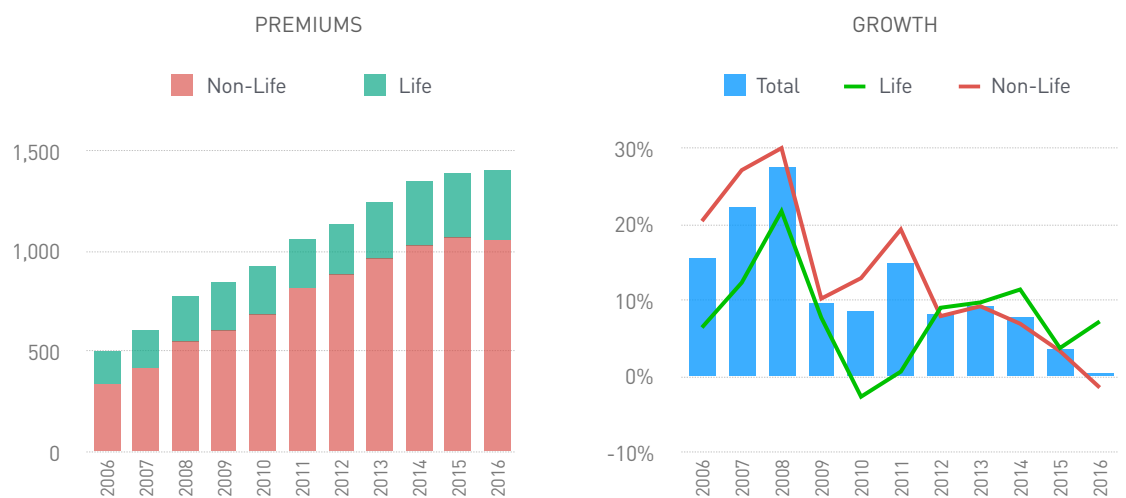


Source: MAPFRE Economic Research (based on data from Superintendence of Insurance and Reinsurance)

Accordingly, of total nominal growth of 0.6 percent registered by the Panamanian insurance market in 2016, 1.67 percentage point came from the Life insurance segment, while Non-Life insurance subtracted -1.1 percentage points from growth (see Chart 3.1.7-c).

**Balance sheet and equity**

Chart 3.1.7-d shows the aggregate balance sheet of the Panamanian insurance industry. The sector's total assets reached 2.7293 billion balboas in 2015, while equity stood at 1.102 billion balboas.

The insurance industry's aggregate capital levels (measured over total assets) have increased notably from 34.5 percent in 2007 to reach 40.4 percent of total assets at the end of 2015.

Information on 2016 is not included in this section (as well as in the analysis of investment, technical provisions and profitability) due to the lack of availability of the 2016 statistical bulletin published by the Superintendence of Insurance and Reinsurance of Panama at the time of preparing the report. Nonetheless, Charts 3.1.7-e, 3.1.7-f and 3.1.7-g are included to illustrate the main trends in Panama's insurance market



**Chart 3.1.7-c**
**Panama: contribution to insurance market growth, 2006-16**
**(percentage points, ppts)**

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance and Reinsurance)
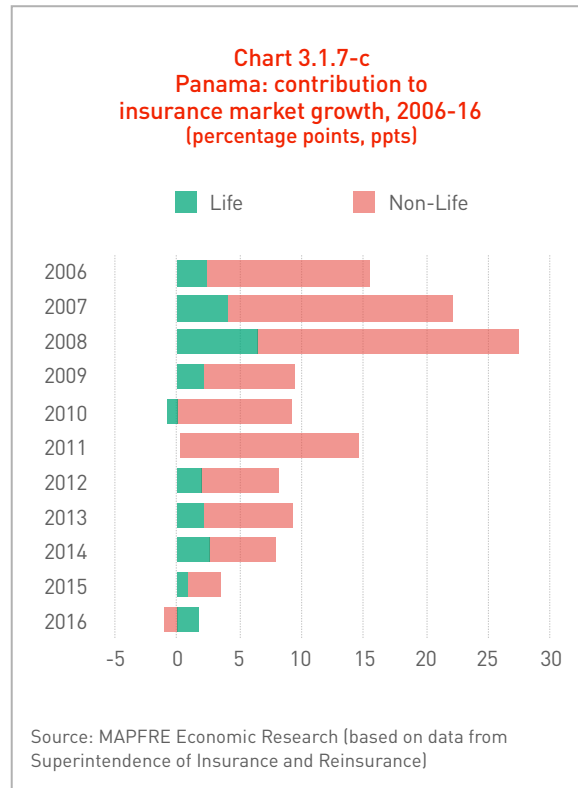
in recent years, showing the evolution and structure of aggregate investment at a sector level over the period 2007-15.

Similarly, Charts 3.1.7-h, 3.1.7-i and 3.1.7-j include information on the evolution and structure of the Panamanian sector's technical provisions over the period 2007-15.
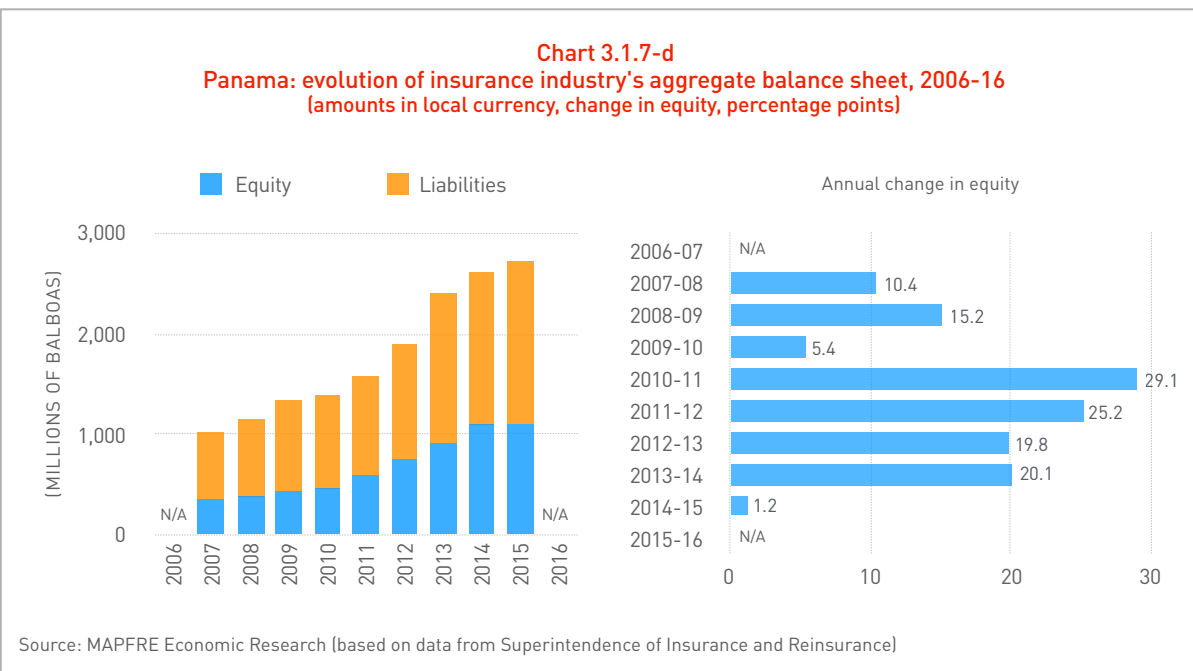


**Chart 3.1.7-d**
**Panama: evolution of insurance industry's aggregate balance sheet, 2006-16**
**(amounts in local currency, change in equity, percentage points)**

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance and Reinsurance)

**Technical performance, results and profitability**

The aggregate combined ratio of Panama's insurance industry fell 2.1 percentage points in 2016 to reach 92.5 percent with a positive technical result of 66 million balboas (see Charts 3.1.7-k and 3.1.7-l).

The improvement in the combined ratio was due to a fall in the expense ratio, which stood at 38.2 percent, down 1.7 percentage points on 2015. Meanwhile, the claims ratio also fell 0.4 percentage points to reach 54.3 percent, having stagnated in recent years.

**Insurance penetration, density and depth**

Chart 3.1.7-m shows the main structural trends in the development of the insurance industry in Panama over the period 2006-16.



**Chart 3.1.7-e
Panama: Insurance market
technical provisions, 2006-16
(millions of balboas)**

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance and Reinsurance)



**Chart 3.1.7-f
Panama: structure of
investment, 2007-15
(%)**

Cash
Other financial investment*
Fixed income and equities

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance and Reinsurance)
* Includes bank deposits



**Chart 3.1.7-g
Panama: structure
of investment, 2015
(%)**

Fixed income and equities
Cash
Others*

4.0%

46.2%

49.8%

Source: MAPFRE Economic Research (based on Superintendence of Insurance and Reinsurance data)
* Includes bank deposits

**Chart 3.1.7-h**
**Panama: insurance market's technical provisions, 2006-16**
**(millions of balboas)**
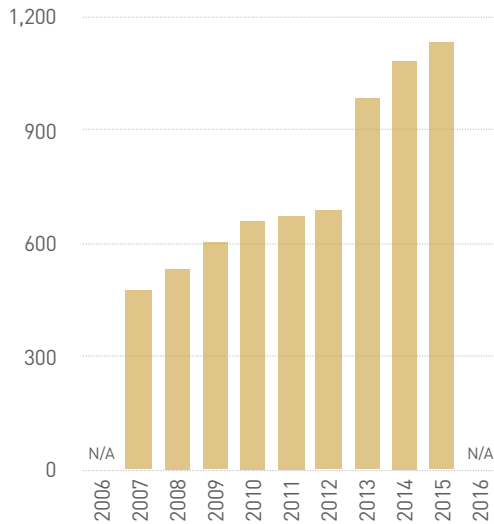


Source: MAPFRE Economic Research (based on data from Superintendence of Insurance and Reinsurance)

The penetration index (premiums/GDP) stood at 2.5 percent in 2016, 0.2 percentage points below 2006. As can be observed, Panama's penetration index grew until 2008, thereafter declining; this contrasts with the average performance of the overall Latin American insurance market.

Insurance density in Panama (premiums per capita) reached 349.8 balboas (at par with the dollar) in 2016, representing a decline of -1 percent relative to the previous year (353.5 balboas). Except for 2016, density has been on an upward trend over the period, registering cumulative growth of 138.1 percent over 2006-16.

The depth of the Panamanian market (measured as the relationship of Life insurance premiums to total premiums) dropped to 24.8 percent in 2016, representing a very significant 7.9 percentage points decrease between 2006 and 2016, in sharp contrast to the average of Latin American insurance markets.

**Chart 3.1.7-i**
**Panama: structure of technical provisions, 2007-15**
**(%)**
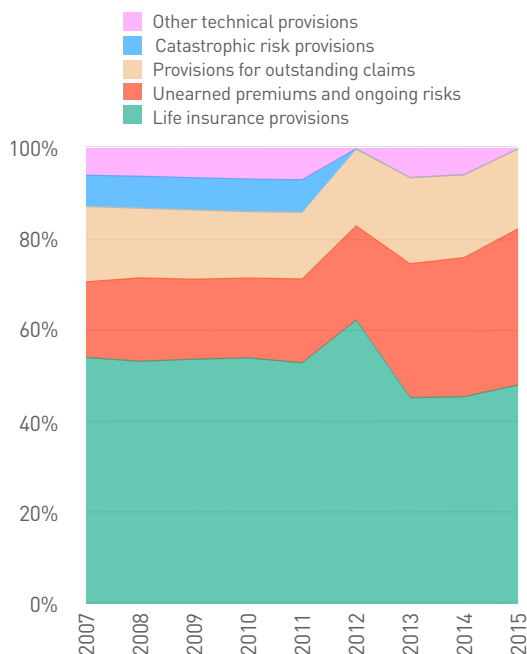
Other technical provisions
Catastrophic risk provisions
Provisions for outstanding claims
Unearned premiums and ongoing risks
Life insurance provisions



Source: MAPFRE Economic Research (based on data from Superintendence of Insurance and Reinsurance)

**Chart 3.1.7-j**
**Panama: structure of technical provisions, 2015**
**(%)**
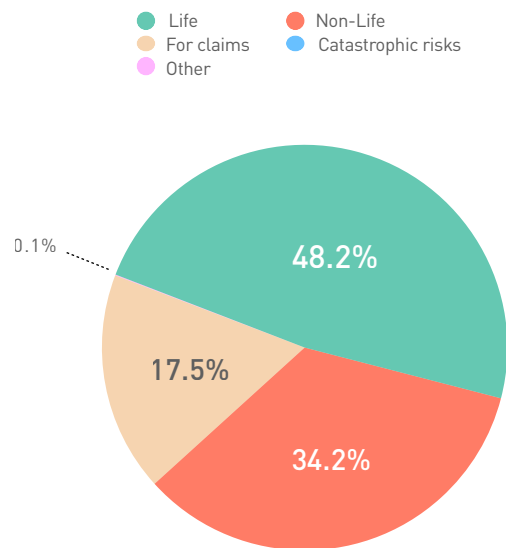
Life
Non-Life
For claims
Catastrophic risks
Other



Source: MAPFRE Economic Research (based on data from Superintendence of Insurance and Reinsurance)

**Chart 3.1.7-k**
**Panama: evolution of market technical performance, 2006-16**
**(total combined ratio, percent; annual change in combined ratio, percentage points)**



Source: MAPFRE Economic Research (based on data from Superintendence of Insurance and Reinsurance)

**Chart 3.1.7-l**
**Panama: evolution of results and profitability, 2006-16**
**(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)**



Source: MAPFRE Economic Research (based on data from Superintendence of Insurance and Reinsurance)
* 2016 only includes the technical result ratio; the financial result ratio can no be calculated due to a lack of available information at the time of preparing this report.
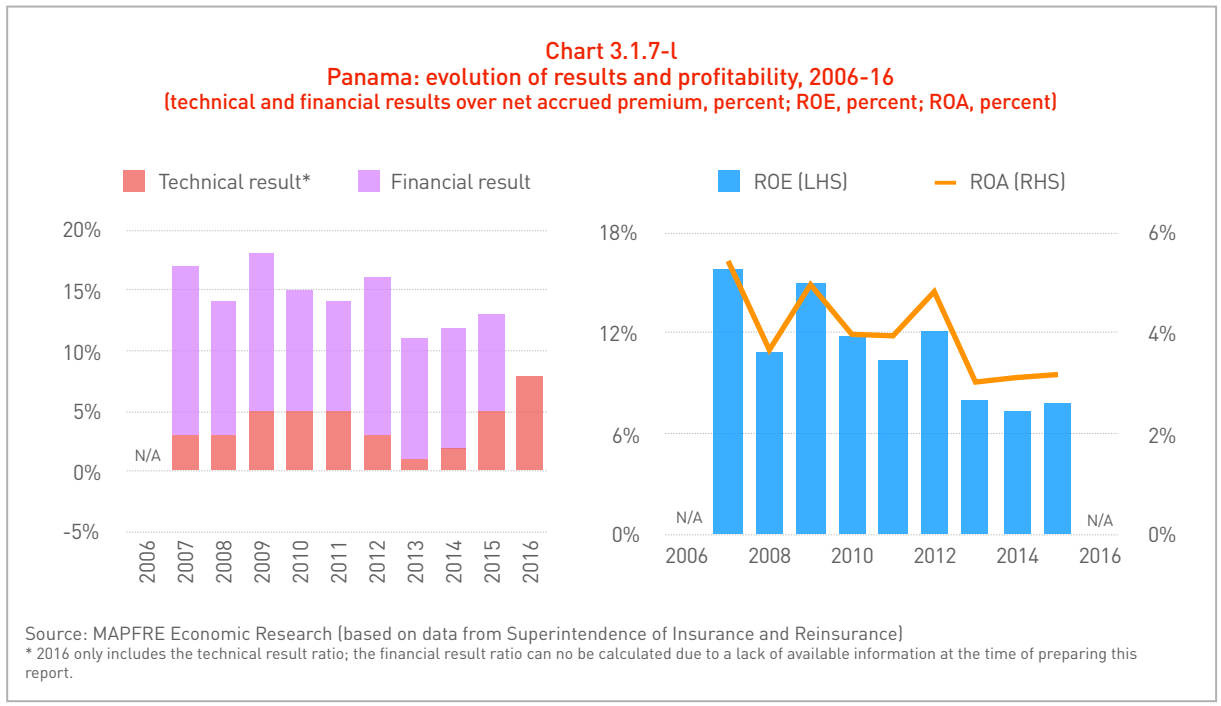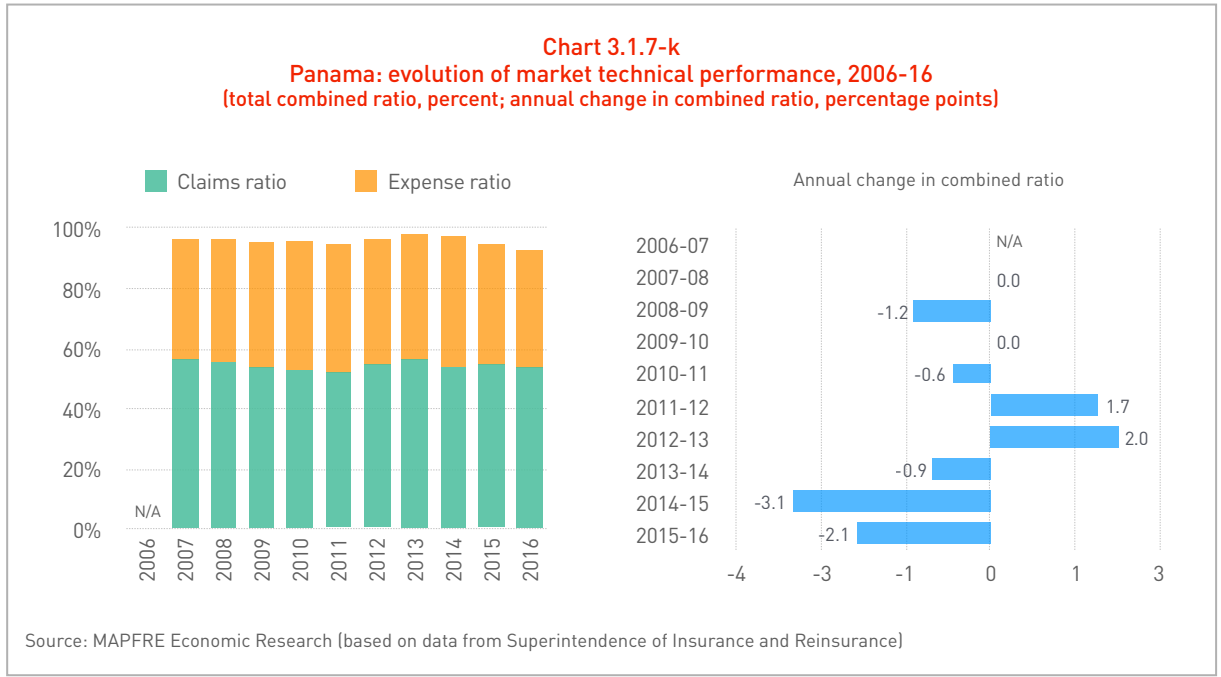
Chart 3.1.7-n confirms this trend, showing the performance of the Panamanian insurance market over the period 2006-16 on the basis of a dispersion analysis which takes into account the combined effect of penetration and depth levels in order to provide a quantitative (penetration) and qualitative (depth) perspective of market performance over the period. This analysis shows that the trend in the development of the Panamanian insurance market has clearly diverged from the average for markets in the region, both in terms of insurance penetration (which after rising on a sustained basis, fell from 2010 onward) and depth (which after declining over the period 2006-12, began to recover from then on).

Chart 3.1.7-m
Panama: evolution of penetration, density and depth, 2006-16
(premiums/GDP, percent; premiums per capita, balboas; Life insurance premiums / total premiums, percent, index 2006=100)
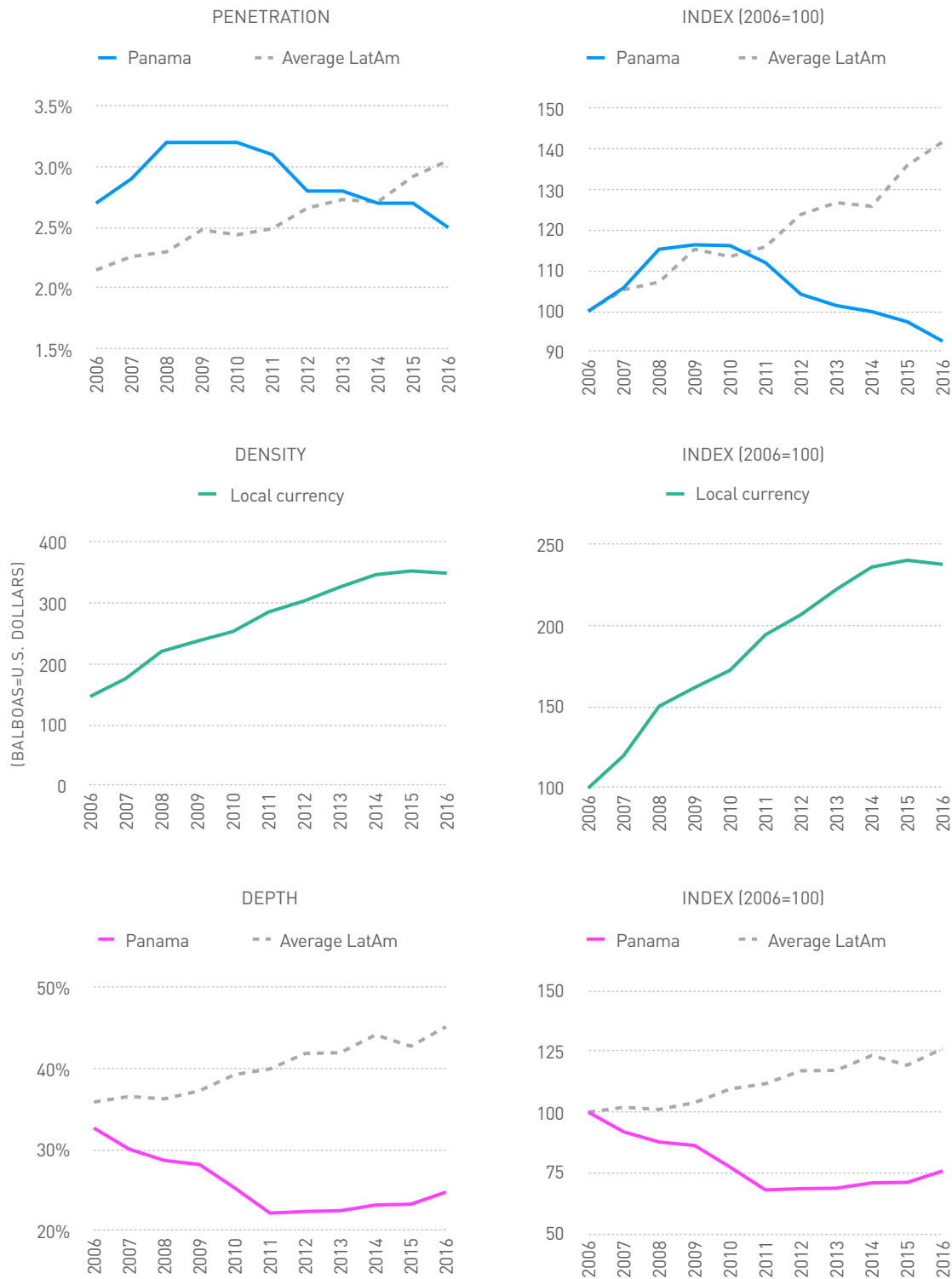


PENETRATION

INDEX (2006=100)

DENSITY

INDEX (2006=100)

DEPTH

INDEX (2006=100)

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance and Reinsurance)

**Chart 3.1.7-n**
**Panama: evolution of insurance market, 2006-16**
**(penetration vs depth)**
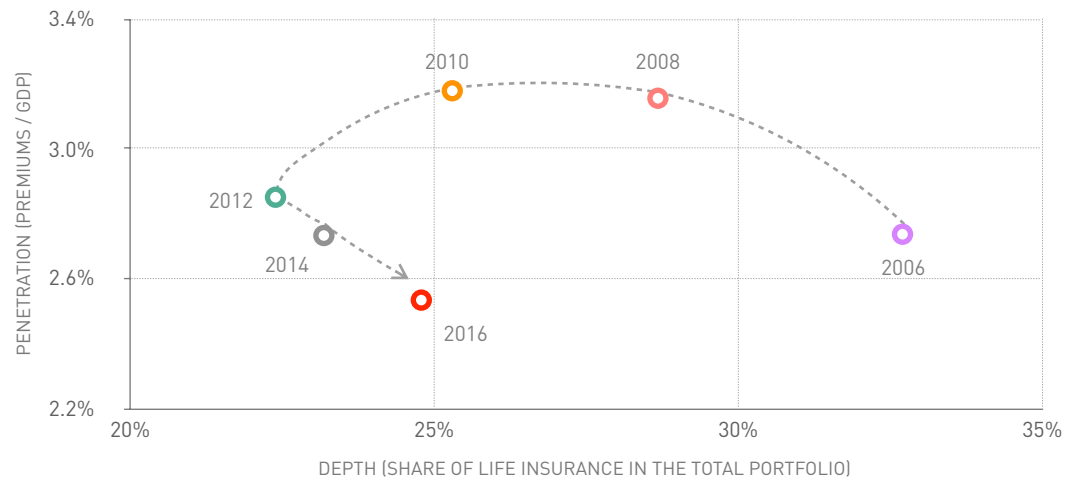
Source: MAPFRE Economic Research

**Estimate of the Insurance Protection Gap**

Chart 3.1.7-o provides an estimate of the IPG for the Panamanian insurance market between 2006 and 2016. The insurance protection gap stood at 2.983 billion balboas in 2016, equivalent to 2.1 times the actual insurance market in Panama.

The structure and evolution of the IPG over the period 2006-16 (as in most Latin American insurance markets) reflects the crucial contribution from the Life insurance segment. At the end of 2016, 71.5 percent of the IPG related to Life insurance (2.132 billion balboas), which was 0.6 percentage points below the share for this segment in 2006. The remaining 28.5 percent of the IPG was explained by Non-Life insurance (851 million balboas).

Accordingly, the potential insurance market in Panama at the end of 2016 (sum of actual market and IPG) is estimated at 4.379 billion balboas, some 3.1 times the total insurance market.

Chart 3.1.7-p shows an estimate of the insurance gap as a multiple of the actual insurance market in Panama. The IPG multiple declined until 2008, thereafter increasing in both

Life and Non-Life insurance segments. Over the period 2006-16, the IPG for Life insurance increased from 4.5 to 6.2 times the actual market, while for Non-Life insurance it fell slightly from 0.9 in 2006 to 0.8 times in 2016.

Finally, Chart 3.1.7-q provides a summary of the analysis of the capacity of Panama's insurance market to close the insurance gap. This has been performed using a comparative analysis of growth rates observed over the last ten years and the growth rates that would be required in order to close the insurance protection gap established in 2016 over the next ten years. Panama's insurance market posted average annual growth of 10.9 percent; underpinned by average growth of 7.9 percent in Life insurance and average annual growth of 12.1 percent in Non-Life insurance. If the same rate of growth were to be sustained over the next ten years, growth in the Panamanian insurance market would only be sufficient to close the gap in the Non-Life insurance segment, while it would fall short in the Life insurance segment by -13.9 percentage points. As can be seen in this Chart, this shortfall has barely changed relative to the same exercise carried out in 2015.

Chart 3.1.7-o
Panama: Insurance Protection Gap and potential market, 2006-16
(millions of balboas)



Source: MAPFRE Economic Research

Chart 3.1.7-p
Panama: the IPG as a multiple of the actual market, 2006-16
(number of times actual insurance market)



Source: MAPFRE Economic Research
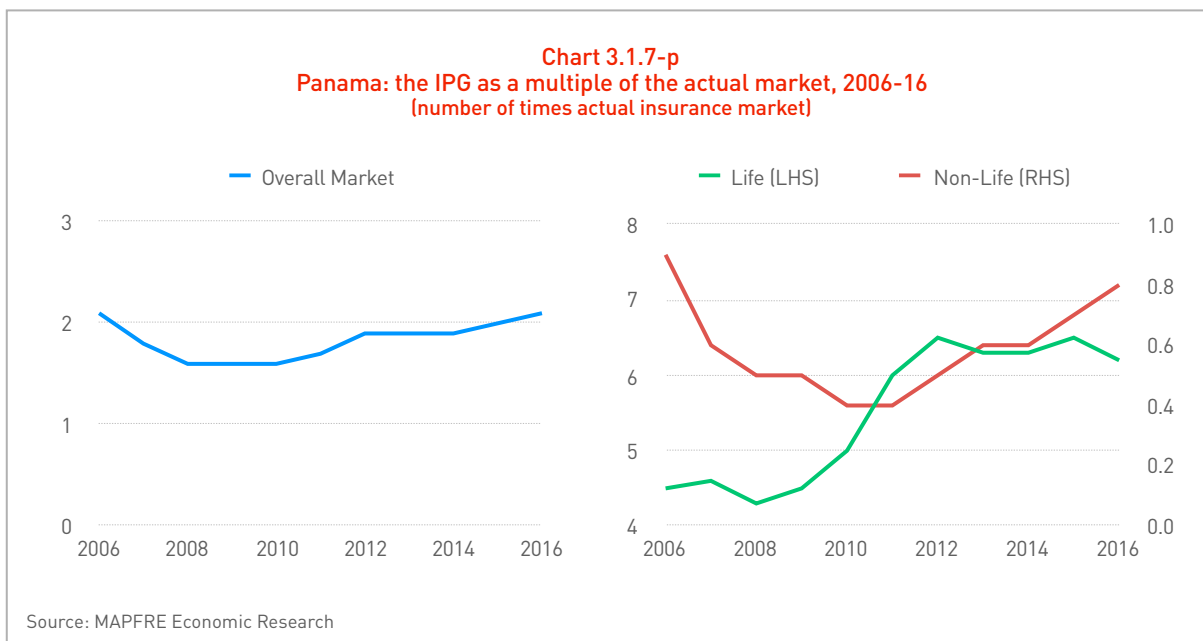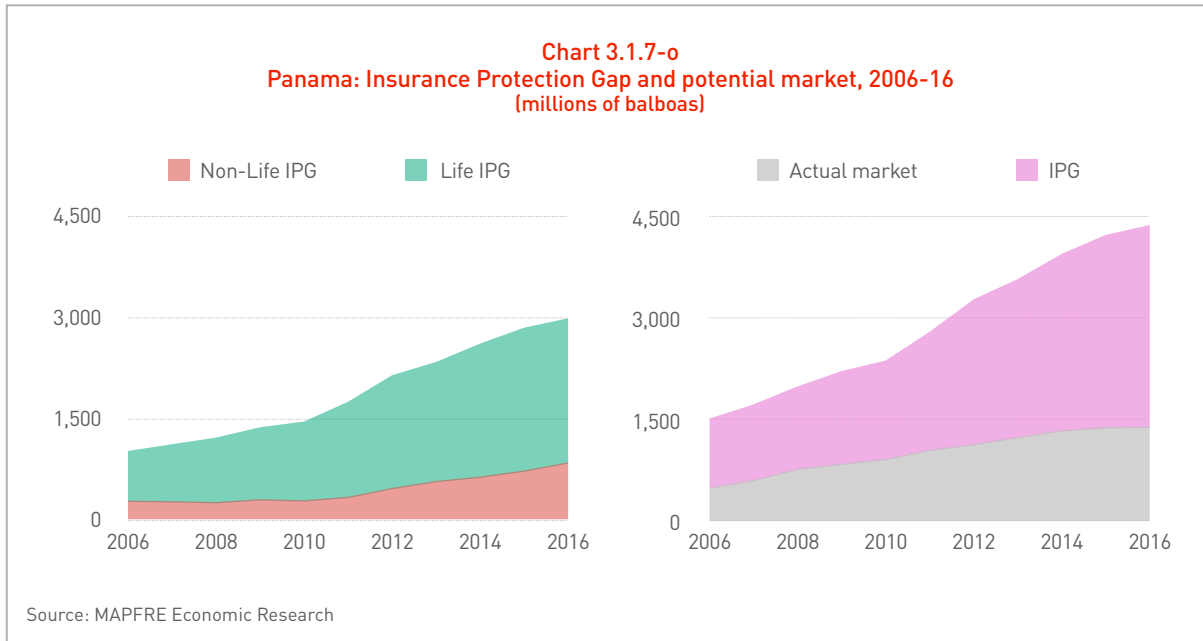
**Market Development Index (MDI)**

Chart 3.1.7-r provides an estimate of the Market Development Index (MDI) for the Panamanian insurance industry over the period 2006-16. As previously highlighted in this report, the MDI is used as an indicator of general trends in the evolution and maturity of the insurance market. The MDI only moved in line with the Latin American insurance market up to 2008, thereafter clearly diverging relative to the average performance of insurance markets in the region.

**Insurance market rankings**

**Overall ranking**

27 insurance companies were operational in Panama in 2016, three less than in 2015. Although industrial concentration fell between 2006 and 2014, both Herfindahl and CR5 indexes

Chart 3.1.7-q
Panama: capacity to close IPG, 2006-16
(average annual growth rate, percent; sufficiency or insufficiency, percentage points)

Source: MAPFRE Economic Research
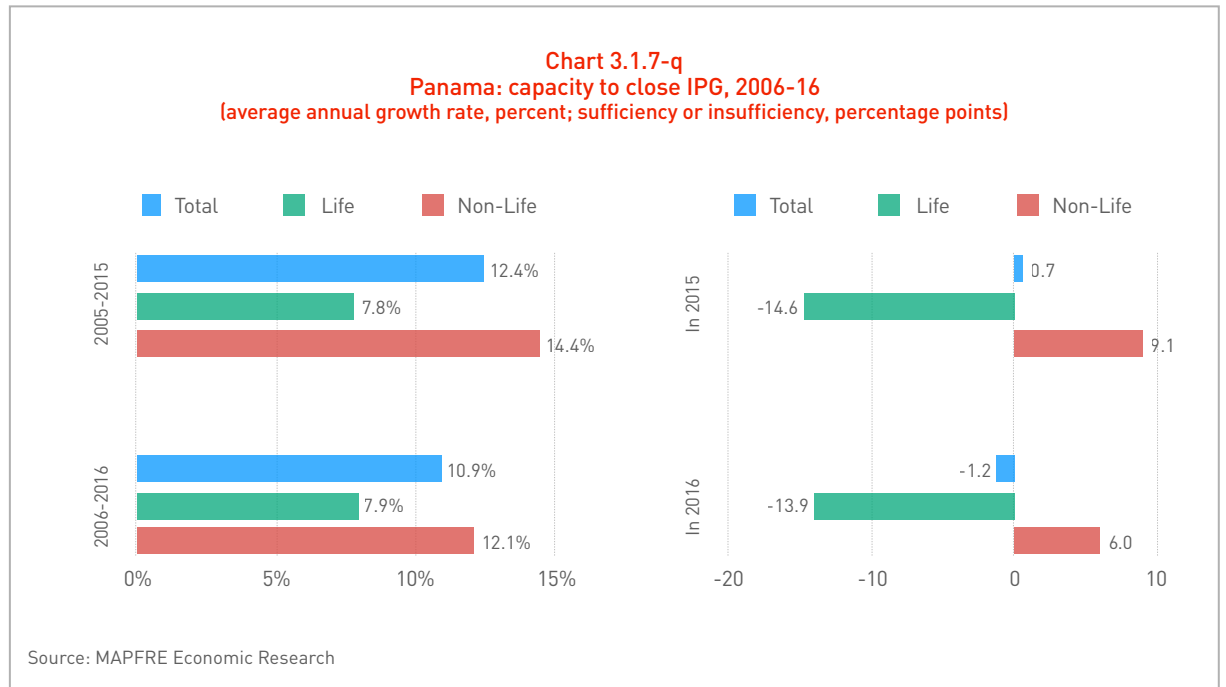
show an increase in market concentration in 2015 and 2016. Indeed in 2016 the Herfindahl index once again broke the theoretical threshold associated with moderate industrial concentration (see Chart 3.1.7-s).

ASSA remained the number one insurance group in 2016 with a market share of 18.9 percent, followed by Compañía Internacional de Seguros on 15.2 percent of premiums. MAPFRE came third in the ranking, sustaining its 14.7 percent market share of premiums in 2015 (see Chart 3.1.7-t).

**Non-Life Ranking**

The top three insurance groups in the overall ranking also occupied the leading positions in



Chart 3.1.7-r
Panama: Market Development Index (MDI), 2005-16
(index 2005=100; annual change)

Source: MAPFRE Economic Research
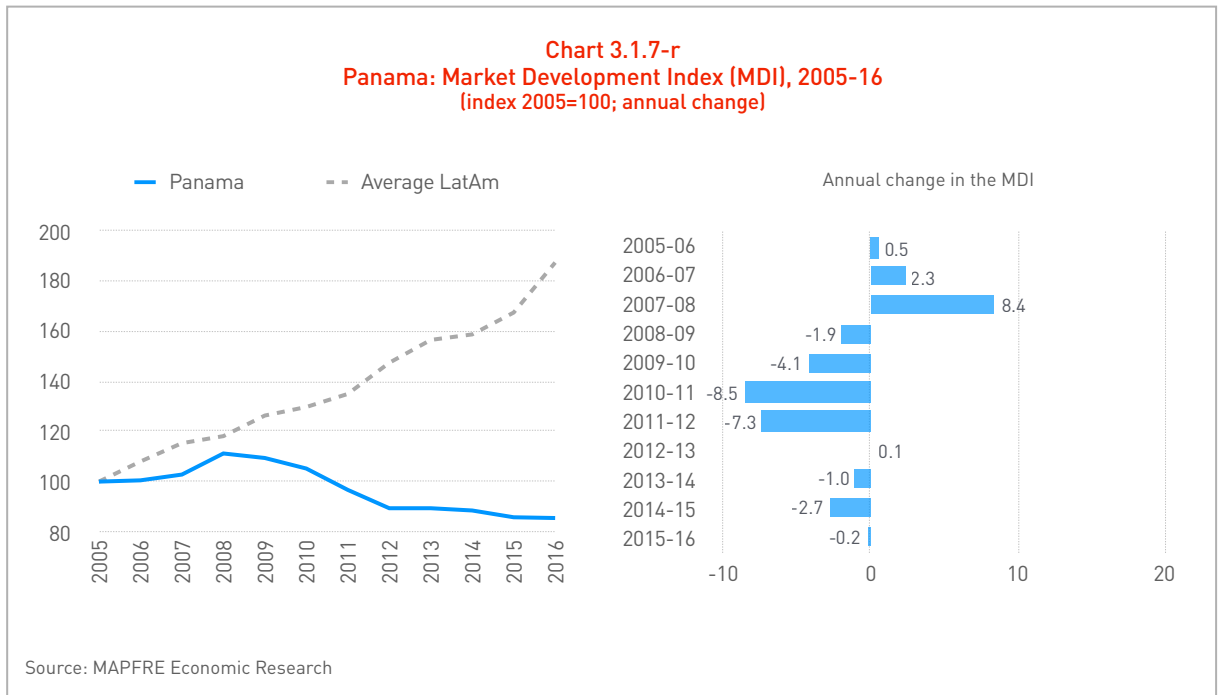
the Non-Life ranking of the Panamanian insurance market in 2016: ASSA with a share of 19.5 percent, Compañía Internacional de Seguros with 15.6 percent and MAPFRE with a market share of 15.1 percent (see Chart 3.1.7-u).

**Life Ranking**

Finally, in terms of the ranking of the Life insurance market in 2016, the top two positions were held by ASSA, with a share of 17.2 percent, and Pan American Life, which overtook Compañía Internacional de Seguros, securing a market share of 15.2 percent, relative to the



**Graph 3.1.7-s**
**Panama: insurance industry concentration, 2006-16**
**(Herfindahl index; CR5 index, percent)**

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance and Reinsurance)



**Chart 3.1.7-t**
**Panama: overall ranking, 2015-16**
**(market shares, percent)**

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance and Reinsurance)

**Chart 3.1.7-u**
**Panama: Life and Non-Life ranking, 2015-16**
**(market shares, percent)**

LIFE

| | 2016 | 2015 |

| Company | Share |
| --- | --- |
| ASSA | 17.2% |
| Pan American Life | 15.2% |
| Cía. Intl. de Seguros | 14.2% |
| MAPFRE | 13.5% |
| Suramericana | 11.8% |
| Generali | 9.1% |
| General de Seguros | 5.8% |
| Aseguradora Global | 2.9% |
| Ancón | 1.8% |
| Banesco | 1.7% |

NON-LIFE

| | 2016 | 2015 |

| Company | Share |
| --- | --- |
| ASSA | 19.5% |
| Cía. Intl. de Seguros | 15.6% |
| MAPFRE | 15.1% |
| Suramericana | 8.2% |
| Generali | 7.5% |
| Pan American Life | 6.4% |
| Ancón | 5.7% |
| Seguros Fedpa | 2.4% |
| WW Medical Assurance | 2.2% |
| Acerta Seguros | 1.9% |

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance and Reinsurance)

market share of 15.2 percent, relative to the latter's 14.2 percent (see Chart 3.1.7-u).

## Key regulatory aspects

As summarized in Table 3.1.7-b, in 2016 the Superintendence of Insurance and Reinsurance of Panama focused its efforts on developing regulation to control money laundering (Agreements No. 5 and subsequent) and protect the interests of affected parties through stable supervision (Agreement No. 02 and Law 68 of December 13, 2016).

The Superintendence also led the way through Agreement No. 01 of April 19, 2016, in establishing a uniform procedure which ensures compliance with guarantees and principles which comprise due process in collection via summary jurisdiction.

Furthermore, through Agreement number 2 of June 2016, the Superintendence established the main corporate governance parameters that must be incorporated by all insurers and reinsurers that it oversees. This provision also sets out the minimum requirements that

insurance and reinsurance companies should comply with in their organizational structures in order to be considered to have good corporate governance.

Meanwhile, through Agreement number 4 of September 2016, the Superintendence established that companies undertaking insurance operations in the Republic of Panama must set aside reserves for premium insufficiency to complement the reserve for unexpired risk, when the latter is insufficient to cover all the risks and expenses facing the company. This measure affects specific business lines.

Finally, it is worth noting that in 2016 various legislative measures were adopted in relation to prevention of money laundering, terrorist financing and proliferation of weapons of mass destruction, which are also applicable to insurance companies operating in the country.

Table 3.1.7-b
Panama: summary of regulatory measures

| Regulation | Objective |
|---|---|
| Agreement No. 01 of April 19, 2016 | Adapting the Superintendence of Insurance and Reinsurance of Panama's procedure for coercive collection in order to establish a uniform procedure which ensures compliance with guarantees and principles comprised in due process in collection via summary jurisdiction. |
| Agreement No. 02 of June 21, 2016 | Enacting provisions on corporate governance which for the first time set a framework on these issues for the insurance sector, in order to foster stable administration and supervision which appropriately recognizes and protects the interests of all stakeholders. |
| Agreement No. 03 of September 6, 2016 | Implementing Standards for Registering Technical Notes and Policy Models. The aim is to set minimum standards for presenting policies and technical notes to the Superintendence, supported by stringent technical and legal bases. |
| Agreement No. 04 of September 6, 2016 | Rolling out general provisions for the valuation and creation of Reserves for Premium Insufficiency. The objective is to avoid insurance companies suffering future financial problems and ensure they are able to full comply with the obligations deriving from their insurance contracts. |
| Agreement No. 05 of October 12, 2016 | Establishing measures to prevent and control the risk of money laundering, terrorist financing and the funding of proliferation of weapons of mass destruction, applicable to products and services offered by parties of the insurance sector. The goal is strengthen regulation on prevention of money laundering regarding the analysis and approval of new products and technologies, in compliance with recommendation 15 of the Financial Action Task Force (FATF). |
| Agreement No. 06 of October 12, 2016 | Establishing minimum criteria and parameters which should be adopted by the subjects of the insurance sector for the dependence on third parties of the measures of due diligence in the prevention of money laundering, terrorist financing and funding of the proliferation of weapons of mass destruction. The agreement will serve to strengthen regulation on the prevention of money laundering regarding the reliance on third-parties and in fulfillment of recommendation 17 of the FATF. |
| Agreement No. 07 of October 12, 2016 | Establishing minimum criteria and parameters which should be adopted by the subjects of the insurance sector in terms of internal controls in the prevention of money laundering, terrorist financing and funding of the proliferation of weapons of mass destruction, applicable to their branches, including foreign subsidiaries. The agreement will strengthen regulation on the prevention of money laundering regarding internal controls on branches and subsidiaries, in accordance with recommendation 18 of the FATF. |
| Law 65 of December 9, 2016 | Amending article 63 of Law 12 of April 3, 2012 (Insurance Law) for obtaining economic autonomy from the central government, as provided by the Insurance Law, granting the Superintendence a percentage of the tax paid by insurance companies to the Fire Department of the Republic of Panama. |
| Law 68 of December 13, 2016 | Regulating mandatory insurance for traffic accidents. The objective is to guarantee compensation for those affected by traffic accidents, without limit or exclusions restricting this right. |
| Amendment of Agreement No. 04 of December 13, 2012 | Regulation in process of amendment creating the Mandatory Register of foreign Reinsurance and Reinsurance Brokers not established in Panama. The objective is to create greater controls and accelerate approvals of registrations and renewals. |

Source: Superintendence of Insurance and Reinsurance

### 3.1.8. Dominican Republic

### Macroeconomic environment

The Dominican Republic's economy grew by 6.6 percent in real terms in 2016, only 0.4 percentage points slower than in 2015, driven by momentum in mining, construction, tourism and the agriculture sector (see Chart 3.1.8-a). Economic activity was also supported by favorable external conditions, notably the decline in oil prices.

Average inflation doubled in 2016 to reach 1.6 percent, while unemployment fell by 0.4 percentage points to 5.5 percent. The current account deficit narrowed for a sixth consecutive year to reach 1.7 percent in 2016 (compared to 1.9 percent the year before), thanks to falling oil prices and an increase in tourism revenues and

remittances. Finally, ECLAC sees the Dominican economy growing by 6.2 percent in 2017, while the IMF has growth coming in at 5.3 percent.



**Chart 3.1.8-a**
**Dominican Republic: evolution of economic growth and inflation, 2006-16**
(GDP in local currency, billions of pesos; real growth rate, percent; annual inflation rate, percent)
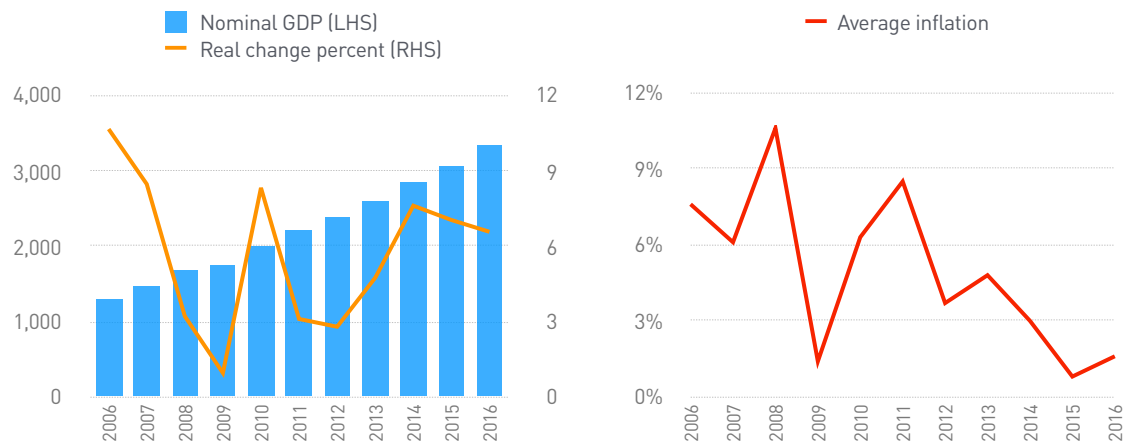
Source: MAPFRE Economic Research (based on IMF data)

## Insurance Market

### Growth

The Dominican insurance market achieved a premium volume of 40.589 billion pesos (882 million dollars) in 2016, representing a nominal increase of 13.9 percent and real growth of 12.1 percent, more than seven percentage points faster than the previous year in real terms (see Table 3.1.8 and Chart 3.1.8-c).

Life insurance premiums grew strongly, increasing by 18 percent in nominal terms to reach 7.453 billion pesos (162 million dollars). Individual Life (40.3 percent) once again saw notable growth in 2016, although it remains of only marginal importance in the Dominican insurance industry. Meanwhile group Life insurance premiums increased by 17.6 percent.

Non-Life premiums (which account for 81.6 percent of the total) grew by 13 percent in nominal terms and 11.2 percent in real terms (compared to 5.1 percent and 2.7 percent respectively last year) to reach 33.136 billion pesos (720 million dollars). The two most



**Chart 3.1.8-b**
**Dominican Republic: contribution to insurance market growth, 2006-16**
**(percentage points, ppts)**

Source: MAPFRE Economic Research (based on Superintendence of Insurance data)
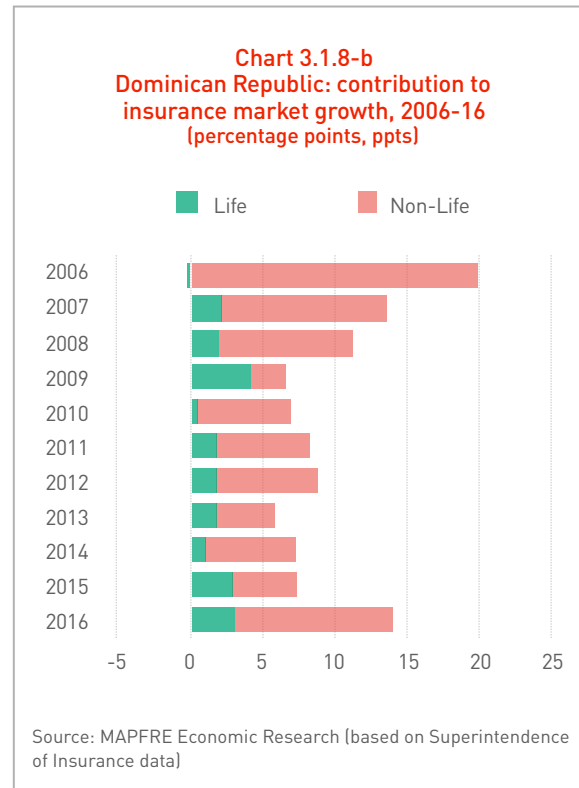
important lines in this segment (Fire and Automobiles) performed differently - Fire insurance stagnated (0.3 percent), while Automobile insurance saw growth of 13.9

**Table 3.1.8**
**Dominican Republic: premium volume[1] by line of business (lob), 2016**

| Line of business | Millions of pesos | Millions of dollars | Increase Nominal (percent) | Increase Real (percent) |
|---|---|---|---|---|
| **Total** | **40,589** | **882** | **13.9** | **12.1** |
| **Life** | **7,453** | **162** | **18.0** | **16.2** |
| Individual Life | 189 | 4 | 40.3 | 38.0 |
| Group Life | 7,264 | 158 | 17.6 | 15.7 |
| **Non-Life** | **33,136** | **720** | **13.0** | **11.2** |
| Fire and Allied Lines | 10,958 | 238 | 0.3 | -1.2 |
| Automobiles | 11,890 | 258 | 13.9 | 12.1 |
| Health | 5,234 | 114 | 71.4 | 68.7 |
| Other Lines | 2,531 | 55 | -5.9 | -7.4 |
| Transport | 1,081 | 23 | 5.1 | 3.5 |
| Surety | 911 | 20 | 8.3 | 6.6 |
| Personal Accidents | 532 | 12 | 53.0 | 50.6 |

Source: MAPFRE Economic Research (based on Superintendence of Insurance data)
1/ Net premiums of returns and cancellations

### Chart 3.1.8-c
### Dominican Republic: growth developments in the insurance market, 2006-16
(premiums, billions of pesos, nominal annual growth rates, percent)

PREMIUMS

Non-Life    Life

GROWTH

Total    Life    Non-Life

Source: MAPFRE Economic Research (based on Superintendence of Insurance data)
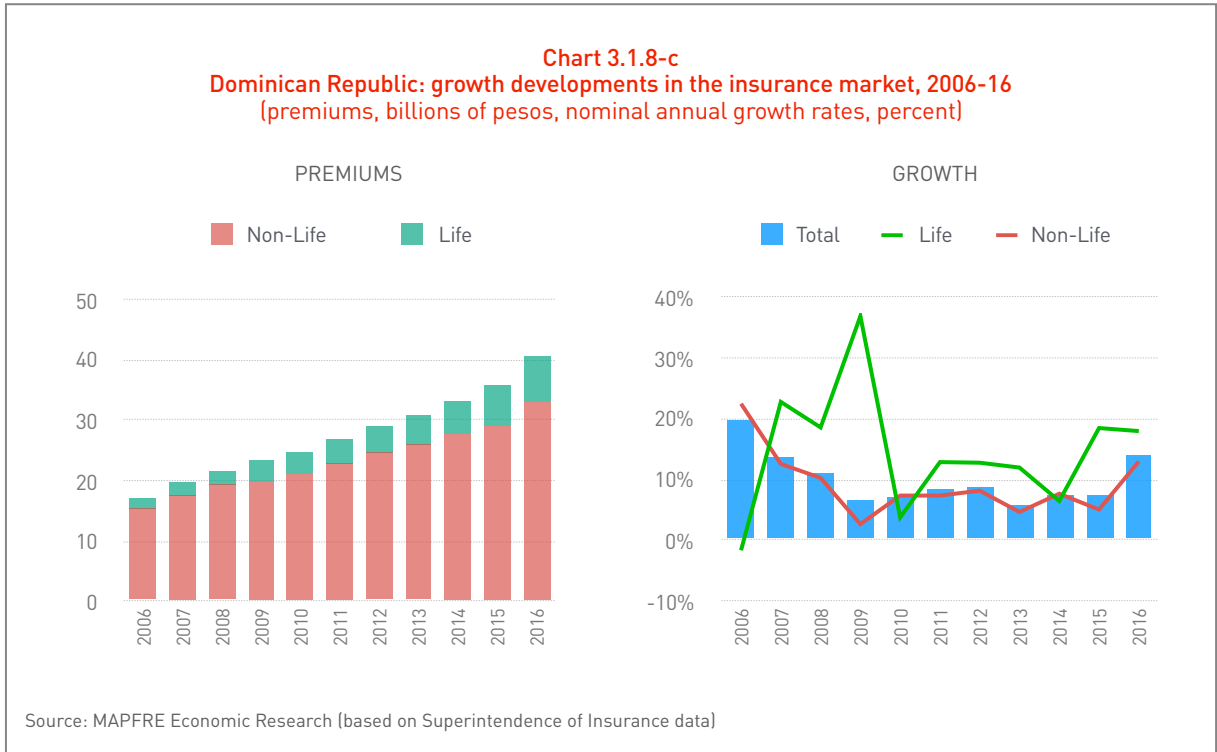
percent. The remaining insurance lines also registered an increase in premiums, with the exception of the Other lines grouping.

Non-Life insurance accounted for the bulk of the 13.9 percent overall growth registered by the Dominican insurance market in 2016. The segment contributed 10.7 percentage points to growth in the sector, while the Life segment contributed the remaining 3.2 percentage points (see Chart 3.1.8-b).

**Balance sheet and equity**

Chart 3.1.8-d shows the aggregate balance sheet for the Dominican insurance industry.

### Chart 3.1.8-d
### Dominican Republic: evolution of insurance industry's aggregate balance sheet, 2006-16
(amounts in local currency, change in equity, percentage points)

Equity    Liabilities

(BILLIONS OF PESOS)

Annual change in equity

| Period | Value |
|---|---|
| 2006-07 | 11.9 |
| 2007-08 | 23.1 |
| 2008-09 | 17.9 |
| 2009-10 | 9.0 |
| 2010-11 | 7.3 |
| 2011-12 | 5.8 |
| 2012-13 | 8.0 |
| 2013-14 | 10.3 |
| 2014-15 | 9.0 |
| 2015-16 | 10.4 |

Source: MAPFRE Economic Research (based on Superintendence of Insurance data)

The industry's total assets amounted to 52.1915 billion pesos (1.134 billion dollars). Total industry equity reached 14.935 billion pesos (324 million dollars), up 10.3 percent on 2015. The Dominican insurance industry has consistently increased its levels of equity on an annual basis over the period 2006-16. Aggregate capital levels in the insurance industry (measured relative to total assets) have remained close to 30 percent throughout the period, representing 28.6 percent of total assets in 2016.

**Investment**

Chart 3.1.8-e shows the evolution of the aggregate investment portfolio at a sector level over 2006-16, while Charts 3.1.8-f and 3.1.8-g show the evolution of the structure of investment over the same period. Investment reached 26.620 billion pesos (578 million dollars) in 2016, with 75.5 percent focused in debt and equity instruments, and a relatively smaller proportion in property (13.3 percent) and cash (6.1 percent).



Chart 3.1.8-e
Dominican Republic: Insurance market technical provisions, 2006-16
(billions of pesos)
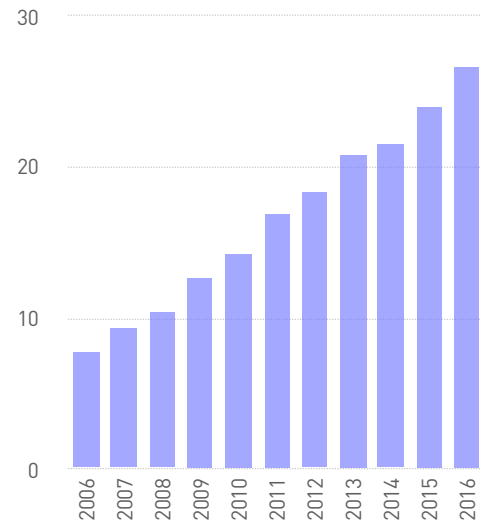
Source: MAPFRE Economic Research (based on Superintendence of Insurance data)



Chart 3.1.8-f
Dominican Republic: structure of investment, 2006-16
(%)
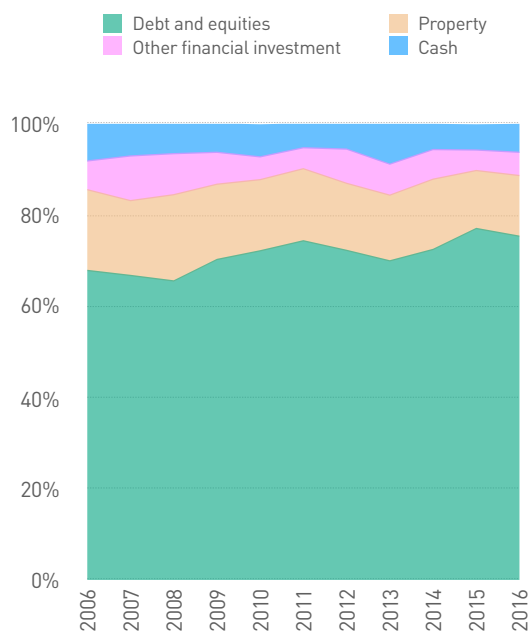
Source: MAPFRE Economic Research (based on Superintendence of Insurance data)



Chart 3.1.8-g
Dominican Republic: structure of investment, 2016
(%)
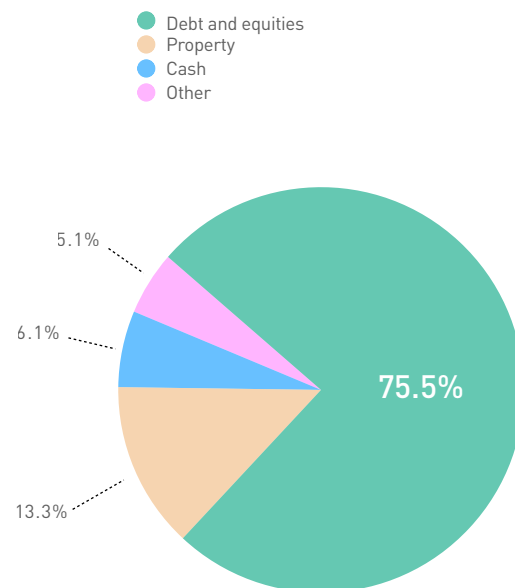
Source: MAPFRE Economic Research (based on Superintendence of Insurance data)

The most notable development in the aggregate investment portfolio is the change in the weight of property investment, which has gradually fallen from 2006 (when property investment accounted for 17.7 percent of the portfolio) to 13.3 percent by the end of 2016.

**Technical provisions**

Chart 3.1.8-h shows the evolution of technical provisions for the Dominican insurance market, while Charts 3.1.8-i and 3.1.8-j show the relative composition over the period 2006-16. As these data illustrate, technical provisions amounted to 19.747 billion pesos (429 million dollars) in 2016. 9.2 percent of total provisions related to mathematical provisions and unexpired risks, 28.3 percent to unearned premiums and unexpired risks in Non-Life insurance, 51 percent to provisions for outstanding claims, 2.2 percent to catastrophic risks, and the remaining 9.3 percent to other technical provisions. It is

**Chart 3.1.8-h
Dominican Republic: insurance market technical provisions, 2006-16
(billions of pesos)**

Source: MAPFRE Economic Research (based on Superintendence of Insurance data)

**Chart 3.1.8-i
Dominican Republic: structure of technical provisions, 2006-16
(%)**

Other technical provisions
Catastrophic risk provisions
Provisions for outstanding claims
Unearned premiums and ongoing risks
Life insurance provisions

Source: MAPFRE Economic Research (based on Superintendence of Insurance data)

**Chart 3.1.8-j
Dominican Republic: structure of technical provisions, 2016
(%)**

Life
For claims
Other
Non-Life
Catastrophic risks

9.2%
9.3%
2.2%
28.3%
51.0%

Source: MAPFRE Economic Research (based on Superintendence of Insurance data)

worth highlighting that in 2016 around 75 percent of the mathematical provision and unexpired insurance risks related to mathematical provisions and the rest to provisions for unexpired risks in health and accident insurance. It is also worth noting the declining weight of these provisions over the period 2006-16, which have gone from accounting for 15.6 percent of total provisions in 2006 to 9.2 percent at the end of 2016.

**Technical performance**

Chart 3.1.8-k shows the evolution of the aggregate combined ratio for the Dominican insurance industry over the period 2006-16. The technical indicator worsened by 1.5 ppts in 2016, primarily due to an increase in the claims ratio, which at 99.5 percent returned to 2014 values. The combined ratio and claims ratio are net of taxes.

Chart 3.1.8-k
Dominican Republic: evolution of market technical performance, 2006-16
(total combined ratio, percent; annual change in combined ratio, percentage points)

Source: MAPFRE Economic Research (based on Superintendence of Insurance data)

Chart 3.1.8-l
Dominican Republic: evolution of results and profitability, 2006-16
(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)

Source: MAPFRE Economic Research (based on Superintendence of Insurance data)

**Results and profitability**

The Dominican insurance industry posted a consolidated result of 2.705 billion pesos (59 million dollars) for 2016, up 1.5 percent on the previous year. This was underpinned by a positive financial result, which has been sustained since 2012 (see Chart 3.1.8-i). Despite a decline in the technical result, accrued premiums were unable to absorb the increase in the claims ratio. Return on equity (ROE) stood at 18.1 percent in 2016, down 1.6 percentage points on the previous year. The return on assets (ROA) reached 5.2 percent in 2016 (0.5 percentage points less than in 2015). Both indicators underscore the stagnation in profitability seen since 2011.

**Insurance penetration, density and depth**

Chart 3.1.8-m shows the main structural trends in the development of the insurance industry in the Dominican Republic over the period 2006-16. The penetration index (premiums/GDP) stood at 1.2 percent in 2016, practically unchanged since 2011 and 0.2 percentage points below 2006. The penetration index for the Dominican Republic has declined over the period, remaining well below absolute average values for the region and moving in the opposite direction over time.

Insurance density in the Dominican Republic (premiums per capita) reached 3,810 pesos (82.8 dollars) in 2016, up 12.6 percent on 2015 (3,383 pesos). Density (in local currency terms) has clearly increased over time, registering cumulative growth of 107.1 percent over 2006-16.

Depth (Life insurance premiums to total premiums) stood at 18.4 percent, 0.7 percentage points above the 2015 value and some 8.5 percentage points above the depth level in 2006. Growth in depth is in line with the trend for the combined Latin American markets, although absolute levels are well below the regional average.

Chart 3.1.8-n illustrates the overall performance of the Dominican insurance market based on a dispersion analysis which takes account of the overall effect of penetration and depth levels. This analysis reveals a patchy performance. Over the period 2006-14, the Dominican insurance industry saw a decrease in penetration levels alongside an increase in depth. However, this trend appears to reverse over 2014-16 with increases both in penetration (+0.05 ppts) and depth (+2.32 ppts).

**Estimate of the Insurance Protection Gap**

Chart 3.1.8-o provides an estimate of the IPG for the Dominican insurance market between 2006 and 2016. The insurance gap amounted to 223.349 billion pesos in 2016, representing 5.5 times the Dominican insurance market at the end of the year.

The structure and evolution of the IPG over the period reflects the major contribution from Life insurance. At the end of 2016, 63.5 percent of the IPG related to Life insurance (141.891 billion pesos), 5.2 percentage points less than this segment's share in 2006. The remaining 36.5 percent of the insurance gap corresponded to Non-Life insurance (81.457 billion pesos).

Accordingly, the potential insurance market in the Dominican Republic at the end of 2016 (sum of actual market and IPG) is estimated at 263.937 billion pesos, some 6.5 times the total insurance market.

Chart 3.1.8-p shows an estimate of the insurance gap as a multiple of the actual insurance market in the Dominican Republic. The insurance gap multiple for Life insurance has continually declined over the period 2006-16 from 36.2 to 19.0 times. However, in the case of Non-Life insurance, the multiple has grown from 1.8 to 2.5 times over the same period.

Lastly, Chart 3.1.8-q provides a summary of the assessment regarding the capacity of the Dominican insurance market to close the insurance gap based on a comparison of growth rates over the last ten years in relation to the growth rates that would be required to close the IPG established in 2016 over the next ten years.

## Chart 3.1.8-m
## Dominican Republic: evolution of penetration, density and depth, 2006-16
(premiums/GDP, percent; premiums per capita, pesos and dollars; Life insurance premiums / total premiums, percent, index 2006=100)

PENETRATION

INDEX (2006=100)

DENSITY

INDEX (2006=100)

DEPTH

INDEX (2006=100)
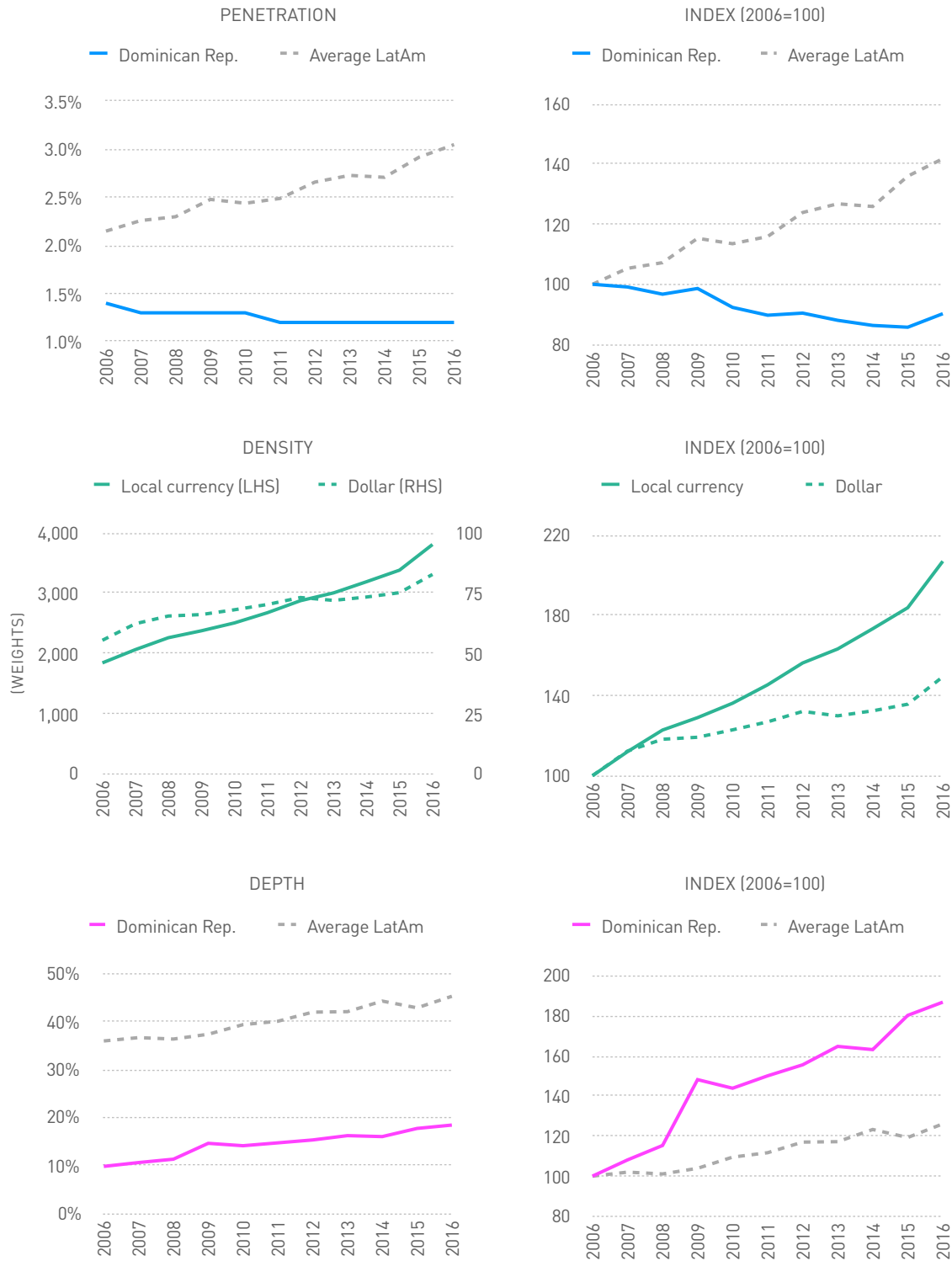
Source: MAPFRE Economic Research (based on Superintendence of Insurance data)

**Chart 3.1.8-n
Dominican Republic: evolution of insurance market, 2006–16
(penetration vs depth)**
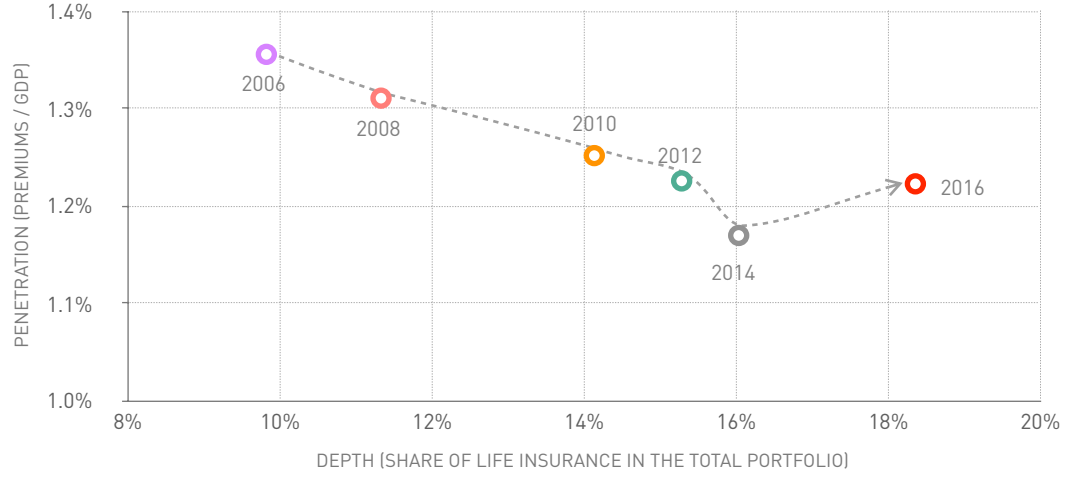


Source: MAPFRE Economic Research

The Dominican insurance market registered average annual growth of 8.9 percent, comprised of an annual growth rate of 16 percent in Life insurance and 7.9 percent in Non-Life insurance. If the same rate of growth were to be sustained over the next ten years, the aggregate market growth rate would be insufficient to cover the IPG estimated for both the Non-Life segment (shortfall of 5.4 percentage points) and the Life segment (shortfall of 19 percentage points).

Relative to the estimates carried out last year, the shortfall is slightly higher for the Non-Life insurance segment (0.4 ppts) and lower for Life insurance (-3.8 ppts).

**Market Development Index (MDI)**

Chart 3.1.8-r provides an estimate of the Market Development Index (MDI) for the Dominican insurance industry. The MDI (indicator of general

**Chart 3.1.8-o
Dominican Republic: Insurance Protection Gap and potential market, 2006–16
(billions of pesos)**
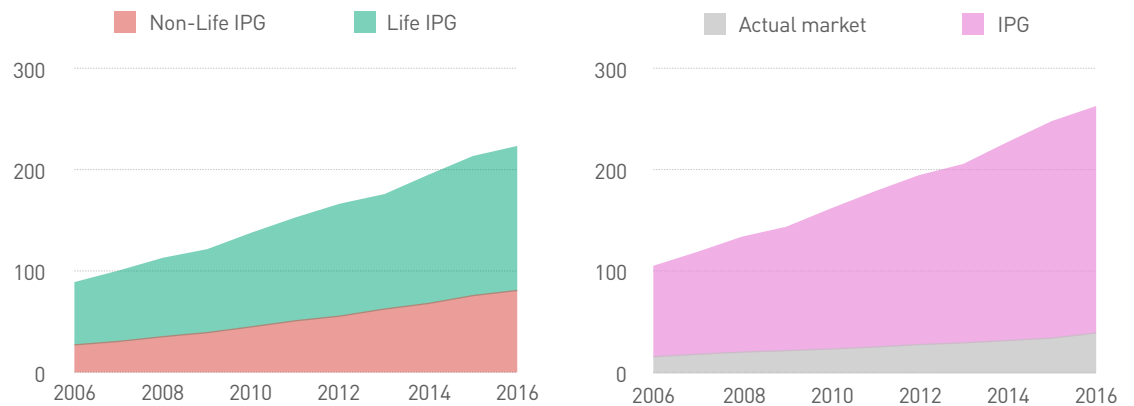


Source: MAPFRE Economic Research

**Chart 3.1.8-p**
**Dominican Republic: the IPG as a multiple of the actual market, 2006-16**
(number of times actual insurance market)
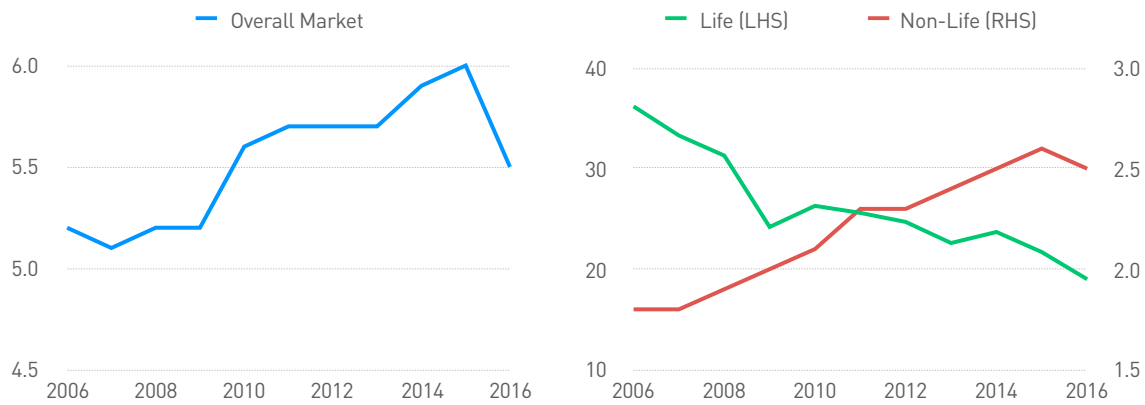


Source: MAPFRE Economic Research

**Chart 3.1.8-q**
**Dominican Republic: capacity to close IPG, 2006-16**
(average annual growth rate, percent; sufficiency or insufficiency, percentage points)
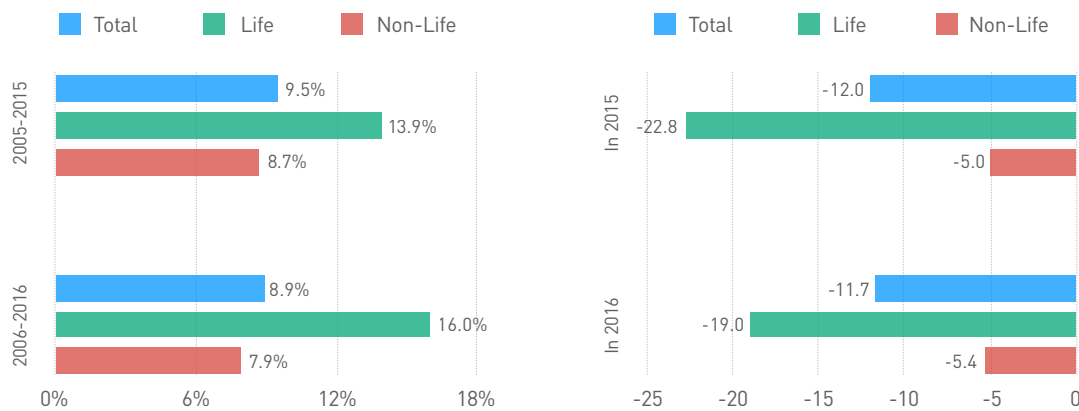


Source: MAPFRE Economic Research

trends in the evolution and maturity of the insurance market) has performed positively over the period 2006-16. However, the trend in market development appears to diverge from the average performance of the Latin American region over this period, with setbacks in 2005-06, 2009-10 and 2013-14.

**Insurance market rankings**

**Overall ranking**

32 insurance companies were operating in the Dominican Republic's market in 2016. The market is highly concentrated, although in the last ten years there has been a slight trend toward lower levels of concentration.

Though reducing over time, the Herfindahl index indicates that concentration levels have remained above the theoretical threshold associated with moderate levels of concentration. The CR5 index has also been on a downward trend (dominated by the Non-Life insurance segment) as is also the case for the Life insurance market (see Chart 3.1.8-s).

The top ten companies leading the overall ranking remained the same as in previous years with the exception of Seguros Pepín and Constitución who dropped out of the ranking in favor of General Seguros and Humano Seguros (which absorbed Seguros Vivir in 2016). Seguros Universal continued to lead the ranking with 24.2 percent of premiums (down 0.9 ppts), followed



**Chart 3.1.8-r
Dominican Republic: Market Development Index (MDI), 2005-16
(index 2005=100; annual change)**

Source: MAPFRE Economic Research
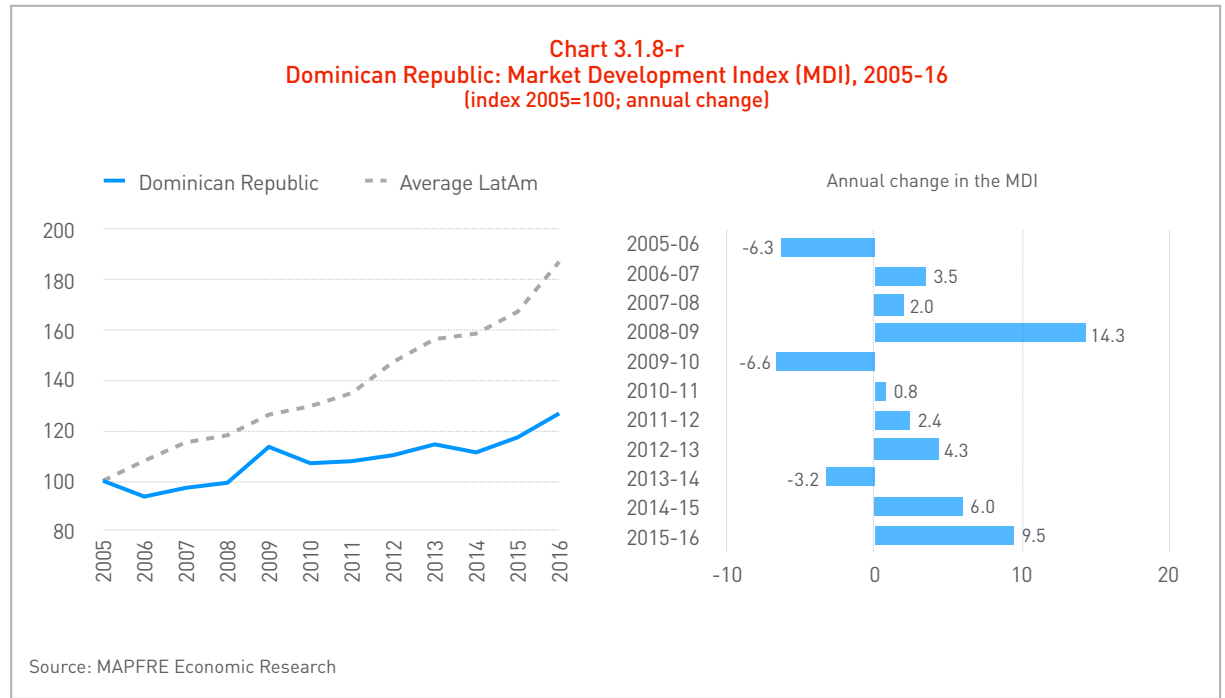
by Seguros Banreservas (16.7 percent) and MAPFRE (14.9 percent).

The rest of the overall ranking of the Dominican market experienced only small changes in market shares and relative positions with respect to 2015. However, it is worth highlighting that La Monumental de Seguros slipped from eighth to last place and the strong entry of Humano Seguros, which climbed to sixth position (see Chart 3.1.8-t).

**Non-Life Ranking**

Given the significant relative weight of Non-Life insurance within the overall Dominican market, the ranking for the segment is very similar to the overall ranking.

The only difference is that Scotia no longer made the Non-Life ranking in 2016 (it was in the 2015 ranking with a market share of 3.1 percent), after being replaced by Seguros Pepín which occupied ninth place (see Chart 3.1.8-u).

**Life Ranking**

Finally, the insurance companies making up the Life ranking in 2016 were the same as in previous years. The only exception being the exit of Agropecuaria and the entry of General de Seguros.

The rest of the ranking for this market segment saw only small changes in market shares and relative positions, with the previously mentioned incorporation of Humano Seguros into Seguros Vivir.

**Graph 3.1.8-s**
**Dominican Republic: insurance industry concentration, 2006–16**
**(Herfindahl index; CR5 index, percent)**
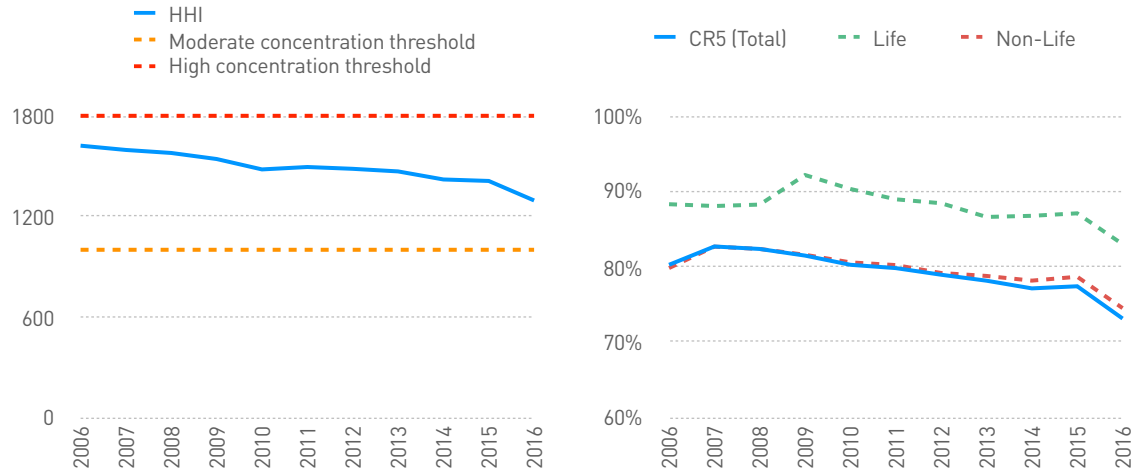


Source: MAPFRE Economic Research (based on Superintendence of Insurance data)

**Chart 3.1.8-t**
**Dominican Republic: overall ranking, 2015–16**
**(market shares, percent)**
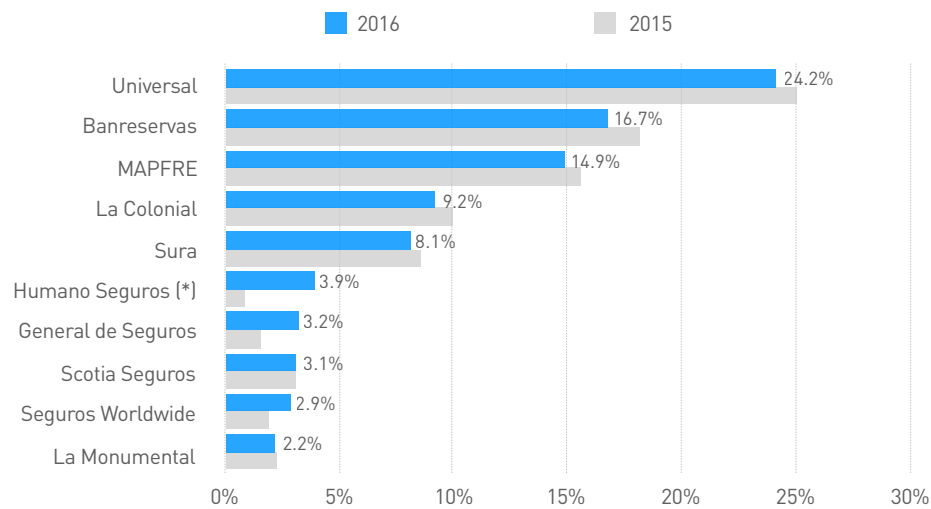


Source: MAPFRE Economic Research (based on Superintendence of Insurance data)

Chart 3.1.8-u
Dominican Republic: Life and Non-Life ranking, 2015-16
(market shares, percent)
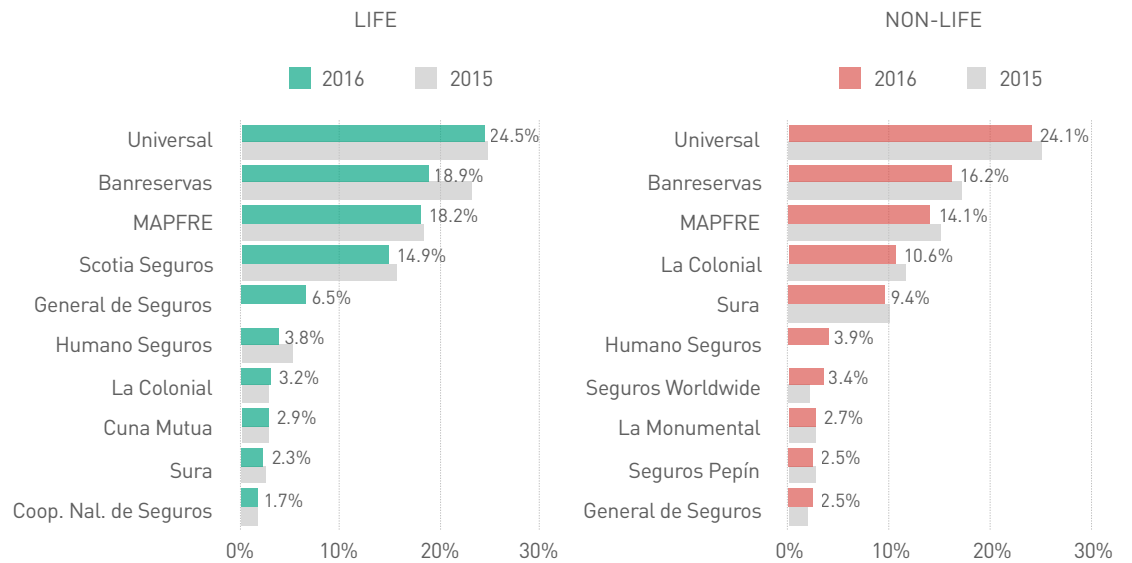
Source: MAPFRE Economic Research (based on Superintendence of Insurance data)

Accordingly, Seguros Universal continued to lead the ranking with 24.5 percent of market premiums, followed by Seguros Banreservas with 18.9 percent of premiums and MAPFRE with a market share of 18.2 percent (see Chart 3.1.8-u).

## Key regulatory aspects

Finally, according to the available information from the Superintendence of Insurance of the Dominican Republic, no significant regulatory reforms were approved in 2016 in relation to the regulatory framework. Law No. 146-02 on Seguros and Surety remains in force.

However, it is worth noting that there is an ongoing process of legal reform taking place to adapt these insurance regulations to the future demands coming out of the Free Trade Agreement between the Dominican Republic, Central America and the United States of America (DR-CAFTA).

### 3.1.9. Puerto Rico

### Macroeconomic environment

The Puerto Rican economy contracted by -1.8 percent in 2016, after stagnating in 2015. The economy continues to struggle to overcome the economic difficulties associated with a now more than ten-year long recession (see Chart 3.1.9-a).

Although exports grew at a moderate pace in 2016, imports also increased at a similar rate, hindering any improvement in the trade balance. Private consumption remained anemic and investment and public consumption contracted.

Fiscal challenges continued to persist despite economic reforms and budgetary adjustments, which proved unable to prevent the country from entering into default on its debt and being classified as sub-investment grade by most international ratings agencies.

The inflation rate returned to positive territory in 2016 (0.2 percent after -0.8 percent), while unemployment improved by around 0.2 percentage points to 11.8 percent. The International Monetary Fund expects Puerto Rico's difficulties to continue in 2017 and estimates that GDP will contract by 3 percent this year.

### Insurance Market

**Growth**

Despite the adverse economic backdrop, the Puerto Rican insurance market continued growing in 2016 - reaching 12.869 billion dollars in premiums. Although slower than the previous year (21.5 percent nominal), premiums grew by 6.2 percent in nominal terms in 2016 (6 percent in real terms).

Premiums increased in 2016 in both Life (which represents only 9.8 percent of the total market) and Non-Life insurance (see Chart 3.1.9-b and Table 3.1.9). Non-Life insurance premiums grew by 1 percent in nominal terms in 2016 reaching 1.265 billion dollars. Growth was broadly in line with the previous year. Meanwhile Non-Life insurance premiums rose by 6.8 percent in 2016 (compared to 24.4 percent in the previous year) to reach 11.605 billion dollars. This growth was largely due to the performance of Health insurance, on the back of amendments made to the Medicaid (Mi Salud) program. The remaining



Chart 3.1.9-a
Puerto Rico: evolution of economic growth and inflation, 2006-16
(GDP in local currency, billions of dollars; real growth rate, percent; annual inflation rate, percent)
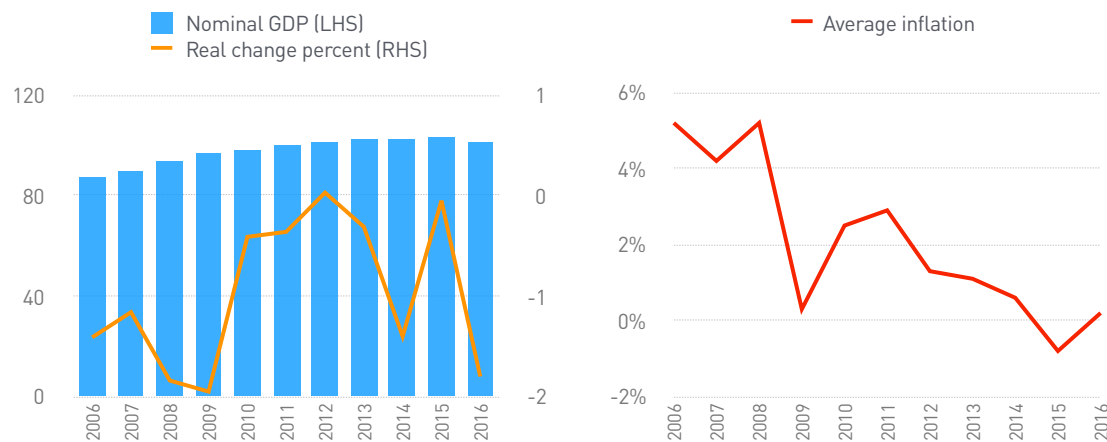
Source: MAPFRE Economic Research (based on IMF data)

### Table 3.1.9
### Puerto Rico: premium volume[1] by line of business (lob), 2016

| line of business[2] | Millions of dollars | Increase | |
|---|---|---|---|
| | | Nominal (percent) | Real (percent) |
| **Total** | **12,869** | **6.2** | **6.0** |
| **Life** | **1,265** | **1.0** | **0.8** |
| **Non-Life** | **11,605** | **6.8** | **6.6** |
| Health | 9,856 | 8.2 | 7.9 |
| Automobiles | 645 | 1.2 | 0.9 |
| Third-party liability | 173 | 1.4 | 1.1 |
| Fire and/or Allied Lines | 255 | -5.3 | -5.6 |
| Transport | 111 | 7.4 | 7.1 |
| Other Damage | 564 | -0.5 | -0.8 |

Source: MAPFRE Economic Research (based on data from Office of the Commissioner of Insurance of Puerto Rico)
1/ Net premiums of returns and cancelations
2/ For 2016, compulsory motor insurance was transferred from Other Damages to the ¨Automobile line.

### Chart 3.1.9-b
### Puerto Rico: growth developments in the insurance market, 2006-16
(premiums, millions of dollars, nominal annual growth rates, percent)
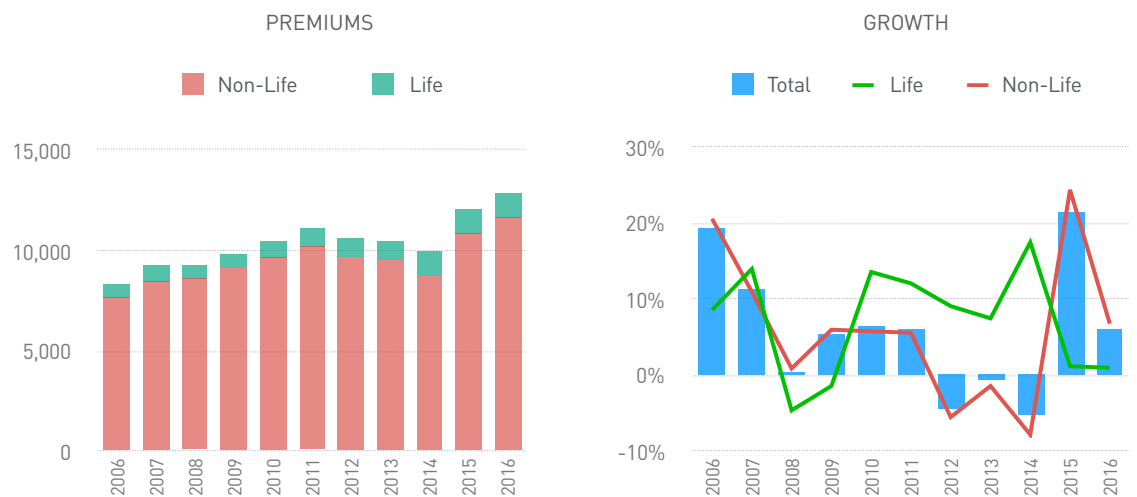


Source: MAPFRE Economic Research (based on data from Office of the Commissioner of Insurance of Puerto Rico)

types of Non-Life insurance registered modest growth (except for Fire which fell -5.3 percent and Other Damages which declined by -0.5 percent). It is worth noting that the decline in the Other Damages line was due to a change in accounting criteria in 2016 and the transfer of compulsory motor insurance to the Automobile line.

Thus, as illustrated in Chart 3.1.9-c, practically the entirety of growth in the Puerto Rican insurance market in 2016 was due to the positive contribution of Non-Life insurance, which accounted for 6.1 percentage points, while Life insurance barely contributed 0.1 percentage points to overall market growth.

**Balance sheet and equity**

Chart 3.1.9-d shows developments in the aggregate balance sheet of insurance companies domiciled in Puerto Rico over the period 2006-16.

Total insurance industry assets amounted to 8.2411 billion dollars in 2016, while equity stood at 2.492 billion dollars, down -2.5 percent on the previous year.



Chart 3.1.9-c
Puerto Rico: contribution to insurance market growth, 2006-16
(percentage points, ppts)

Source: MAPFRE Economic Research (based on data from Office of the Commissioner of Insurance of Puerto Rico)
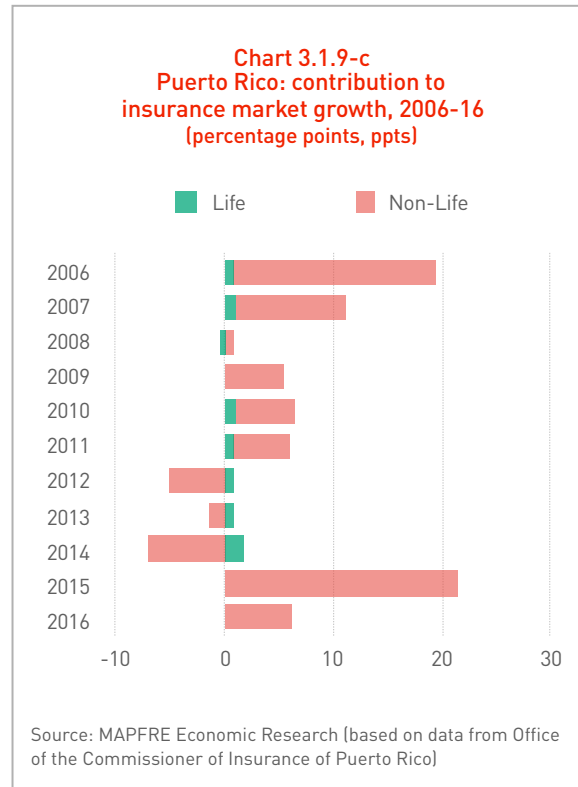
The aggregate capital level of insurance companies operating in the country (measures over total assets) has remained above 30 percent throughout the period 2006-16, reaching a peak in 2012 at 35.3 percent and subsequently declining to 30.2 percent in 2016.
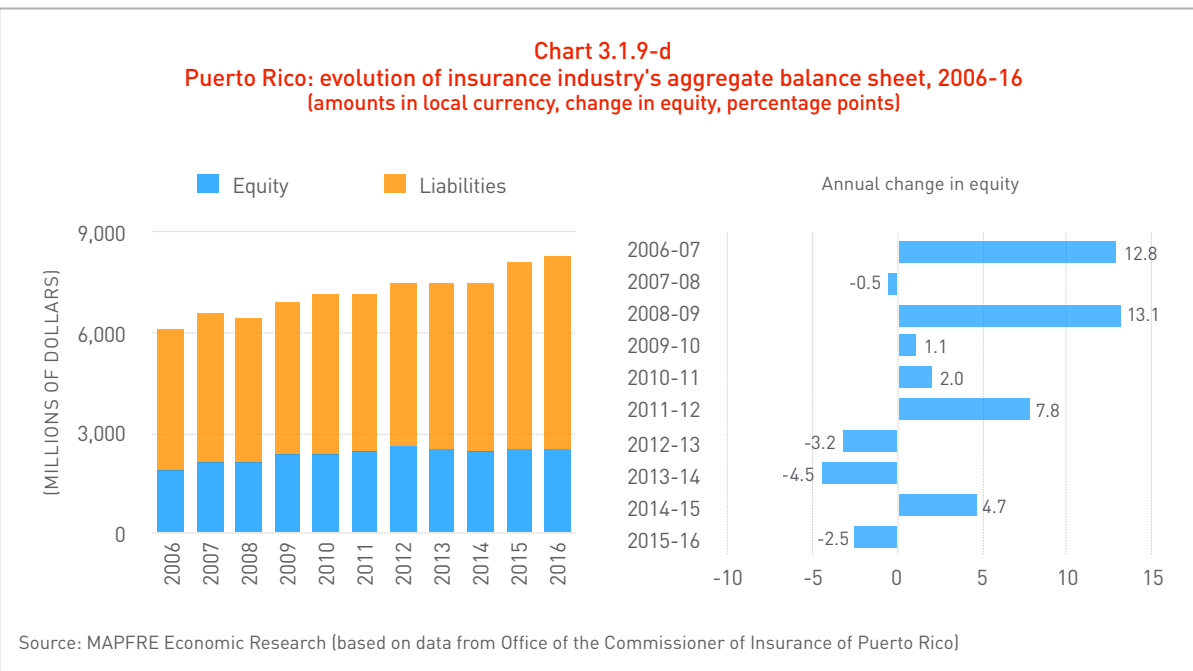


Chart 3.1.9-d
Puerto Rico: evolution of insurance industry's aggregate balance sheet, 2006-16
(amounts in local currency, change in equity, percentage points)

Source: MAPFRE Economic Research (based on data from Office of the Commissioner of Insurance of Puerto Rico)

**Investment and technical provisions**

Chart 3.1.9-e shows developments in the aggregate investment portfolio at a sector level for insurers in Puerto Rico over the period 2010-16. The total portfolio reached 6.2935 billion dollars in 2016, 2.8 percent more than the previous year. Chart 3.1.9-f shows the evolution of technical provisions at a sector level over the period 2010-16. Provisions amounted to 3.399 billion dollars, equivalent to a reduction of -1.5 percent on 2015.

Is is not possible on the basis of available data to undertake a more detailed disaggregation of the composition of both investment and technical provisions.

**Results and profitability**

The Puerto Rican insurance industry posted a consolidated result of 170 million dollars in 2016, up 44.5 percent on the previous year. This improvement was mainly due to an better

**Chart 3.1.9-e
Puerto Rico: Insurance market
technical provisions, 2006-16
(millions of dollars)**



Source: MAPFRE Economic Research (based on data from Office of the Commissioner of Insurance of Puerto Rico)

**Chart 3.1.9-f
Puerto Rico: insurance market
technical provisions, 2006-16
(millions of dollars)**



Source: MAPFRE Economic Research (based on data from Office of the Commissioner of Insurance of Puerto Rico)

**Chart 3.1.9-g
Puerto Rico: profitability, 2006-16
(percent; ROE; ROA, percent)**



Source: MAPFRE Economic Research (based on data from Office of the Commissioner of Insurance of Puerto Rico)

investment result in 2016, in addition to the exceptionally adverse performance in 2015 of property and personal damage lines.

In terms of profitability, the Puerto Rican market posted a return on equity (ROE) of 6.8 percent in 2016, increasing by 2.2 percentage points on 2015. In a similar vein, return on assets (ROA) amounted to 2 percent in 2016, a slight increase of 0.6 percentage points on 2015 (see Chart 3.1.9-g).

**Insurance penetration, density and depth**

Chart 3.1.9-h shows the main structural trends in the development of the Puerto Rican insurance industry over the period 2006-16.

The penetration index (premiums/GDP) stood at 12.7 percent in 2016, 0.9 percentage points above the previous year and some 3.2 percentage points above 2006. This is the highest indicator value in Latin America and is largely because premium volumes include Health insurance for the poorest populations, which are managed by the insurance industry and covered by government budgets.

Insurance density in Puerto Rico (premiums per capita) reached 3,496 dollars (also the highest in the region) in 2016, representing a 6 percent increase on the previous year (3,289 dollars). As with penetration, density has clearly increased over time, registering cumulative growth of 57.5 percent over 2006-16.

The depth index (Life insurance premiums to total premiums) stood at 9.8 percent, 0.5 percentage points below the 2015 value and barely 1.9 percentage points above the depth level in 2006. In contrast to the penetration and density indicators, growth in depth of the Puerto Rican insurance market has been well below the trend for the combined Latin American market.

Finally, Chart 3.1.9-i illustrates the overall performance of the Puerto Rican insurance market based on a dispersion analysis which takes account of the combined effect of

penetration levels (as a quantitative indicator of market development) and depth (as a *proxy* indicator of qualitative conditions).

The insurance industry posted a mixed performance over the period 2010-14; while depth increased it was not accompanied by an increase in penetration. By contrast over 2014-16 (as was also the case in 2006-10) development has been characterized by increases in penetration but at the cost of a deterioration in the depth indicator.

**Estimate of the Insurance Protection Gap**

Chart 3.1.9-j provides an estimate of the IPG for the Puerto Rican insurance market between 2006 and 2016. In accordance with the chart, the insurance gap amounted to 3.289 billion dollars in 2016, some 0.3 times the actual insurance market in Puerto Rico at the end of the year.

The structure and evolution of the insurance gap over the period reflect the absolute predominance of the contribution from Life insurance, given the relative size of the Non-Life insurance sector (dominated by growth in Health insurance). Thus at close 2016, nearly the entire IPG related to the Life insurance segment.

Accordingly, the potential insurance market in Puerto Rico at the end of 2016 (sum of actual market and IPG) is estimated at 16.158 billion dollars, some 1.3 times the total insurance market in that year.

Chart 3.1.9-k shows an estimate of the IPG as a multiple of the actual insurance market in Puerto Rico. The insurance gap multiple (concentrated in the Life insurance segment) has continually declined over the period 2006-16 from 5.6 to 2.6 times.

Chart 3.1.9-l provides a summary of the assessment of the capacity of the Puerto Rican insurance market to close the IPG. This is based on a comparison of growth rates over the last ten years in relation to the growth rates that would be required over the next ten years in order to close the IPG established in 2016.

**Chart 3.1.9-h**
**Puerto Rico: evolution of penetration, density and depth, 2006-16**
(premiums/GDP, percent; premiums per capita, dollars; Life insurance premiums / total premiums, percent, index 2006=100)



PENETRATION

INDEX (2006=100)

DENSITY

INDEX (2006=100)

DEPTH

INDEX (2006=100)
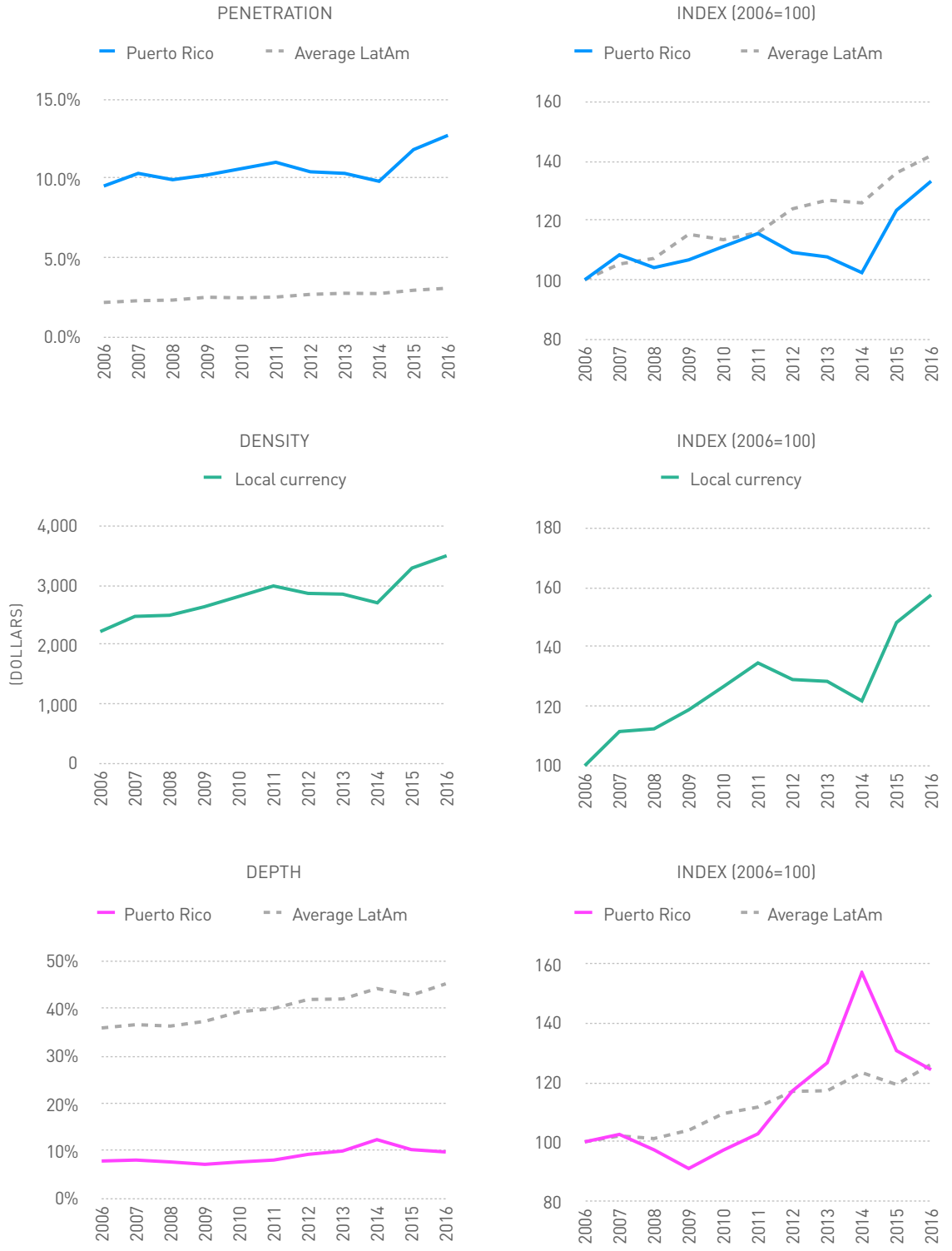
Source: MAPFRE Economic Research (based on data from Office of the Commissioner of Insurance of Puerto Rico)

**Chart 3.1.9-i**
**Puerto Rico: evolution of insurance market, 2006-16**
**(penetration vs depth)**
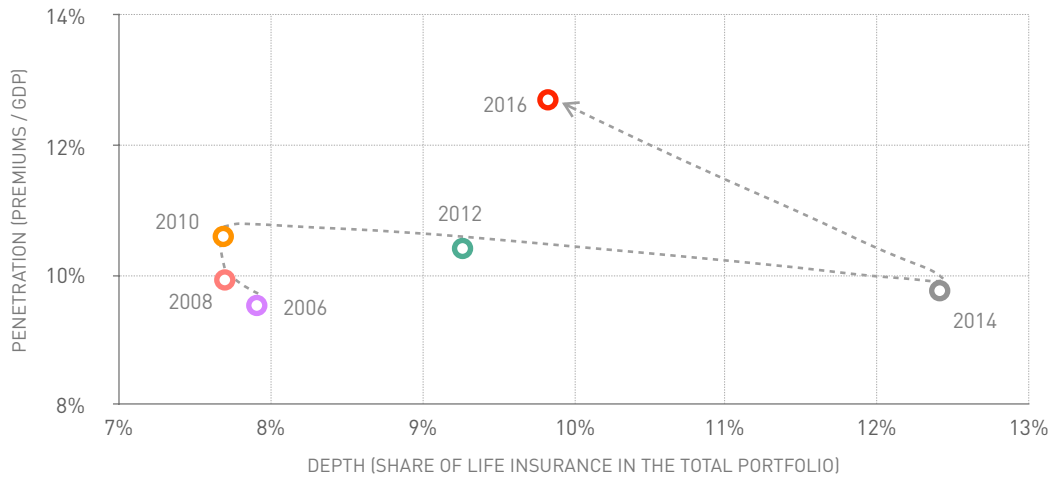


Source: MAPFRE Economic Research

The Puerto Rican insurance market registered average annual growth of 4.5 percent over the last ten years, comprised of an annual growth rate of 6.8 percent in Life insurance and 4.2 percent in Non-Life insurance.

If the same rate of growth were to be sustained over the next ten years, the growth rate of the Puerto Rican insurance market would fall short of closing the gap in the Life insurance segment by 6.9 percentage points - the focus of the insurance gap is in this market. This shortfall remains unchanged related to the 2015 estimate.

**Market Development Index (MDI)**

Chart 3.1.9-m provides an estimate of the Market Development Index (MDI) for the Puerto Rican insurance industry. The MDI has performed positively since 2009, converging toward the average for Latin American insurance markets.

**Chart 3.1.9-j**
**Puerto Rico: Insurance Protection Gap and potential market, 2006-16**
**(millions of dollars)**
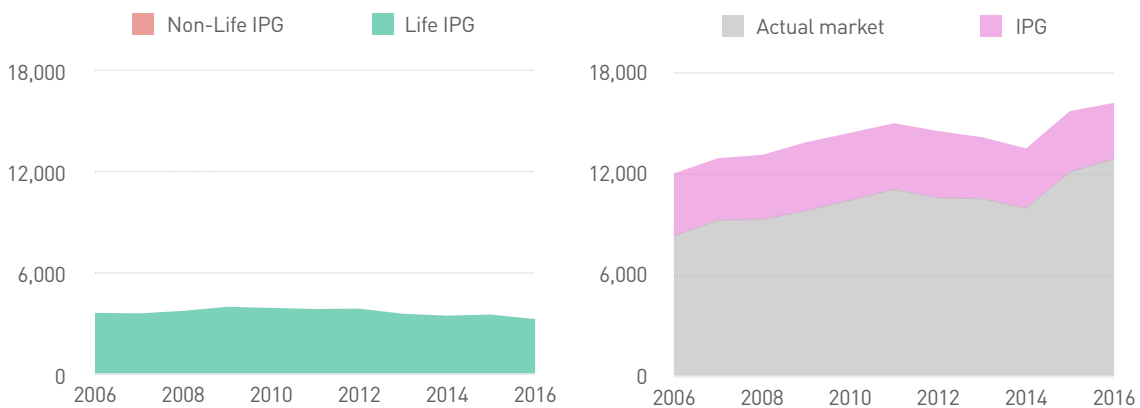


Source: MAPFRE Economic Research

Chart 3.1.9-k
Puerto Rico: the IPG as a multiple of the actual market, 2006-16
(number of times actual insurance market)



Source: MAPFRE Economic Research

Chart 3.1.9-l
Puerto Rico: capacity to close IPG, 2006-16
(average annual growth rate, percent; sufficiency or insufficiency, percentage points)



Source: MAPFRE Economic Research
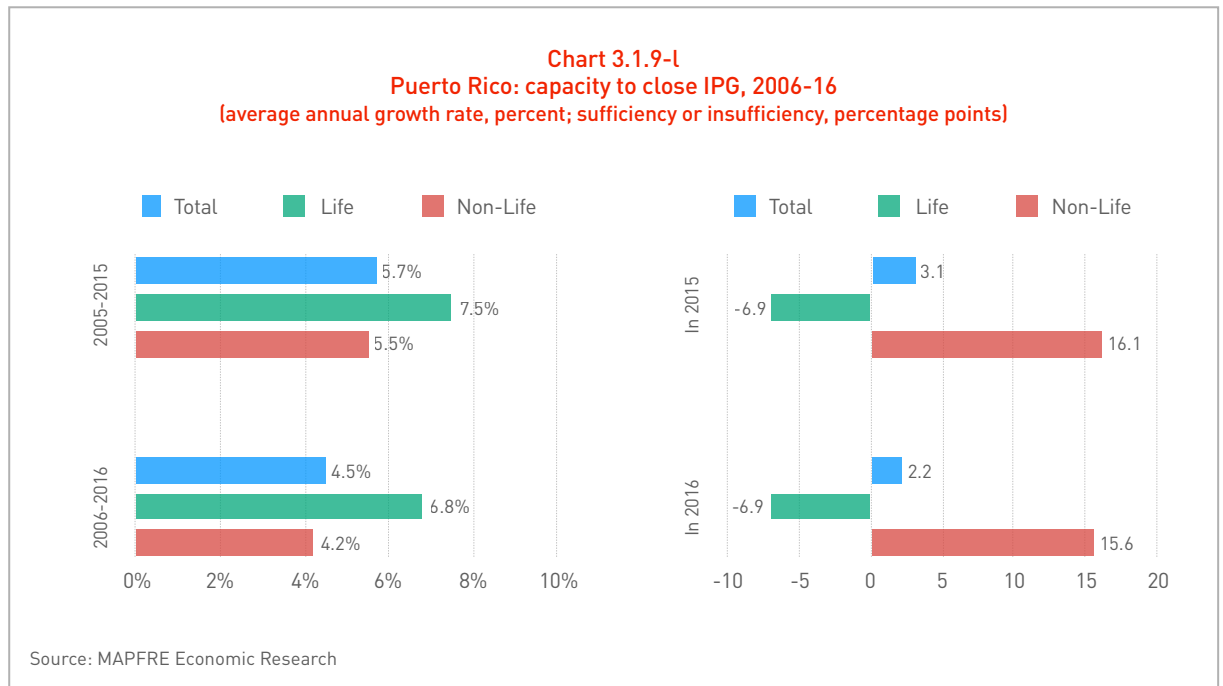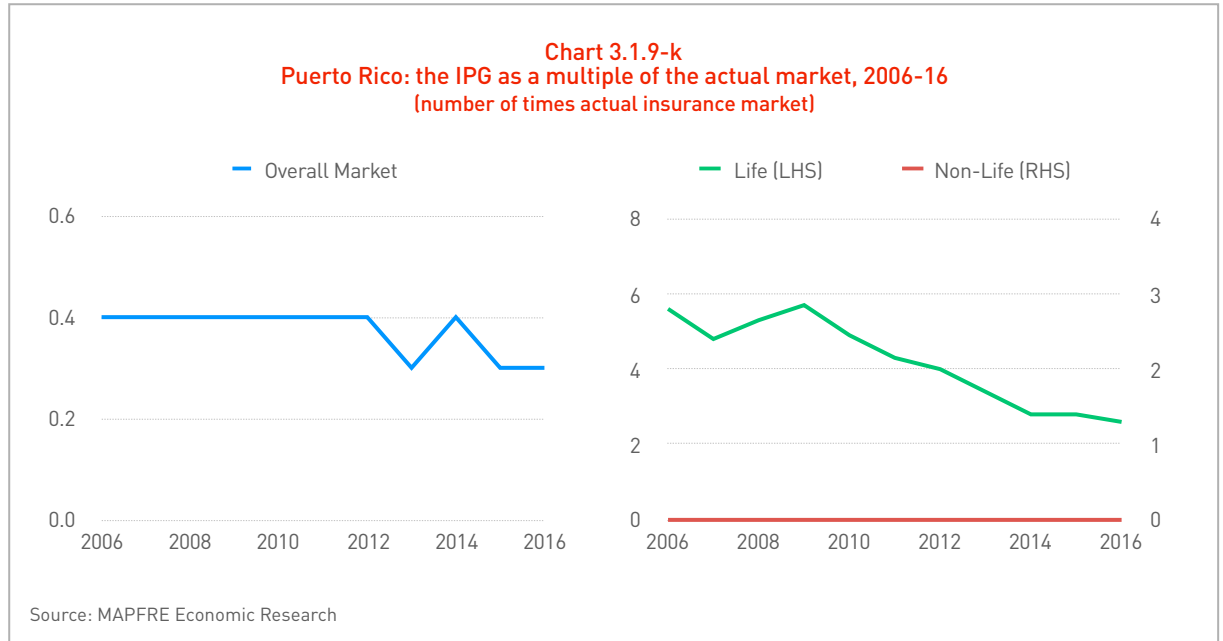
## Insurance market rankings

### Overall ranking

In 2016 there were 388 insurance companies and Health Maintenance Organizations (HMO's) operating in Puerto Rico, seven less than the previous year (mainly reinsurers). 110 of these companies were Life and Disability insurers, 217 were Property and Contingency insurers, 15 were HMO's and 46 were Reinsurers.

According to the indexes measuring market concentration (see Chart 3.1.9-n), concentration rose between 2007 and 2012 before reducing over the following three years and slightly increasing in 2016. Even so, according to the Herfindahl index, the level of industrial

**Chart 3.1.9-m**
**Puerto Rico: Market Development Index (MDI), 2005-16**
**(index 2005=100; annual change)**
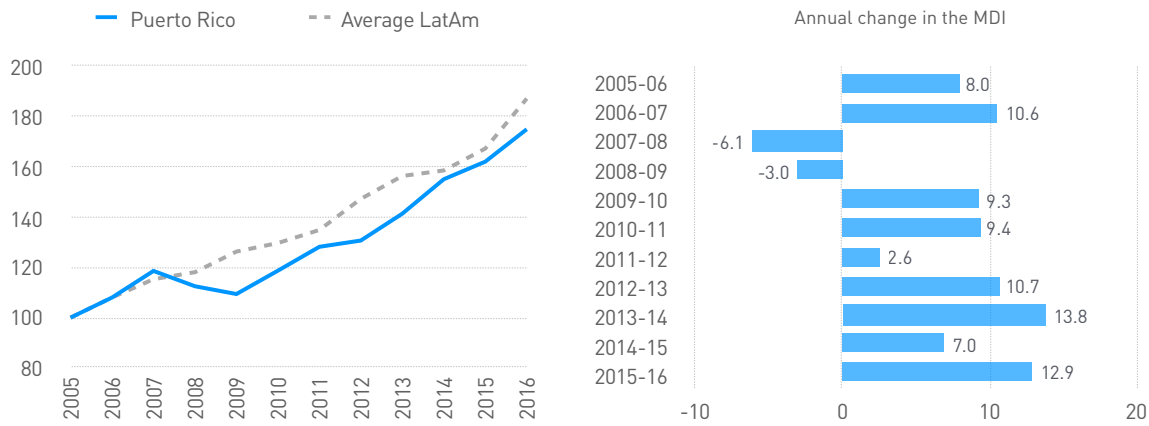


Source: MAPFRE Economic Research

concentration has remained consistently below the technical threshold for moderate concentration. However, there was a notable spike in concentration in the Life insurance segment from 2013, which fell back in 2016.

The top three positions in the overall ranking of insurance groups were held by companies with a dominant share of the market relative to other participants. Once again Triple-S led the ranking with a 22.7 percent share of total premiums. It was followed by InnovaCare (MMM y PMC) with a share of 17.8 percent and MCS in third place with a 16 percent share (see Chart 3.1.9-o).

**Chart 3.1.9-n**
**Puerto Rico: insurance industry concentration, 2006-16**
**(Herfindahl index; CR5 index, percent)**
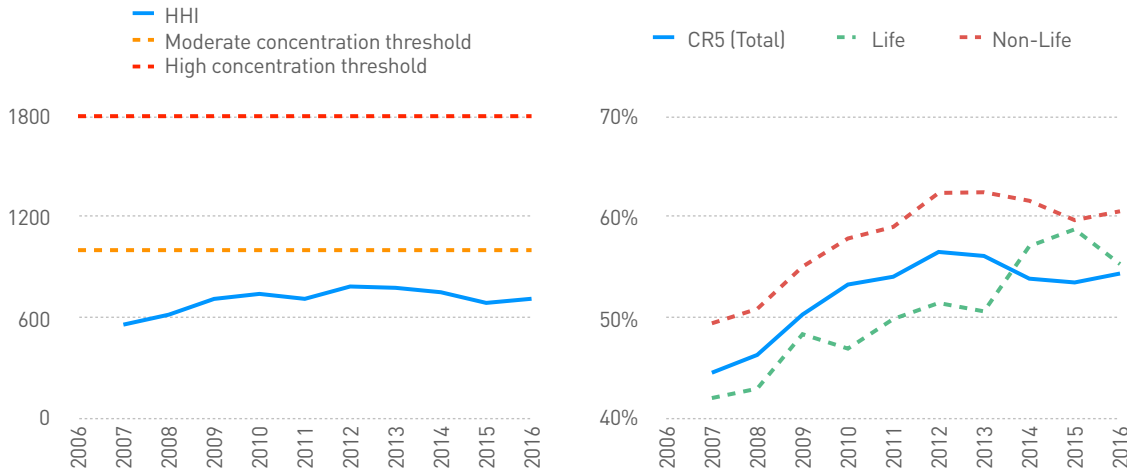


Source: MAPFRE Economic Research (based on data from Office of the Commissioner of Insurance of Puerto Rico)

**Chart 3.1.9-o**
**Puerto Rico: overall ranking, 2015-16**
**(market shares, percent)**



Source: MAPFRE Economic Research (based on data from Office of the Commissioner of Insurance of Puerto Rico)
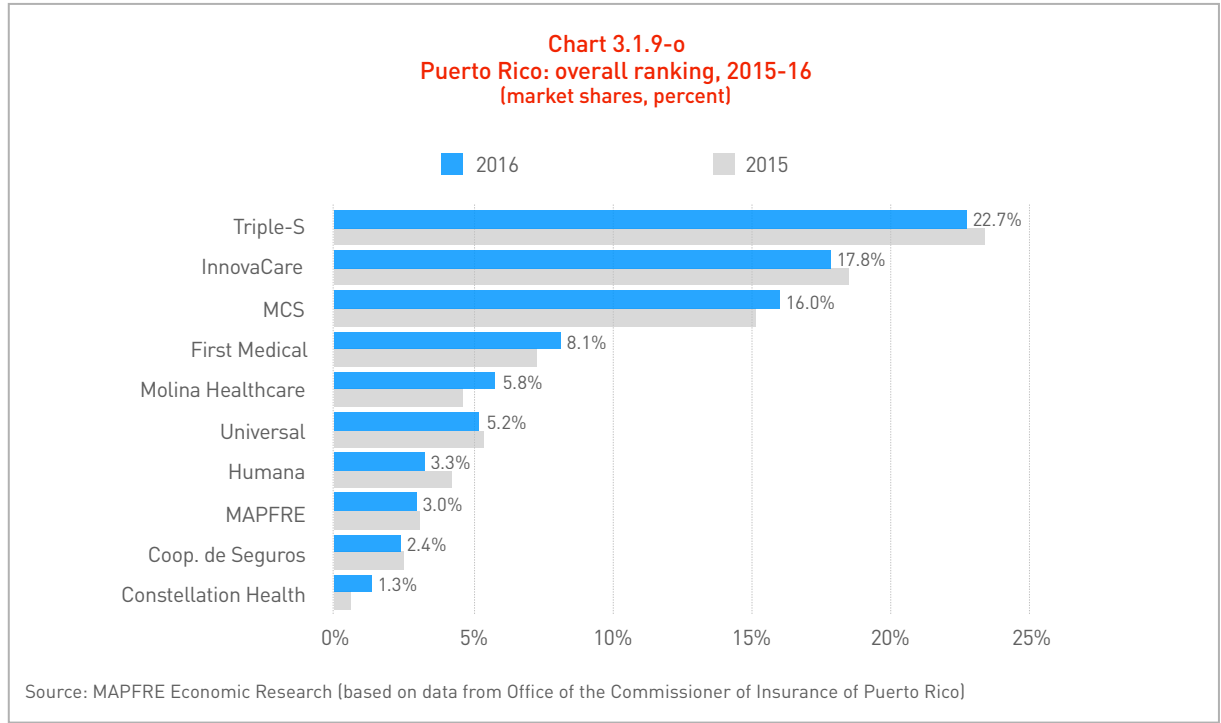
**Non-Life Ranking**

Given the significant relative weight of Health insurance in Puerto Rico, the overall and Non-Life rankings were very similar. Triple-S led the way with a 24.3 percent share of Non-Life premiums. InnovaCare (MMM y PMC) was in second place with a market share of 19.8 percent with MCS in third place on 17.8 percent (see Chart 3.1.9-p).

**Life Ranking**

The top three positions in the Life insurance market in Puerto Rico were occupied by Universal Life with a share of 26.5 percent of premiums, followed by Triple-S with an 8.2 percent market share and finally AXA with a 7.2 percent share (see Chart 3.1.9-p).

**Key regulatory aspects**

According to the information contained in the annual report of the Commissioner of Insurance of Puerto Rico, four new laws and four new regulations were approved in 2016 in relation to the insurance industry.

It is worth highlighting Law 1-2016 (which amends Sections 4010.01 and 4110.01 of "2011 Internal Income Code of Puerto Rico") which among its goals seeks to clarify the contributive treatment applicable to international insurance organizations in accordance with Law 399-2004, known as the "International Insurers and Reinsurers Law of Puerto Rico".

It is also worth noting the introduction of the following regulations:

• Number 80 - Standards regulating the operation of international insurers and reinsurers (update of chapter 61 of the Insurance Code for international companies which require authorization to operate).

• Number 83 - Rules and Procedures to Regulate the Systems of the Holding Companies of Insurers and Organizations of Health Services and Criteria for Evaluating Change of Control (derogating the previous requirements for when there is a change of control in the insurer).

• Number 98 - Credit for Reinsurance (derogating the previous regulation to adapt the arrangement of reinsurance by

**Chart 3.1.9-p
Puerto Rico: Life and Non-Life ranking, 2015-16
(market shares, percent)**

LIFE

| | 2016 | 2015 |

| | |
|---|---|
| Universal | 26.5% |
| Triple-S | 8.2% |
| AXA | 7.2% |
| Mass. Mutual Life | 7.0% |
| Lincoln National | 6.8% |
| Manulife Financial | 6.7% |
| Coop. de Seguros | 4.8% |
| Nationwide Mutual | 4.3% |
| MetLife | 3.7% |
| AEGON | 3.3% |

NON-LIFE

| | 2016 | 2015 |

| | |
|---|---|
| Triple-S | 24.3% |
| InnovaCare | 19.8% |
| MCS | 17.8% |
| First Medical | 9.0% |
| Molina Healthcare | 6.4% |
| Humana | 3.6% |
| MAPFRE | 3.2% |
| Universal | 2.8% |
| Coop. de Seguros | 2.6% |
| Constellation Health | 0.6% |

Source: MAPFRE Economic Research (based on data from Office of the Commissioner of Insurance of Puerto Rico)

domestic ceding insurers to NAIC and NRRA (Non-admitted and Reinsurance Reform Act of 2010 and to chapter 46 of the Insurance Code)).

## 3.2   South America

### 3.2.1. Colombia

#### Macroeconomic environment

The Colombian economy slowed in real terms in 2016, posting growth of 2 percent after 3.1 percent the year before. This slowdown was due to both a fall in external demand and a deceleration in domestic demand. The new fuel price cycle also affected the adjustment, as well as the reduction in the supply of energy and agricultural products due to adverse weather events such as El Niño and the shutdown of freight transport in July. The finance, industrial and construction sectors registered growth,

while the mining and energy, and agricultural sectors stagnated (see Chart 3.1.1-a).

Peso depreciation contributed to increasing the cost of debt and pushed up average inflation to 7.5 percent in 2016 (2.5 percentage points above the previous year), forcing the Central Bank to hike interest rates by around 200 basis points.

Unemployment also climbed to 9.2 percent (compared with 8.9 percent the previous year).

ECLAC sees the Colombian economy expanding by 2.7 percent in 2017, while the IMF puts the forecast four percentage points lower, at 2.3 percent.

**Chart 3.2.1-a**
**Colombia: evolution of economic growth and inflation, 2006-16**
(GDP in local currency, billions of pesos; real growth rate, percent; annual inflation rate, percent)
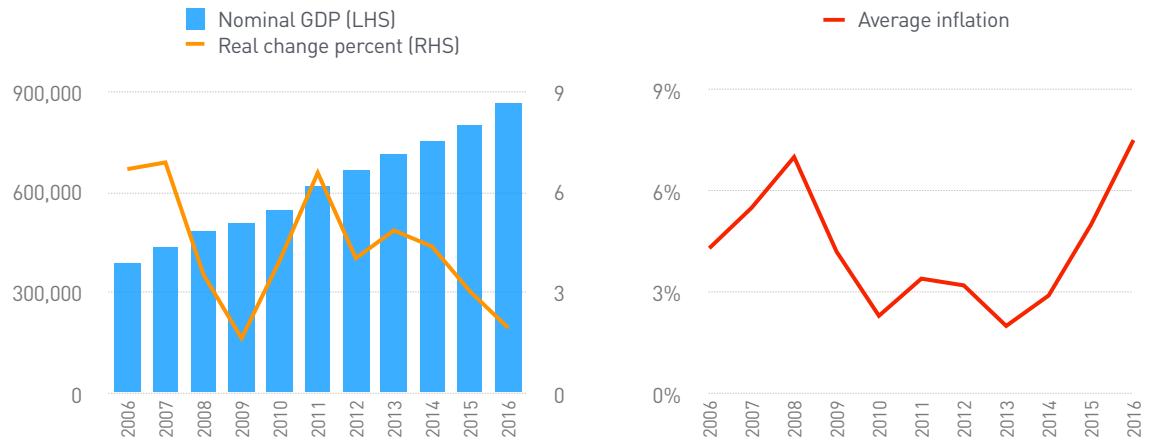
Source: MAPFRE Economic Research (based on IMF data)

## Insurance Market

### Growth

In 2016 the Colombian insurance industry banked a premium volume of 23.849423 trillion pesos (7.816 billion dollars) with a nominal increase of 10.9 percent and real increase of 3.1 percent. Premiums continued to grow in 2016, though at a slightly slower pace than the previous year, which registered a nominal increase of 13 percent and a real increase of 5.8 percent (see Chart 3.2.1-b and Table 3.2.1).

The Life segment of the market (which represents 31.3 percent of the entire industry) saw a nominal increase of 18.2 percent in 2016 (9.9 percent real), confirming the recovery



**Chart 3.2.1-b**
**Colombia: growth developments in the insurance market, 2006-16**
(premiums, billions of pesos, nominal annual growth rates, percent)
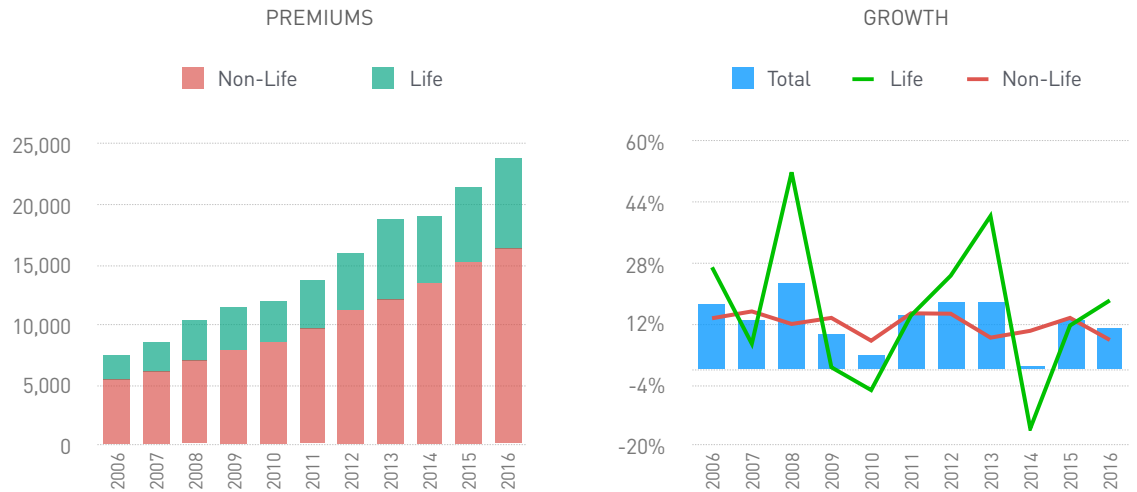
Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)

Table 3.2.1
Colombia: premium volume[1] by line of business (lob), 2016

| Line of business | Millions of pesos | Millions of dollars | Increase | |
|---|---|---|---|---|
| | | | Nominal (percent) | Real (percent) |
| **Total** | **23,849,424** | **7,816** | **10.9** | **3.1** |
| **Life** | **7,461,856** | **2,445** | **18.2** | **9.9** |
| Group and individual Life | 4,123,649 | 1,351 | 4.6 | -2.7 |
| Pension Insurance | 3,338,207 | 1,094 | 40.8 | 31.0 |
| **Non-Life** | **16,387,568** | **5,370** | **7.9** | **0.3** |
| Automobiles | 2,969,600 | 973 | 13.3 | 5.4 |
| Other Lines | 2,521,683 | 826 | -2.2 | -9.0 |
| SOAT[2] | 2,142,102 | 702 | 10.5 | 2.8 |
| Health | 1,454,877 | 477 | 11.6 | 3.8 |
| Earthquake | 735,403 | 241 | 8.7 | 1.1 |
| Fire | 768,175 | 252 | 5.7 | -1.7 |
| Third-party liability | 868,820 | 285 | 5.2 | -2.1 |
| Personal Accidents | 1,014,336 | 332 | 19.2 | 10.9 |
| Transport | 303,084 | 99 | -0.5 | -7.4 |
| Theft | 329,542 | 108 | 11.3 | 3.5 |
| Aviation | 119,479 | 39 | 6.1 | -1.3 |
| Credit | 67,061 | 22 | 7.5 | 0.0 |
| Workplace accidents | 3,093,406 | 1,014 | 6.7 | -0.7 |

Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)
1/ Written premium
2/ Mandatory Traffic Accident Insurance

registered in 2015 (12 percent) following a contraction of this segment in 2014 (-15.5 percent). The boost came from pension insurance, which climbed steeply (+40.8 percent) after more moderate growth in 2015 (+6.4 percent).

Non-Life insurance (which accounts for 68.7 percent of the market) grew by 7.9 percent in 2016 (0.3 percent real). Nearly every business line registered positive nominal growth, most notably Automobile (13.3 percent), Mandatory Traffic Accident (10.5 percent), Health (11.6 percent), Personal Accident (19.2 percent) and Theft (11.3 percent). Other (-2.2 percent) and Transport (-0.5 percent) were among the lines that experienced a decrease.

These figures confirm that the Colombian insurance industry experienced balanced growth in 2016 in terms of market composition. As Chart 3.2.1-c shows, the Life segment contributed 5.4 percentage points to an overall growth of 10.9 percent in the country's market, while the Non-Life segment contributed the remaining 5.5 percentage points.

**Balance sheet and equity**

Chart 3.2.1-d shows the evolution of the aggregate balance sheet at sector level for the insurance industry in Colombia between 2006 and 2016. Total assets for the industry reached 58.252927 trillion pesos (19.091 billion dollars). Aggregate equity stood at 11.148445 trillion pesos (3.654 billion dollars) that year, up 13.0 percent, compared with a contraction of 1.3 percent in 2015.

Meanwhile, aggregate capital levels for the Colombian insurance industry (relative to total assets) experienced a downward trend in the period analyzed, falling to 19.1 percent of assets by the end of 2016 (28.2 percent at the end of 2006).

**Investment**

Chart 3.2.1-e shows the evolution of investments in the Colombian insurance industry between 2006 and 2016, while Charts 3.2.1-f and 3.2.1-g highlight the changes in the structure of the investment portfolio during that period.

As this information indicates, in the last year of the period analyzed investments in the Colombian insurance industry reached 43.438209 trillion pesos (14.2355 billion dollars). From the point of view of their structure, investments were concentrated in fixed income (78.6 percent) and, to a lower proportion (14.5 percent), equity instruments. Significantly, property investments all but disappeared from the investment portfolio during the course of the last decade, with the weight clearly shifting to fixed income and variable annuities in the period analyzed.



Chart 3.2.1-c
Colombia: contribution to insurance market growth, 2006-16
(percentage points, ppts)

Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)
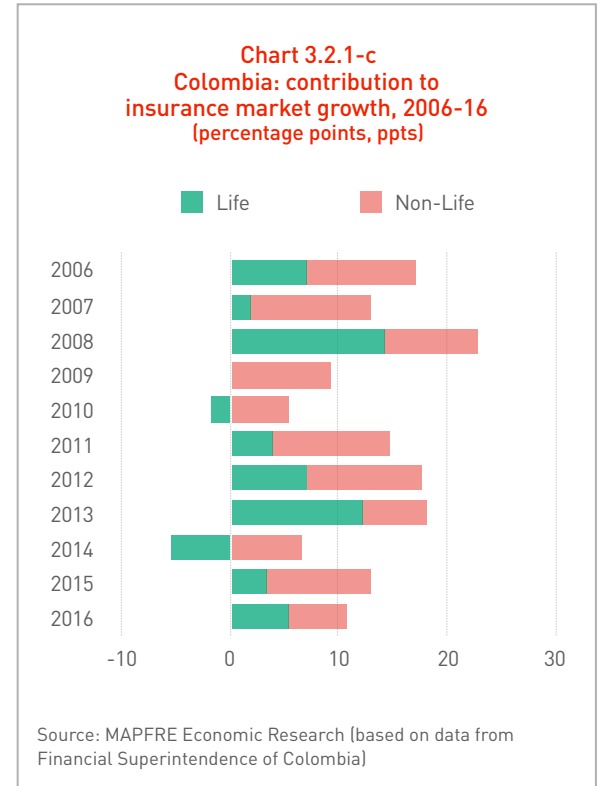
**Technical provisions**

Chart 3.2.1-h shows the evolution of technical provisions between 2006 and 2016, while Charts 3.2.1-i and 3.2.1-j highlight their relative composition during that period.
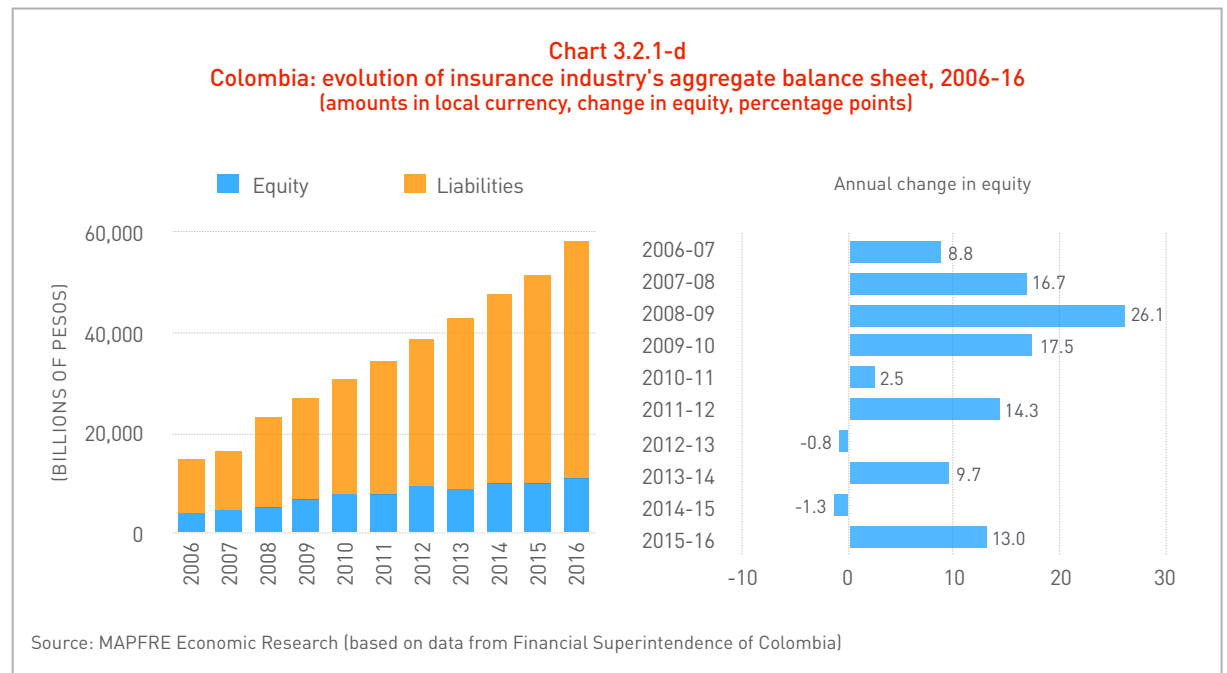


Chart 3.2.1-d
Colombia: evolution of insurance industry's aggregate balance sheet, 2006-16
(amounts in local currency, change in equity, percentage points)

Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)

Technical provisions reached 40.623613 trillion pesos (13.3127 billion dollars) in 2016. Of the total provisions, 50.6 percent corresponded to Life insurance, 14 percent to provisions for unearned premiums and unexpired risks in Non-Life insurance, 28.6 percent to provisions for outstanding claims, 3.4 percent to provisions for catastrophic risks, and the remaining 3.4 percent to other technical provisions.

A medium-term analysis reveals a sustained absolute growth in all technical provisions in the Colombian insurance industry during the period 2006-16, with the exception of a fall in the Life insurance business in 2015. However, these provisions climbed to 20.565747 trillion pesos in 2016, exceeding the 2014 figure (19.023418 trillion pesos).

The variability in technical provisions observed in recent years, and in the last two years in particular, is explained by the implementation of the IFRS standards.

**Chart 3.2.1-e**
**Colombia: Insurance market technical provisions, 2006-16**
**(billions of pesos)**
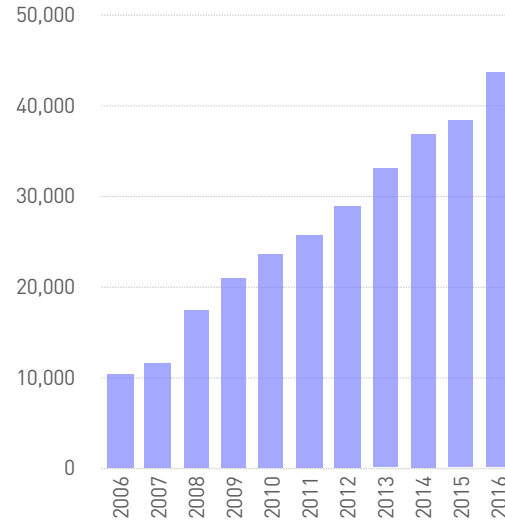


Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)

**Chart 3.2.1-f**
**Colombia: structure of investment, 2006-16**
**(%)**
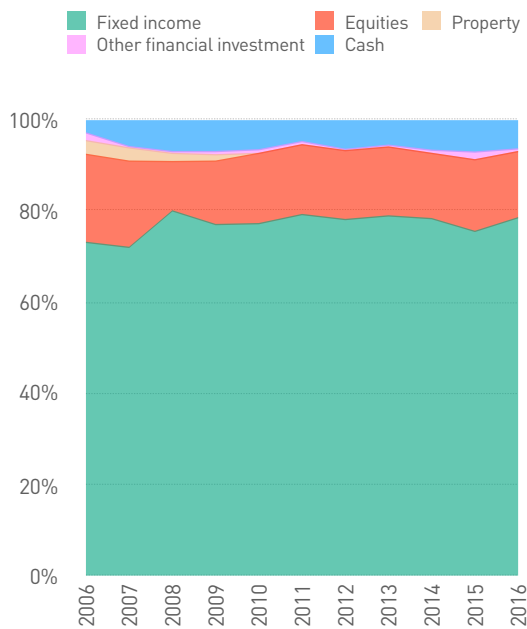
Fixed income · Equities · Property · Other financial investment · Cash



Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)

**Chart 3.2.1-g**
**Colombia: structure of investment, 2016**
**(%)**
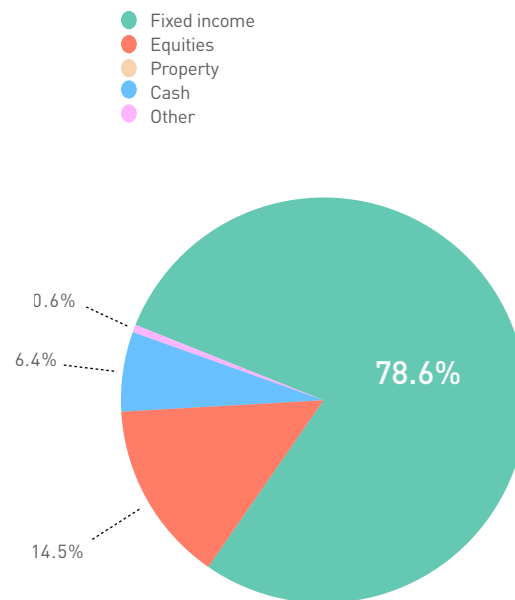
Fixed income
Equities
Property
Cash
Other



Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)

**Technical performance**

The Colombian insurance industry ended 2016 with a negative technical result. The total combined ratio increased by one percentage point to 111.8 percent due to an increase of 1.1 percentage points in the claims ratio which could not be offset by the decrease of 0.11 points in expenses. Recent years have seen an upward trend in the claims ratio and a stabilization of the combined ratio at around 110 percent (see Chart 3.2.1-k).

Meanwhile, the combined ratio of companies operating in general insurance (Non-Life) reveals an equally negative performance. In 2016 this ratio experienced a slight increase (0.4 percentage points), rising to 105.6 percent as a result of the fall of 1.7 percentage points in the expense ratio. As Chart 3.2.1-l clearly shows, there have been years when the expense ratio has even exceeded the claims ratio.



**Chart 3.2.1-h
Colombia: insurance market
technical provisions, 2006-16
(billions of pesos)**

Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)



**Chart 3.2.1-i
Colombia: structure of
technical provisions, 2006-16
(%)**

Other technical provisions
Catastrophic risk provisions
Provisions for outstanding claims
Unearned premiums and ongoing risks
Life insurance provisions

Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)



**Chart 3.2.1-j
Colombia: structure
of technical provisions, 2016
(%)**

Life
Non-Life
For claims
Catastrophic risks
Other

50.6%
28.6%
14.0%
3.4%
3.4%

Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)

Chart 3.2.1-k
Colombia: evolution of market technical performance, 2006-16
(total combined ratio, percent; annual change in combined ratio, percentage points)
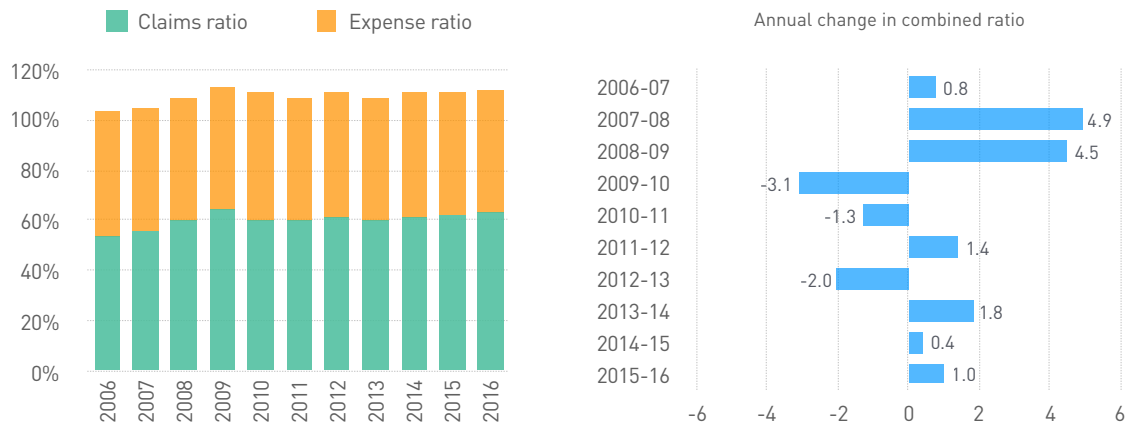
Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)



Chart 3.2.1-l
Colombia: evolution of the Non-Life market's technical performance, 2006-16
(total combined ratio, percent; annual change in combined ratio, percentage points)
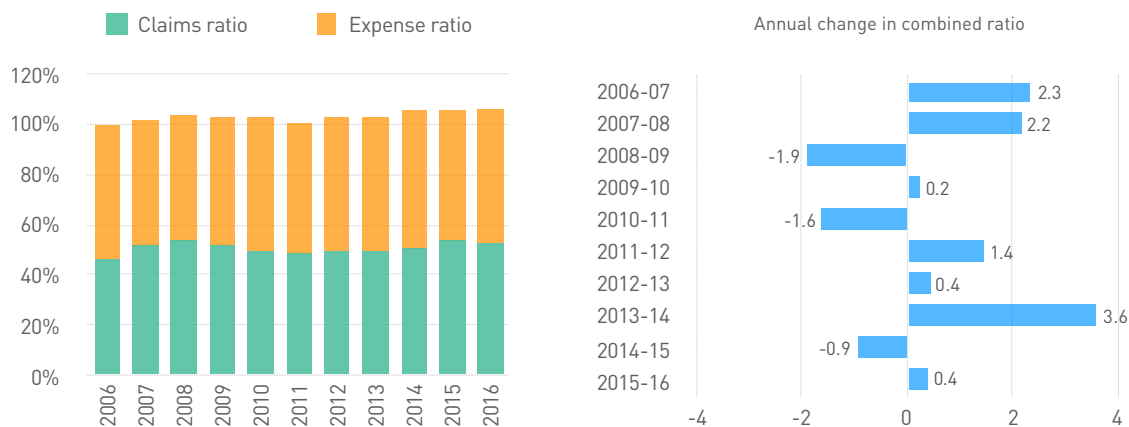
Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)

## Results and profitability

The net result of the Colombian insurance business in 2016 was 1.665738 trillion pesos (546 million dollars), registering a steep increase (56.9 percent) in relation to the previous year. This is explained by the fact that the positive financial results were able to offset the market's poor technical performance (see Chart 3.2.1-m).

Meanwhile, profitability in the Colombian insurance industry seems to have recovered its upward trend in 2016, with the return on equity (ROE) rising to 14.9 percent, more than 4 percentage points higher than the previous year. This is comparable to the return on assets (ROA), which reached 2.9 percent in 2016, up by 0.9 percentage points on the 2015 figure.

**Chart 3.2.1-m**
**Colombia: evolution of results and profitability, 2006-16**
**(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)**

Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)
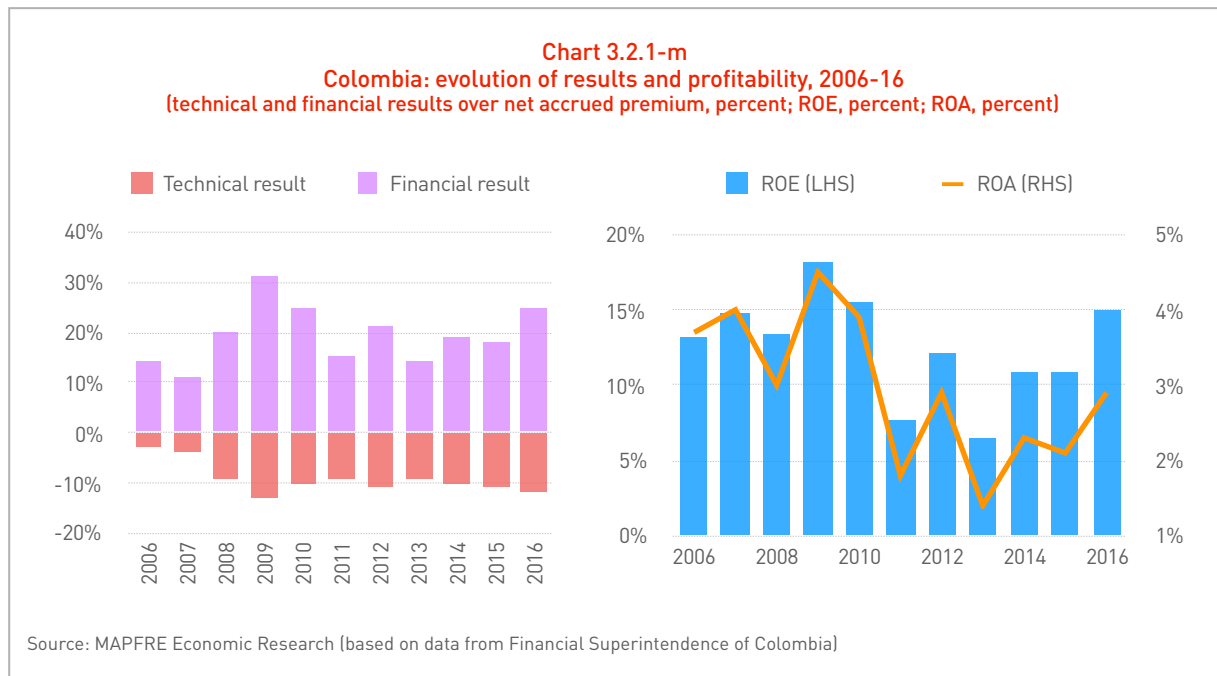
**Insurance penetration, density and depth**

Chart 3.2.1-n shows the main structural trends in the development of the Colombian insurance industry over the period 2006-16.

The penetration index (premiums/GDP) reached 2.8 percent in 2016, up 0.8 percentage points on the 2006 figure. Penetration of the Colombian market has grown steadily since 2006, in line with the average for the Latin American insurance market as a whole, although it remains slightly below the absolute average values for the region.

Insurance density in Colombia (premiums per capita) reached 490,220 pesos (160.5 dollars) in 2016, representing an increase of 10 percent relative to the previous year's level (445,979 pesos). Like the penetration index, density in Colombia (measured in local currency) climbed steadily over the period 2006-16. However, when measured in dollars it shows a decline from 2013 as a result of the devaluation of the Colombian peso in relation to the U.S. currency.

With regard to the depth of the Colombian market (Life insurance premiums versus total premiums), this reached 31.3 percent in 2016, up 2.6 percentage points on the 2006 level and with

a slight upward trend throughout the period analyzed, though consistently below the absolute values for the average across Latin American countries.

Chart 3.2.1-o shows the performance of the Colombian insurance market based on a dispersion analysis which takes account of the overall effect of the penetration and depth levels.

This aggregate analysis illustrates a balanced upward trend over the period 2006-16, with the growth of both penetration (quantitative) and depth (qualitative) in the Colombian market. Nevertheless, this process is marked by an enormous variability in the depth levels, with contractions between 2008 and 2010 and, to a lesser extent, between 2012 and 2014.

**Estimate of the Insurance Protection Gap**

Chart 3.2.1-p provides an estimate of the IPG for the Colombian insurance market between 2006 and 2016. As indicated by this analysis, the insurance gap reached 44,683 billion pesos in 2016, representing 1.9 times the actual insurance market in Colombia at the end of the year.

**Chart 3.2.1-n**
**Colombia: evolution of penetration, density and depth, 2006-16**
(premiums/GDP, percent; premiums per capita, pesos and dollars; Life insurance premiums / total premiums, percent, index 2006=100)

PENETRATION

INDEX (2006=100)

DENSITY

INDEX (2006=100)

DEPTH

INDEX (2006=100)
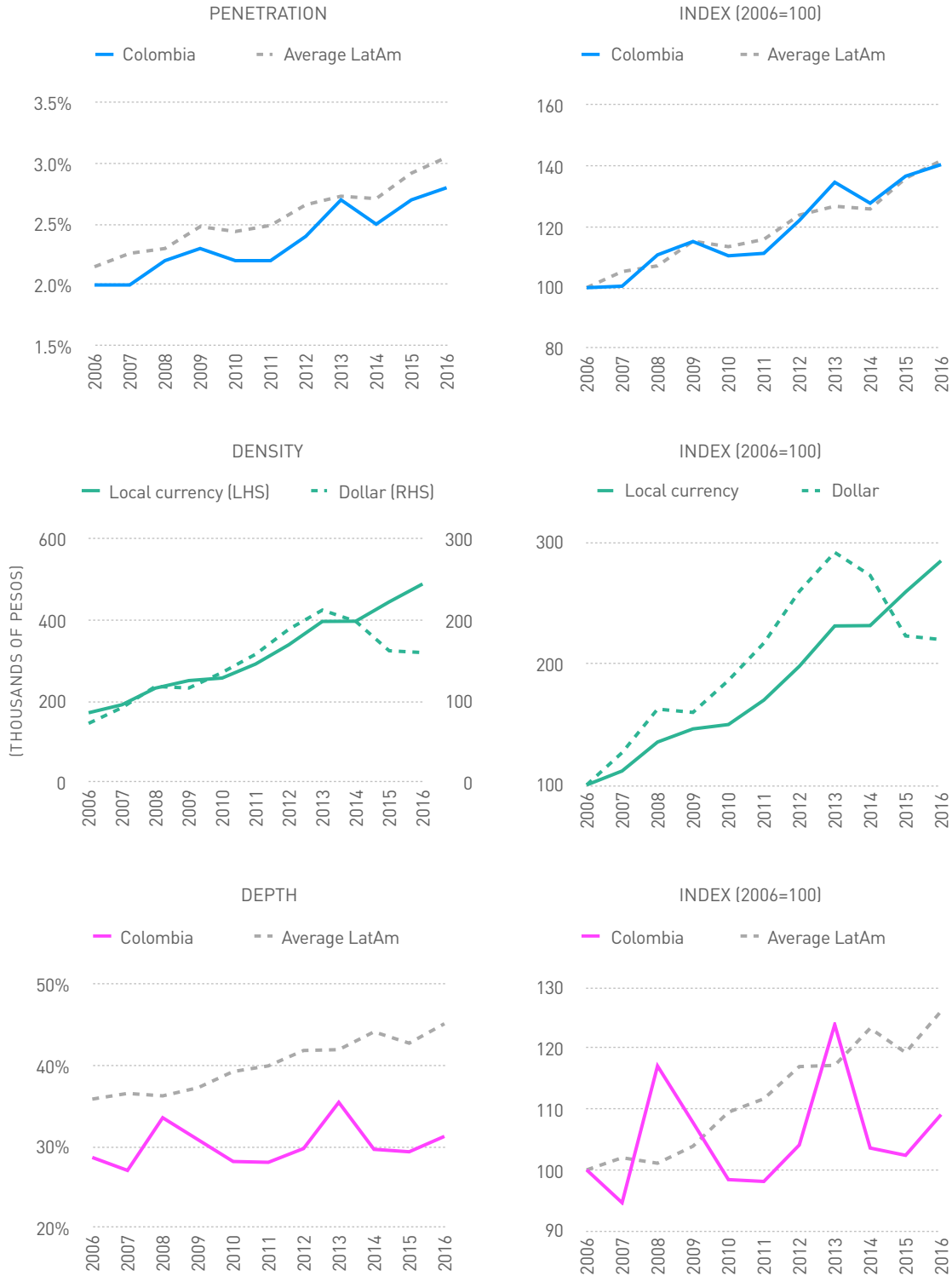
Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)

**Chart 3.2.1-o**
**Colombia: evolution of insurance market, 2006-16**
**(penetration vs depth)**
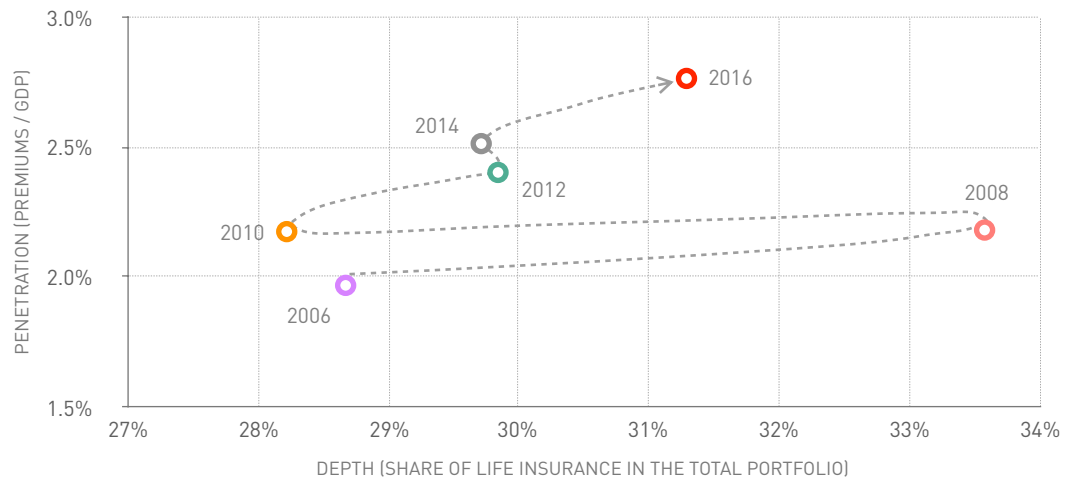


Source: MAPFRE Economic Research

The structure and evolution of the IPG over the period analyzed reflects the contribution from Life insurance. At the end of 2016, 70.1 percent of the IPG related to Life insurance (31.316 trillion pesos), which is 1.5 percentage points above the share for this segment in 2006. The remaining 29.9 percent of the insurance gap corresponds to Non-Life insurance (13.367 trillion pesos).

Accordingly, the potential insurance market in Colombia at the end of 2016 (sum of actual market and IPG) was estimated at 68.532 trillion pesos, representing 2.9 times the total insurance market that year.

Chart 3.2.1-q shows an estimate of the IPG as a multiple of the actual insurance market in Colombia. The insurance gap multiple has declined continually over the period 2006-16, falling from 3.2 to 1.9 times the actual market. Similarly, the Life insurance multiple fell from 7.8 to 4.2 and the Non-Life multiple from 1.4 to 0.8.

Lastly, Chart 3.2.1-r provides a summary of the assessment regarding the capacity of the Colombian insurance market to close the insurance gap based on a comparison of growth rates over the last ten years in relation to the growth rates that would be required to close the IPG established in 2016 over the next ten years.

The Colombian insurance market registered an average annual growth of 12.2 percent, with an annual growth of 13.2 percent in Life insurance and an average annual growth of 11.8 percent in the Non-Life insurance segment.

On the basis of this analysis, if the same rate of growth seen in the last ten years were to be sustained over the next ten years, the growth rate of the Colombian insurance market would only be sufficient to close the insurance gap in the Non-Life segment. For Life insurance the rate would fall short by 4.8 percentage points, a slight improvement on the measurement taken in 2015.

**Market Development Index (MDI)**

Chart 3.2.1-s provides an estimate of the Market Development Index (MDI) for the Colombian insurance industry, which in general has performed positively over the period analyzed. This trend is in line with the average registered by all Latin American markets, but with significant fluctuations in certain years (2007-08

**Chart 3.2.1-p**
**Colombia: Insurance Protection Gap and potential market, 2006-16**
(billions of pesos)
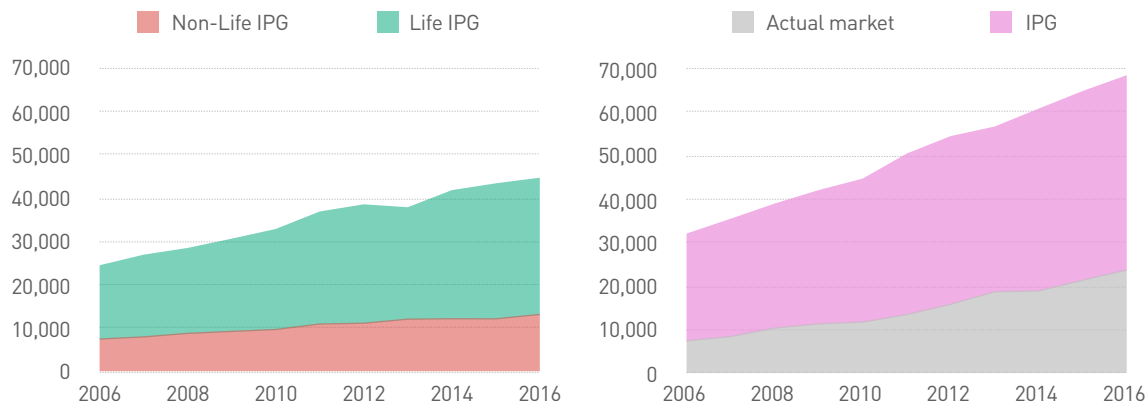


Source: MAPFRE Economic Research

**Chart 3.2.1-q**
**Colombia: the IPG as a multiple of the actual market, 2006-16**
(number of times actual insurance market)
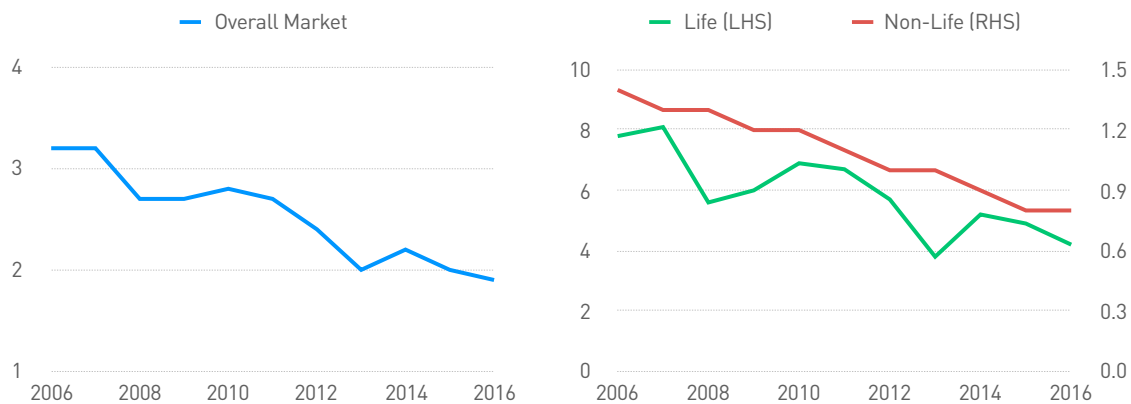


Source: MAPFRE Economic Research

and 2013-14) as a result of atypical behavior in the growth of the Life insurance segment in Colombia, explained by the variability in the depth index.

### Insurance market rankings

#### Overall ranking

In 2016, 26 general insurance companies and 19 Life insurance companies were operating in Colombia. In general, the Colombian insurance market continues to show low levels of concentration.

The Herfindahl and CR5 indexes shown in Chart 3.2.1-t reveal a steady trend. Despite a slight increase in 2016, the Herfindahl index (IHH=549) is still well below the moderate concentration threshold. That year also saw a slight increase in the level of concentration of the five largest insurance companies (CR5), which account for 41.4 percent of all premiums (38.2 percent in

Chart 3.2.1-r
Colombia: capacity to close IPG, 2006-16
(average annual growth rate, percent; sufficiency or insufficiency, percentage points)

Source: MAPFRE Economic Research
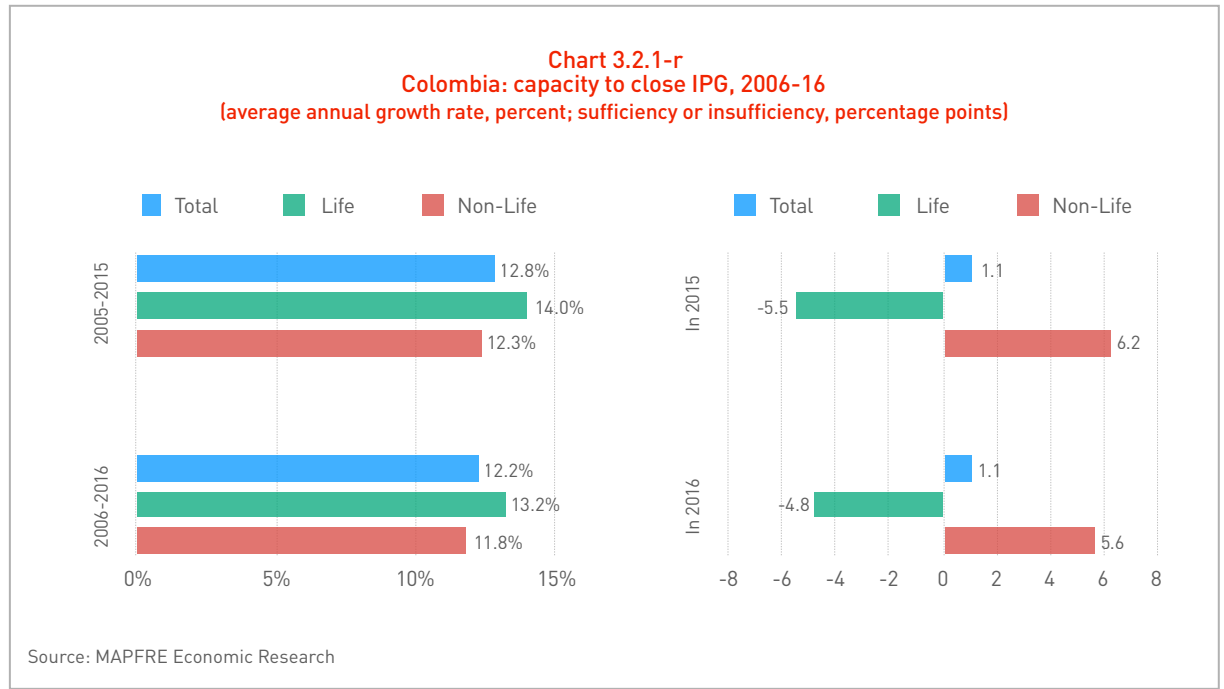
2015), with a higher concentration in the Life segment (75.3 percent) than the Non-Life segment (37.3 percent). These percentages are higher when the groups in the ranking are considered rather than individual entities, although they do not represent a significant increase in the levels of concentration.

In the overall ranking of insurance groups, Suramericana held on to its first place in 2016 with 24.5 percent of all premiums, slightly below its share in 2015 (25.2 percent). It is important to note that in 2015 the Sura Group announced that it had reached an agreement with the British RSA Group to acquire the latter's subsidiary in the country, and the transaction was completed in 2016. Alfa (13.2 percent), Bolivar (7.6 percent)



Chart 3.2.1-s
Colombia: Market Development Index (MDI), 2005-16
(index 2005=100; annual change)

Source: MAPFRE Economic Research
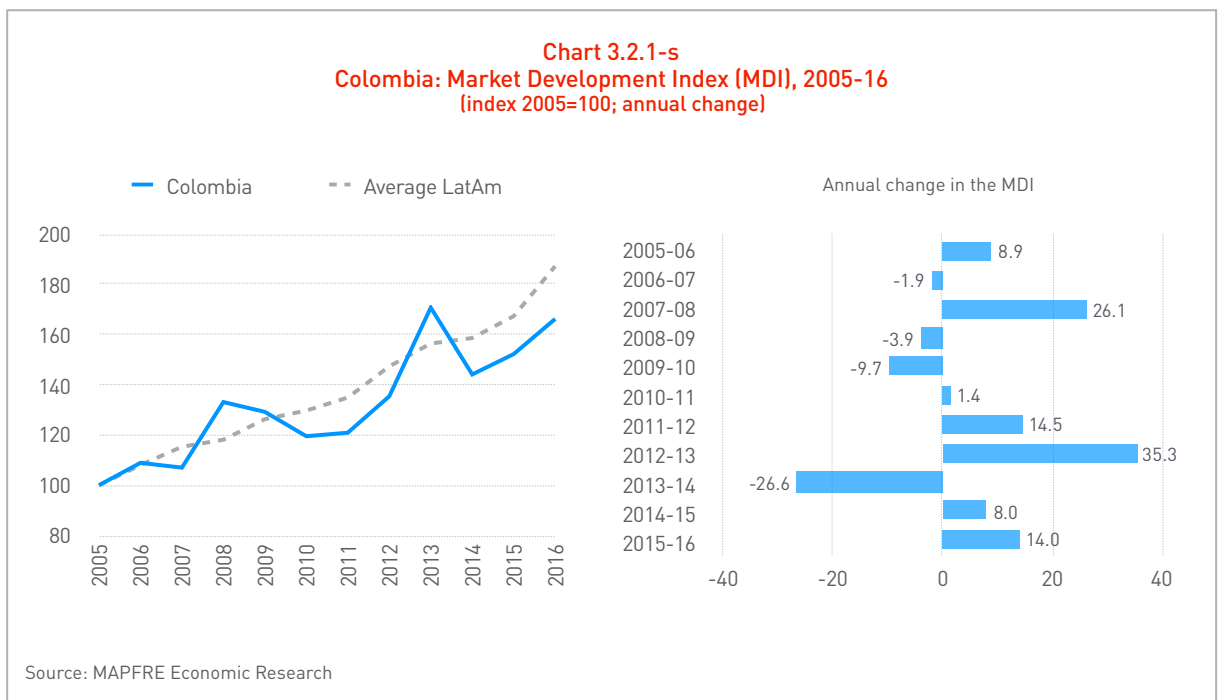
Chart 3.2.1-t
Colombia: insurance industry concentration, 2006-16
(Herfindahl index; CR5 index, percent)
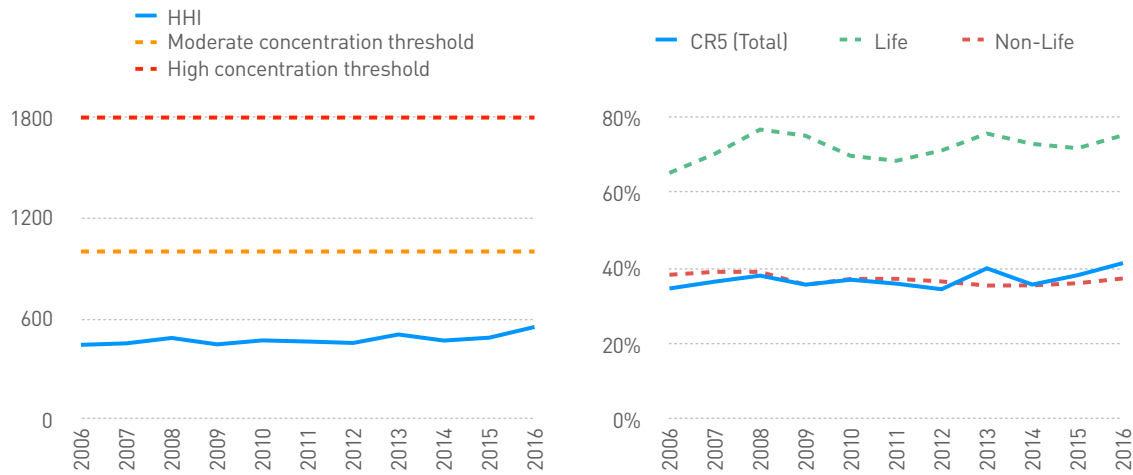
Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)

and the state-owned companies Positiva and Previsora (7.0 percent) occupy the next slots in the overall ranking, while MAPFRE, AXA Colpatria, Allianz, Seguros del Estado and Liberty have a market share of around 5 percent. They are followed at some distance by Equidad, which occupies the tenth slot with a share of 2.6 percent (see Chart 3.2.1-u).

**Non-Life Ranking**

In the Non-Life insurance segment, Suramericana continued to top the ranking in 2016 with 25.4 percent of all premiums. The groups that make up this ranking are the same as in 2015 but with changes in position. Bolivar and Liberty climbed to higher slots while Seguros del Estado, Allianz and MAPFRE lost ground. The remaining groups occupy the same position as the previous year (see Chart 3.2.1-v).

**Life Ranking**

Lastly, in the Life ranking for 2016 Vida Alfa held on to the top slot, after overtaking Suramericana

in 2015, with 37.6 percent of premiums (up 8.2 percentage points on the previous year). The most representative business lines in this company's portfolio (life annuities and disability and survivor pension insurance) experienced the highest growth in the year analyzed. Suramericana (22.5 percent) is followed by Bolivar (9.3 percent), MAPFRE (4.1 percent), BBVA (3.2 percent) and Global (2.8 percent), all in the same positions as 2015. MetLife (2.4 percent) climbed from the tenth to the seventh slot, Equidad jumped one slot up to eighth position, Liberty fell two slots to the last position, and Allianz made it to ninth position, occupied by Cardif in 2015 (see Chart 3.2.1-v).

**Key regulatory aspects**

Decree 2103 of December 22 amended Decrees 2555 of 2010 and 1068 of 2015 related to the system for the investment of technical provisions by insurers companies and capitalization companies.

**Chart 3.2.1-u**
**Colombia: overall ranking, 2015-16**
**(market shares, percent)**
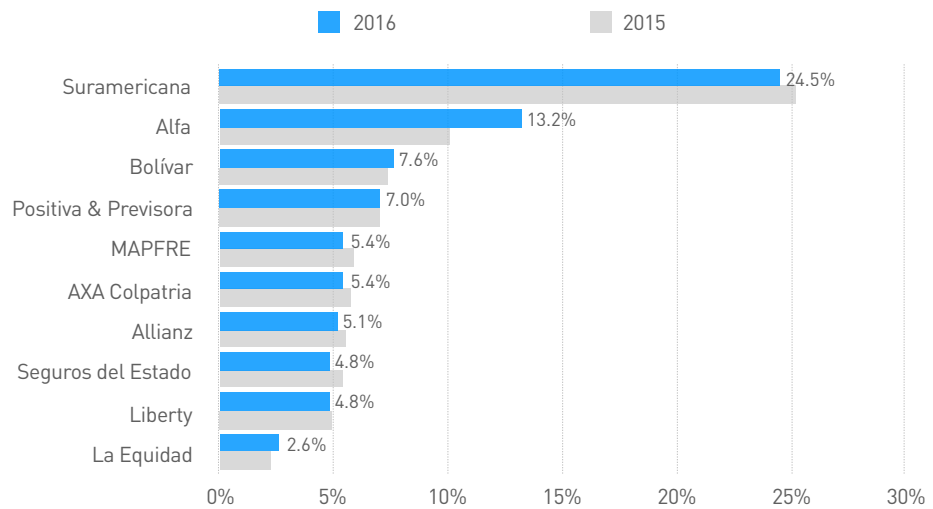


Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)

**Chart 3.2.1-v**
**Colombia: Life and Non-Life ranking, 2015-16**
**(market shares, percent)**
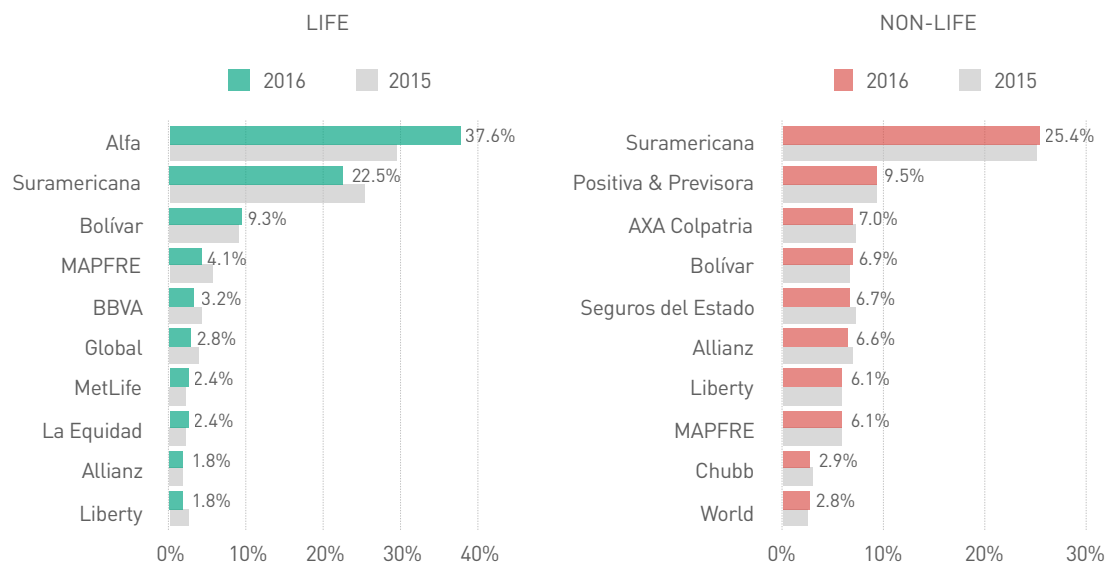
LIFE

NON-LIFE



Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)

Likewise, Decree 2953 of 2010 amended the system for the investment of technical provisions by insurers and capitalization companies. The amendment consisted in implementing an investment system that determines the admissible assets for investment, the limits in each case, and all the other requirements and conditions that need to be met before making any investments.

As stated in the Recitals of Decree 2103, the international experience in the administration of the risks inherent to the investment of technical provisions suggests that the admissible assets may be reorganized in line with their risk characteristics, and that there are potential improvements to be gained for these provisions by allowing limited investment in assets not covered in the system. Therefore, the aim of the new regulation is to make adjustments to the existing investment system to ensure that the funds supporting these technical provisions continue to be invested in safe, profitable and liquid assets.

With respect to new bills, the most important one presented to Congress concerns the regulation of financial conglomerates as a means of monitoring the stability of the financial system. The aim of the intervention instruments is to establish general rules related to the sufficiency of capital for financial conglomerates, an adequate management framework for the financial risks they accept, and corporate governance standards.

## 3.2.2. Venezuela

### Macroeconomic environment

In 2016 the Venezuelan economy shrank by 18.2 percent in real terms (compared with 6.2 percent the previous year), with a fall in public and private consumption, in investment, and in nearly every major economic sector caused by external factors (drop in oil prices) as well as internal instability and uncertainty (see Chart 3.2.2-a).

The fall in oil prices had an enormous negative impact on Venezuelan exports since 96.7 percent of exports are oil-related. Consequently, the current account registered a deficit of -2.4 percent of GDP in 2016 (-7.8 percent the previous year), in spite of a considerable reduction in the import of goods. This contrasts with the surpluses achieved in earlier periods.

Average inflation reached a record high of 254.9 percent and unemployment climbed 14.8 percentage points to a rate of 21.2 percent. The IMF estimates that the Venezuelan economy could contract by 25.3 percent in 2017.

### Insurance Market

**Growth**

In 2016 premiums in the Venezuelan insurance market experienced a nominal increase of 165 percent in relation to the previous year, reaching 872.901 billion bolivars, but the effect of inflation converts this into a real decrease of 25.5 percent. Non-Life insurance, which accounts for 99 percent of all premiums, saw an acceleration of its downward trend, experiencing a real decrease of 25.4 percent.

Meanwhile, Life insurance fell by a real 30.0 percent, compared with -36.7 percent in 2015 (see Chart 3.2.2-b and Table 3.2.2.) In the absence of more detailed statistical information on the behavior of the insurance industry in 2016, it has not been possible to analyze the behavior of the different lines of insurance business.

Due to the structural weakness of the Venezuelan economy, which is preventing the development of the Life insurance segment, of the nominal growth of 164.5 percent registered by the market in 2016, 162.7 percentage points were contributed by the Non-Life insurance segment, with Life insurance therefore accounting for only 1.8 percentage points (see Chart 3.2.2-c).

Chart 3.2.2-a
Venezuela: evolution of economic growth and inflation, 2006-16
(GDP in local currency, billions of bolivars; real growth rate, percent; annual inflation rate, percent)
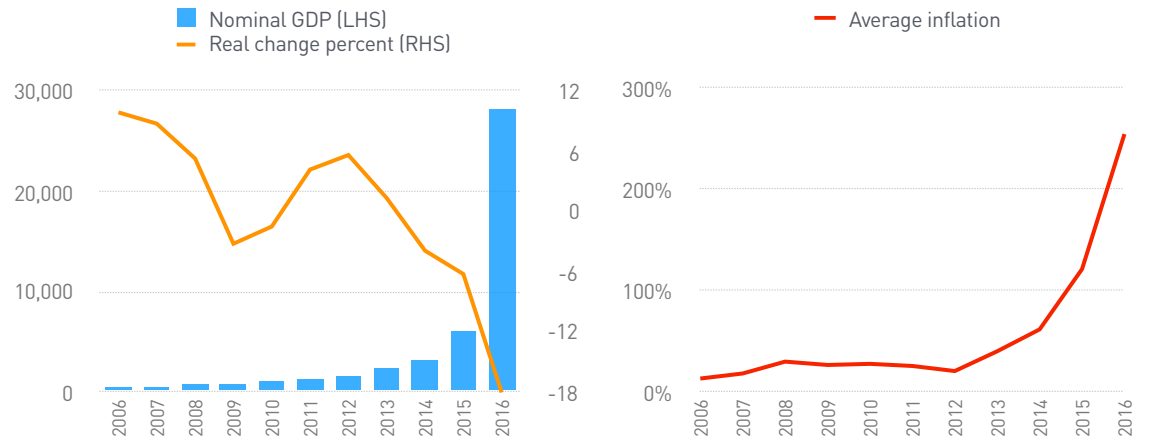


Source: MAPFRE Economic Research (based on IMF data)

Chart 3.2.2-b
Venezuela: growth developments in the insurance market, 2006-16
(premiums, billions of bolivars; nominal annual growth rates, percent)
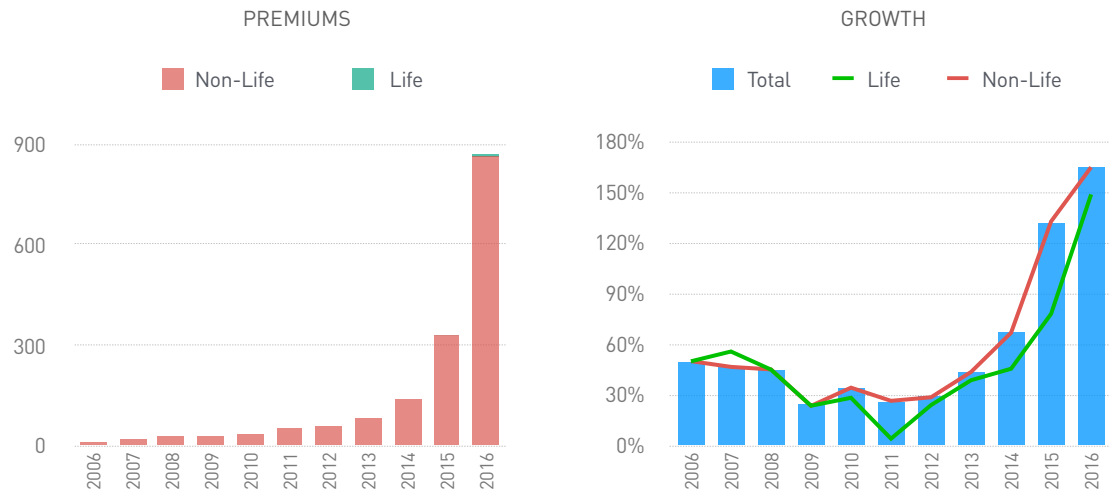


Source: MAPFRE Economic Research (based on data from Superintendence of Insurance Activity)

**Table 3.2.2**
**Venezuela: premium volume[1] by line of business (lob), 2016**

| Line of business | Millions of bolivars | Millions of dollars | Increase Nominal (percent) | Real (percent) |
|---|---|---|---|---|
| Total | 872,901 | 2,031 | 164.5 | -25.5 |
| Life | 10,081 | 23 | 148.6 | -30.0 |
| Non-Life | 862,820 | 2,007 | 164.7 | -25.4 |

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance Activity)
1/ Net collected premiums. Direct insurance.

**Balance sheet and equity**

Chart 3.2.2-d shows the aggregate balance sheet for the Venezuelan insurance market over the period 2005-2015, based on the latest data available. In that last year, the total assets for the industry reached 583.874 billion bolivars, while equity amounted to 371.973 billion bolivars, registering an increase of 391.7 percentage points in relation to 2014, largely motivated by the effects of inflation in the Venezuelan economy.

Aggregate capital levels for the Venezuelan insurance industry (relative to total assets) were around 34 percent during the period 2005-2012, thereafter increasing to 63.7 percent of total assets in 2015. The vast majority of the shareholders' equity recorded corresponds to unrealized gains on property investments and other financial instruments, with an average inflation rate of 121.7 percent in 2015. Since this rose to 254.9 percent in 2016, the same phenomenon is likely to be repeated.

**Investment**

For information purposes, Chart 3.2.2-e shows the evolution of investments in the Venezuelan insurance market over the period 2005-12 (latest information available), which in that last year reached 478.371 billion bolivars. Due to a lack of information, it has not been possible to undertake a more detailed analysis of the country's insurance industry and provide a breakdown of the portfolio at sector level.

**Chart 3.2.2-c**
**Venezuela: contribution to insurance market growth, 2006-16 (percentage points, ppts)**
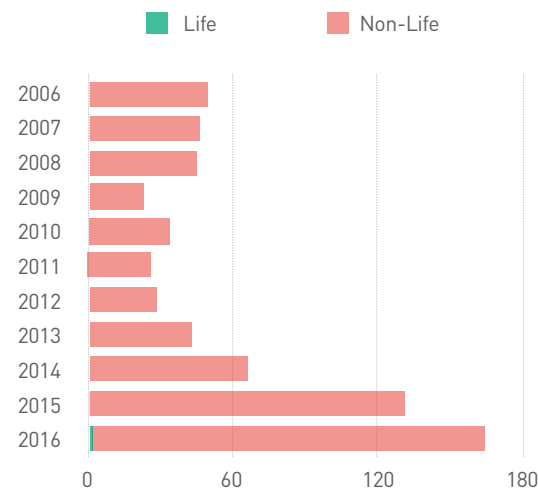


Source: MAPFRE Economic Research (based on data from Superintendence of Insurance Activity)

**Technical provisions**

Chart 3.2.2-f shows the the evolution of technical provisions, net of reinsurance, for the Venezuelan insurance industry over the period 2005-15, while Charts 3.2.2-g and 3.2.2-h highlight their relative composition.

In 2015 (the last year for which data are available) technical provisions amounted to 132.590 billion bolivars. Barely 0.5 percent of the total provisions related to Life insurance, 69.1 percent to unearned premiums and unexpired risks in Non-Life insurance, 28.6 percent to the

**Chart 3.2.2-d**
**Venezuela: evolution of insurance industry's aggregate balance sheet, 2006-16**
**(amounts in local currency, change in equity, percentage points)**

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance Activity)
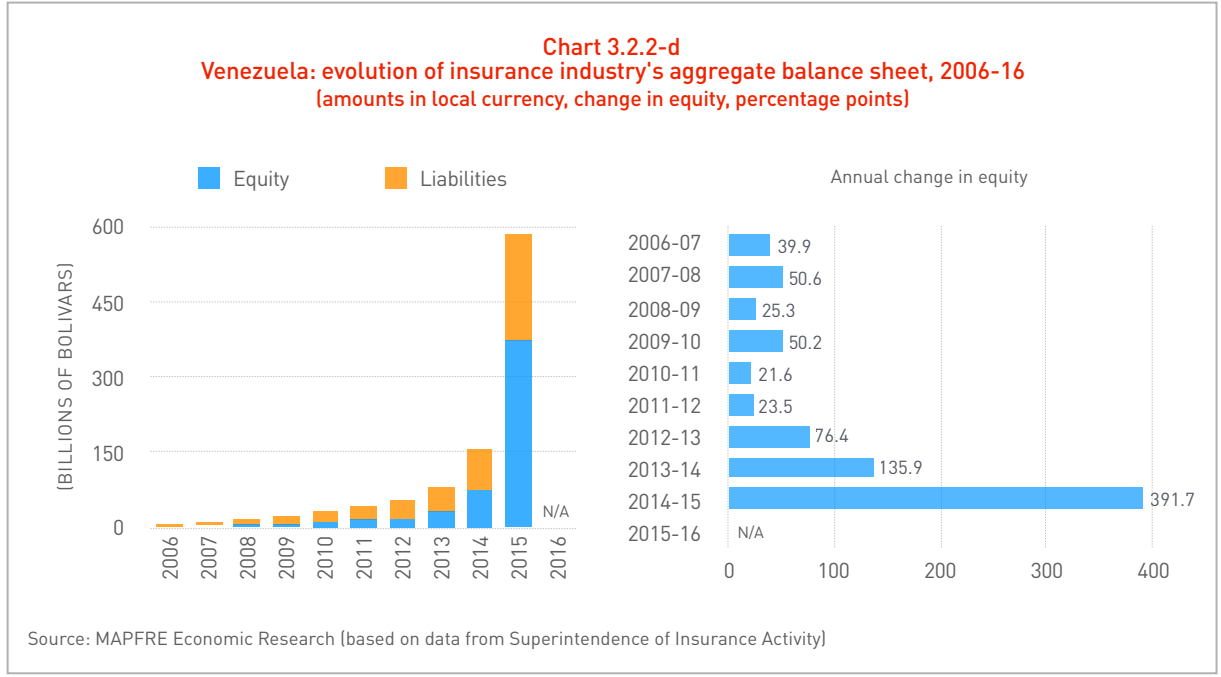
provision for outstanding claims, 1 percent to catastrophic risks, and the remaining 0.7 percent to other technical provisions.

A medium-term analysis (shown in Chart 3.2.2-g above) reveals the low relative weight of Life insurance provisions, which fell from 1.4 percent

of total provisions in 2005 to 0.5 percent in 2015. This is explained by the aforementioned structural weakness of the Venezuelan market for the development of this segment based on the country's current economic and financial conditions. By contrast, the period 2005-15 saw a gradual increase in the weight of the provision



**Chart 3.2.2-e**
**Venezuela: Insurance market technical provisions, 2006-16**
**(billions of bolivars)**

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance Activity)



**Chart 3.2.2-f**
**Venezuela: insurance market technical provisions, 2006-16**
**(billions of bolivars)**

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance Activity)
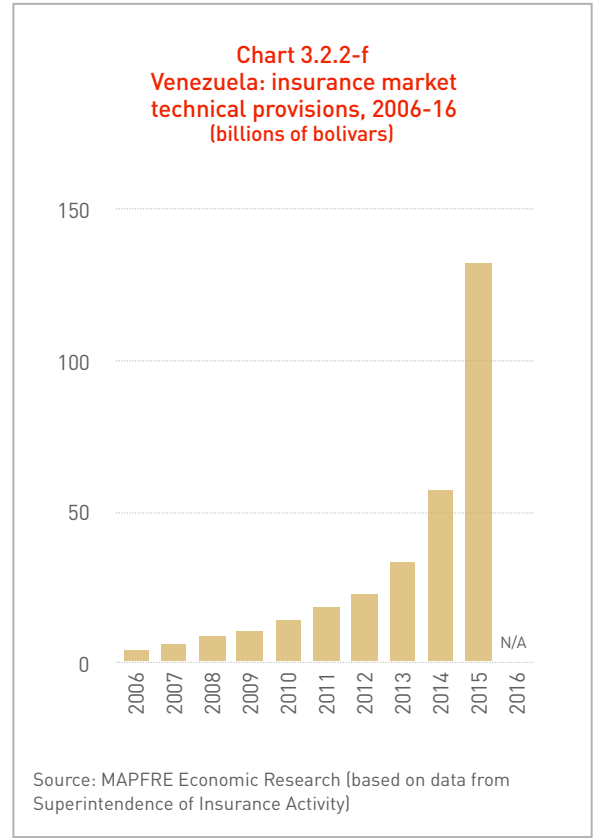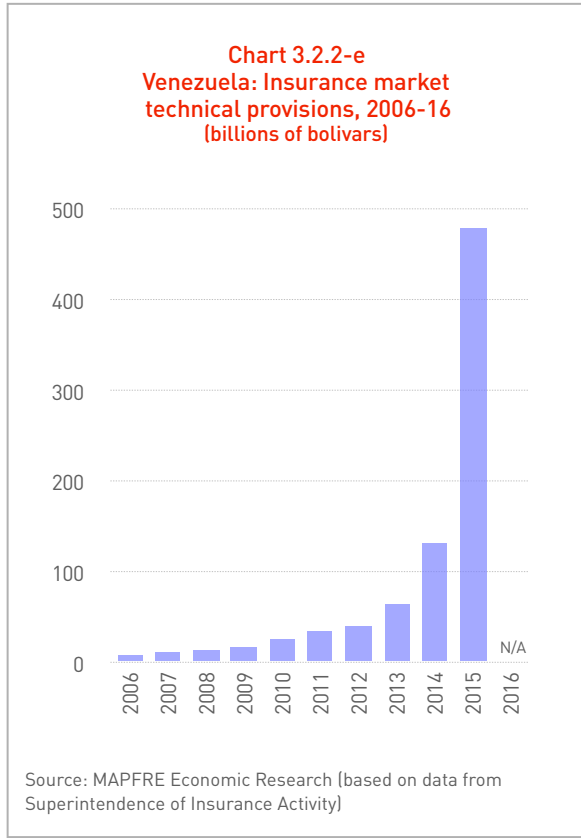
**Chart 3.2.2-g**
**Venezuela: structure of technical provisions, 2006-2015 (%)**
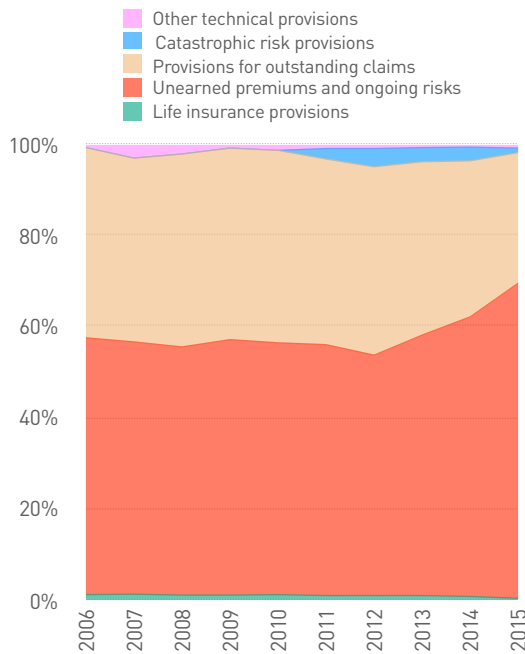
Source: MAPFRE Economic Research (based on data from Superintendence of Insurance Activity)



**Chart 3.2.2-h**
**Venezuela: structure of technical provisions, 2015 (%)**
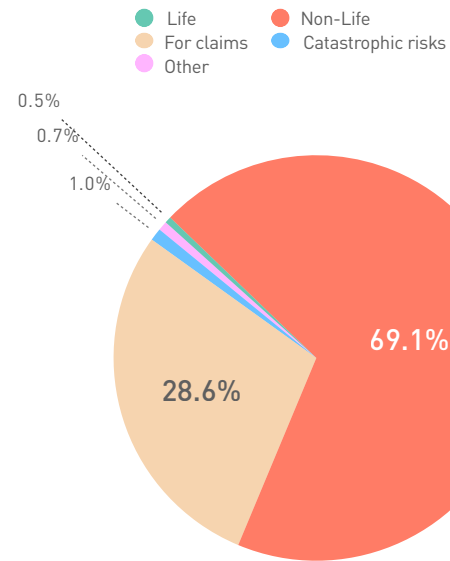
Source: MAPFRE Economic Research (based on data from Superintendence of Insurance Activity)

for unearned premiums and unexpired risks, which climbed from 58 percent of the total provisions in 2005 to 69 percent in 2015. Meanwhile, the provision for outstanding claims fell from average values of around 40 percent over the period to 28.6 percent in 2015.

**Technical performance**

Based on the latest information available, the Venezuelan insurance industry registered a negative technical result in 2015 with a combined ratio of 105.3 percent, representing an impairment of 4.2 percentage points in relation to 2014, and with increases in both the claims and expense ratios (see Chart 3.2.2-i).

**Results and profitability**

The Venezuelan insurance industry posted a consolidated result of 38.108 billion bolivars (89 million dollars) for 2016, up 318 percent on the

previous year, measured in local currency (bolivars).

However, due to the absence of data on the aggregate balance sheet of the insurance industry for 2016, it has not been possible to analyze the profitability indicators for that year. As the analysis in Chart 3.2.2-j shows, the year 2012 marked the beginning of a clear downward trend in the profitability of the insurance industry in Venezuela, reaching the lowest levels of the ten-year period in 2015.

**Insurance penetration, density and depth**

Chart 3.2.2-k shows the main structural trends in the development of the Venezuelan insurance industry over the period 2006-16. The penetration index (premiums/GDP) in 2016 was 3.1 percent, 2.4 percentage points below the 2015 index. Following a period of contraction between 2009 and 2011, the indicator shows an upward trend, coinciding with the increase in

Chart 3.2.2-i
Venezuela: evolution of market technical performance, 2006-16
(total combined ratio, percent; annual change in combined ratio, percentage points)

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance Activity)



Chart 3.2.2-j
Venezuela: evolution of results and profitability, 2006-16
(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance Activity)
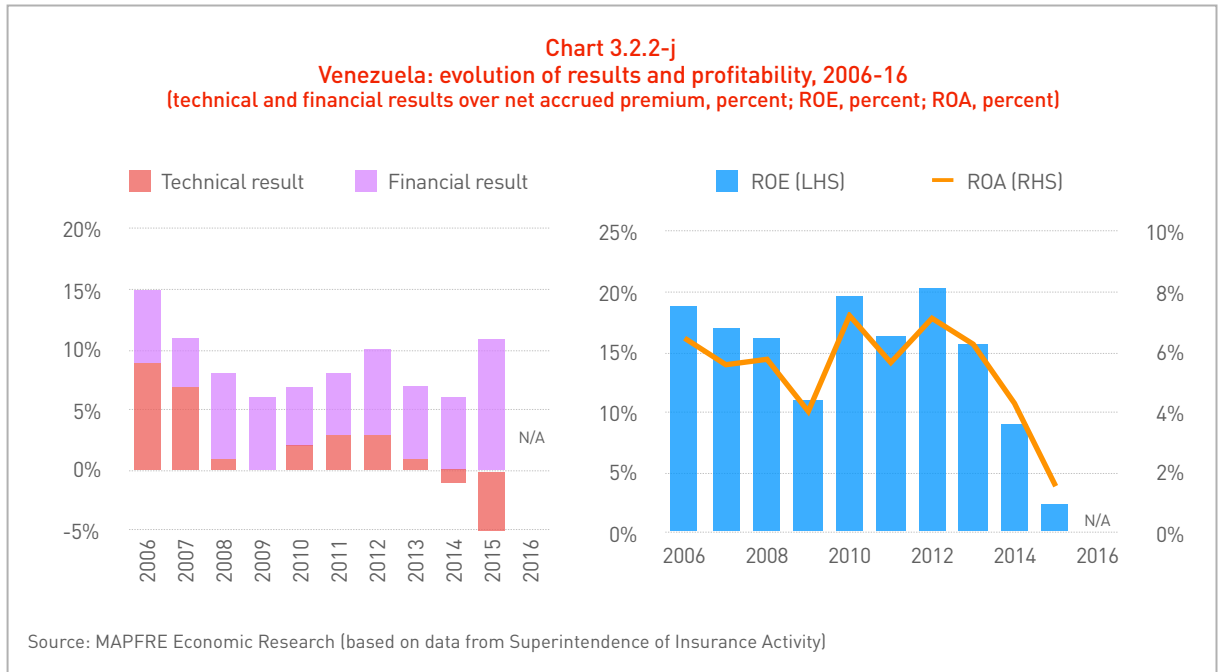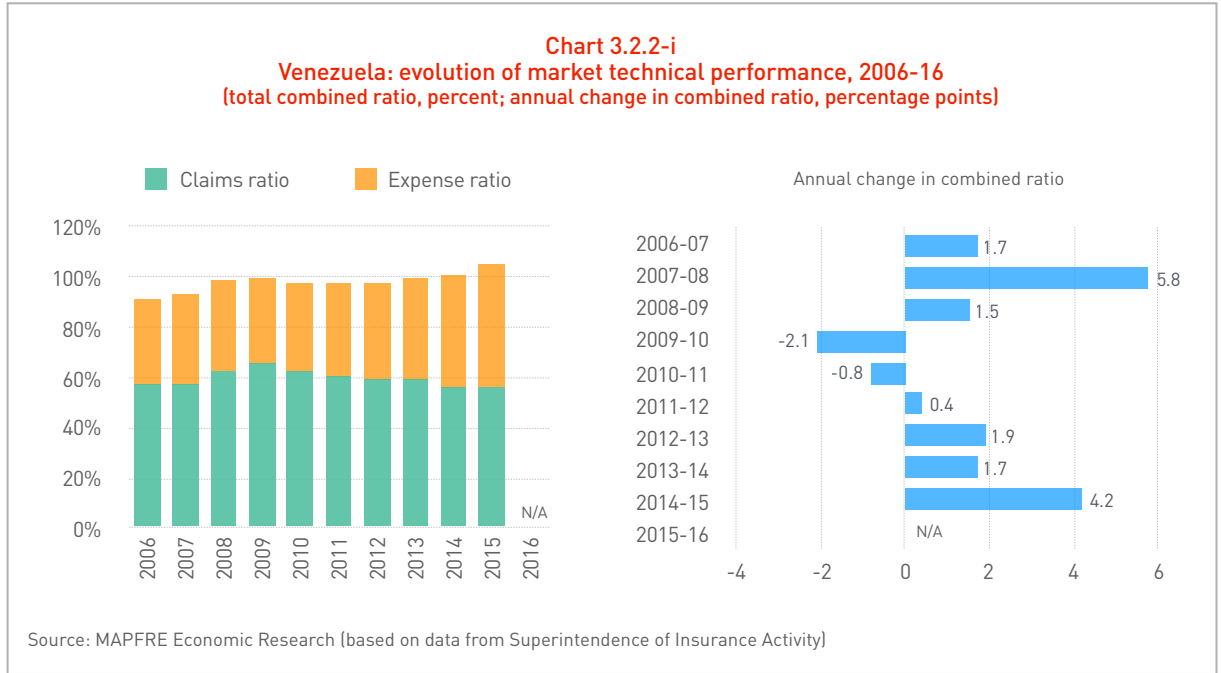
inflation. The behavior of the penetration index may therefore be linked to the increase in prices experienced by the Venezuelan economy (see Chart 3.2.2-a).

It is a well-known fact that in insurance activities the production cycle is inverted and the prices of products are fixed not according to an incurred cost but to a cost estimated to be incurred in the future. Since the activity is insurance, claims are the most important component of that future cost and, particularly in the case of Non-Life insurance, they are greatly impacted by the general level of prices in the economy. Accordingly, penetration is estimated by comparing the expected cost for the following year with the flow of production in the economy in the current year, which in high-inflation scenarios can lead to an overestimation of the indicator.

**Chart 3.2.2-k**
**Venezuela: evolution of penetration, density and depth, 2006-16**
**(premiums/GDP, percent; premiums per capita, pesos and dollars; Life insurance premiums / total premiums, percent, index 2006=100)**
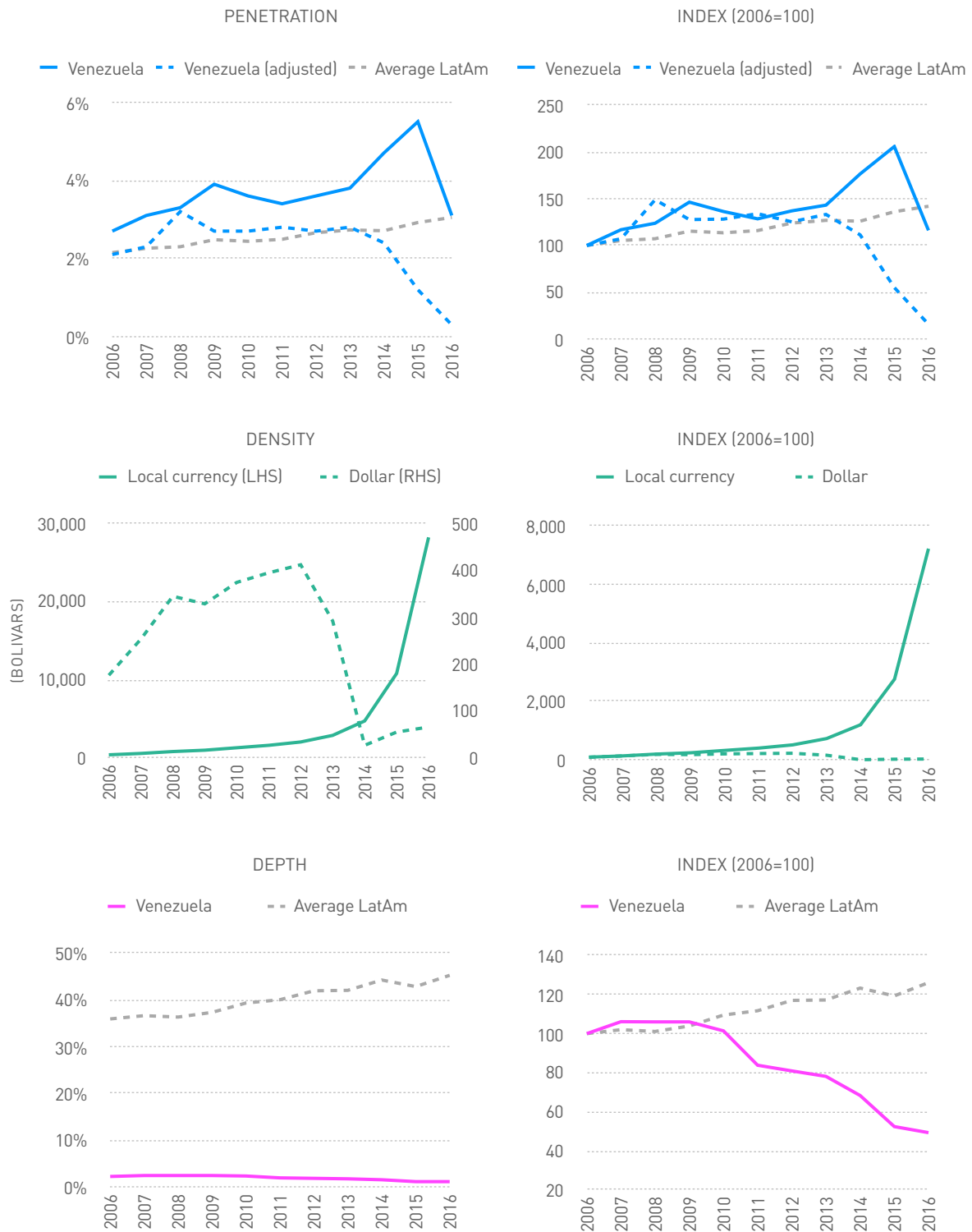


Source: MAPFRE Economic Research (based on data from Superintendence of Insurance Activity)

To eliminate this effect produced by a highly inflationary environment, the penetration index has been adjusted as shown in Chart 3.2.2-k. In line with this adjustment, the effective penetration of the Venezuelan market entered a downward trend in 2013, falling to barely 0.3 percent in 2016.

Meanwhile, the density of insurance in Venezuela (premiums per capita) reached 28,217 bolivars (65.7 dollars), up 161 percent on the value observed in 2015 (10,799.7 bolivars). Again, this behavior was influenced by the trend in the general level of prices in the economy. Accordingly, as with penetration, density climbed steadily over the last decade, rising exponentially from 2013.

In relation to depth (Life insurance premiums relative to total premiums), this indicator amounted to barely 1.2 percent in 2016 (1.2 percentage points below the value observed in 2006). The trend in the depth of the Venezuelan insurance market stands in stark contrast to the average performance of other insurance markets in Latin America and once again confirms the impairment in the development of the Life insurance market.

This behavior is clearly reflected in the dispersion analysis shown in Chart 3.2.2-l, which illustrates the combined effect of the penetration and depth levels. The development of the insurance market in Venezuela has experienced a strong contraction, especially in terms of depth and especially since 2014.

However, when the penetration index is corrected to eliminate the overestimation produced by the highly inflationary environment (Chart 3.2.2-m), it becomes clear that this contraction in the development of the Venezuelan insurance industry began in 2008 and affects both the quantitative (penetration) and qualitative (depth) dimensions.

**Estimate of the Insurance Protection Gap**

Chart 3.2.2-n provides an estimate of the IPG for the Venezuelan insurance market between 2006 and 2016. The insurance gap amounted to 1.3677 trillion bolivars in 2016, representing 1.6 times the insurance market in Venezuela at the end of the year. However, for the reasons explained above, this may be an underestimation because of the overestimation of the penetration levels of the Venezuelan market, a key variable in estimating the IPG based on the methodology used in this report.



Chart 3.2.2-l
Venezuela: evolution of insurance market, 2006-16
(penetration vs depth)

Source: MAPFRE Economic Research
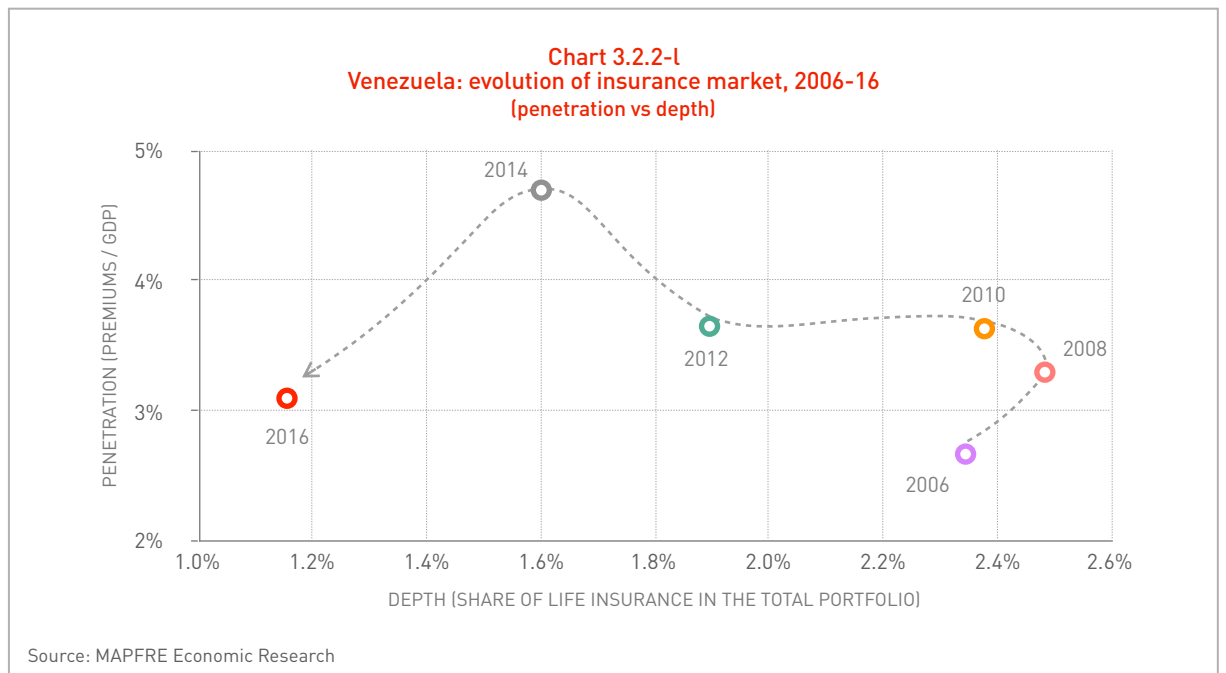
Chart 3.2.2-m
Venezuela: adjusted evolution of the insurance market, 2006-16
(penetration vs depth)
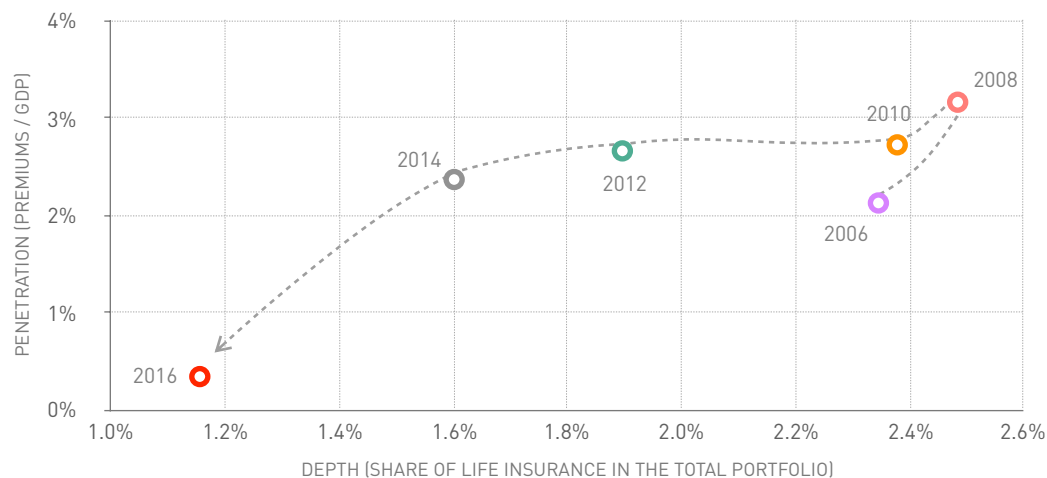


Source: MAPFRE Economic Research

The structure and evolution of the insurance gap over the period reflect the absolute predominance of Life insurance in this estimate. At the close of 2016 the entire IPG corresponded to Life insurance due to the underestimation of the IPG in the Non-Life insurance segment as well as the extreme sensitivity of the IPG to the effect of the aforementioned overestimation of the penetration index

After making the corresponding adjustment (shown in Chart 3.2.2-o), the insurance gap is estimated at 2.144640 quadrillion bolivars, of which 40.9 percent correspond to the Non-Life insurance segment and the remaining 59.1 percent to Life insurance, which is insufficiently developed in the Venezuelan market.

The potential insurance market in Venezuela at the end of 2016 (estimated as the sum of actual insurance market in the country and the IPG) stands at 2.2406 trillion bolivars, representing 2.6 times the total insurance market that year. In the adjusted version, the potential market for the year is 3.017541 quadrillion bolivars (3.5 times the current market).

Chart 3.2.2-p provides an estimate of the IPG as a multiple of the actual insurance market in Venezuela, in both its original and adjusted version. This analysis reveals that the insurance gap as a multiple of the market (concentrated in the Life insurance segment) followed a downward trend between 2006 and 2009, falling from 78.2 to 49.6 times of the relative market. It then climbed to sustain a multiple of nearly 60 times the Life market, finally growing considerably in 2016 to represent 124.8 times the market. Meanwhile, the adjusted estimate (indicated by the discontinuous lines) shows how the IPG as a multiple of the market experiences an upward shift in both the Non-Life total and adjusted magnitudes, clearly revealing an effective insufficiency of insurance in this segment as well which is concealed (due to the overestimation of the penetration index) in the original exercise.

Lastly, Chart 3.2.2-q provides a summary of the assessment regarding the capacity of the Venezuelan insurance market to close the IPG. As in the rest of this report, this is based on a comparative analysis of the growth rates observed over the last ten years in the Venezuelan market and the growth rates that would be required to close the IPG established in 2015 over the next ten years.

**Chart 3.2.2-n**
**Venezuela: Insurance Protection Gap and potential market, 2006-16**
**(billions of bolivars)**



Source: MAPFRE Economic Research

**Chart 3.2.2-o**
**Venezuela: Insurance Protection Gap (adjusted) and potential market, 2006-16**
**(billions of bolivars)**



Source: MAPFRE Economic Research
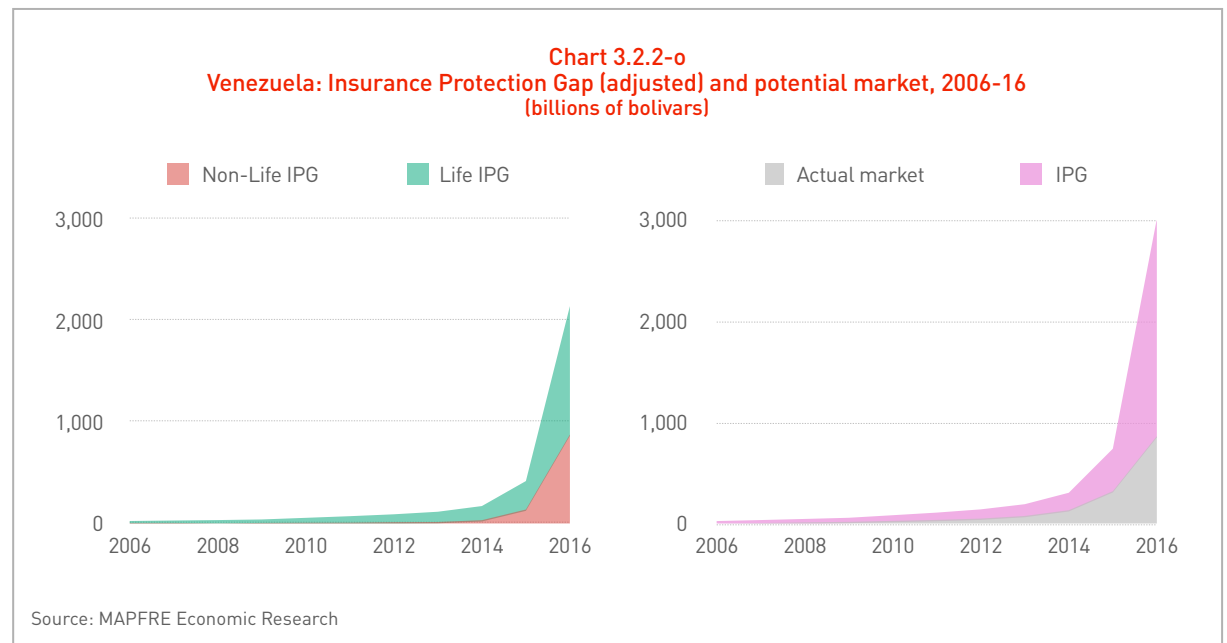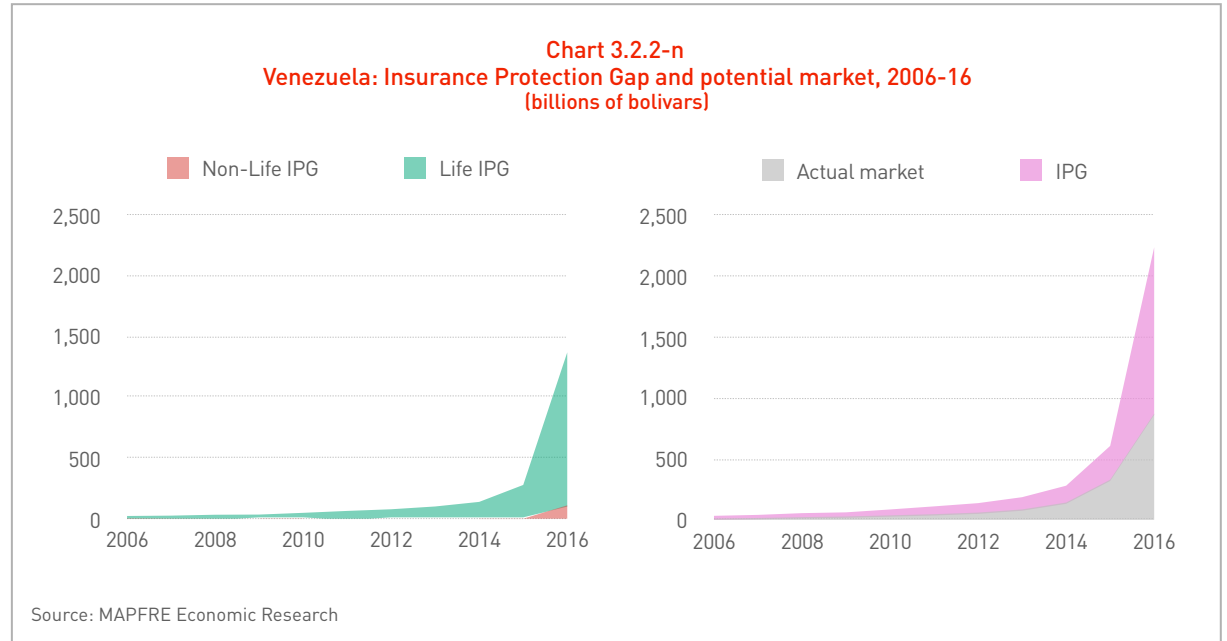
The Venezuelan insurance market registered an average annual nominal growth of 55.6 percent, with an annual growth rate of 45.0 percent in Life insurance and 55.8 percent in the Non-Life insurance segment. If the same rate of growth as seen over the last ten years were to be sustained, the growth rate of the Venezuelan insurance market would be insufficient (falling short by 17.3 percent) to achieve that objective in the Life insurance segment, where the insurance gap is concentrated in the Venezuelan market. As shown, the shortfall in this segment has increased in relation to the measurement taken in 2015.

**Market Development Index (MDI)**

Chart 3.2.2-r provides an estimate of the Market Development Index (MDI) for the Venezuelan insurance industry. As previously highlighted, the aim of the MDI is to summarize trends in the development and maturity of insurance markets. In the case of the Venezuelan insurance industry, the indicator shows a positive trend for the

**Chart 3.2.2-p**
**Venezuela: the IPG as a multiple of the actual market, 2006-16**
**(number of times actual insurance market)**
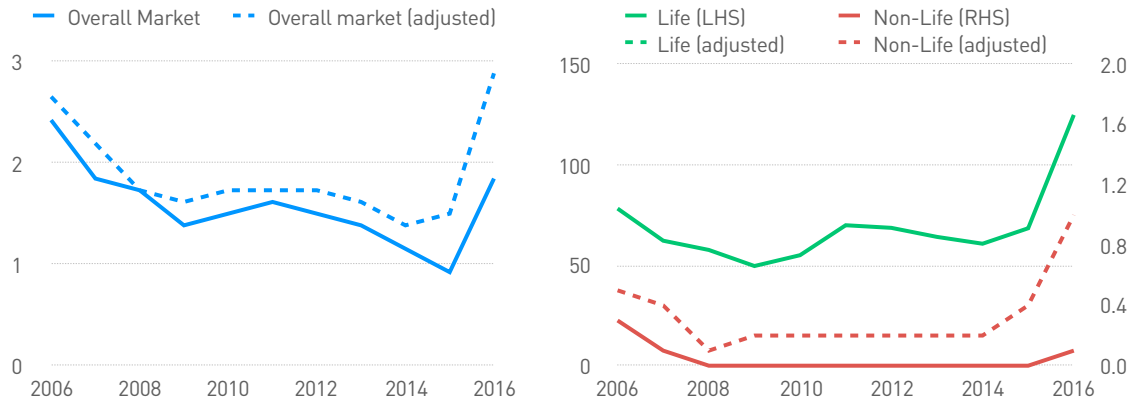


Source: MAPFRE Economic Research

period 2006-09. However, it then begins to diverge from the average performance of all the other countries in the region, entering a marked decline in 2016. This is even more evident when the analysis is adjusted to eliminate the overestimation in the speed of closing the Life IPG (due to the relatively small base), which not only confirms the below-average performance of the Venezuelan insurance market in the region but also highlights a sharp impairment from 2013.

## Insurance market rankings

### Overall ranking

In 2016, 48 insurance companies were operating in Venezuela, the same number as in 2015. Market concentration is low and has remained stable in recent years, as shown in Chart 3.2.2-s. The Herfindahl index is 709, below the moderate concentration threshold, and the CR5 was 49.1 percent in 2016.

**Chart 3.2.2-q**
**Venezuela: capacity to close IPG, 2006-16**
**(average annual growth rate, percent; sufficiency or insufficiency, percentage points)**
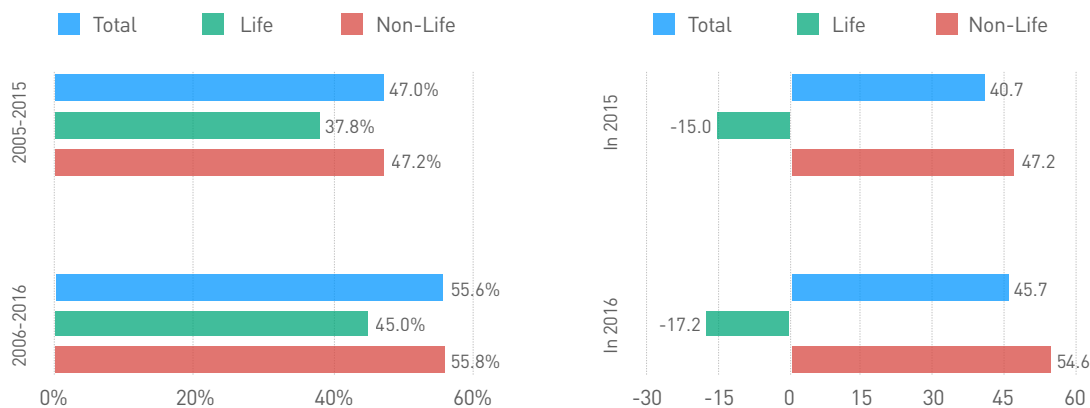


Source: MAPFRE Economic Research

Chart 3.2.2-r
Venezuela: Market Development Index (MDI), 2005-16
(index 2005=100; annual change)
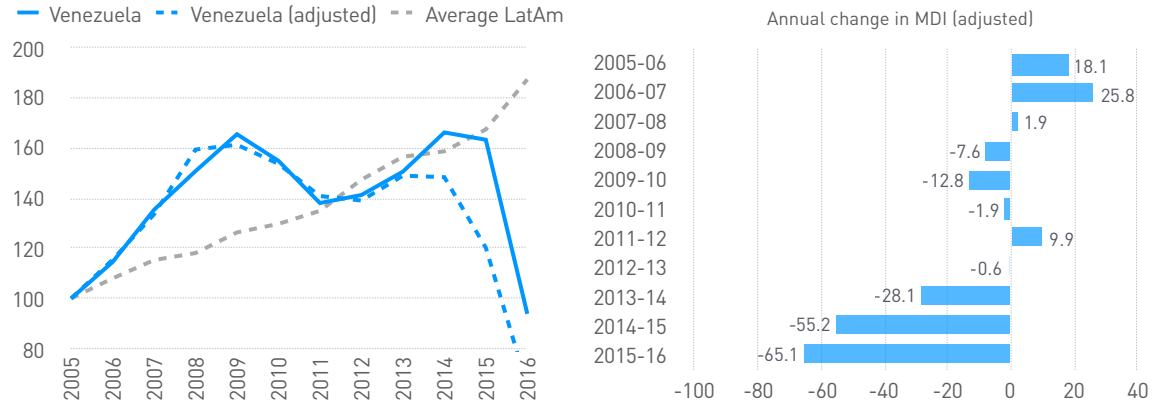
Source: MAPFRE Economic Research

The ranking of insurance groups in the Venezuelan market continues to be led by Liberty, with a market share of 18.1 percent, followed by Mercantil (9.7 percent) and Horizonte (7.6 percent), all in the same slots as the previous year. MAPFRE fell from the fourth position to the seventh, with Previsora taking its place after moving up one slot. It is followed by Universitas (scaling four positions) and Pirámide (up one slot). Occidental, Multinacional and Altamira occupy the last three slots in the ranking. In the absence of detailed information about the different business lines, it has not been possible to provide details on the Non-Life and Life rankings.

## Key regulatory aspects

In 2016 the key regulatory developments in the Venezuelan insurance market included the following:



Chart 3.2.2-s
Venezuela: insurance industry concentration, 2006-16
(Herfindahl index; CR5 index, percent)
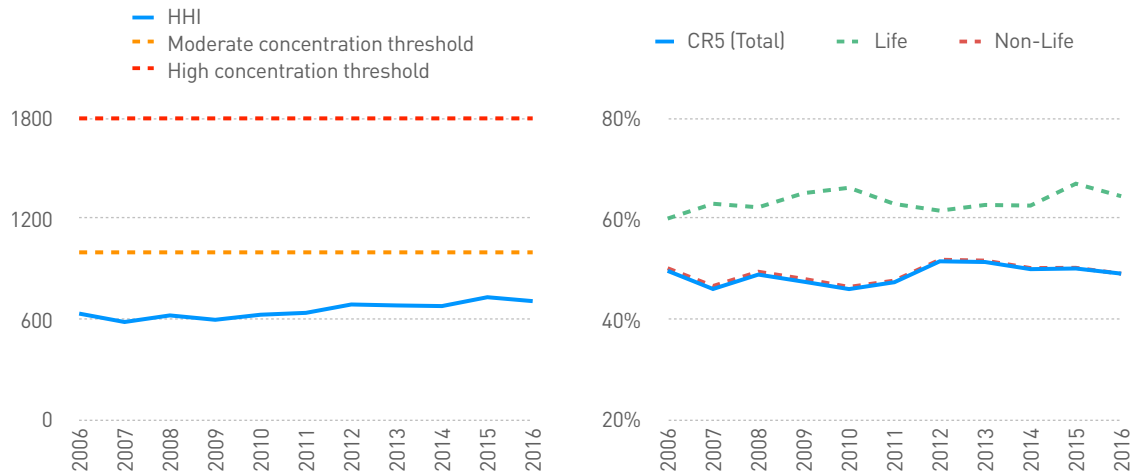
Source: MAPFRE Economic Research (based on data from Superintendence of Insurance Activity)

**Chart 3.2.2-t**
**Venezuela: overall ranking, 2015-16**
**(market shares, percent)**
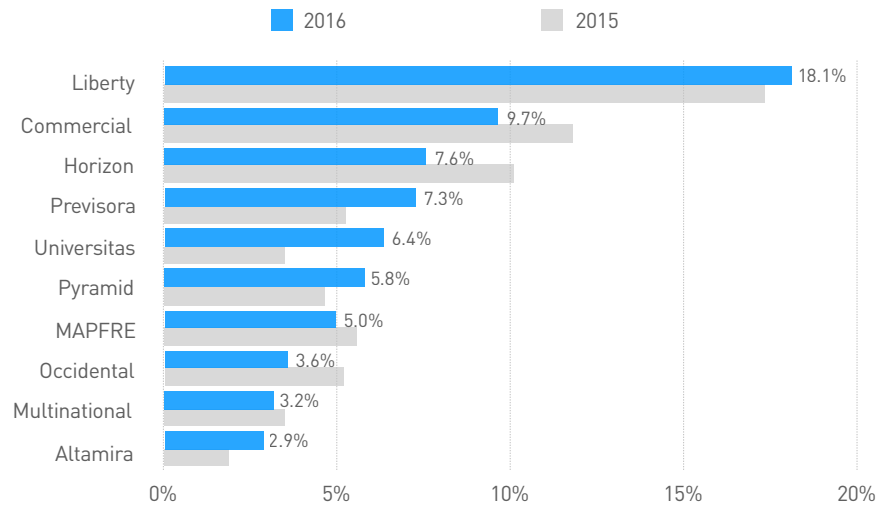
■ 2016   ■ 2015

| Company | 2016 |
|---|---|
| Liberty | 18.1% |
| Commercial | 9.7% |
| Horizon | 7.6% |
| Previsora | 7.3% |
| Universitas | 6.4% |
| Pyramid | 5.8% |
| MAPFRE | 5.0% |
| Occidental | 3.6% |
| Multinational | 3.2% |
| Altamira | 2.9% |

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance Activity)

- In March 2016 Ruling FSAA-2-00287 was published and entered into force, establishing the Code of Accounts and Accounting Standards for Prepaid Medical Services.

- In May 2016 Rule FSAA-00288 of 03/10/2016 was published, reforming Ruling HSS-100-001 of 01/20/1992 and amending the accounts under Accounting Standards for Insurance Companies.

- Official Gazette 40,973 of 08/24/2016 published Ruling FSAA-9-00661 of 07/11/2016 issued by the Insurance Activity Superintendence, which sets out the rules governing contractual relationships in insurance activities. These rules are issued in accordance with the dispositions of the Statutory Decree on Insurance Activities (published in the Official Gazette, Extraordinary Issue 6,211 of December 30, 2105 and reprinted in Official Gazette, Extraordinary Issue 6,220 of March 15, 2016), which in turn repealed the Statutory Decree on Insurance Contracts (published in Official Gazette, Extraordinary Issue 5,553 of November 12, 2001). These regulate, in their different versions, all insurance and reinsurance contracts, contracts for prepaid medical services, risk management contracts, contracts for the financing of prepaid medical insurance premiums or instalments, deposits, refinancing agreements and trusts.

- Ruling FSAA-9-00730 of 08/01/2016, issued by the Insurance Activity Superintendence, sets out the rules for social development contributions. The annual social development contribution, established in Article 135 of the Statutory Decree on Insurance Activity, is to be paid half-yearly by insurance companies, prepaid medical services, cooperative associations that undertake insurance activities, and risk managers.

- Ruling FSAA-9-00731 of 08/01/2016, issued by the Insurance Activity Superintendence, sets out the rules for the dissemination and advertising of insurance activities. Its aim is to define the broad terms governing dissemination and advertising by entities regulated by the Statutory Decree on Insurance Activities as well as by any other natural or legal person that undertakes or orders them. Dissemination and advertising

must be designed to preserve and increase trust in the Venezuelan insurance industry, and to provide information and guidance on the activities undertaken by the regulated entities.

### 3.2.3. Brazil

### Macroeconomic environment

In 2016 the Brazilian economy shrank by 3.6 percent, slightly less than the 3.8 percent of the previous year. The latest figures for the first quarter of this year indicate that Brazil may be leaving behind a two-year recession, although the environment remains complicated.

In terms of demand, 2016 saw private consumption fall by 4.7 percent and public consumption by 11.6 percent. The figures for investment also remained negative (-11.7 percent). By sector, production in the agriculture sector shrank by 6.9 percent in the first three quarters, the transformation industry by 6.7 percent and construction by 4.4 percent. Meanwhile, the electricity, water and sewage sectors recorded a 5.6 percent growth following

the removal of the water restrictions imposed in 2015.

The average inflation rate fell 0.3 percentage points in 2016, ending the year at 8.7 percent, while the unemployment rate climbed three points to reach 11.3 percent, reversing the downward trend of the last two years (see Chart 3.2.3-a).

In terms of the external sector, the first ten months of 2016 saw a sharp decline in imports (-22 percent), reflecting the lower level of activity. Particularly pronounced was the 44.5 percent fall in the purchase of oil and derivative products, as well as the general decline in all other products, most notably capital goods and consumer products. Exports also took a dip, though not as sharp (-4.6 percent), but the overall volume was higher due to the increase in car and aircraft exports.

For 2017, ECLAC estimates that the Brazilian economy will experience a slight growth of around 0.5 percent of GDP, while the IMF predicts that this growth will be 0.3 percentage points lower, putting it at 0.2 percent of GDP.



**Chart 3.2.3-a**
**Brazil: evolution of economic growth and inflation, 2006-16**
(GDP in local currency, billions of reais; real growth rate, percent; annual inflation rate, percent)

Source: MAPFRE Economic Research (based on IMF data)
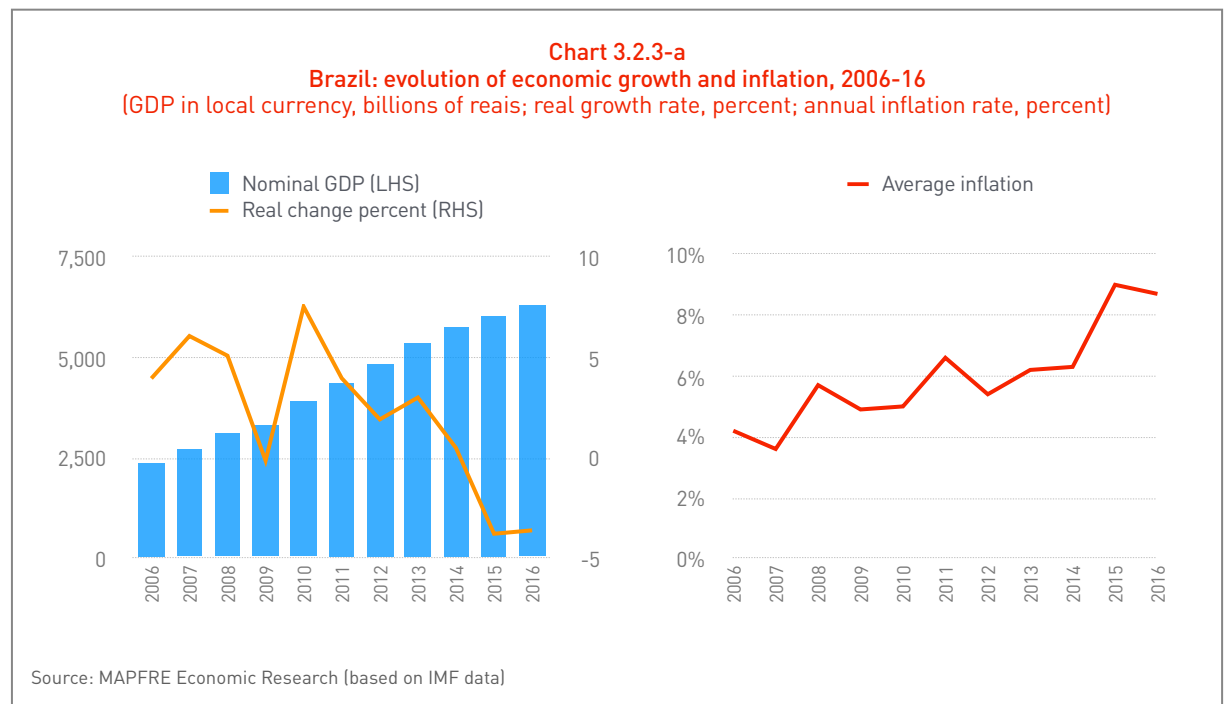
## Insurance Market

### Growth

In spite of the economic recession that the country is experiencing, the premium volume of the Brazilian insurance market performed well in 2016, with a nominal growth of 11.6 percent and a real growth of 2.6 percent, reaching 205.480 billion reais (58.965 billion dollars).

In 2016 the market sustained nominal growth figures similar to those of 2015 (11.6 percent compared with 11.5 percent), while in actual terms these figures grew by 1.9 percentage points from the 0.7 percent registered the previous year. This boost was provided by the Life insurance segment, specifically by the Vida Gerador de Beneficio Livre or VGBL product (see Table 3.2.3-a and Chart 3.2.3-b).

Life premiums reached 130.722 billion reais (37.513 billion dollars) in 2016, representing a nominal growth of 17.7 percent and a real growth of 8.3 percent (compared with 17.9 percent and 6.5 percent, respectively, in 2015). As indicated, this growth is explained by the excellent performance of VGBL insurance, which accounts for 80.3 percent of all Life premiums and grew by more than three points to reach 12.1 percent in real terms. Meanwhile, Individual and Group Life insurance fell by 4.8 percent in real terms.

The premium volume for Non-Life insurance amounted to 74.757 billion reais (21.453 billion dollars) in 2016, representing a nominal increase of 2.2 percent and an actual decrease of 6.1 percent. The Automobile line, which accounts for 54 percent of all Non-Life premiums, fell by 9.6 percent in real terms. As in the previous year,

### Table 3.2.3-a
### Brazil: premium volume[1] by line of business (lob), 2016

| Line of busuiness | Millions of reais | Millions of dollars | Increase | |
|---|---|---|---|---|
| | | | Nominal (percent) | Real (percent) |
| **Total** | **205,480** | **58,965** | **11.6** | **2.6** |
| **Life** | **130,722** | **37,513** | **17.7** | **8.3** |
| Group and individual Life | 25,752 | 7,390 | 3.5 | -4.8 |
| VGBL[2] | 104,970 | 30,123 | 21.9 | 12.1 |
| **Non-Life** | **74,757** | **21,453** | **2.2** | **-6.1** |
| Automobiles | 40,391 | 11,591 | -1.7 | -9.6 |
| Other Damage | 11,850 | 3,401 | 7.8 | -0.9 |
| Accidents | 5,160 | 1,481 | 4.4 | -4.0 |
| Fire | 4,965 | 1,425 | 4.4 | -4.0 |
| Transport | 2,984 | 856 | 7.3 | -1.3 |
| Credit and Surety | 3,089 | 886 | 10.3 | 1.4 |
| Agrarian | 2,979 | 855 | 14.5 | 5.3 |
| Third-party liability | 1,592 | 457 | 12.3 | 3.3 |
| Hull Transport | 812 | 233 | 0.5 | -7.6 |
| Specialty Risks[3] | 464 | 133 | -24.2 | -30.3 |
| Burial | 472 | 135 | 26.7 | 16.5 |

Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)
1/ Prêmio Emitido (Reg. Capitalização) + Prêmio Seguros
2/ Redeemable Life Insurance
3/ Oil, nuclear risks and satellites

Chart 3.2.3-b
Brazil: growth developments in the insurance market, 2006-16
(premiums, millions of reais; nominal annual growth rates, percent)
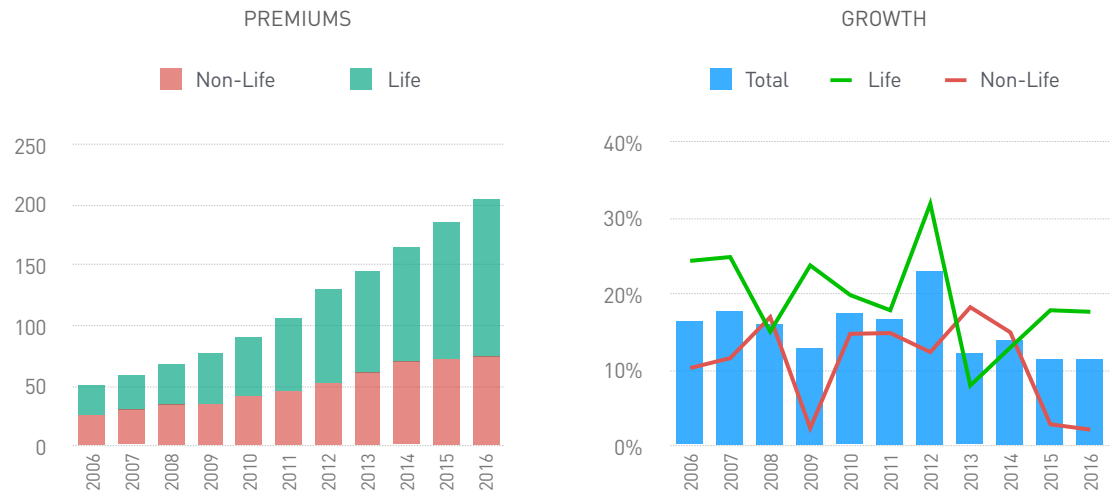
Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)

2016 saw the majority of insurance types fall in actual terms, with the exceptions of Credit and Surety, Agricultural, Third-Party Liability and Burial policies.

Accordingly, of the 11.6 percentage points of growth experienced by the Brazilian insurance industry in 2016, 10.7 percentage points correspond to the growth of the Life insurance segment and 0.9 percentage points to Non-Life insurance (see Chart 3.2.3-c).

Furthermore, if in addition to the insurance premium volume we take into account the contributions from private pensions received by insurance companies, Health insurance premiums (controlled by the *Agencia Nacional de Saude Suplementar*, ANS), and the Capitalization premiums, total revenues for 2016 amounted to 274.146 billion reais (78.670 billion dollars), representing a nominal increase of 9.3 percent in relation to the previous year (see Table 2.2.3-b).

**Balance sheet and equity**

Chart 3.2.3-d shows the evolution of the aggregate balance sheet for all insurance companies operating in Brazil between 2006 and 2016.

As indicated, total assets reached 873.4632 billion reais (250.6525 billion dollars). Meanwhile, equity reached 81.2472 billion reais (23.315 billion dollars), up 13.4 percentage points on the 2015 figure.



Chart 3.2.3-c
Brazil: contribution to insurance market growth, 2006-16
(percentage points, ppts)
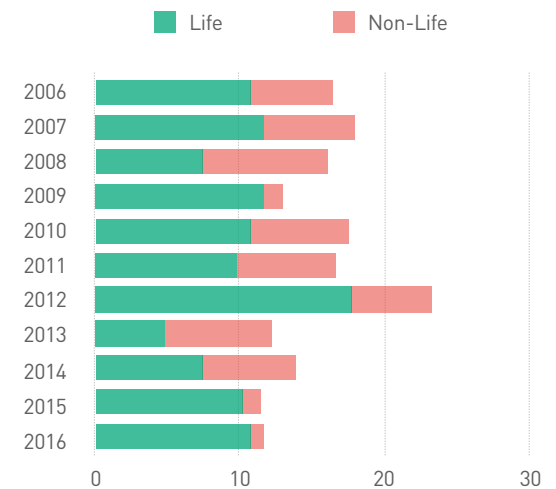
Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)

Aggregate capital levels for the Brazilian insurance industry (measured against total assets) entered a downward trend in 2008, with relative values of around 20 percent falling to 9.3 percent of total assets by the end of 2016.

**Investment**

Chart 3.2.3-e shows the evolution of the aggregate investment portfolio at sector level for the Brazilian insurance industry over the period 2006-16, while Charts 3.2.3-f and 3.2.3-g analyze the relative composition of the portfolio.

Investment reached 776.339 billion reais (222.781 billion dollars) in 2016, largely focused on investments in mutual funds (87.8 percent) and, to a much smaller proportion, debt and equity instruments (8 percent and 3.5 percent, respectively), and the remaining 0.6 percent in cash, property and other financial investments.

The analysis of the aggregate portfolio illustrates the high percentage of investments managed through mutual funds, which increased in both absolute and relative terms with respect to the other investments over the period 2006-16. The only exception was 2012, when their weight in the portfolio took a slight dip compared with the previous year.

Table 3.2.3-b
Brazil: Private insurance premiums and contributions, 2016

| Line of business | Millions of reais | Millions of dollars | Change 2015-2016 (percent) |
|---|---|---|---|
| Insurance | 205,480 | 58,965 | 11.6 |
| Private Pension | 12,104 | 3,473 | -2.3 |
| Health Insurance | 35,481 | 10,182 | 8.3 |
| Capitalization | 21,081 | 6,049 | -1.8 |
| **Total** | **274,146** | **78,670** | **9.3** |

Source: MAPFRE Economic Research (based on data from the Private Insurance Superintendence and the National Agency for Supplementary Health, ANS)

Chart 3.2.3-d
Brazil: evolution of insurance industry's aggregate balance sheet, 2006-16
(amounts in local currency, change in equity, percentage points)
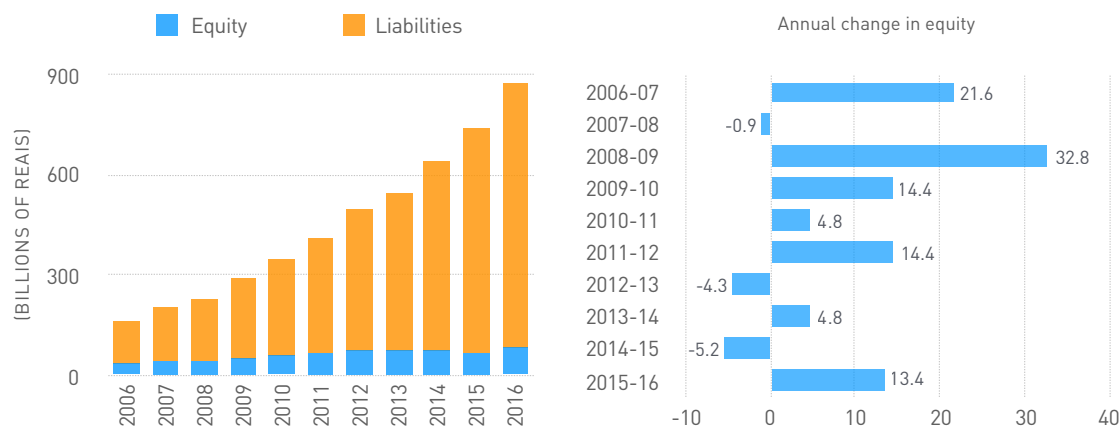


Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)

Table 3.2.3-c shows the evolution of the structure of investments but this time analyzing the underlying assets managed through mutual funds. Again, these are concentrated in fixed income instruments (95.9 percent in 2016).

**Technical provisions**

Chart 3.2.3-h shows the evolution of technical provisions in the Brazilian insurance industry between 2006 and 2016, while Charts 3.2.3-i and 3.2.3-j analyze the evolution of their relative composition during the same period.

As these data show, technical provisions amounted to 753.576 billion reais (216.249 billion dollars) in 2016. That year the Life business represented around 87 percent of all technical provisions (659.9462 million reais), taking into account the percentage of the provision for the so-called pension business.

**Chart 3.2.3-e
Brazil: Insurance market
technical provisions, 2006-16
(billions of reais)**



Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)

**Chart 3.2.3-f
Brazil: structure of
investment, 2006-16
(%)**



Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)

**Chart 3.2.3-g
Brazil: structure
of investment, 2016
(%)**



Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)

In spite of a growth in absolute terms over the period 2006-16, the provision for pensions has experienced a relative loss of weight in the overall technical provisions, falling from 46.2 percent in 2006 to 21.8 percent in 2016.

**Technical performance**

Chart 3.2.3-k shows practically no change in the total combined ratio for the Brazilian insurance industry in 2016 with respect to the previous year (95.26 percent compared with 95.24 percent in 2015).

This is due to a fall of 0.6 percentage points in operating expenses and an increase of practically the same amount in claims expenses. Specifically, the claims ratio for 2016 was 46.9 percent, evidencing a downward trend in recent years.

**Results and profitability**

Brazilian insurance companies posted a net result of 17.840 billion reais (5.119 billion dollars) in 2016, down 10 percent on the previous year. This net result was not only based on the technical result discussed above but also on the good financial result of the operation, which was nevertheless 2.5 percentage points below the 2015 result (see Chart 3.2.3-l).

Meanwhile, profitability took a slight dip. This is partly explained by the return on equity (ROE), which ended 2016 at 21.9 percent, 5.7 percentage points below the 2015 figure but still exceptionally good; and partly by the return on assets (ROA), which reached 2.0 percent in 2016, 0.63 percentage points below their value in 2015.

**Insurance penetration, density and depth**

Chart 3.2.3-m shows the main structural trends in the development of the Brazilian insurance industry over the period 2006-16. The penetration index (premiums/GDP) reached 3.3 percent in 2016, up 0.2 percentage points on the previous year and 1.2 percentage points on the

### Table 3.2.3-c
### Brazil: evolution of the structure of investments by underlying asset, 2006-16
#### (composition, percent)

|  | Fixed income | Variable annuities | Property | Other investments |
|---|---|---|---|---|
| 2006 | 87.3% | 10.7% | 0.6% | 1.4% |
| 2007 | 85.5% | 11.8% | 0.4% | 2.2% |
| 2008 | 88.5% | 9.1% | 0.4% | 2.0% |
| 2009 | 86.3% | 12.3% | 0.6% | 0.8% |
| 2010 | 86.9% | 11.6% | 0.5% | 1.0% |
| 2011 | 89.2% | 9.4% | 0.4% | 1.0% |
| 2012 | 89.4% | 9.4% | 0.4% | 0.9% |
| 2013 | 91.3% | 7.1% | 0.4% | 1.1% |
| 2014 | 93.3% | 5.5% | 0.4% | 0.9% |
| 2015 | 94.7% | 4.0% | 0.3% | 1.0% |
| 2016 | 95.9% | 3.6% | 0.2% | 0.3% |

Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)



### Chart 3.2.3-h
### Brazil: insurance market technical provisions, 2006-16
#### (billions of reais)

Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)

**Chart 3.2.3-i
Brazil: structure of
technical provisions, 2006-16
(%)**
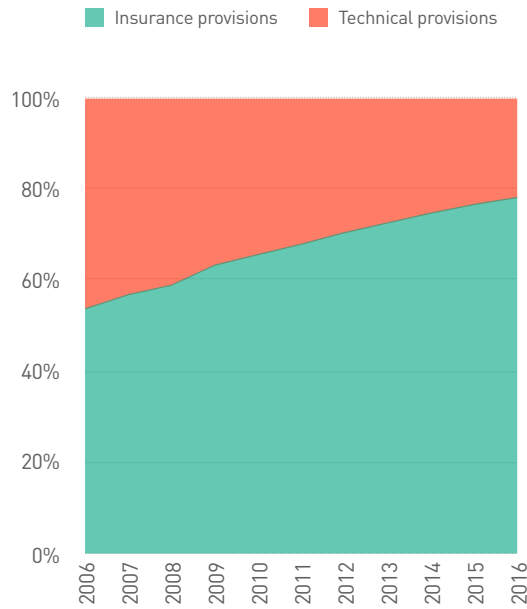
Insurance provisions    Technical provisions



Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)

**Chart 3.2.3-j
Brazil: structure
of technical provisions, 2016
(%)**
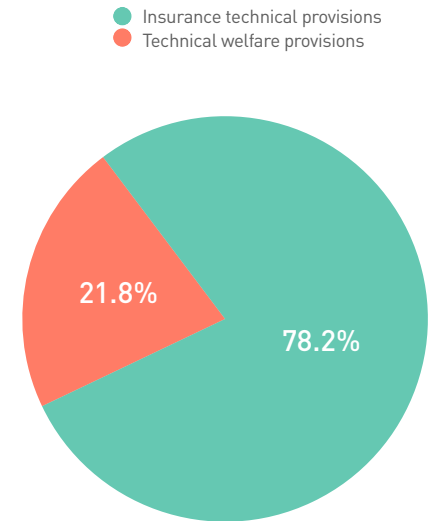
● Insurance technical provisions
● Technical welfare provisions



21.8%

78.2%

Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)

**Chart 3.2.3-k
Brazil: evolution of market technical performance, 2006-16
(total combined ratio, percent; annual change in combined ratio, percentage points)**

Claims ratio    Expense ratio



Annual change in combined ratio

| | |
|---|---|
| 2006-07 | -0.3 |
| 2007-08 | -1.2 |
| 2008-09 | -2.1 |
| 2009-10 | 0.1 |
| 2010-11 | 2.7 |
| 2011-12 | -1.0 |
| 2012-13 | -3.5 |
| 2013-14 | 2.4 |
| 2014-15 | 0.0 |
| 2015-16 | 0.0 |
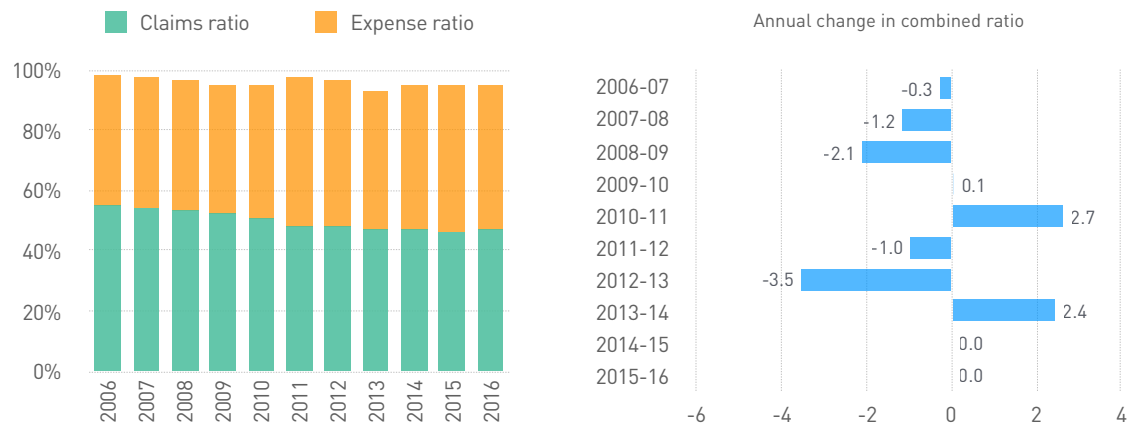
Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)

**Chart 3.2.3-l**
**Brazil: evolution of results and profitability, 2006-16**
**(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)**
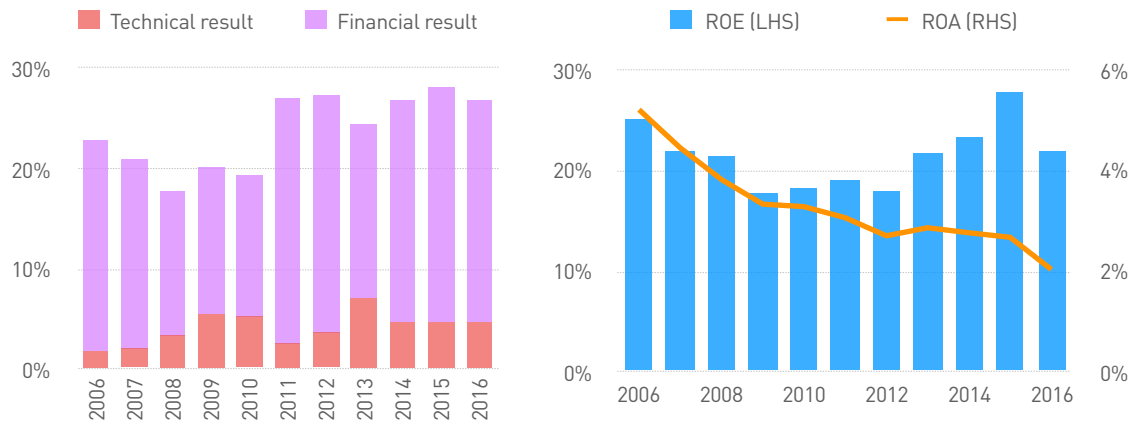


Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)

index registered in 2006. As shown, the penetration index for the Brazilian market (which only takes into account the premiums from insurance activities) has grown steadily since 2006, in line with the average trend for the Latin American insurance market as a whole.

Meanwhile, the insurance density level (premiums per capita) reached 980.9 reais (281.5 dollars), representing an increase of 10.6 percent on the previous year's value (886.6 reais). Like the penetration index, density in Brazil (measured in local currency) climbed steadily over the period 2006-16. However, when the parameter is measured in dollars, the impact of the devaluation of the Brazilian real becomes evident, especially in 2015.

With regard to depth (Life insurance premiums versus total premiums), this indicator reached 63.6 percent in 2016, representing an increase of 16.8 percentage points on the 2006 value. Depth has increased steadily in the Brazilian insurance market during the period analyzed and is higher than the average values observed across Latin America.

This positive behavior of the structural parameters of the Brazilian insurance market is confirmed by the dispersion analysis shown in

Chart 3.2.3-n, which illustrates the combined effect of the penetration and depth levels. Overall, the period analyzed has seen a steady and balanced development of the Brazilian insurance market characterized by increases in both the quantitative dimension (penetration) and qualitative dimension (depth), with only a slight contraction of the latter between 2012 and 2014.

**Estimate of the Insurance Protection Gap**

Chart 3.2.3-o provides an estimate of the Insurance Protection Gap (IPG) for the Brazilian insurance market over the period 2006-16. The IPG reached 292.4 billion reais in 2016, equivalent to 1.4 times the Brazilian insurance market at the close of 2016.

The structure and evolution of the IPG over the last ten years still shows a slight predominance of Life over Non-Life insurance. In 2016, 51.6 percent of the IPG related to Life insurance (151 billion reais), while the Non-Life insurance segment accounted for the remaining 48.4 percent of the gap (141.4 billion reais). Over the period 2006-16 the share of Life insurance in the IPG fell by 11.6 percentage points.

**Chart 3.2.3-m**
**Brazil: evolution of penetration, density and depth, 2006–16**
(premiums/GDP, percent; premiums per capita, reais and dollars; Life insurance premiums/total premiums, percent, index 2006=100)
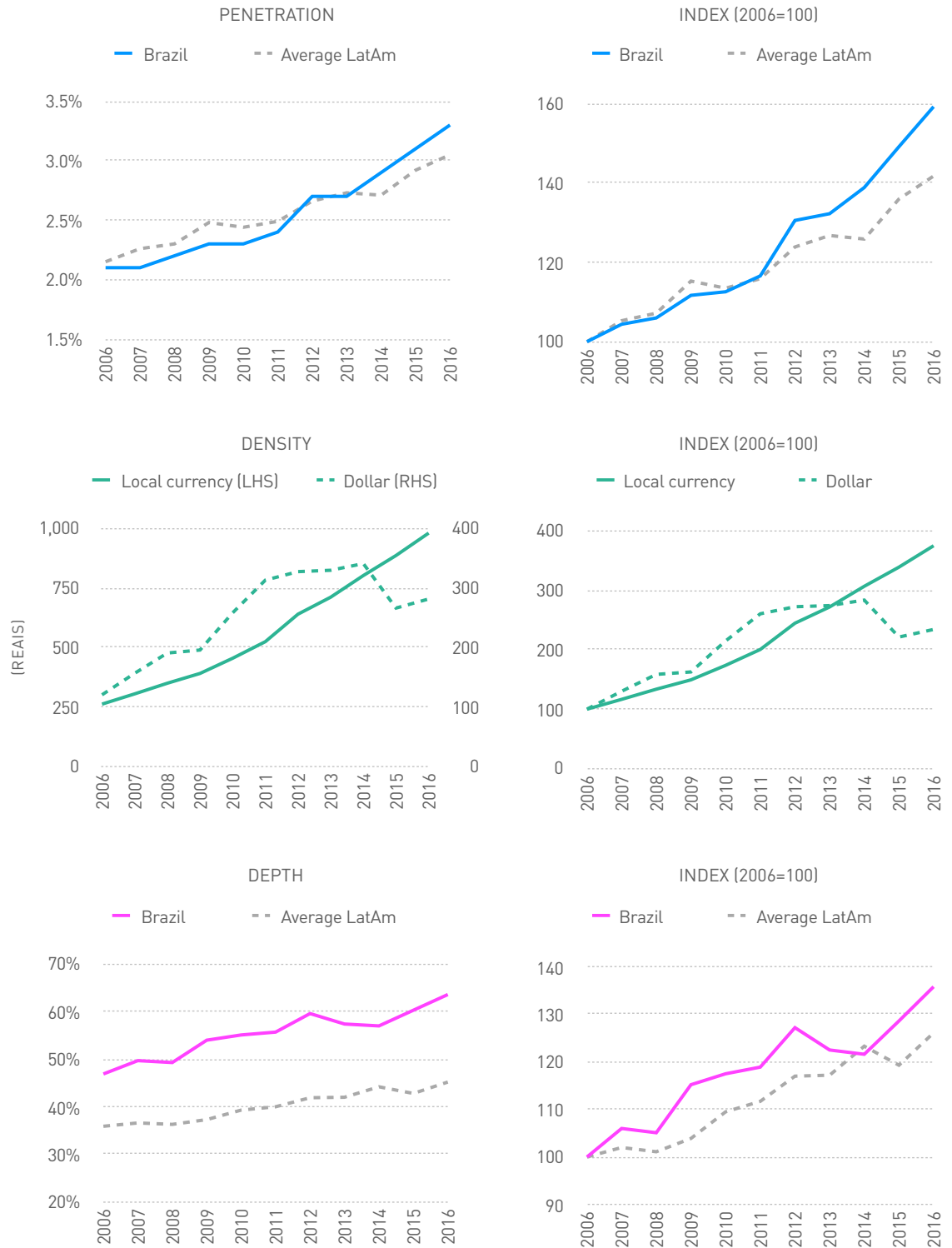


Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)

**Chart 3.2.3-n**
**Brazil: evolution of insurance market, 2006-16**
**(penetration vs depth)**
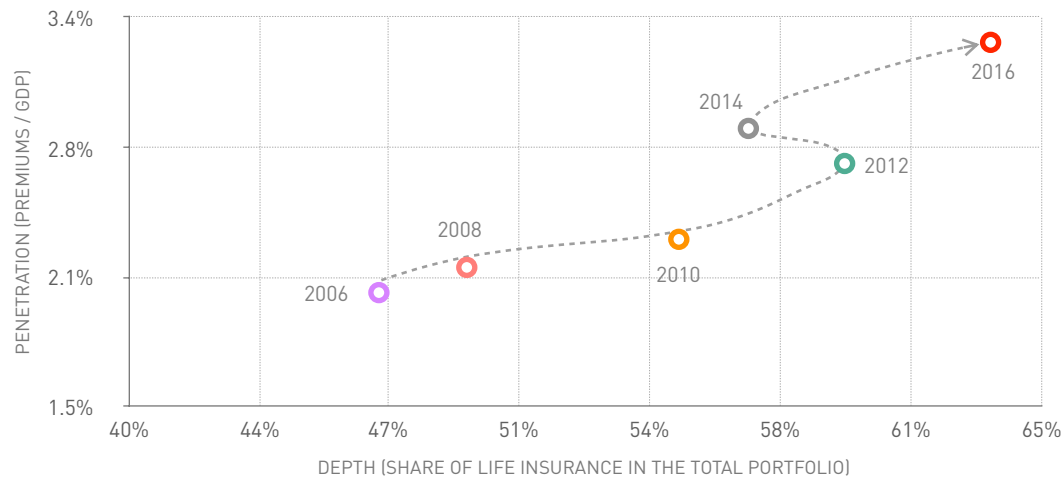


Source: MAPFRE Economic Research

Accordingly, the potential insurance market in Brazil at the end of 2016 (sum of actual market and IPG) was estimated at 497.9 billion reais, representing 2.4 times the total insurance market in Brazil that year.

Chart 3.2.3-p shows an estimate of the IPG as a multiple of the actual market. In the case of the Brazilian insurance market the insurance gap multiple has declined steadily over the period analyzed, especially in the Life insurance segment. During this time the IPG fell from 3.1 to 1.4 times the actual market, with the multiple for the Life market falling from 4.1 to 1.2 and from 2.1 to 1.9 in the case of Non-Life insurance.

Lastly, Chart 3.2.3-q provides a summary of the assessment undertaken regarding the capacity of the Brazilian insurance market to close the IPG. This is based on a comparative analysis of the growth rates observed over the last ten years and the growth rates that would be required to close the gap established in 2016 over the next ten years. Between 2006 and 2016 the Brazilian insurance market registered an average annual nominal growth of 15.3 percent, with an annual growth rate of 18.9 percent in Life insurance and 11 percent in the Non-Life insurance segment.

On the basis of the analysis summarized in

Chart 2.2.3-q, if the same rate of growth were to be sustained over the next ten years, the growth rate of the Brazilian market would only be sufficient to close the insurance gap in the Life segment, while a slight shortfall (0.2 percentage points) would have emerged in 2016 for the Non-Life segment. In general, the capacity of the Brazilian market to close the gap remains the same as in 2015.

**Market Development Index (MDI)**

Chart 3.2.3-r provides an estimate of the Market Development Index (MDI) for the Brazilian insurance industry. The MDI is used in this report as an indicator of general trends in the development and maturity of the insurance markets in the region.

In the case of the Brazilian insurance industry, the indicator clearly shows a positive trend over the period 2006-16, above the average registered for all insurance industries in the region during that time, with positive annual growth every year and reaching the highest value of the series in 2016.

**Chart 3.2.3-o**
**Brazil: Insurance Protection Gap and potential market, 2006-16**
(billions of reais)



Source: MAPFRE Economic Research

**Chart 3.2.3-p**
**Brazil: the IPG as a multiple of the actual market, 2006-16**
(number of times actual insurance market)



Source: MAPFRE Economic Research
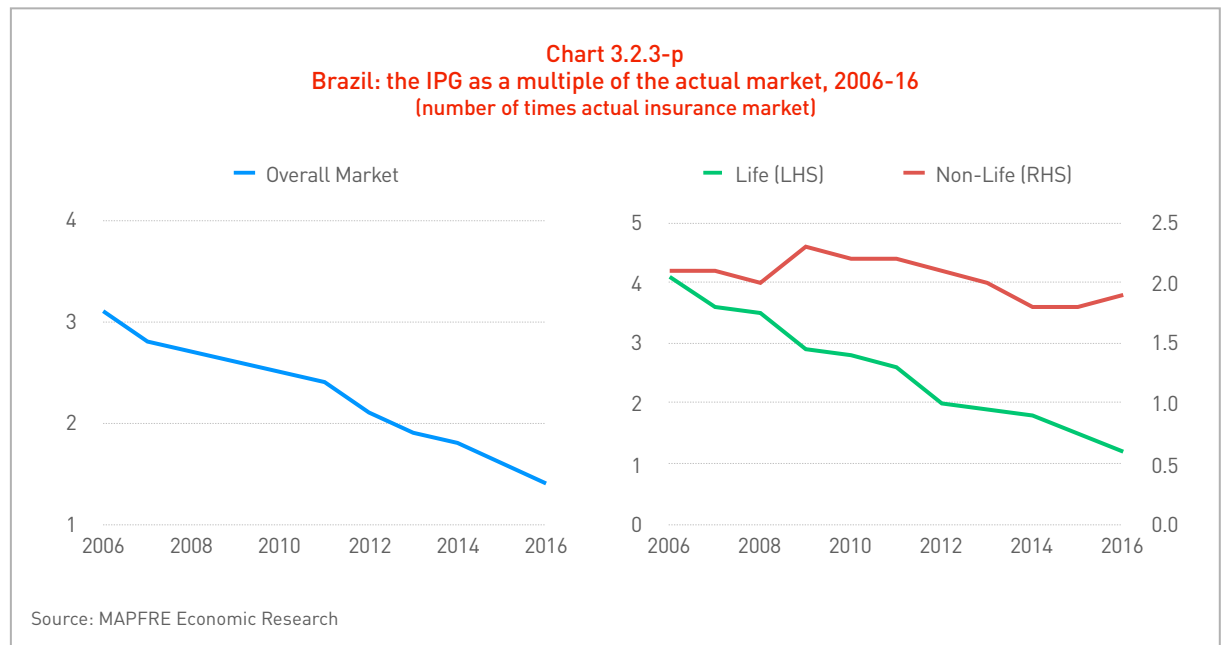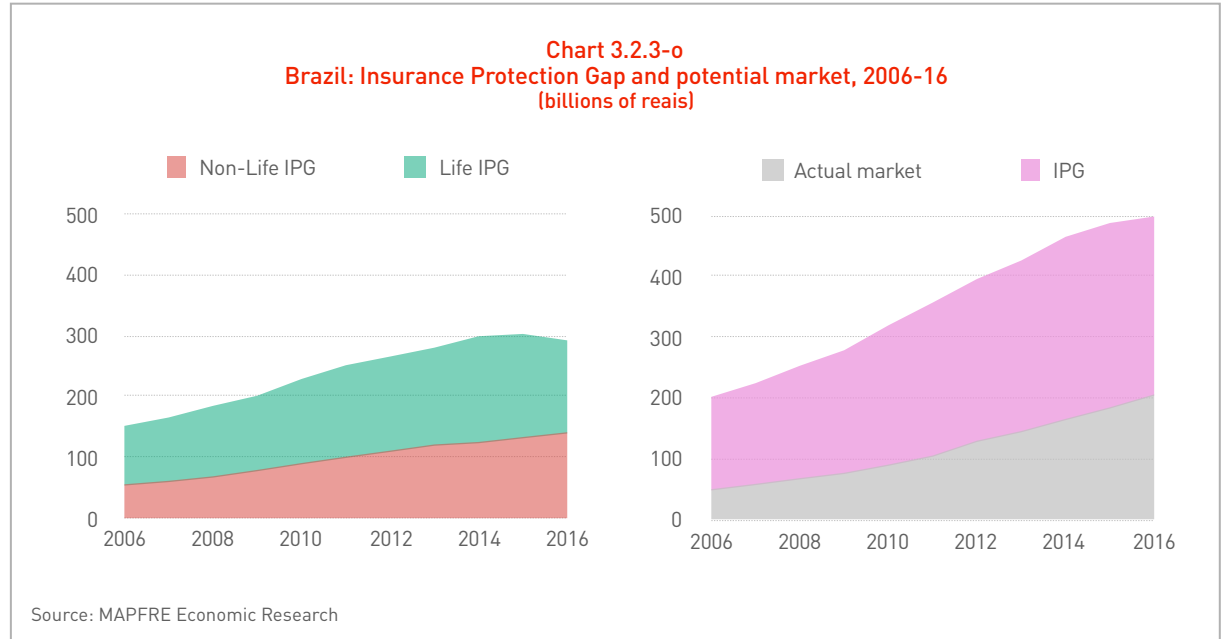
## Insurance market rankings

### Overall ranking

The Brazilian insurance industry comprised 116 insurance companies in 2016. Levels of market concentration have grown steadily over the last ten years.

Although the Herfindahl index remained below the theoretical threshold that indicates a moderate level of concentration, it sustained an upward trend throughout the period. The same is true of the CR5 index, at least in the case of the Life insurance segment of the market, which followed a similar trend. However, this was not the case with Non-Life insurance (see Chart 3.2.3-s).

With regard to the overall ranking of the groups in the Brazilian market, Brasilprev took over the top slot in 2016 with a 21.7 percent share of premiums, pushing Bradesco down to second

Chart 3.2.3-q
Brazil: capacity to close IPG, 2006-16
(average annual growth rate, percent; sufficiency or insufficiency, percentage points)
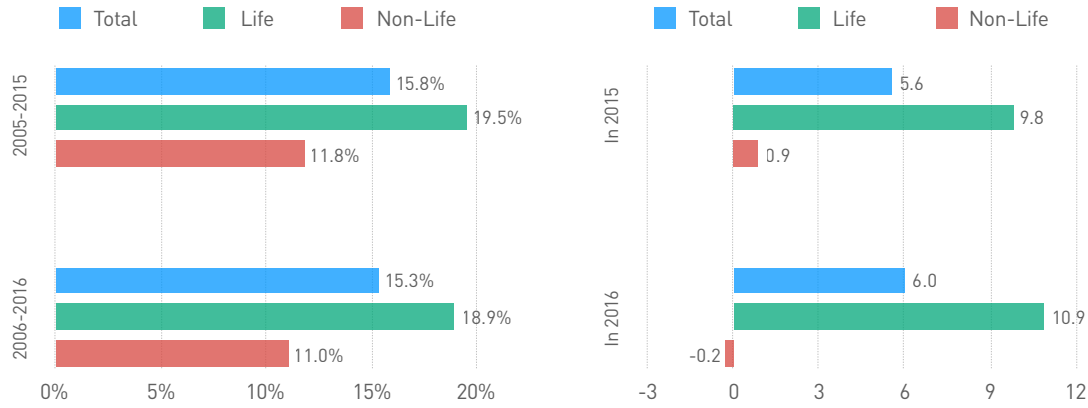


Source: MAPFRE Economic Research

Chart 3.2.3-r
Brazil: Market Development Index (MDI), 2005-16
(index 2005=100; annual change)
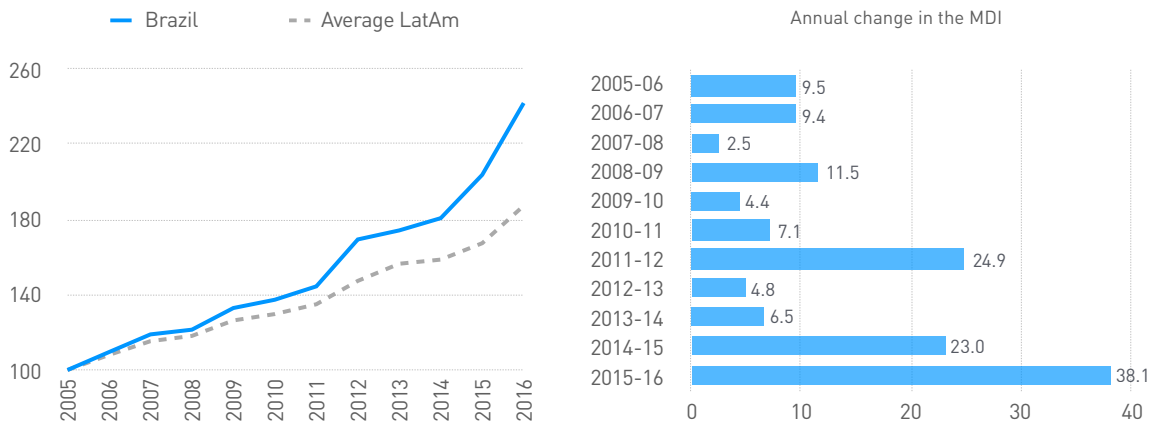


Source: MAPFRE Economic Research

place with a share of 18.9 percent. Itaú and MAPFRE occupy the third and fourth place, respectively. There is only one change in the other positions compared with the previous year: Zurich now occupies the fifth position while Porto Itaú has fallen to the sixth position (see Chart 3.2.3-t).

**Non-Life Ranking**

In the Non-Life ranking of groups, Porto Itaú occupies the top position with 15.2 percent of all premiums, followed by MAPFRE with a share of 14 percent and Bradesco with 8.9 percent. Zurich and SulAmérica have swapped places, with the former climbing to the fourth place and the latter falling to the fifth. The majority of the

Chart 3.2.3-s
Brazil: insurance industry concentration, 2006-16
(Herfindahl index; CR5 index, percent)
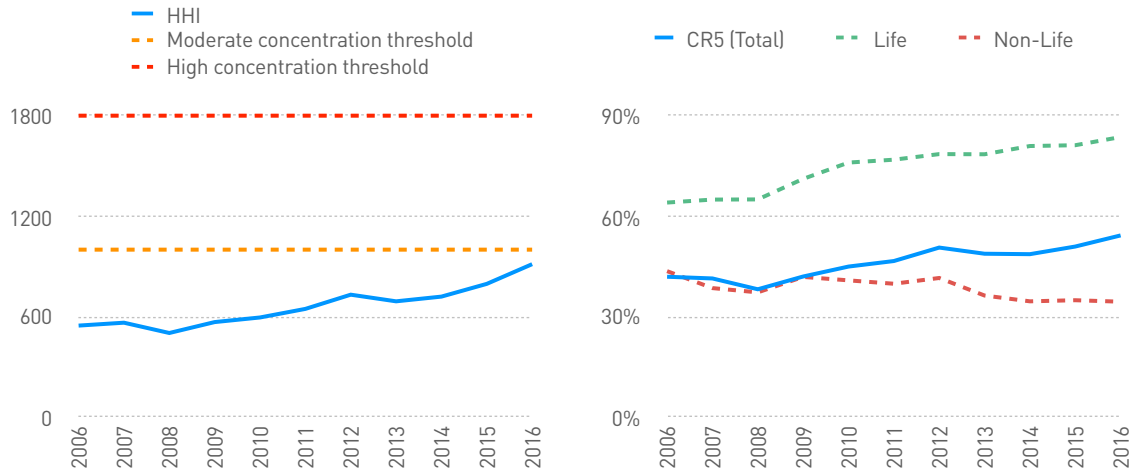
Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)

groups in the rest of the ranking occupy similar positions to 2015. Allianz has joined the ranking in position as 9th in line while Marítima has won the tenth position in place of Chubb and Liberty (see Chart 3.2.3-u).

**Life Ranking**

Lastly, Brasilprev has consolidated its leadership of the ranking of Life groups with a market share of 34.1 percent. It is followed by Bradesco with 24.6 percent and Itaú with a share of 15.5 percent. These three groups account for 74.3 percent of all premiums. The following positions in the ranking up to the ninth place remain unchanged with respect to 2015, while Safra Vida e Previdencia now occupies the tenth position in place of Cardif (see Chart 3.2.3-u).

**Key regulatory aspects**

The National Board of Private Insurance (CNSP) approved Resolution 433/2016 establishing the rules and criteria for the structure, marketing and applicability of Universal Life Insurance. This product is a major innovation in Life insurance in Brazil, though it already exists in other countries where consumers can choose from different versions.

CNSP Resolution 336 of March 2016 was also approved to regulate the popular Motor insurance which authorizes the utilization of used parts from vehicle dismantlers to repair damaged cars, instead of original parts as contemplated in Brazilian law to date.

CNSP Resolution 342/2016 was published, explaining the criteria for the prices of the Mandatory Insurance for Personal Injuries caused by land vehicles, or their cargo, to people transported or not (DPVAT insurance, created by Law No. 6,194/74). In Category 1, which refers to private vehicles, the 2017 premium was set at 63.69 reais, representing a 37 percent decrease on the previous price. In 2016 the Chamber of Deputies created the Parliamentary Inquiry Commission (CPI) which dealt specifically with this mandatory insurance.

To complete the regulation published in 2016, the CNSP approved the recommendation submitted by the Private Insurance Superintendence (SUSEP) to amend the premium prices of the Mandatory Insurance for Personal Injuries caused by land vehicles, or

### Chart 3.2.3-t
### Brazil: overall ranking, 2015-16
### (market shares, percent)
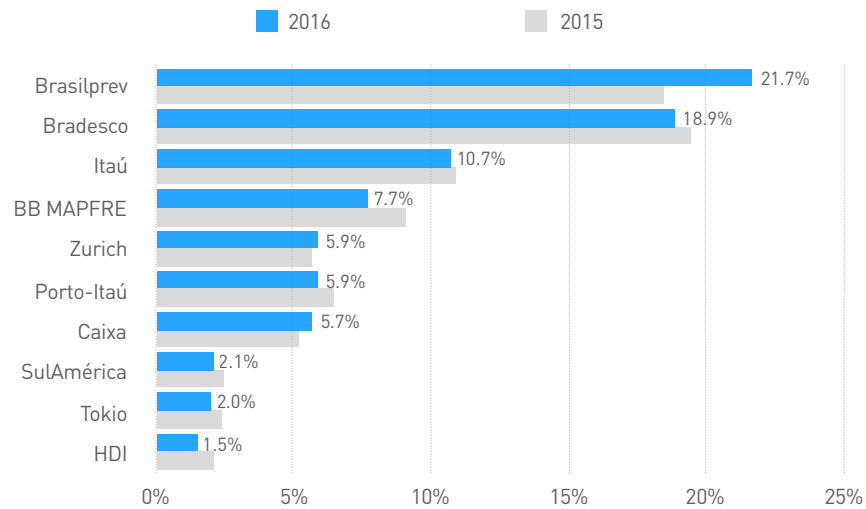


Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)

### Chart 3.2.3-u
### Brazil: Life and Non-Life ranking, 2015-16
### (market shares, percent)
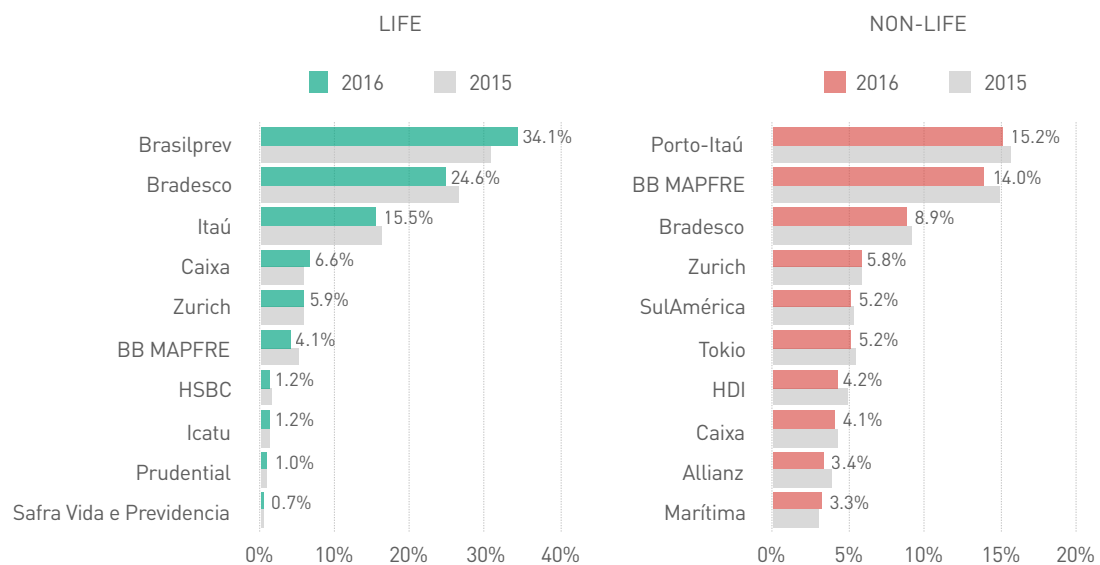


Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)

their cargo, to people transported or not (DPVAT insurance) for 2017.

The values of the premiums for the DPVAT product (categories 1, 2, 3, 4, 9 and 10) had remained unchanged since they were first fixed in 2013, and the decision adopted by the Board reduces them linearly for all categories, by 37 percent for 2017.

On the regulation issued in 2017, SUSEP Circular 545/17 published in January of this year sets out additional criteria for the preferential offer of risks to local reinsurers, in accordance with the stipulations of CNSP Resolution 168/2007. These criteria establish the deadlines for this purpose and set as 40 percent the minimum risk transferred to local reinsurers, either to one entity in particular or several entities.

Meanwhile, SUSEP Circular 547/17 published in March 2017 sets out the Commitment Agreement for Changes in Conduct (TCAC), in the context of activities related to the insurance, capital, private pension, reinsurance and insurance brokerage markets, repealing SUSEP Circular 450/2012.

Lastly, CNP Resolution 345/17 of May 2017 approved the coverages that may be offered to closed supplementary pension entities by authorized insurance companies, aimed at covering the risks related to the benefit plans administered by these entities.

### 3.2.4. Ecuador

### Macroeconomic environment

The Ecuadorian economy shrank by 2.2 percent in real terms in 2016, compared with the weak 0.2 percent growth of the previous year, due to the fall in oil prices for the second year in a row and the weakness of internal demand reflected in both investment and household consumption.

The components of the aggregate demand that experienced the sharpest fall were the gross fixed capital formation, as a result of the drop in public investment, and household consumption, due to poor performance by the labor market. Meanwhile, the growth of net exports motivated by a contraction in imports and a slight expansion of exports prevented a sharper GDP decline. The stand-out aspect of the supply side was the growth of the agriculture and fishing industries. Other lines of activity that experienced positive growth were oil refining, following renovation of the Esmeraldas refinery, and the supply of electricity and water following the rollout of the Coca Codo Sinclair and Sopladora hydro-electric power plants. By contrast, construction, trade and manufacturing all experienced a sharp decline.

The average inflation rate fell by more than two percentage points to 1.7 percent, while unemployment grew to 5.2 percent, compared with 4.8 percent the previous year (see Chart 3.2.4-a).

The year 2016 saw the value of both exports and imports fall. A greater relative fall in imports than exports led to a positive balance of 1.1 percent in the balance of payments current account, compared with the deficit of 2.2 percent registered the previous year.

In relation to the growth forecasts for 2017, ECLAC predicts that the Ecuadorian economy will grow by 0.3 percent, while the IMF projects a decline of 1.6 percent for next year.

Chart 3.2.4-a
Ecuador: evolution of economic growth and inflation, 2006-16
(GDP in local currency, billions of dollars; real growth rate, percent; annual inflation rate, percent)
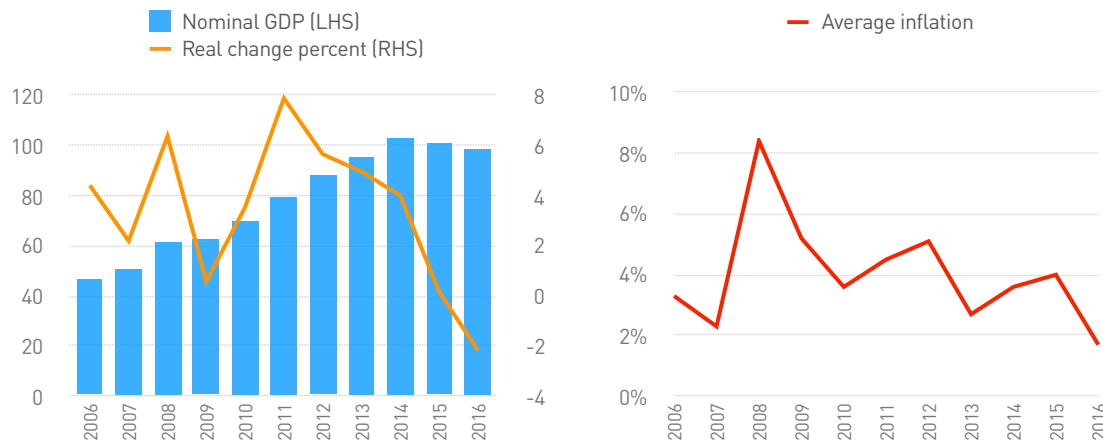
Source: MAPFRE Economic Research (based on IMF data)

## Insurance Market

### Growth

For the second year in a row, the premium volume of the Ecuadorian insurance market fell. The fall in 2016 amounted to -2.8 percent in nominal terms and -4.5 percent in real terms, ending the year at 1.618 billion dollars. Life premiums experienced a significant upturn and reached 347 million dollars (17.6 percent nominal and 15.6 percent real growth), and it was therefore the decline in the Non-Life business, whose premiums reached 1.271 billion dollars (down by a nominal 7.2 percent and a real 8.8 percent in relation to 2015), that led to the contraction in total premiums (see Table 3.2.4 and Chart 3.2.4-b).

As in 2015, the boost provided by the Life business in 2016 came from group Life insurance, which grew by a nominal 19.5 percent, while individual Life insurance, with less weight in the risk portfolio of the Ecuadorian insurance industry, fell by 0.3 percent.

In relation to the Non-Life market segment, most of the business lines experienced declines, the only exceptions being Fire and Allied Lines (11.6 percent) and Third-Party Liability (3.5 percent). The Automobile line, which accounts for 30 percent of all Non-Life premiums, experienced one of the sharpest declines (-12.6 percent).

Accordingly, of the total decline of -2.8 percent registered in 2016, the Life insurance segment made a positive contribution of 3.1 percentage points but this proved insufficient to offset the negative contribution of -5.9 percentage points from the Non-Life insurance segment (see Chart 3.2.4-c).

In April 2016 the country experienced one of the worst earthquakes of recent decades, leading to 671 fatalities and very significant material damage which, according to government figures, exceeded 3.3 billion dollars. With regard to the insurance coverage for these losses, according to the latest figures published by the Superintendence of Companies, Securities and Insurance, with information up to March 2017, a total of 40,635 claims had been submitted, insurance companies had paid out more than 480 million dollars, and reserves of 216.6 million dollars had been set aside.

Table 3.2.4
Ecuador: premium volume[1] by line of business (lob), 2016

| Line of business | Millions of dollars | Increase | |
|---|---|---|---|
| | | Nominal (percent) | Real (percent) |
| **Total** | **1,618** | **-2.8** | **-4.5** |
| **Life** | **347** | **17.6** | **15.6** |
| Individual Life | 27 | -0.3 | -2.0 |
| Group Life | 320 | 19.5 | 17.4 |
| **Non-Life** | **1,271** | **-7.2** | **-8.8** |
| Automobiles | 383 | -12.6 | -14.1 |
| Other Damage | 233 | -11.4 | -12.9 |
| Fire, Theft and Allied Lines | 197 | 11.6 | 9.7 |
| Transport | 138 | -7.4 | -9.0 |
| Personal Accidents | 88 | -15.5 | -16.9 |
| Surety and Credit | 105 | -7.4 | -9.0 |
| Health | 65 | -0.5 | -2.2 |
| Third-party liability | 62 | 3.5 | 1.7 |

Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)

1/ Net written premium (written premiums from direct insurance taken out, less settlements and redemptions, plus the premiums from ceded reinsurance)

Chart 3.2.4-b
Ecuador: growth developments in the insurance market, 2006-16
(premiums, millions of dollars, nominal annual growth rates, percent)
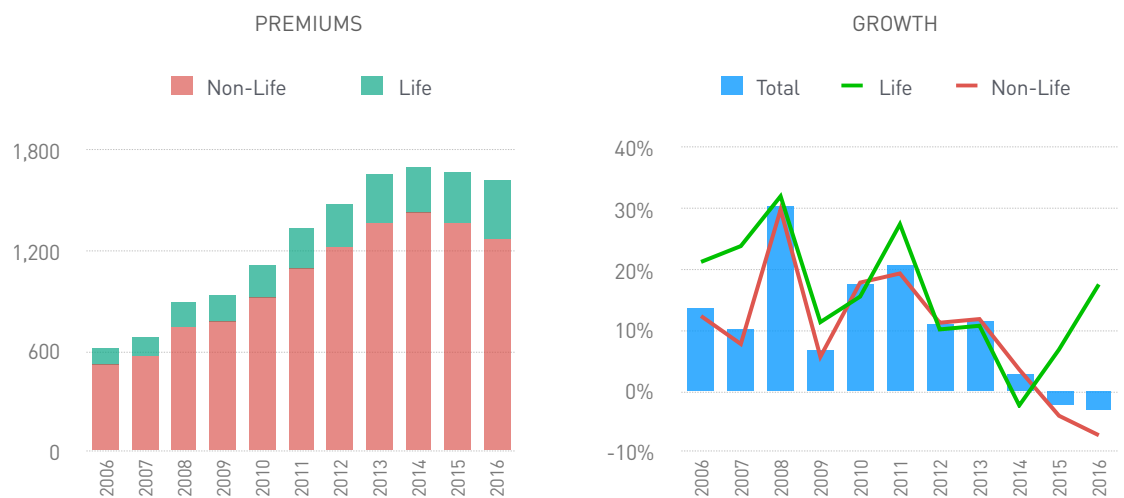


Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)

**Balance sheet and equity**

Chart 3.2.4-d summarizes the evolution of the aggregate balance sheet at sector level for the Ecuadorian insurance industry over the period 2006-16. Total assets reached 2.3206 billion dollars in 2016, while equity amounted to 617 million dollars, up 8.4 percent on the level registered the previous year.

Meanwhile, the aggregate capital levels for the Ecuadorian insurance industry (measured against total assets) climbed to more than 30 percent over the period 2005-11 and then entered a decline, reaching their lowest level (25.6 percent) in 2013. They made a partial recovery after that to reach 28.2 percent of total assets in 2015 before falling again to 26.6 percent of assets by the end of 2016.

**Investment**

Chart 3.2.4-e shows the evolution of the aggregate investment portfolio at a sector level for insurers in Ecuador over the period 2010-16, while Charts 3.2.4-f and 3.2.4-g analyze the evolution of the relative composition of the portfolio.

As this information clearly shows, investments reached 952 million dollars in 2016, with a



Chart 3.2.4-c
Ecuador: contribution to
insurance market growth, 2006-16
(percentage points, ppts)
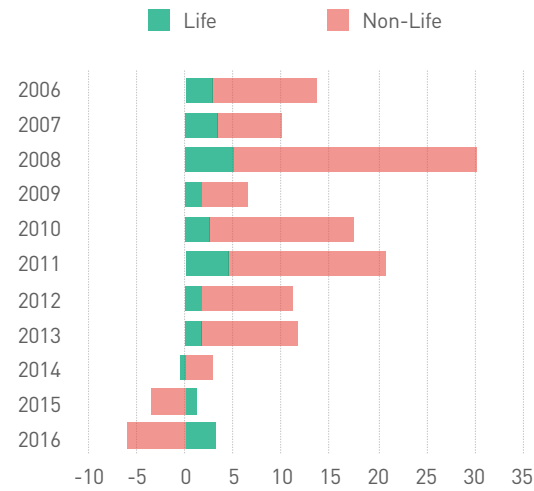
Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)

reduction in investments in fixed income instruments (58.4 percent compared with 67.7 percent in 2015) in favor of equity instruments, which doubled their weight (20.9 percent of total investments compared with 10.5 percent in 2015). Since 2012 sovereign fixed income has gradually increased its weight in the overall fixed income portfolio, rising to 21.7 percent in 2016



Chart 3.2.4-d
Ecuador: evolution of insurance industry's aggregate balance sheet, 2006-16
(amounts in local currency, change in equity, percentage points)
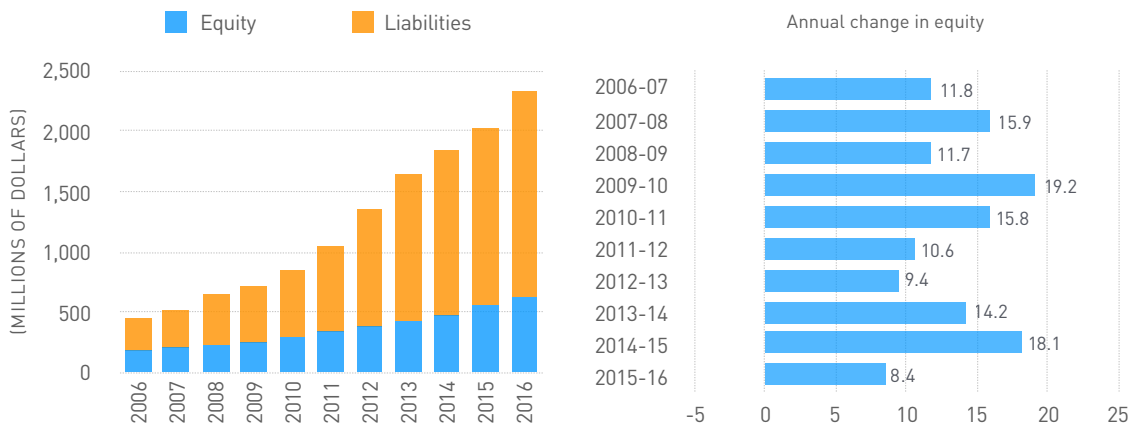
Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)

income portfolio, rising to 21.7 percent in 2016 (up 3.0 percentage points on 2015).

**Technical provisions**

Charts 3.2.4-h and 3.2.4-j show the evolution and composition relative to the technical provisions in the Ecuadorian insurance industry over the period 2006-16.

Technical provisions experienced a sharp increase in 2016, reaching 895.25 million dollars. Of the total, 4.9 percent related to Life insurance provisions, 22.6 percent to the provision for unearned premiums and unexpired risks in Non-Life insurance, 68.6 percent to the provision for outstanding claims, 0,3 percent to catastrophic risks, and the remaining 3.6 percent to other technical provisions.

**Chart 3.2.4-e
Ecuador: Insurance market
technical provisions, 2006-16
(millions of dollars)**

Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)

**Chart 3.2.4-f
Ecuador: structure of
investment, 2006-16
(%)**

Fixed income    Equities    Property
Other financial investment    Cash

Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)

**Chart 3.2.4-g
Ecuador: structure
of investment, 2016
(%)**

Fixed income
Equities
Property
Cash
Other

2.7%
5.2%
12.8%
58.4%
20.9%

Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)

There was a significant increase in the volume of technical provisions for outstanding claims (66.4 percent), clearly related to the earthquake in April 2016.

The change observed in 2012 is basically explained by an accounting effect since Resolution SBS-2012-0068 of February 7, 2012 amended the presentation format of the provision for outstanding claims. Until 2011 this was reported net of ceded reinsurance but it is now presented as a gross amount, including the credit for the part corresponding to the reinsurer in the assets. The other important change between 2015 and 2016 is explained by the aforementioned relative increase in the provision for outstanding claims as a result of the earthquake.

**Technical performance**

Chart 3.2.4-k shows the evolution in the Ecuadorian insurance industry's technical

**Chart 3.2.4-h
Ecuador: insurance market
technical provisions, 2006-16
(millions of dollars)**



Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)

**Chart 3.2.4-i
Ecuador: structure of
technical provisions, 2006-16
(%)**
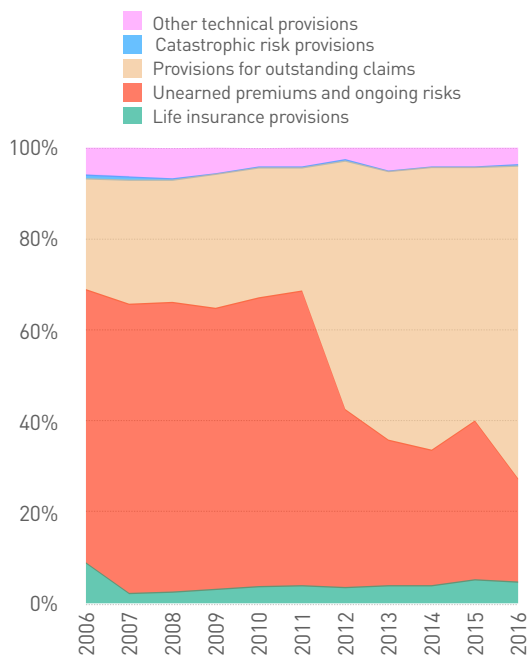


Other technical provisions
Catastrophic risk provisions
Provisions for outstanding claims
Unearned premiums and ongoing risks
Life insurance provisions

Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)

**Chart 3.2.4-j
Ecuador: structure
of technical provisions, 2016
(%)**
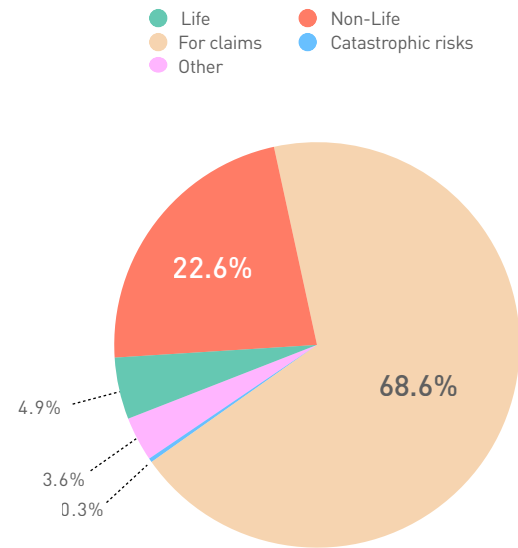


Life
For claims
Other
Non-Life
Catastrophic risks

22.6%
68.6%
4.9%
3.6%
0.3%

Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)

performance over 2006-16. As illustrated, the combined ratio experienced a slight decline of 1.6 percentage points in 2016, ending the year at 74.9 percent. The claims ratio continued its downward trend of the last ten years, in spite of the payment of compensation associated with the earthquake that occurred in April.

Reinsurance played a significant role in containing the claims ratio for the Ecuadorian insurance industry, with recoveries from ceded reinsurance registering an increase of 75 percent in relation to the previous year. The expense ratio also experienced a slight decline (-0.3 percentage points), falling to 29.9 percent.

The Non-Life combined ratio (Chart 3.2.4-l) also fell in 2016, ending the year at 77.8 percent, three percentage points below the 2015 figure. As explained above, reinsurance played a significant role in the sharp decline of the claims ratio (-2.8 percentage points), even in spite of the



**Chart 3.2.4-k**
**Ecuador: evolution of market technical performance, 2006-16**
**(total combined ratio, percent; annual change in combined ratio, percentage points)**

Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)



**Chart 3.2.4-l**
**Ecuador: evolution of the Non-Life market's technical performance, 2006-16**
**(total combined ratio, percent; annual change in combined ratio, percentage points)**

Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)

ratio (-2.8 percentage points), even in spite of the earthquake in April 2016.

The technical result indicated above does not include other revenues and non-operational expenses related on the one hand to other business conducted by insurance companies in Ecuador and on the other to certain administration costs which in this country are not calculated as such for the purposes of the expense ratio.

**Results and profitability**

The Ecuadorian insurance industry posted a positive aggregate technical result in 2016 of 249.5 million dollars, up 20 percent on the previous year, with a financial result of 40 million dollars, 2.7 percent below the figure for 2015. Unlike 2015, when the net result for the insurance industry fell by 27.8 percent, 2016 saw an increase of 25.1 percent in the net result, which ended the year at 64 million dollars (see Chart 3.2.4-m).



Chart 3.2.4-m
Ecuador: evolution of results and profitability, 2006-16
(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)

Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)
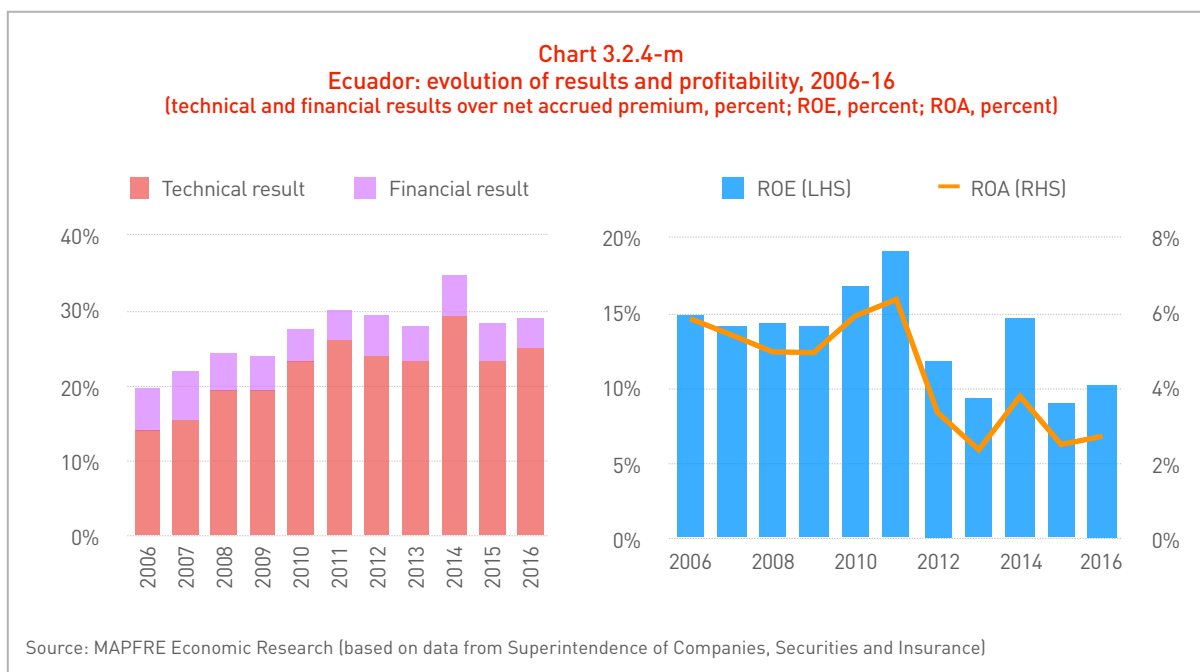
In terms of the profitability of the Ecuadorian insurance industry, the return on equity (ROE) climbed 1.4 percentage points in 2016, up to 10.31 percent, while the return on assets (ROA) ended the year at 2.7 percent, an increase of 0.2 percentage points on 2015.

**Insurance penetration, densityand depth**

Chart 3.2.4-n shows the most relevant structural trends in the development of the Ecuadorian insurance industry over the period 2006-16.

The penetration index (premiums/GDP) reached 1.7 percent in 2016, with no changes since 2011 and only 0.4 percentage points higher than the

2006 figure. Penetration of the Ecuadorian market grew steadily up to 2013, in line with the average trend observed for the Latin American insurance market as a whole during that period, although it remains below the absolute average values for the region. Thereafter, the indicator entered a slight downward trend.

A similar situation has occurred with the density of insurance in Ecuador. The indicator (premiums per capita) amounted to 98.8 dollars in 2016, representing a decline of 4.2 percent on the level reached in 2015 (103.1 dollars). The density of insurance in Ecuador grew steadily up to 2014 and then fell for two years in a row, reflecting the decline in premiums as a result of

**Chart 3.2.4-n**
**Ecuador: evolution of penetration, density and depth, 2006-16**
(premiums/GDP, percent; premiums per capita, dollars; Life insurance premiums / total premiums, percent, index 2006=100)



PENETRATION

INDEX (2006=100)

DENSITY

INDEX (2006=100)

DEPTH

INDEX (2006=100)
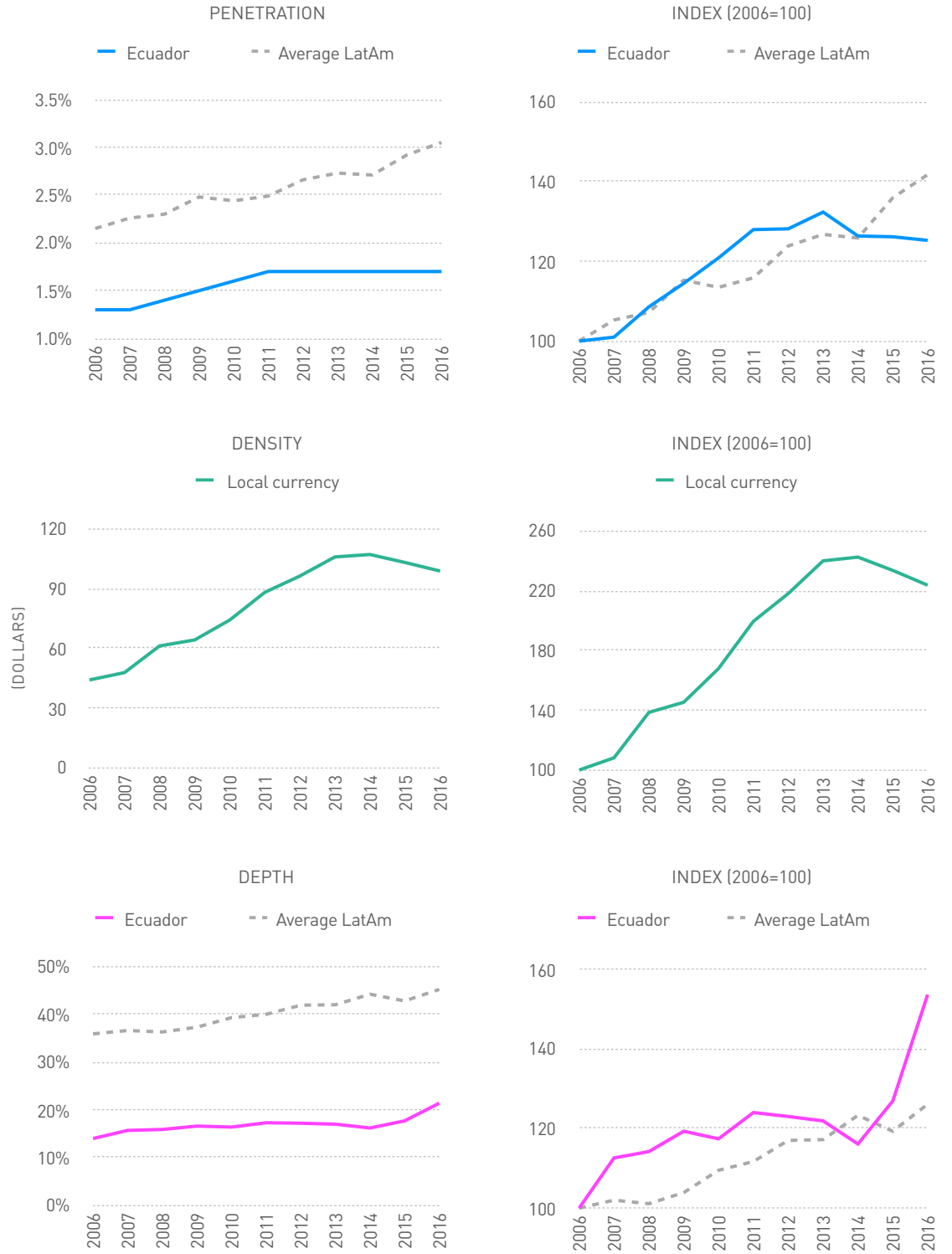
Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)

the country's general economic situation (see Table 3.2.4 and Chart 3.2.4-a).

With regard to the depth of the Ecuadorian market (measured as Life insurance premiums versus total premiums), the index reached 21.4 percent in 2016, which was 3.7 percentage points higher than in 2015 and 7.5 percentage points higher than the value reached in 2006. The indicator also followed a slight upward trend over the period but is still well below the absolute values of the average indicator across Latin American countries.

Chart 3.2.4-o shows the performance of the Ecuadorian insurance market based on a dispersion analysis which takes account of the overall effect of the penetration and depth levels. As shown, between 2006 and 2012 the market developed in a balanced and positive manner. The period 2012-14 saw a contraction in development and then the market experienced a new upturn, but only because of the increases in depth. The quantitative dimension (penetration) stagnated.

**Estimate of the Insurance Protection Gap**

Chart 3.2.4-p provides an estimate of the IPG for the Ecuadorian insurance market between 2006

and 2016. As shown, the insurance gap amounted to 6.168 billion dollars in 2016, which represents 3.8 times the actual insurance market in Ecuador at the end of the year.

As is the case for most Latin American insurance markets, the structure and evolution of the IPG over the period 2006-16 is conditioned by the contribution from Life insurance. Thus, at the end of 2016, 65.8 percent of the IPG related to Life insurance (4.059 billion dollars), which is 1.9 percentage points below the share for this segment in 2006. The remaining 34.2 percent of the gap is explained by the contribution from Non-Life insurance (2.109 billion dollars).

The potential insurance market at the end of 2016 (measured as the sum of the actual market and the insurance gap) was estimated at 7.786 billion dollars, representing 5 times the total insurance market in Ecuador that year.

Chart 3.2.4-q provides an estimate of the IPG as a multiple of the actual insurance market in Ecuador over the period 2006-16. The gap for the Life insurance segment shows a downward trend throughout the entire period analyzed (falling from 25.9 to 11.7 times), while in the case of the Non-Life insurance segment it fell steadily until 2011 and then stabilized, finally



Chart 3.2.4-o
Ecuador: evolution of insurance market, 2006-16
(penetration vs depth)
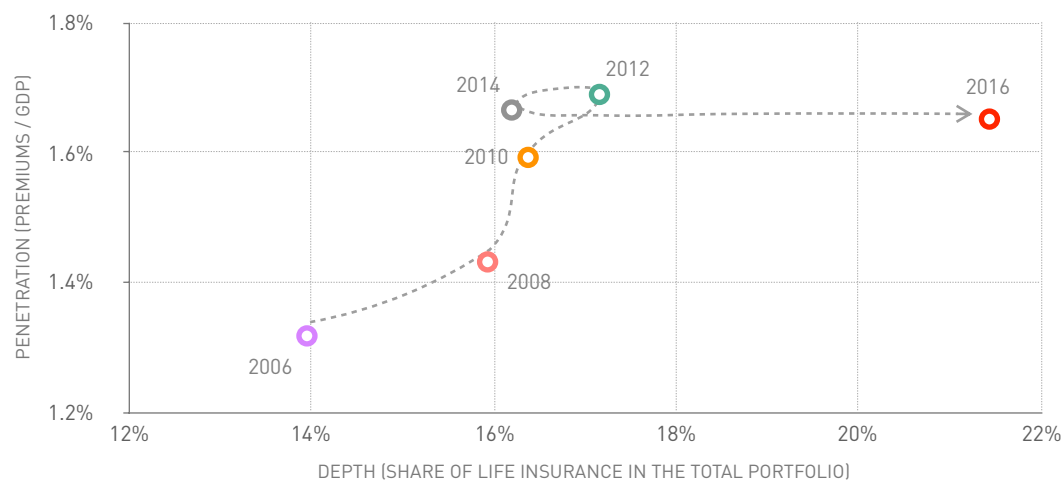
Source: MAPFRE Economic Research

**Chart 3.2.4-p**
**Ecuador: Insurance Protection Gap and potential market, 2006-16**
**(millions of dollars)**
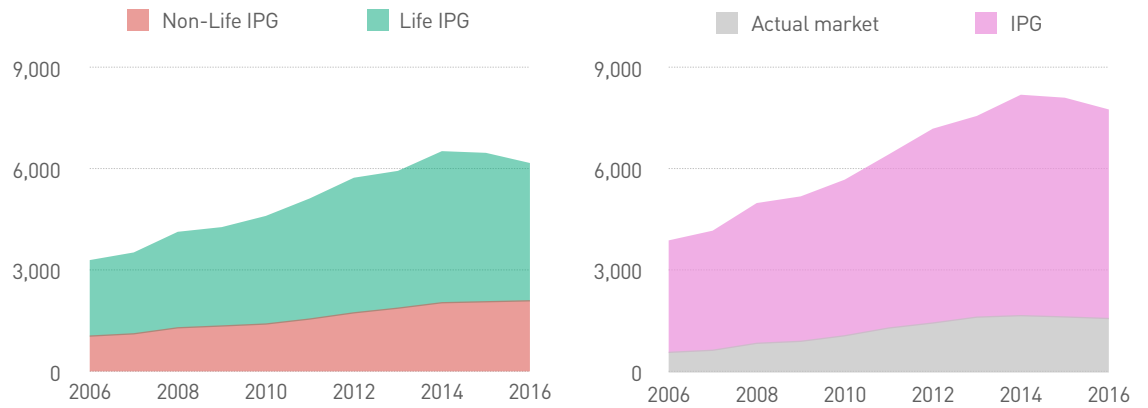
Source: MAPFRE Economic Research

steadily until 2011 and then stabilized, finally rising again in 2015 and ending at 1.7 in 2016.

Lastly, Chart 3.2.4-r provides a summary of the assessment regarding the capacity of the Ecuadorian insurance market to close the IPG based on a comparison of growth rates over the last ten years in relation to the growth rates that would be required to close the IPG established in 2016 over the next ten years. The Ecuadorian insurance market experienced an annual average growth rate of 10.1 percent. The Life

insurance segment grew by an annual average rate of 15 percent, while Non-Life insurance grew by an annual 9.1 percent.

On the basis of the above analysis, if the same rates of growth as those observed over the last ten years were maintained, market growth would still be insufficient to close the IPG, registering a shortfall of 6.9 percentage points. In the case of the gap in the Life segment, this shortfall would be 14 percentage points, compared with a shortfall of 1.1 percentage points in the Non-Life



**Chart 3.2.4-q**
**Ecuador: the IPG as a multiple of the actual market, 2006-16**
**(number of times actual insurance market)**
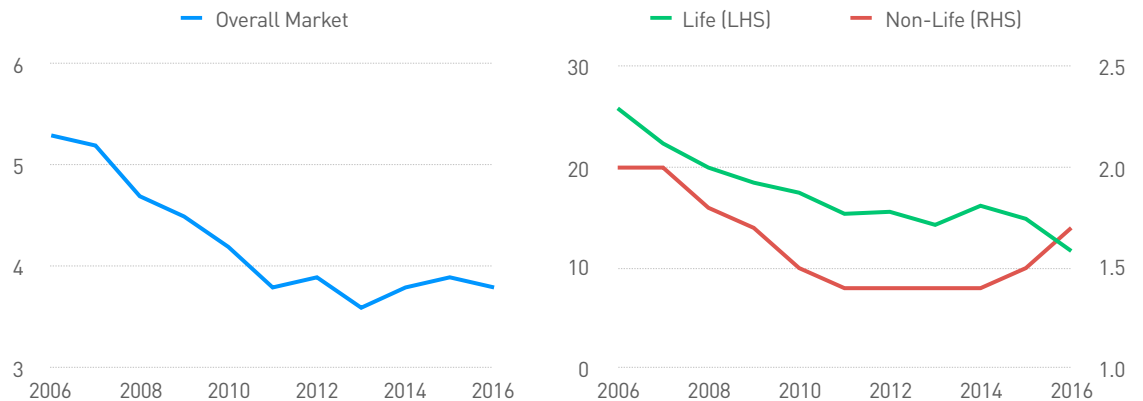
Source: MAPFRE Economic Research

**Chart 3.2.4-r**
**Ecuador: capacity to close IPG, 2006-16**
**(average annual growth rate, percent; sufficiency or insufficiency, percentage points)**
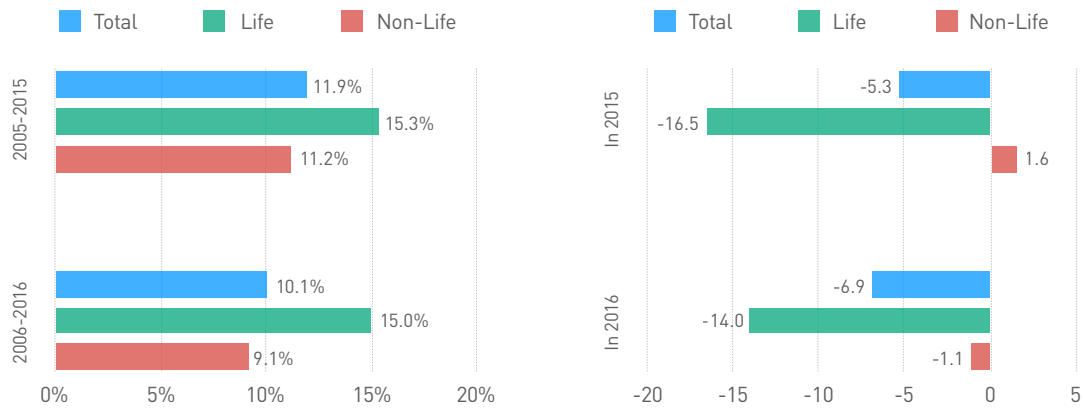


Source: MAPFRE Economic Research

segment. In fact, the shortfall in the case of Non-Life insurance has grown since the previous year.

**Market Development Index (MDI)**

Chart 3.2.4-s provides an estimate of the Market Development Index (MDI) for the Ecuadorian insurance industry. This indicator shows a positive trend up to 2013 in line with the average performance of all Latin American markets.

However, that years marks a reversal of the trend following the decline in the growth of premiums in this market (see Table 3.2.4-a), which in turn is explained by the unfavorable economic environment in Ecuador (see Chart 3.2.4-a).

**Chart 3.2.4-s**
**Ecuador: Market Development Index (MDI), 2005-16**
**(index 2005=100; annual change)**
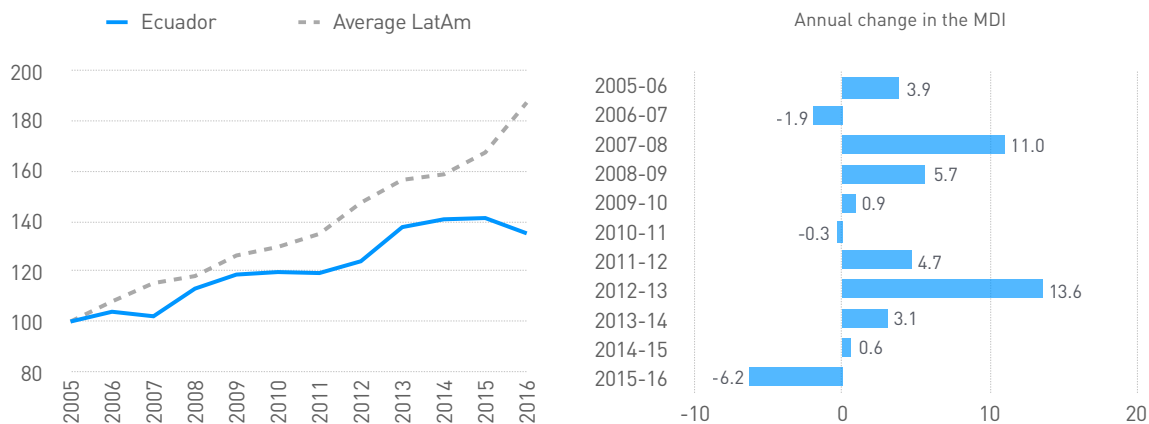


Source: MAPFRE Economic Research

## Insurance market rankings

### Overall ranking

The Ecuadorian insurance industry comprised 35 insurance companies in 2016. The top five (CR5) represent 47.1 percent of all premiums, registering a slight increase in concentration with respect to 2015. In the last ten years the Ecuadorian market has seen an upward trend in concentration levels, especially since 2011, as indicated by the Herfindhal and CR5 indexes shown in Chart 3.2.4-t. Even so, the Herfindahl index is still below the moderate concentration threshold.

The total ranking for 2016 is led by Sucre (with 15 percent of all premiums), followed by Equinoccial (9.6 percent) and Chubb Seguros (8.2 percent), which has climbed up one slot and pushed QBE Colonial down to fourth place. Pichincha and AIG Metropolitana repeat in fifth and sixth position, while Aseguradora del Sur has slipped to the eleventh slot and allowed all the following groups in the ranking to improve their position (see Chart 3.2.4-u).

### Non-Life Ranking

The top five slots in the 2016 Non-Life ranking are the same as in 2016—Sucre still leads with a share of 14.6 percent. Rocafuerte has overtaken Aseguradora del Sur, while MAPFRE Atlas has slipped from the eighth position in 2015 to the tenth, allowing Liberty and Ecuatoriano Suiza to move up a position (see Chart 3.2.4-v).

### Life Ranking

Lastly, the 2016 Life ranking is led by Pichincha with a market share of 26.9 percent, at a considerable distance from Equivida in the second slot with 17.4 percent of all Life premiums.

The top six slots remain the same as in 2015, with all the changes occurring from the seventh place: Pan América has moved up two slots, while BMI has moved down one and Colvida two. As a new entrant, Rocafuerte occupies the ninth position and Ecuatoriano Suiza has lost its place among the top ten Life insurers (see Chart 3.2.4-v).
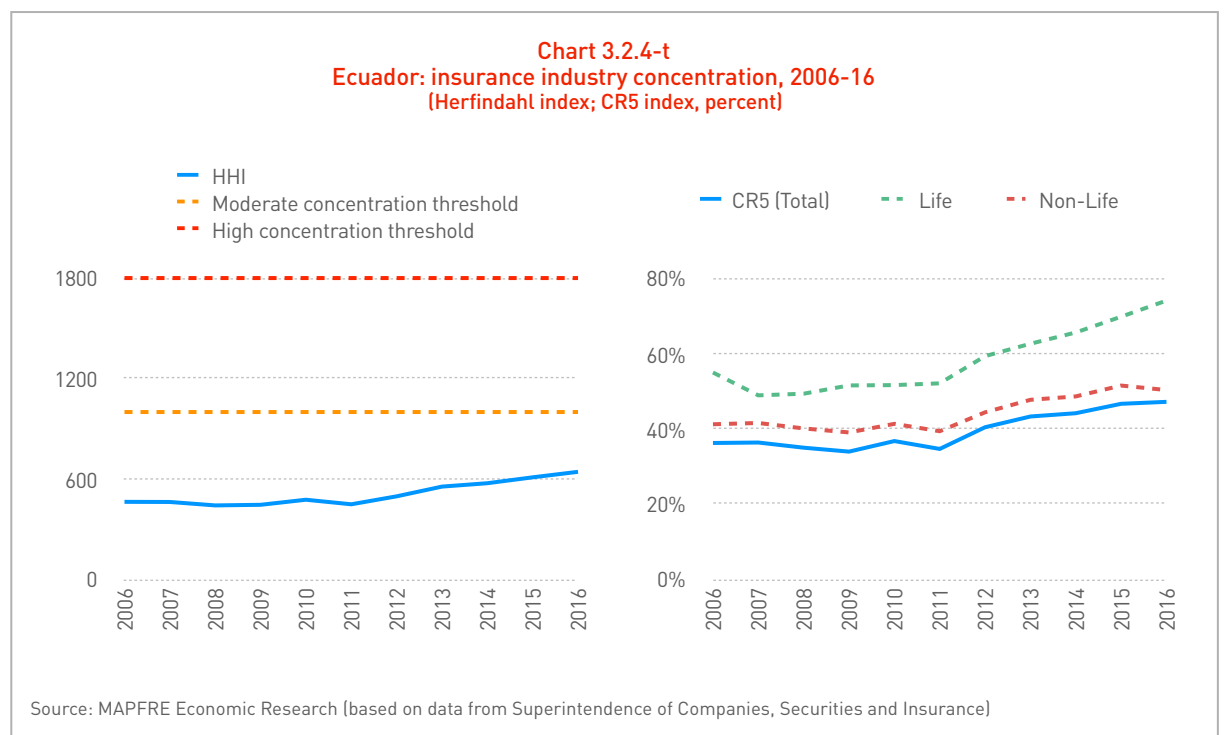
Chart 3.2.4-t
Ecuador: insurance industry concentration, 2006-16
(Herfindahl index; CR5 index, percent)



Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)

**Chart 3.2.4-u**
**Ecuador: overall ranking, 2015-16**
**(market shares, percent)**

■ 2016    ■ 2015

| | |
|---|---|
| Sucre | 15.0% |
| Equinoccial | 9.6% |
| Chubb | 8.2% |
| QBE | 7.6% |
| Pichincha | 6.8% |
| AIG | 5.6% |
| Equivida | 4.4% |
| Rocafuerte | 4.1% |
| Liberty | 4.0% |
| Ecuatoriano Suiza | 3.3% |

Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)

**Chart 3.2.4-v**
**Ecuador: Life and Non-Life ranking, 2015-16**
**(market shares, percent)**

LIFE

■ 2016    ■ 2015

| | |
|---|---|
| Pichincha | 26.9% |
| Equivida | 17.4% |
| Sucre | 16.2% |
| Chubb | 7.7% |
| AIG | 5.9% |
| Liberty | 5.2% |
| Panamerican | 3.3% |
| BMI | 3.0% |
| Rocafuerte | 2.2% |
| Colvida | 2.1% |

NON-LIFE

■ 2016    ■ 2015

| | |
|---|---|
| Sucre | 14.6% |
| Equinoccial | 12.1% |
| Chubb | 9.7% |
| QBE | 8.3% |
| AIG | 5.5% |
| Rocafuerte | 4.7% |
| Aseguradora del Sur | 4.0% |
| Liberty | 3.7% |
| Ecuatoriano Suiza | 3.6% |
| MAPFRE | 3.2% |

Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)
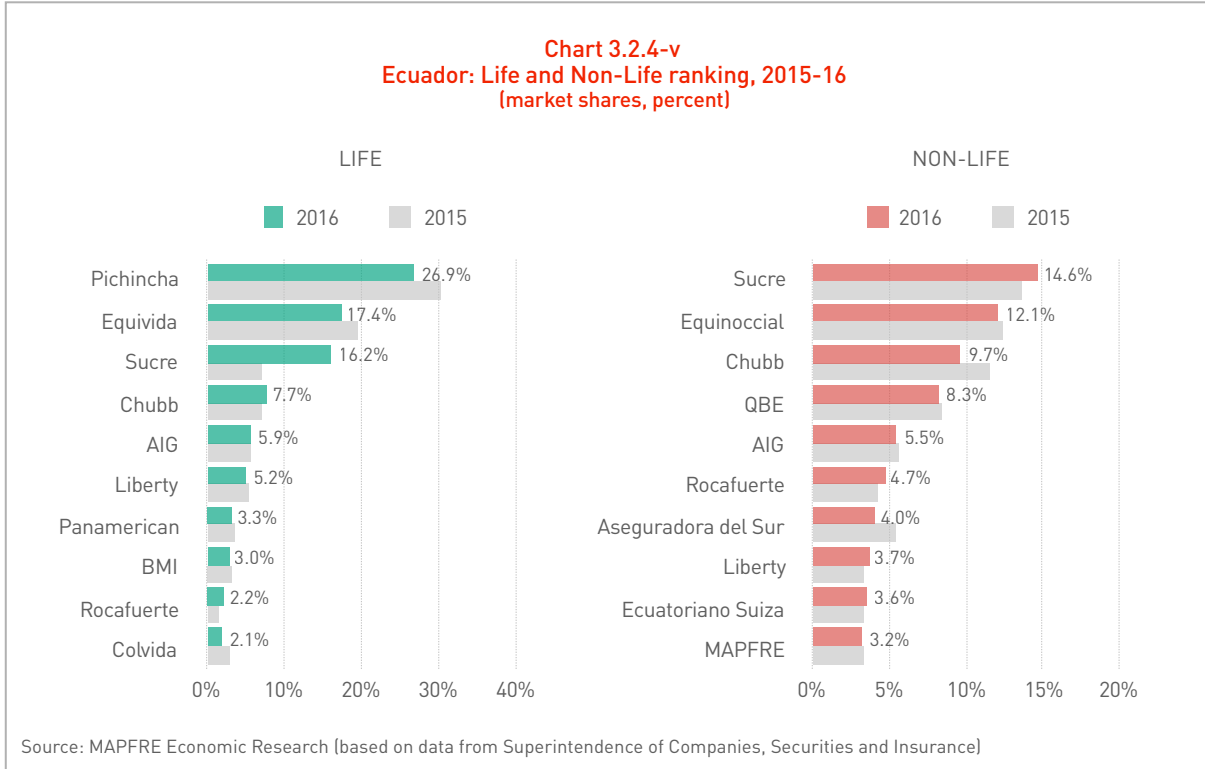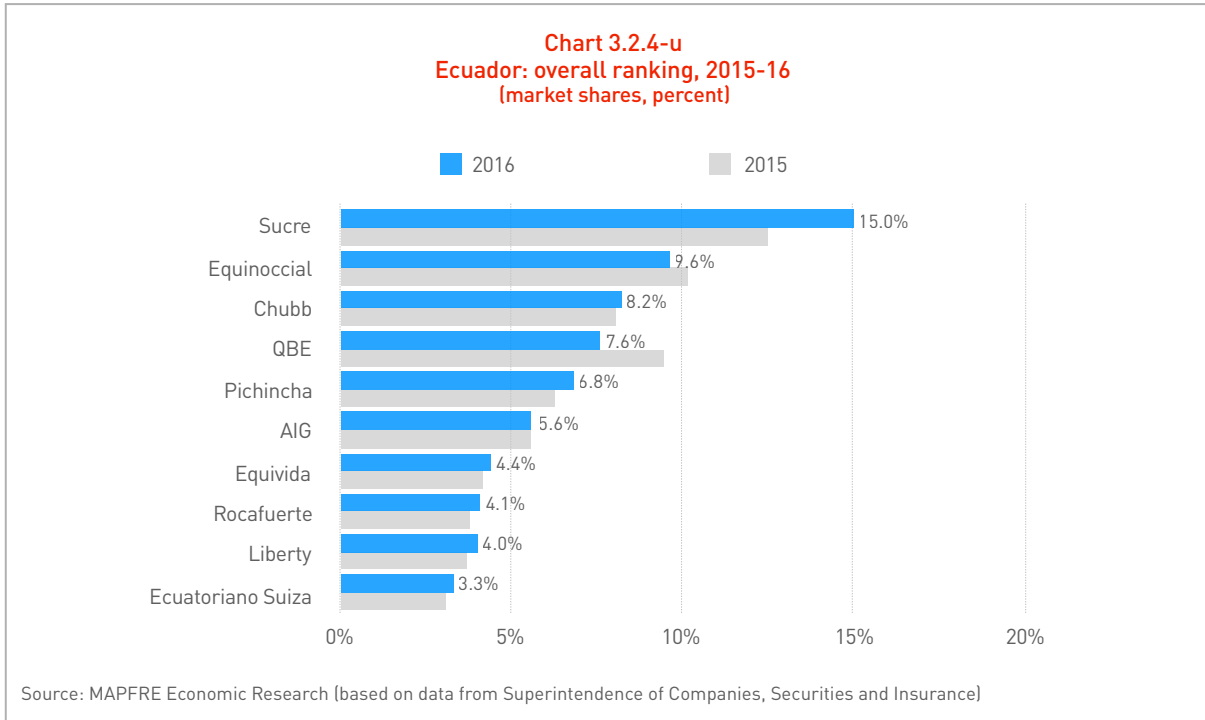
**Key regulatory aspects**

A new Private Insurance Fund has been operating in Ecuador since 2016 with the stated aim of guaranteeing and protecting citizens' funds in the event of the forced closure of a company belonging to the country's private insurance scheme. Resolution 174-2015-S sets out the General Rules governing the Private Insurance Fund and makes it compulsory for insurance companies to contribute 1.5 percent of the value of their net written premiums from direct insurance, composed of an annual fixed premium and a risk-adjusted variable premium in line with the proportions established by the Ecuadorian Deposit Insurance Corporation (COSEDE). Resolution DIR-2016 038 was published in December of that year, establishing the 0.7 percent as the fixed prorportion for 2016 and a variable proportion of between 0.1 percent and 0.8 percent based on the risk rating of each company.

Meanwhile, Resolution-2016-011 establishes the rules governing external audit functions. The document specifies the obligated parties as well as the requirements and procedures to be carried out. The companies subject to the control and oversight of the Companies, Securities and Insurance Superintendence that are obliged to present consolidated balance sheets are also obliged to submit their annual financial statements to an external auditor.

Resolution SCVS.INS.17.006 concerns the regulation of actuarial services for insurance, reinsurance and prepaid medical services companies and the rating of the natural or legal entities that provide them. It explains the rating, renewal and registration procedures, which must all be carried out through the Superintendence website, as well as the related requirements and prohibitions. The functions to be performed by the qualified people designated and the minimum contents to be covered by the actuarial analyses carried out are also specified in the document.

Lastly, Resolution SCVS.INS.17.005 and its subsequent amendment through Resolution SCVS.INS.17.007 establish the rules governing the structure of the technical notes justifying the prices of installments and premiums which accompany the contracts that prepaid medical services and insurance companies in the healthcare field draw up for their users. The resolutions set out minimum parameters for information, surcharges, installments and actuarial calculations as well as the period of their validity, which the Companies, Securities and Insurance Superintendence establishes at a maximum of two years.

### 3.2.5. Peru

**Macroeconomic environment**

The Peruvian economy grew 3.9 percent in 2016, in real terms, compared with 3.3 percent the previous year. This acceleration in growth was mainly driven by primary activities. The most buoyant sector was metal mining, and copper in particular, following the extension of the Cerro Verde mine, the rollout of operations at Las Bambas, and increased production at Antamina. Electricity, water and services also enjoyed buoyant activity. The worst-performing sector was fishing, mainly due to the late start of the season because of environmental conditions. The manufacturing sector also shrank, with the goods associated with primary fishing resources coming off the worst. Construction enjoyed very little buoyancy and the sector even shrank slightly. On the demand side, the growth in GDP primarily benefited from increased exports, as a result of the maturity of the mining projects underway, and the positive performance of public and, to a lesser extent, private consumption, which compensated for the fall in investment (see Chart 3.2.5-a).

Average inflation increased by 0.1 percentage points in 2016 to 3.6 percent, while the unemployment rate increased by 0.3 percentage points to 6.7 percent.

The current account deficit of the balance of payments fell 2.1 percentage points in 2016 to 2.8 percent of GDP. This was due to the fall in imports which, coupled with increased exports, principally mining, had a positive impact on the trade balance.

ECLAC sees the Peruvian economy expanding by 4 percent in 2017, driven by the increase in mining production and fishing, while the IMF puts the forecast five percentage points lower, at 3.5 percent.

Chart 3.2.5-a
Peru: evolution of economic growth and inflation, 2006-16
(GDP in local currency, billions of soles; real growth rate, percent; annual inflation rate, percent)
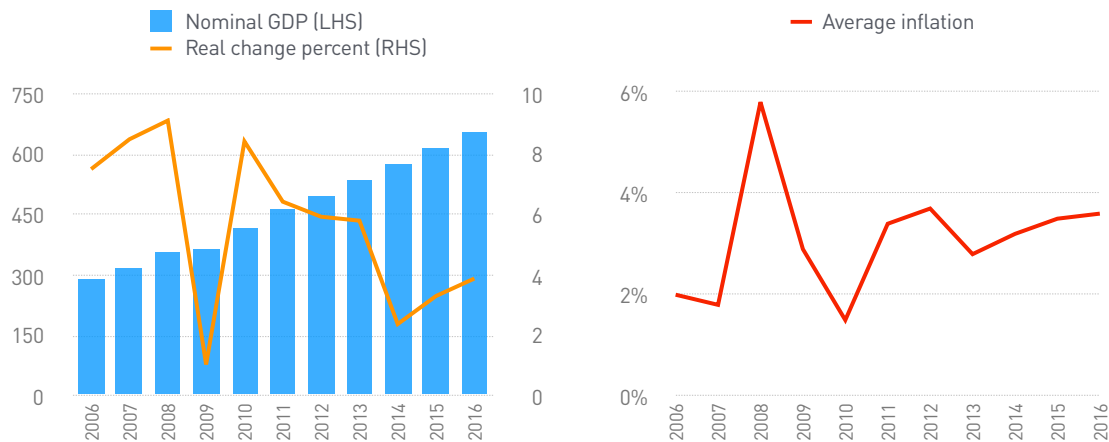
Source: MAPFRE Economic Research (based on IMF data)

## Insurance Market

### Growth

After eleven years of steady growth in the premium volume, in 2016 the Peruvian insurance market experienced a fall of -4.2 percent in nominal terms and -7.5 percent in real terms with respect to 2015, posting 11.256 billion soles (3.335 billion dollars). The main reason for this contraction was the behavior of insurance in the Private Pension Scheme, which took a dip of -24.6 percent and caused a general decrease of -10.3 percent in the Life business line (see Table 3.2.5-c and Chart 3.2.5-b).

This behavior may have been impacted by the entry into force in April 2016 of Law 30.425 which amends the Private Pension Scheme Act and, among other aspects, allows subscribers over 65 years old to choose been receiving their pension in any of the available retirement types, or asking the pension fund administrator to pay up to 95.5 percent of the fund available in their Individual Capitalization Account.

Meanwhile, the Non-Life insurance business experienced a slight nominal increase of 0.6 percent (-2.9 percent in real terms), reaching

6.667 billion soles (1.975 billion dollars). In spite of this nominal increase, there was a significant slowdown in Non-Life insurance business with respect to the previous year when it registered a nominal increase of 16.2 percent, 11.3 percent real. While all lines grew in 2015, the year 2016 saw sharp increases in Burial insurance (14.9 percent), Multiperil (11.8 percent) and Credit and/or Surety (21.9 percent), and a more moderate but no less important increase, given their greater volume, in the Automobile (1.8 percent), Health (7.3 percent) and Personal Accident (3.4 percent) lines.

The downturn of -4.2 percent registered in the Peruvian insurance market in 2016 was therefore driven by the Life insurance segment, with a negative contribution of 4.5 percentage points, while Non-Life insurance made a small positive contribution of 0.3 percentage points (see Chart 3.2.5-c).

### Balance sheet and equity

Chart 3.2.5-d shows the evolution of the aggregate balance sheet at sector level for the Peruvian insurance industry. Total insurance industry assets reached 42.1873 billion soles in 2016 (12.499 billion dollars), while equity

Table 3.2.5-a
Peru: premium volume[1] by line of business (lob), 2016

| Line of business | Millions of soles | Millions of dollars | Increase | |
|---|---|---|---|---|
| | | | Nominal (percent) | Real (percent) |
| **Total** | **11,256** | **3,335** | **-4.2** | **-7.5** |
| **Life** | **4,589** | **1,360** | **-10.3** | **-13.4** |
| Individual Life | 860 | 255 | 16.9 | 12.9 |
| Group Life | 1,371 | 406 | 9.5 | 5.7 |
| Pensions | 2,358 | 699 | -24.6 | -27.2 |
| **Non-Life** | **6,667** | **1,975** | **0.6** | **-2.9** |
| Automobiles | 1,451 | 430 | 1.8 | -1.7 |
| Fire and/or Allied Lines | 1,341 | 397 | -4.2 | -7.5 |
| Other Damage | 791 | 234 | -6.0 | -9.2 |
| Health | 877 | 260 | 7.3 | 3.5 |
| Personal Accidents | 688 | 204 | 3.4 | -0.2 |
| Transport | 184 | 55 | -9.2 | -12.3 |
| Third-party liability | 249 | 74 | -8.6 | -11.8 |
| Burial | 141 | 42 | 14.9 | 10.9 |
| Aviation | 121 | 36 | 2.3 | -1.3 |
| Multiperil | 151 | 45 | 11.8 | 7.9 |
| Maritime - Hulls | 80 | 24 | 5.2 | 1.6 |
| Credit and/or Surety | 210 | 62 | 21.9 | 17.6 |
| Workplace accidents | 382 | 113 | 0.6 | -2.9 |

Source: MAPFRE Economic Research (based on data from Superintendence of Banking, Insurance and PFA)
1/ Net insurance premiums

Chart 3.2.5-b
Peru: growth developments in the insurance market, 2006-16
(premiums, millions of soles; nominal annual growth rates, percent)
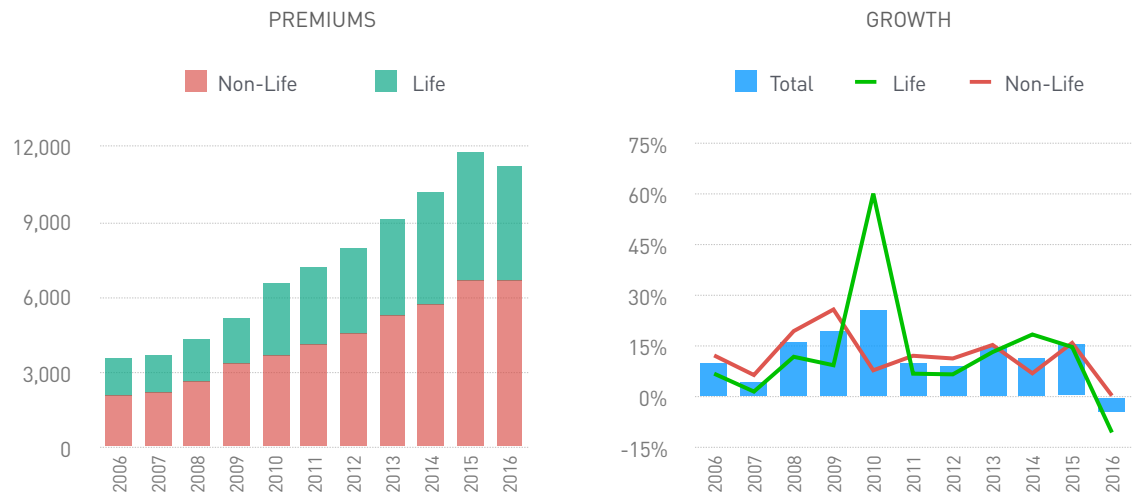


Source: MAPFRE Economic Research (based on data from Superintendence of Banking, Insurance and PFA)

amounted to 7.131 billion soles (2.113 billion dollars), up 20.14 percentage points on the previous year.

Aggregate capital levels for the Peruvian insurance industry (measured against total assets) improved over the period 2006-10, climbing steadily from 18.6 percent in 2006 to 21.7 percent at the end of 2010. After that capital levels entered a downward trend, falling to 15.1 percent by the end of 2015, and then reversed the trend in 2016 by climbing to 16.9 percent of total assets.

**Investment**

Charts 3.1.5-e, 3.2.5-f and 3.2.5-g show the evolution of investments and the composition of the aggregate investment portfolio at a sector level for the Peruvian insurance industry over the period 2006-16.

As indicated, investments reached 33.7248 billion soles (9.992 billion dollars) in 2016, mainly focused on equity and fixed income financial securities. The composition of the 2016 investment portfolio was as follows: 91.5 percent was concentrated in debt and variable annuities,



Chart 3.2.5-c
Peru: contribution to
insurance market growth, 2006-16
(percentage points, ppts)

Source: MAPFRE Economic Research (based on data from Superintendence of Banking, Insurance and PFA)
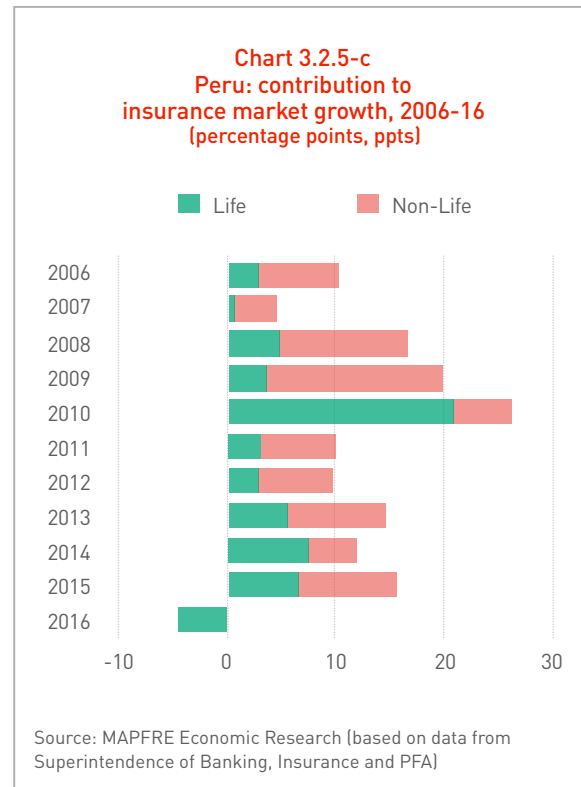
3.1 percent in cash, and the remaining 5.5 percent in property, the latter experiencing an increase of one percentage point in relation to the previous year.
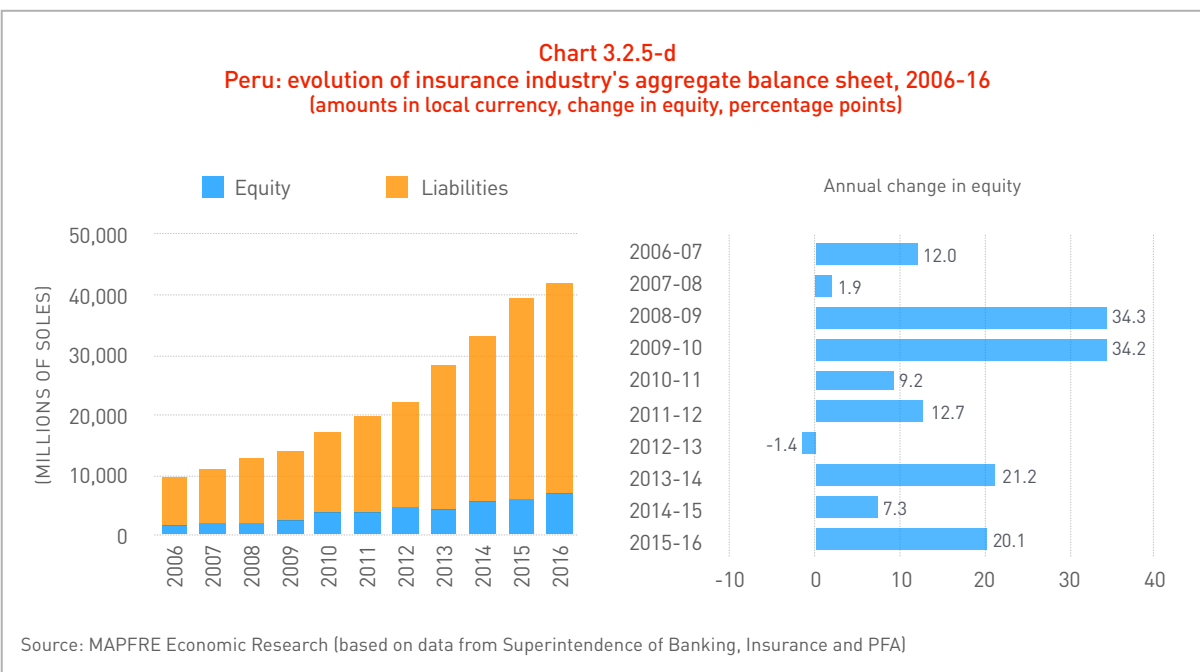


Chart 3.2.5-d
Peru: evolution of insurance industry's aggregate balance sheet, 2006-16
(amounts in local currency, change in equity, percentage points)

Source: MAPFRE Economic Research (based on data from Superintendence of Banking, Insurance and PFA)

**Technical provisions**

Charts 3.2.5-h, 3.2.5-i and 3.2.5-j show the evolution and relative composition of technical provisions.

Technical provisions reached 30.676 billion soles (9.089 billion dollars) in 2016. Of the total provisions, 76.8 percent related to Life insurance, 15.8 percent to the provision for outstanding claims, and the remaining 7.5 percent to the provision for unearned premiums and unexpired risks in Non-Life insurance.

The volume of technical provisions experienced a significant increase in absolute values over the period 2006-16, both for Life and Non-Life insurance. This trend altered slightly in 2016 due to a dip in the provisions for unearned premiums and unexpired risks, which fell from 2.377 billion soles in 2015 to 2.295 billion in 2016.

**Chart 3.2.5-e**
**Peru: Insurance market technical provisions, 2006-16**
**(millions of soles)**



Source: MAPFRE Economic Research (based on data from Superintendence of Banking, Insurance and PFA)

**Chart 3.2.5-f**
**Peru: structure of investment, 2006-16**
**(%)**



Source: MAPFRE Economic Research (based on data from Superintendence of Banking, Insurance and PFA)

**Chart 3.2.5-g**
**Peru: structure of investment, 2016**
**(%)**



Source: MAPFRE Economic Research (based on data from Superintendence of Banking, Insurance and PFA)

The composition of the aggregate provisions remained relatively stable until 2013, when the proportion of Life insurance fell slightly, from values of around 80 percent to values in the region of 76 percent, representing 76.8 percent of total provisions at the end of 2016.

**Technical performance**

Chart 3.2.5-k shows the evolution of the Peruvian insurance market's technical performance over the period 2006-16. The expense ratio increased one percentage point to 58 percent after falling 0.3 percentage points in 2015 with respect to 2014. Similarly, the claims ratio, which fell 2.2 percentage points in 2015, increased 2.1 percentage points in 2016 up to 58.5 percent. Consequently, the combined ratio worsened, losing 3 percentage points to end the year at 116.4 percent.

### Chart 3.2.5-h
### Peru: insurance market technical provisions, 2006-16 (millions of soles)



Source: MAPFRE Economic Research (based on data from Superintendence of Banking, Insurance and PFA)

### Chart 3.2.5-i
### Peru: structure of technical provisions, 2006–16 (%)
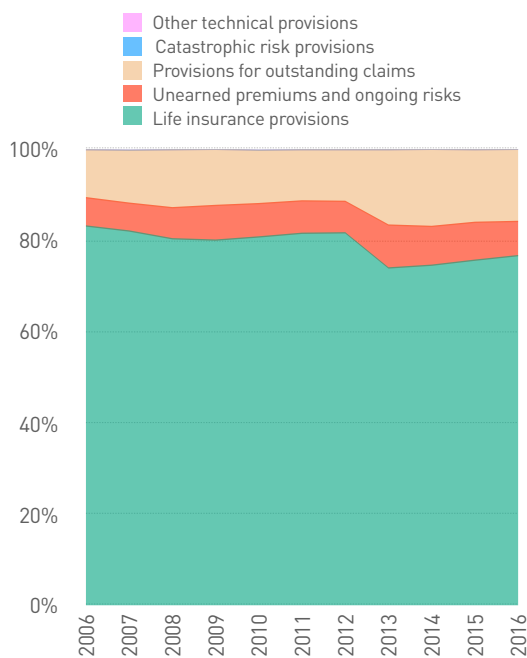
Other technical provisions
Catastrophic risk provisions
Provisions for outstanding claims
Unearned premiums and ongoing risks
Life insurance provisions



Source: MAPFRE Economic Research (based on data from Superintendence of Banking, Insurance and PFA)

### Chart 3.2.5-j
### Peru: structure of technical provisions, 2016 (%)
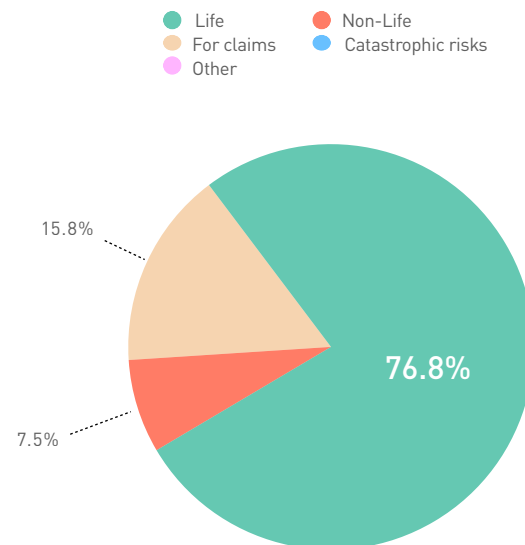
Life          Non-Life
For claims    Catastrophic risks
Other



15.8%

7.5%

76.8%

Source: MAPFRE Economic Research (based on data from Superintendence of Banking, Insurance and PFA)

**Chart 3.2.5-k**
**Peru: evolution of market technical performance, 2006-16**
**(total combined ratio, percent; annual change in combined ratio, percentage points)**

Source: MAPFRE Economic Research (based on data from Superintendence of Banking, Insurance and PFA)

## Results and profitability

The net result for 2016 was 1.024 billion soles (303.6 million dollars), representing a slight fall of -0.9 percent compared with the previous year. Once again, the financial result was excellent, compensating for the negative impact of the industry's technical performance. The financial result has stayed above 30 percent of net unearned premiums since 2010 and ended 2016 at 33.6 percent (see Chart 3.2.5-l).

With regard to the profitability of the Peruvian insurance market, return on equity (ROE) stood at 14.4 percent in 2016, down 3 percentage points on the previous year. Meanwhile, the return on assets (ROA) reached 2.4 percent in 2016, 0.2 percentage points below their value in 2015.

## Insurance penetration, density and depth

Chart 3.2.5-m shows the main structural trends in the development of the Peruvian insurance industry over the period 2006-16.

The penetration index (premiums/GDP) reached 1.7 percent in 2016, representing an increase of 0.5 percentage points on the level registered by the indicator in 2006 but 0.2 percentage points below the level registered the previous year. In

general, the penetration index for the Peruvian market has grown steadily over the period analyzed but is still below the average absolute values of the other markets in the region. However, the figure took a dip in 2016 as a result of the contraction of the insurance industry in relation to the previous year.

Insurance density in Peru (premiums per capita) reached 354.2 soles (105 dollars), 5.3 percent below the level reached in 2015 (374.2 soles). The density of the Peruvian market (measured in local currency terms) has grown steadily over the period, in spite of the dip in 2016, registering a cumulative increase of 179.4 percent between 2006 and 2016. However, when analyzed in dollars the indicator reveals a downturn from 2013 onwards due to the monetary effect of the relationship between the Peruvian sol and the U.S. dollar.

The depth of insurance in the Peruvian market (Life insurance premiums relative to total premiums) reached 40.8 percent, up 0.2 percentage points on the level registered in 2006 but 2.7 percentage points below the level of the previous year. The increase in the depth of the Peruvian insurance market has fluctuated around the average values of the markets in the region over the period analyzed but experienced a clear contraction in 2015.

**Chart 3.2.5-l**
**Peru: evolution of results and profitability, 2006-16**
**(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)**
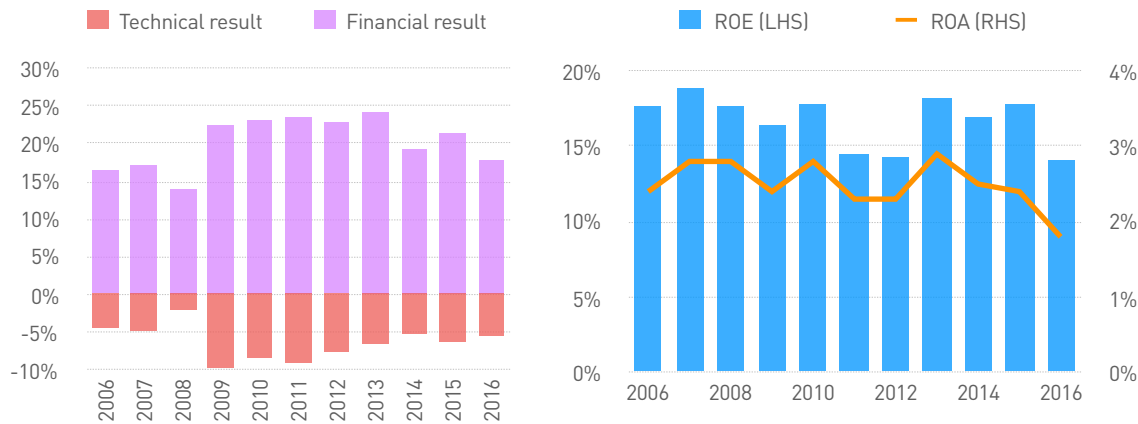
Source: MAPFRE Economic Research (based on data from Superintendence of Banking, Insurance and PFA)

Chart 3.2.5-n shows the performance of the Peruvian insurance market based on a dispersion analysis which takes account of the overall effect of the penetration and depth levels. This aggregate analysis reveals that after periods of positive and balanced development (2008-10 and 2012-14), the insurance industry in this country entered a process of contraction in terms of both its quantitative development (with a decline in penetration) and qualitative development (with reversals in depth levels).

**Estimate of the Insurance Protection Gap**

Chart 3.2.5-o provides an estimate of the IPG for the Peruvian insurance market between 2006 and 2016. As shown, the insurance gap reached 41.072 billion soles in 2016, representing 3.6 times the Peruvian insurance market at the end of the year.

The structure and evolution of the IPG over the period reflects the major contribution from Life insurance. At the close of 2016, 60.9 percent of the IPG related to Life insurance (25.020 billion soles), 1.5 percentage points below the share for this segment in 2006. The remaining 39.1 percent of the insurance gap in 2016 related to Non-Life insurance (16.053 billion soles).

Accordingly, the potential insurance market in Peru at the end of 2016 (sum of actual market and IPG) was estimated at 52.329 million soles, representing 4.6 times the total insurance market.

Chart 3.2.5-p shows an estimate of the insurance gap as a multiple of the actual insurance market in Peru. As a multiple of the market, the IPG fell steadily over the period 2006-16 (especially from 2007 onwards) but started growing again in 2016 in the case of both the Life insurance segment (up from 4.6 to 5.5 times) and Non-Life insurance (up from 2.2 to 2.4 times).

Chart 3.2.5-q provides a summary of the assessment regarding the capacity of the Peruvian insurance market to close the IPG based on a comparison of growth rates over the last ten years in relation to the growth rates that would be required over the next ten years to close the IPG established in 2016.

The Peruvian insurance market registered an average annual growth of 12.1 percent over the period 2006-16, comprised of an annual growth rate of 12.3 percent in the Life insurance segment and 12.2 percent in the Non-Life

Chart 3.2.5-m
Peru: evolution of penetration, density and depth, 2006-16
(premiums/GDP, percent; premiums per capita, soles and dollars; Life insurance premiums/total premiums, percent, index 2006=100)
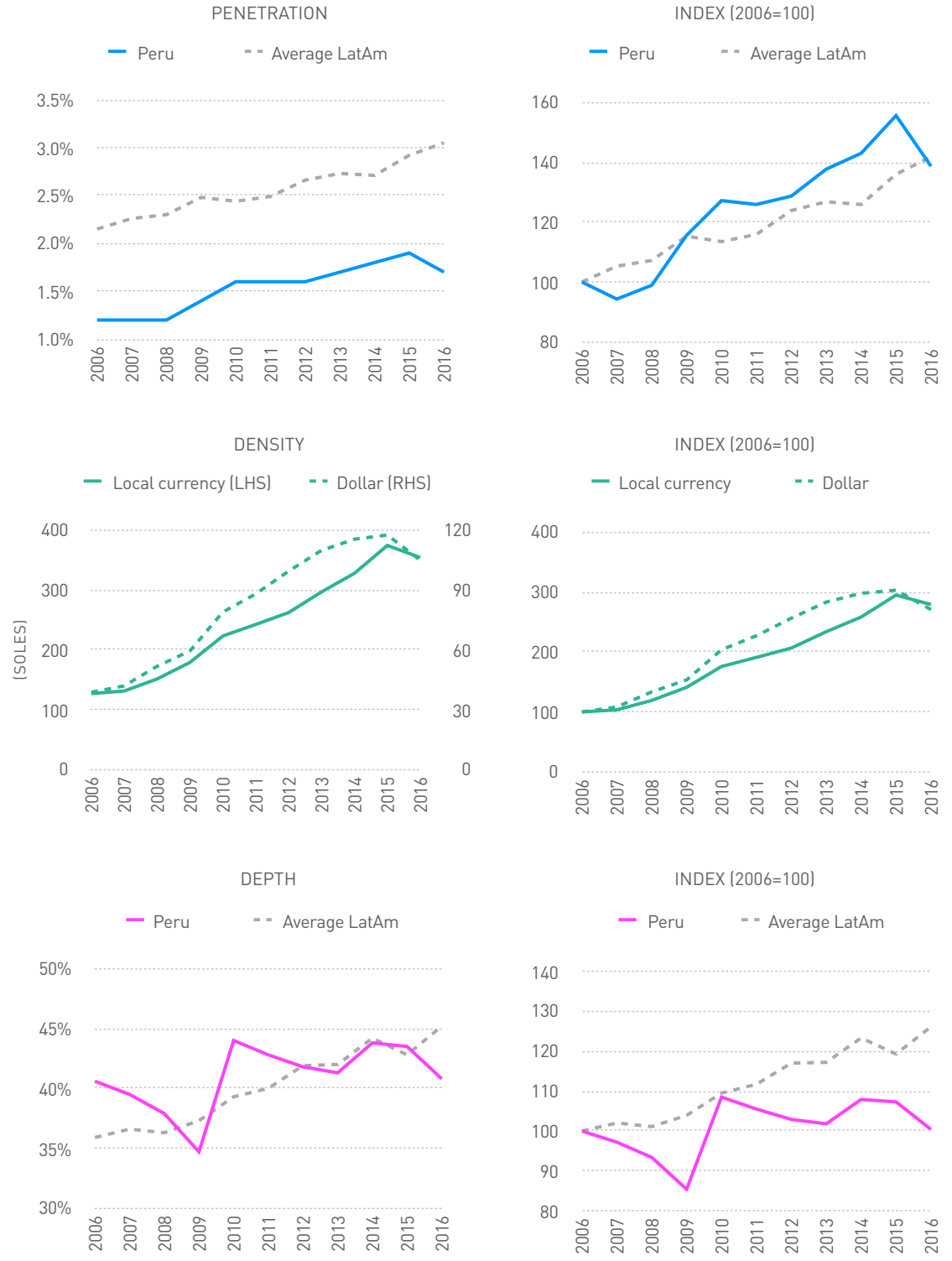


Source: MAPFRE Economic Research (based on data from Superintendence of Banking, Insurance and PFA)

**Chart 3.2.5-n
Peru: evolution of insurance market, 2006-16
(penetration vs depth)**
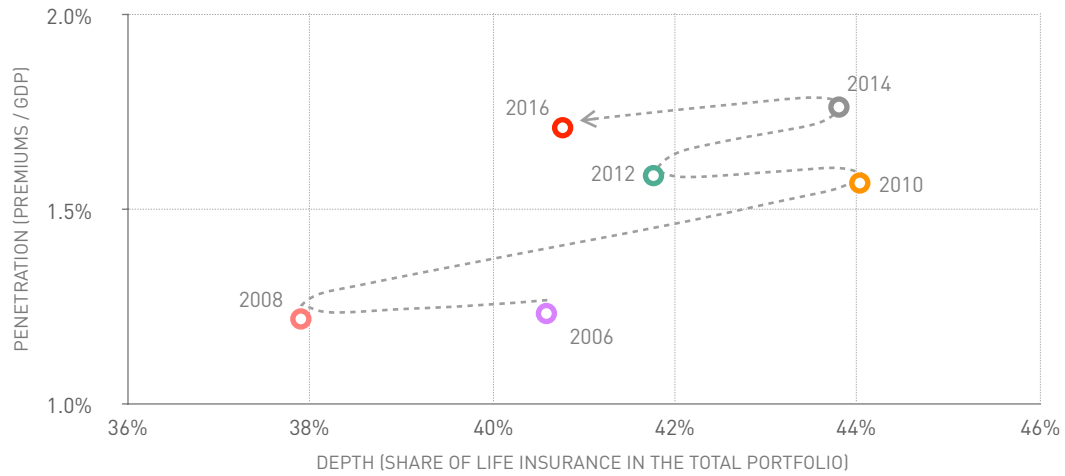


Source: MAPFRE Economic Research

insurance segment. On the basis of this analysis, if the same rate of growth seen in the last ten years were to be sustained over the next ten years, the growth rate of the Peruvian insurance market would be insufficient to close the gap in both the Life and Non-Life segments (a shortfall of 8.2 percentage points and 0.8 percentage points, respectively). In both cases the shortfall has grown in relation to 2015.

**Market Development Index (MDI)**

Chart 3.2.5-r provides an estimate of the Market Development Index (MDI) for the Peruvian insurance industry. Although in general terms the MDI followed an upward trend over the period 2006-16, in the last of year of that period it experienced a sharp contraction as a result of the trend reversal in the development of the market, explained in this section of the report.

**Chart 3.2.5-o
Peru: Insurance Protection Gap and potential market, 2006-16
(millions of soles)**
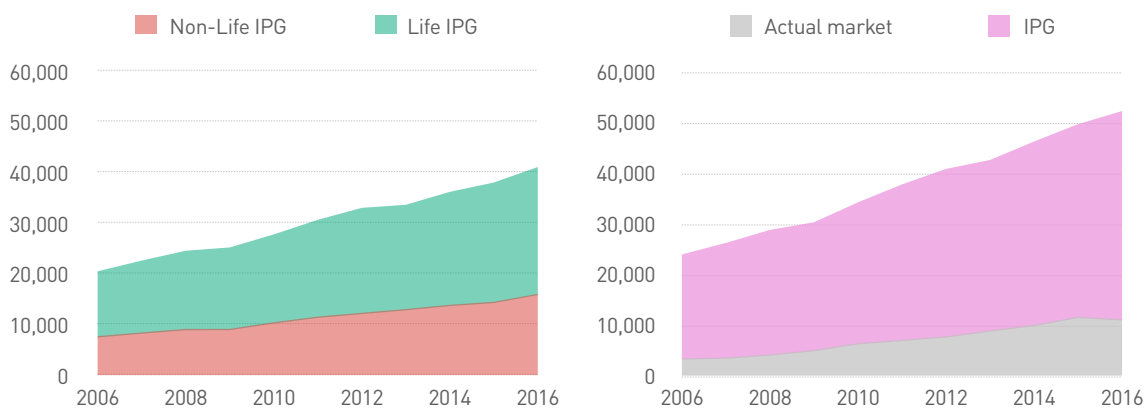


Source: MAPFRE Economic Research

Chart 3.2.5-p
Peru: the IPG as a multiple of the actual market, 2006-16
(number of times actual insurance market)



Source: MAPFRE Economic Research

Chart 3.2.5-q
Peru: capacity to close IPG, 2006-16
(average annual growth rate, percent; sufficiency or insufficiency, percentage points)



Source: MAPFRE Economic Research
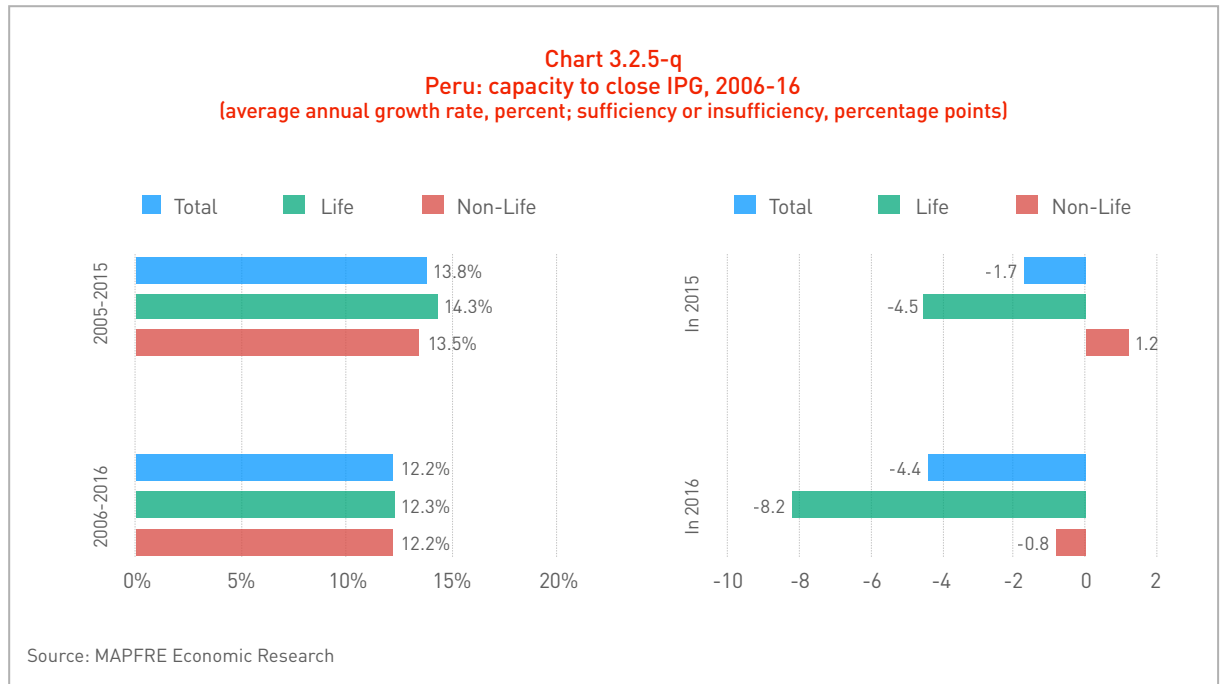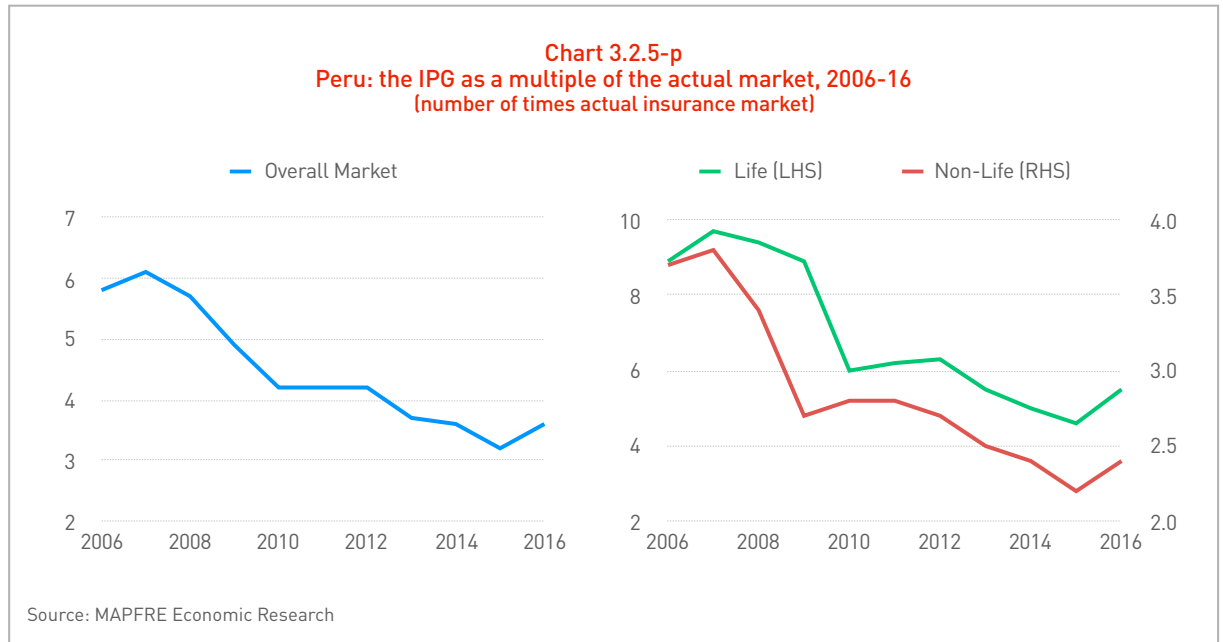
## Insurance market rankings

### Overall ranking

At the end of 2016 there were 21 insurance companies operating in Peru, two more than the previous year, of which eight are dedicated exclusively to general insurance, eight to Life insurance and the remaining five to both businesses.

In general, the levels of market concentration have fallen steadily in recent years. In 2010 the Herfindahl index crossed the theoretical threshold that warns of a high level of concentration in the industry, reaching the band associated with moderate concentration. This downward trend in concentration levels is confirmed by the CR5 index, which replicates this behavior for both the Non-Life and Life segments. Following a severe decline in the concentration of Life insurance in 2014, almost

Chart 3.2.5-r
Peru: Market Development Index (MDI), 2005-16
(index 2005=100; annual change)
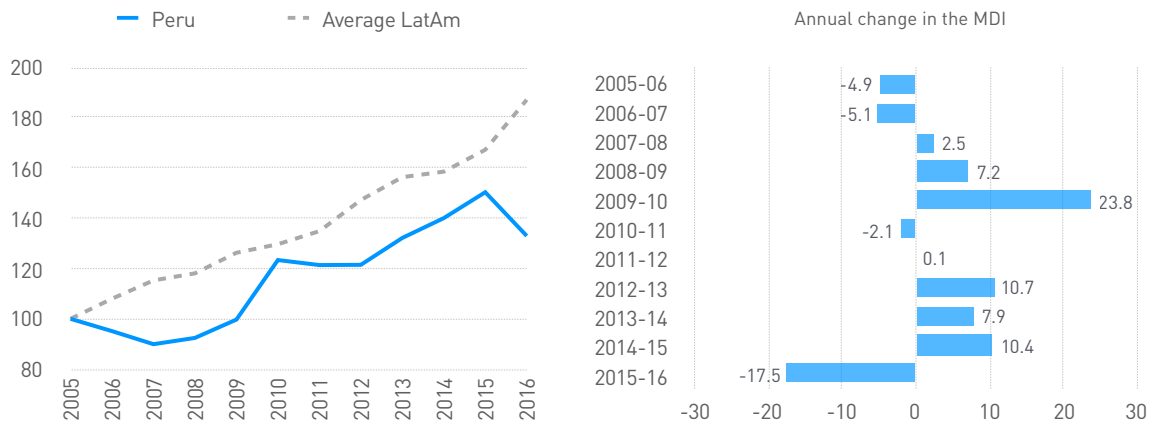


Source: MAPFRE Economic Research

certainly influenced by the rollout of three new companies, the years 2015 and 2016 saw a slight upturn, although the level remains below the pre-fall value (see Chart 3.2.5-s).

The 2016 overall ranking of groups in the Peruvian insurance market is not very different from the 2015 ranking. Rimac and Pacífico continue to occupy the top two slots, with market shares of 31.5 percent and 24.4 percent, respectively. Neither has there been any significant movement in the following positions, although the market shares vary slightly, increasing in the case of MAPFRE, Cardif, Chubb and Ohio National Vida, and falling in all the other cases. Ohio and Protecta have swapped ninth and tenth positions since 2015 (see Chart 3.2.5-g).

Chart 3.2.5-s
Peru: insurance industry concentration, 2006-16
(Herfindahl index; CR5 index, percent)
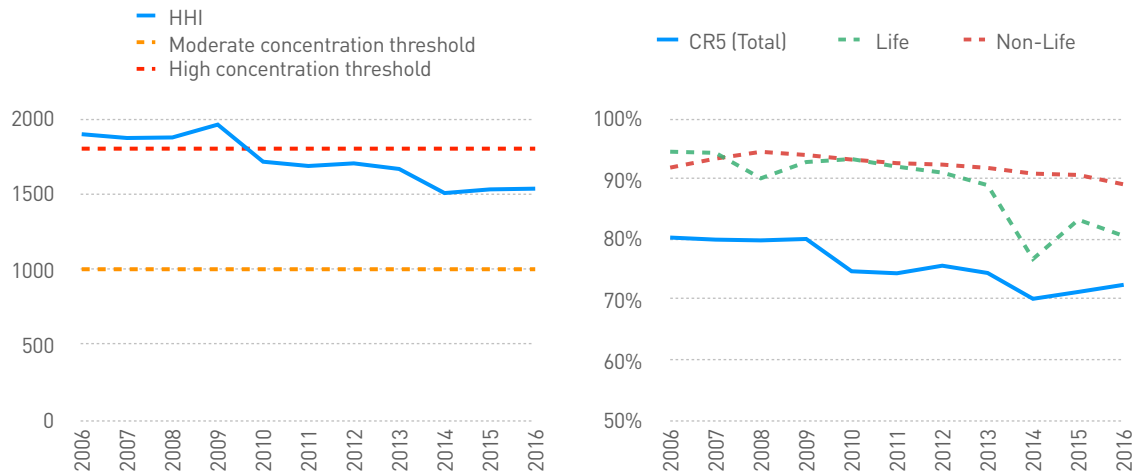


Source: MAPFRE Economic Research (based on data from Superintendence of Banking, Insurance and PFA)

**Chart 3.2.5-t**
**Peru: overall ranking, 2015-16**
**(market shares, percent)**
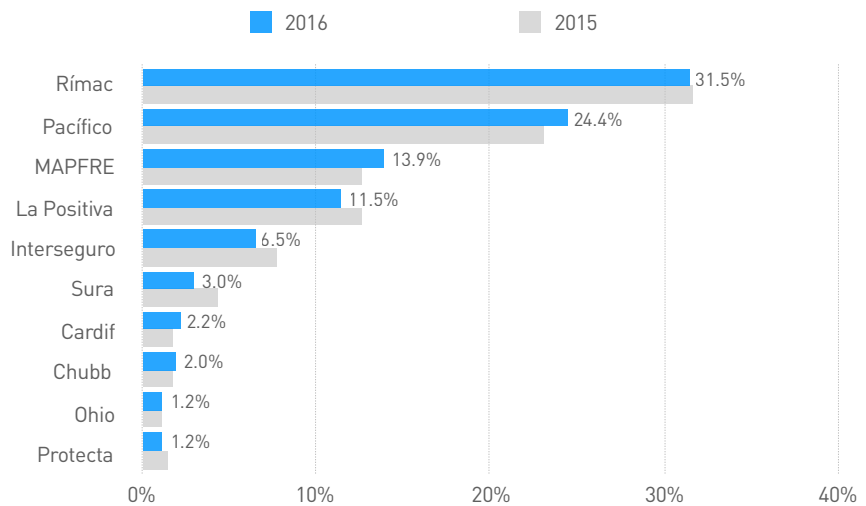


Source: MAPFRE Economic Research (based on data from Superintendence of Banking, Insurance and PFA)

**Chart 3.2.5-u**
**Peru: Life and Non-Life ranking, 2015-16**
**(market shares, percent)**
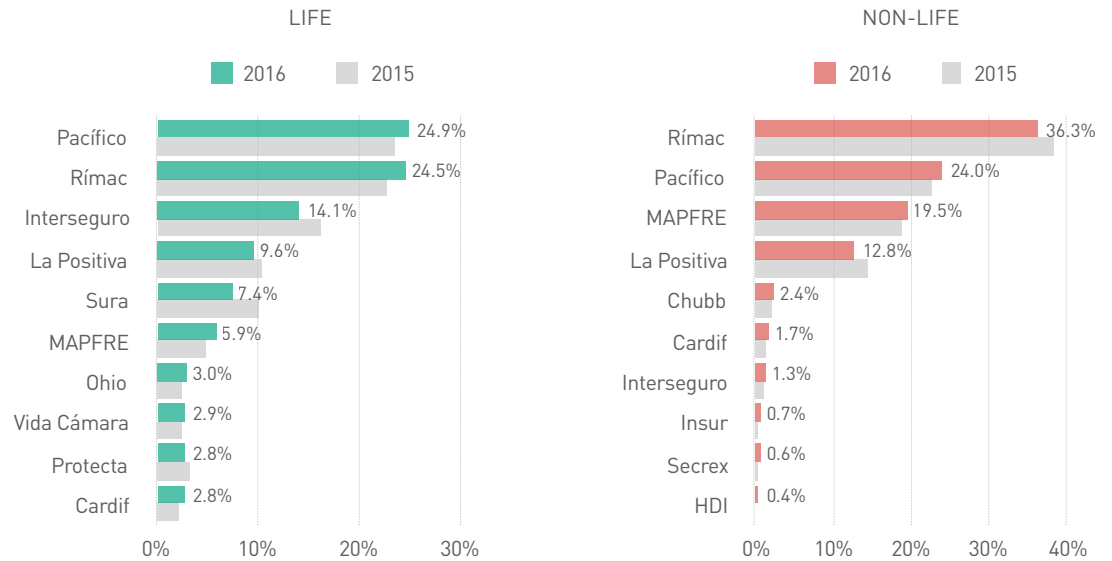


Source: MAPFRE Economic Research (based on data from Superintendence of Banking, Insurance and PFA)

**Non-Life Ranking**

Rimac, Pacífico, MAPFRE and La Positiva also occupy the top positions in the Non-Life ranking, with market shares of 36.3 percent, 24.0 percent, 19.5 percent and 12.8 percent, respectively.

**Life Ranking**

Lastly, Pacífico still leads the Life ranking with a market share of 24.9 percent, followed by Rimac

(24.5 percent), Interseguro (14.1 percent) and La Positiva (9.6 percent) (see Chart 3.2.5-u).

## Key regulatory aspects

The latest significant developments in the legislation governing the Peruvian insurance industry are explained below.

Table 3.2.5-b
Peru: Recent regulatory developments on insurance issues

| Regulation | Main aspects |
| --- | --- |
| **Regulation governing the services which the Banks and Insurance Companies Superintendence (SBS) offers to citizens and the handling of complaints filed against the companies supervised**<br><br>**Resolution SBS 4464-2016 of 08-17-2016** | The regulation amends the way the SBS User Service Platform operates and is designed to enhance efficiency in the handling of the complaints and inquiries submitted to the Superintendence by the users of the systems supervised. |
| **Regulation on reserves for unexpired risks**<br><br>**Resolution SBS 6394-2016 of 12-07-2016** | The Unexpired Risk Reserve (URR) that applies to short-term insurance estimates the future claims and expenses that will be assumed by companies for retained ongoing risks. It is determined on the basis of the premiums established to finance those claims and expenses. It is calculated by adding the sum of two components: i) the Retained Unearned Premium Reserve (RUPR); and, ii) the Premium Deficiency Reserve (PDR).<br><br>The new regulation establishes a standard methodology for calculating these reserves but allows companies to use their own calculation methodology in the case of certain types of insurance. This is the first time that a methodology has been established for calculating the premium deficiency reserve per business line, which is used to compensate claims and expenses that exceed the company's original estimates. The regulation also includes improvements in the methods and procedures for calculating the URR. The SBS has been stepping up its efforts to protect the interests of insureds and promote transparency in the insurance system through greater efficiency in measuring the obligations which insurance companies have to their policy holders and overseeing the solvency of these companies. |

**Table 3.2.5-b (continued)**
**Peru: Recent regulatory developments on insurance issues**

| Regulation | Main aspects |
|---|---|
| **Corporate Governance Regulation and Integral Risk Management Regulation**<br><br>**Resolution SBS 272-2017** | The new regulation replaces Integral Risk Management Regulation (Res. SBS 37-2008) and will enter into force in April 2018. In light of supervisory experience and international standards, the existing regulation has been amended to encourage better risk management and corporate governance in companies supervised by the SBS.<br><br>The new regulation develops and sets out corporate governance criteria related to independent directors, management committees, remuneration systems, market conduct and the management of conflicts of interest. It is based on the approaches adopted in international standards (such as the "Corporate Governance Principles for Banks" introduced by the Basel Committee on Banking Supervision and the EU Directive on Solvency II) and adapts them to the environment of local companies. It is also based on the Good Corporate Governance Code for Peruvian Companies, published by the Securities Market Superintendence. The regulation revises aspects related to integral risk management, such as the regulatory compliance function, with the aim of strengthening companies' performance and responsibility. The concepts associated with risk management (risk capacity, risk appetite and risk limit) have been updated in line with the new international standards on this issue, such as the "Principles for an Effective Risk Appetite" issued by the Financial Stability Board (FSB). |
| **Regulation on the marketing of insurance products**<br><br>**Resolution SBS 1121-2017 of 03-15-2017** | This replaced the Framework Regulation on the Marketing of Insurance Products approved by Resolution SBS 2996-2010 and its amendments. The purpose of the new regulation was to update the stipulations related to the practices used by insurance companies to market insurance products, and to promote financial inclusion. The new regulation defines two marketing practices: i) through the company (staff, promoters and points of sale) and ii) through marketers (including bancassurance). Insurance companies remain liable to contractors, insureds and/or beneficiaries, as well as to the SBS for the provision of services, risk administration and regulatory compliance. The regulation also places special emphasis on the training that must be provided for the different marketing practices used, to ensure that users receive accurate information. |

Source: Peruvian Banking, Insurance and PFA Superintendence

## 3.2.6. Bolivia

### Macroeconomic environment

The Bolivian economy grew by 4.1 percent in real terms in 2016, compared with 4.8 percent the previous year. The slowdown is explained by the poor performance of foreign trade, nevertheless offset by increased public investment and a countercyclical monetary policy. In spite of the slowdown, the growth rate of the Bolivian economy continues to exceed that of all the other South American countries, supported by internal demand and public consumption in particular.

On the supply side, the finance sector and construction saw the highest growth thanks to the government's promotion of easier credit for the production sectors and social housing.

The average inflation rate in 2016 was 3.6 percent, compared with the 4.1 percent registered the previous year (see Chart 3.2.6-a). With regard to the external sector, 2016 saw the current account deficit fall by 0.2 percentage points to 5.4 percent of GDP. This was due to the general increase of all exports except for hydrocarbons, whose international prices fell steadily over the year.

**Chart 3.2.6-a**
**Bolivia: evolution of economic growth and inflation, 2006-16**
(GDP in local currency, billions of bolivianos; real growth rate, percent; annual inflation rate, percent)
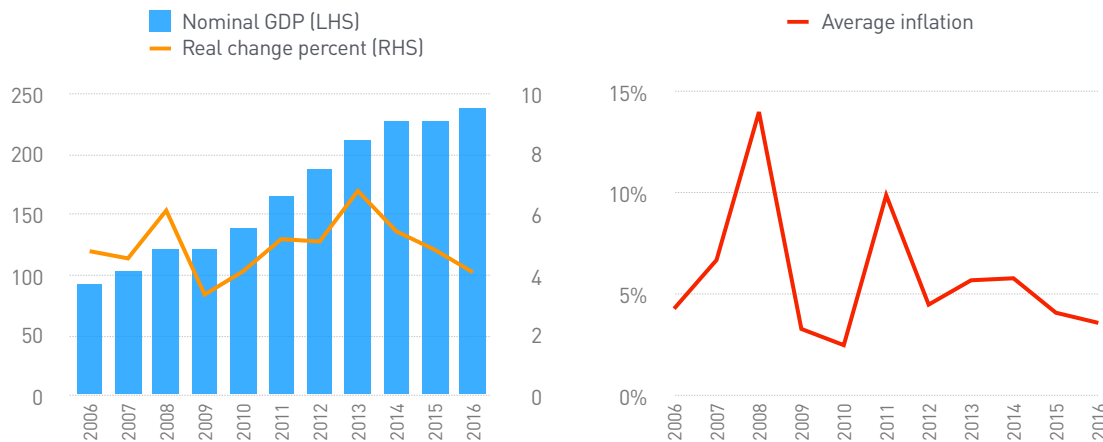


Source: MAPFRE Economic Research (based on IMF data)

Both ECLAC and the IMF forecast a growth rate of 4 percent for the Bolivian economy in 2017.

### Insurance Market

**Growth**

The premium volume of the Bolivian insurance market reached 3.228 billion bolivianos (467 million dollars) in 2016, registering a nominal increase of 4 percent (0.4 percent real) compared with the previous year. Premiums continued to grow, albeit at a slower pace than in previous years. Of the total premiums, 71.7 percent relate to Non-Life insurance and the remaining 28.3 percent to Life (see Table 3.2.6 and Chart 3.2.6-a).

Life insurance premiums continued their upward trend in 2016, with a nominal increase of 11.3 percent and a real increase of 7.4 percent (compared with a nominal 16.6 percent and 13.3 percent real, respectively, in 2015), reaching 915 million bolivianos (132 million dollars) by the end of the year. This growth occurred in both Group Life (6.6 percent) and Individual Life (11.6 percent), with the latter seeing the most significant increase in Mortgage Protection Insurance (11 percent nominal).

Non-Life insurance premiums grew by a nominal 1.4 percent in 2016 with a variation of -2.1 percent in real terms (compared with a nominal 4.7 percent and 1.7 percent real, respectively, in 2015), reaching 2.313 billion bolivianos (335 million dollars) by the end of the year.

Unlike the previous year, Other Damages, Transport, Technical Risks and Third-party Liability all took a dip in 2016 (as well as the Automobile line, though only in real terms). By contrast, the Personal Accidents and Health lines registered strong nominal growths of 26.5 percent and 10.1 percent, respectively. The most important line continues to be Automobile, including Mandatory Traffic Accident Insurance (SOAT), which registered a nominal growth of 3.4 percent (compared to 7.6 percent in 2015).

In line with these data, the nominal growth of 4 percent registered by the Bolivian insurance market in 2016 was primarily driven by the Life insurance segment, which contributed 3 percentage points. Non-Life insurance contributed 1.1 percentage points (see Chart 3.2.6-c).

Table 3.2.6
Bolivia: premium volume[1] by line of business (lob), 2016

| Line of business | Millions of bolivianos | Millions of dollars | Increase | |
|---|---|---|---|---|
| | | | Nominal (percent) | Real (percent) |
| **Total** | **3,228** | **467** | **4.0** | **0.4** |
| **Life** | **915** | **132** | **11.3** | **7.4** |
| Group Life | 83 | 12 | 6.6 | 2.8 |
| Individual Life | 831 | 120 | 11.6 | 7.7 |
| Life annuities | 1 | 0 | - | - |
| **Non-Life** | **2,313** | **335** | **1.4** | **-2.1** |
| Automobiles | 698 | 101 | 3.4 | -0.3 |
| Other Damage | 138 | 20 | -18.8 | -21.7 |
| Fire | 355 | 51 | 10.4 | 6.6 |
| Third-party liability | 92 | 13 | -9.3 | -12.5 |
| Transport | 215 | 31 | -17.2 | -20.1 |
| Technical Risks | 181 | 26 | -0.6 | -4.1 |
| Surety | 171 | 25 | 5.8 | 2.1 |
| Health | 364 | 53 | 10.1 | 6.3 |
| Personal Accidents | 99 | 14 | 26.5 | 22.1 |

Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)
1/ Direct premiums

Chart 3.2.6-b
Bolivia: growth developments in the insurance market, 2006-16
(premiums, millions of bolivianos, nominal annual growth rates, percent)
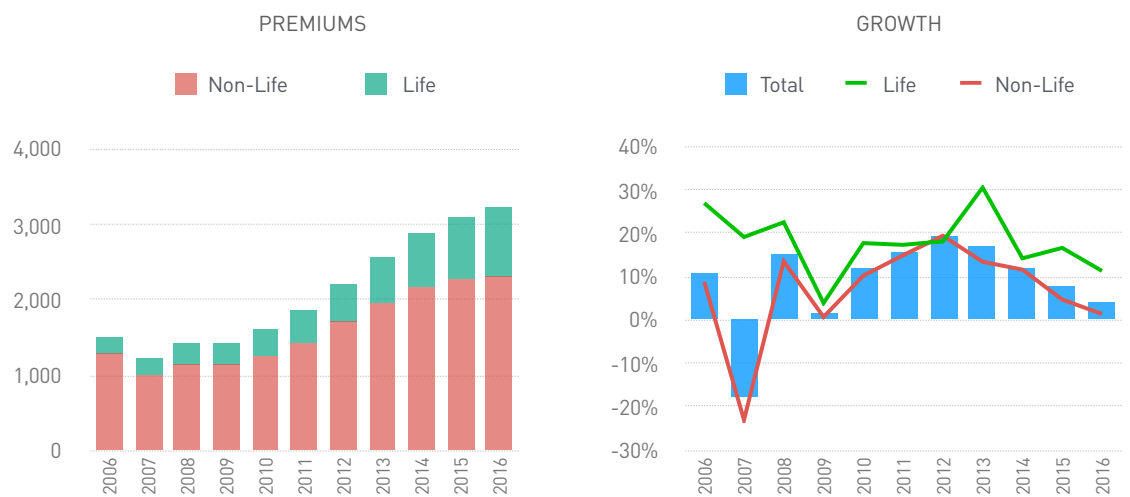
PREMIUMS

GROWTH



Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)

## Balance sheet and equity

As indicated by the overall balance sheet for the Bolivian insurance market at sector level (Chart 3.2.6-d), total assets climbed to 6.953 billion bolivianos (1.007 billion dollars) in 2016, while equity reached 1.789 billion bolivianos (259 million dollars), up 4.8 percent on the 2015 figure.

The Bolivian insurance industry sustained a capital level (over total assets) of more than 20 percent over the period 2008-16, representing 25.7 percent of total assets in 2016.

## Investment

The evolution of investments during the period 2006-16 is shown in Chart 3.2.6-e. As these data show, investments reached 5.183 billion bolivianos (750 million dollars) in 2016.

Meanwhile, Charts 3.2.6-f and 3.2.6-g show the evolution of the composition of the investment portfolio at a sector level for the Bolivian insurance market over the period 2006-15 (the last year for which the breakdown of data is available).

At the end of that period, the portfolio was distributed between fixed income (69.7 percent)

Chart 3.2.6-c
Bolivia: contribution to
insurance market growth, 2006-16
(percentage points, ppts)



Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)
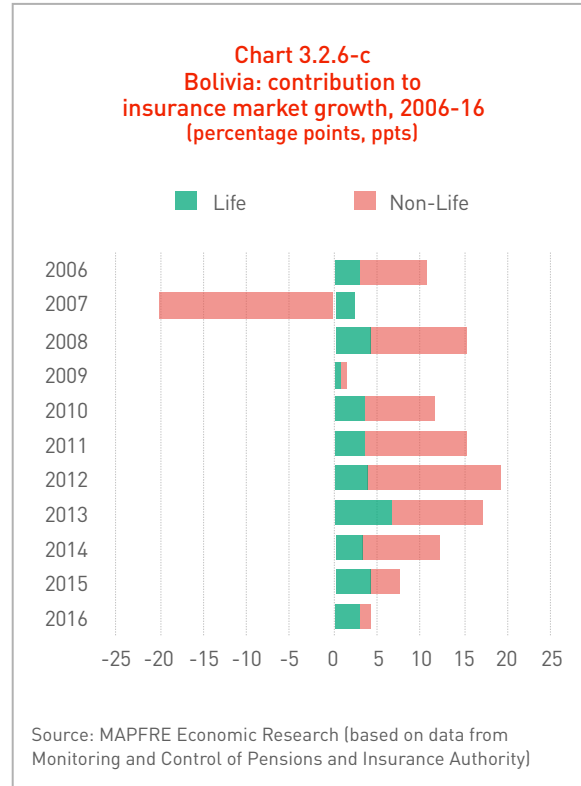
and, to a significantly smaller proportion (12.1 percent), variable annuities, property (8.7 percent), and cash and other investments (9.2 percent and 0.3 percent, respectively). The structure of the portfolio has changed significantly, with the weight of investments in annuities falling from above 24 percent in 2012 and 2013 to around 12 percent in the last two
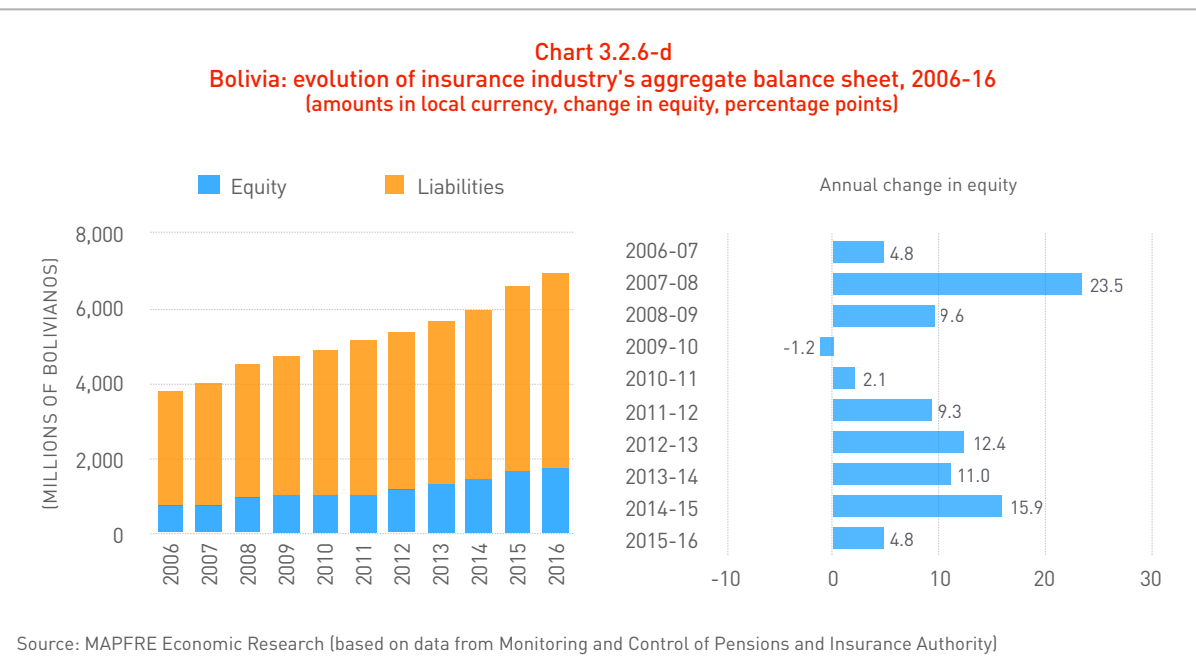
Chart 3.2.6-d
Bolivia: evolution of insurance industry's aggregate balance sheet, 2006-16
(amounts in local currency, change in equity, percentage points)



Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)

years. Meanwhile, the weight of property assets has risen from around 4 percent during the period 2008-11 to 8.7 percent at the close of 2015, the last year available.

**Technical provisions**

Charts 3.2.6-h, 3.2.6-i and 3.2.6-j show the evolution and relative composition of the Bolivian insurance industry's technical provisions. Technical provisions reached 3.214 billion bolivianos (465 million dollars) in 2016. According to the latest data available (end of 2015), 77.7 percent of the total related to Life insurance, 10,9 percent to the provision for unearned premiums and unexpired risks in Non-Life insurance, and 11.4 percent to the provision for outstanding claims.

The period 2009-15 saw a reduction in the weight of the provision for Life insurance, which fell from 88.8 percent of the total in 2009 to 77.7 percent in 2015. This was also reflected in

**Chart 3.2.6-e
Bolivia: Insurance market
technical provisions, 2006-16
(millions of bolivianos)**



Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)

**Chart 3.2.6-f
Bolivia: structure of
Investments, 2006-15
(%)**



Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)

**Chart 3.2.6-g
Bolivia: structure
of investment, 2015
(%)**



Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)

absolute values, falling from 2.7957 billion bolivianos (405 million dollars) in 2009 to 2.4706 billion bolivianos (358 million dollars) in 2015. However, during the same period both the provision for outstanding claims and the provision for unearned premiums and unexpired risks in Non-Life insurance practically doubled, rising from 178.6 million bolivianos (26 million dollars) and 173.3 million bolivianos (25 million dollars) in 2009 to 361.2 million bolivianos (52 million dollars) and 346.8 million bolivianos (50 million dollars) in 2015, respectively.

**Technical performance**

In relation to the technical performance of the Bolivian insurance market, the combined ratio worsened by 3.7 percentage points in 2016, reaching 100.5 percent, driven by increases in both the claims and expense ratios, which led to a negative technical result. The claims ratio increased 1.3 percentage points up to 41.5 percent while the expense ratio gained 2.5 points



Chart 3.2.6-h
Bolivia: insurance market
technical provisions, 2006-16
(millions of bolivianos)
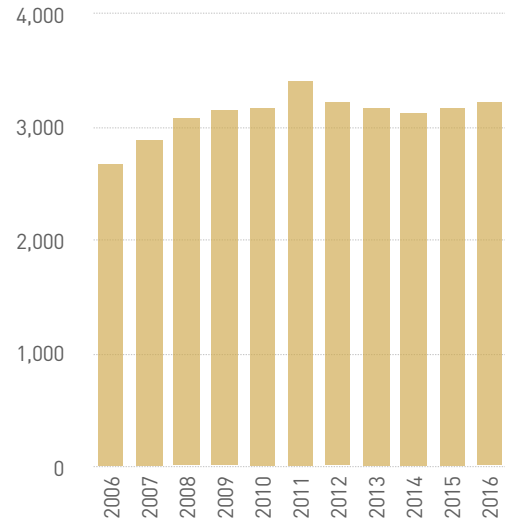
Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)



Chart 3.2.6-i
Bolivia: structure of
technical provisions, 2009-15
(%)
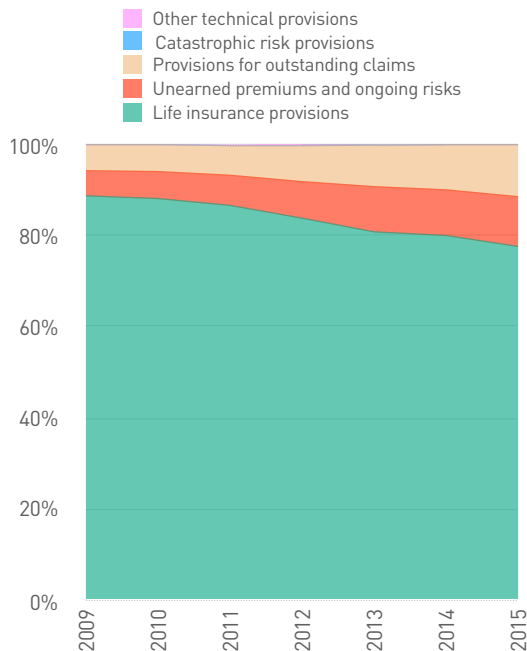
Other technical provisions
Catastrophic risk provisions
Provisions for outstanding claims
Unearned premiums and ongoing risks
Life insurance provisions

Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)



Chart 3.2.6-j
Bolivia: structure
of technical provisions, 2015
(%)
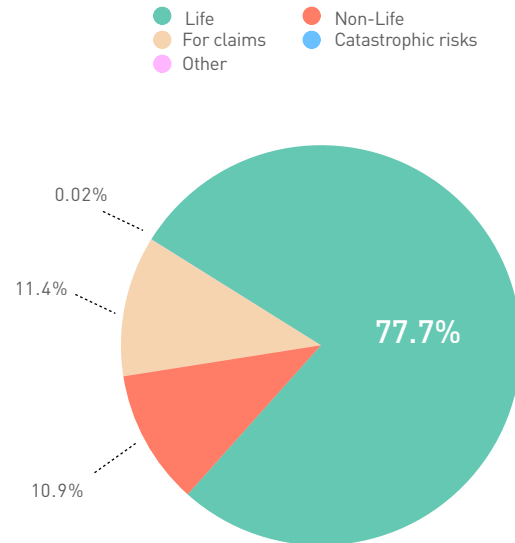
Life                Non-Life
For claims          Catastrophic risks
Other

0.02%
11.4%
10.9%
77.7%

Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)

(see Chart 3.2.6-k).

The combined ratio for Non-Life insurance companies reached 89.4 percent in 2016, down 2.1 percentage points on the 2015 figure. In the case of the Non-Life segment, the downward trend in the combined ratio since 2011 is mainly owing to reductions in the claims ratio (see Chart 3.2.6-l).

**Results and profitability**

The Bolivian insurance industry posted a consolidated result of 237 million bolivianos (34 million dollars) for 2016, up 0.5 percent on the previous year. However, the financial result decreased 6.9 percentage points to 14 percent (see chart 3.2.6-m).

**Chart 3.2.6-k**
**Bolivia: evolution of market technical performance, 2006-16**
**(total combined ratio, percent; annual change in combined ratio, percentage points)**



Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)

**Chart 3.2.6-l**
**Bolivia: evolution of the Non-Life market's technical performance, 2006-16**
**(total combined ratio, percent; annual change in combined ratio, percentage points)**



Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)

**Chart 3.2.6-m**
**Bolivia: evolution of results and profitability, 2006-16**
**(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)**
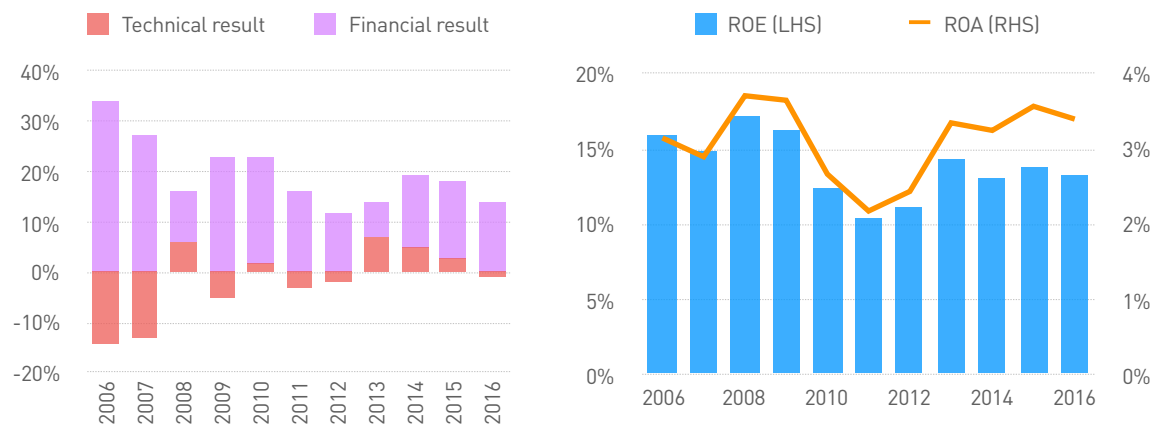
Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)

In terms of profitability, the return on equity (ROE) was 13.2 percent in 2016, down 0.6 percentage points on 2015. In a similar vein, the return on assets (ROA) reached 3.3 percent in 2016, representing a fall of 0.2 percentage points relative to 2015. In general, the profitability of Bolivian insurance activities remained stable over the period, mainly supported by the contribution from the financial result, which is more consistent than the technical result.

**Insurance penetration, density and depth**

Chart 3.2.6-n shows the main structural trends in the development of the Bolivian insurance industry over the period 2006-16.

The penetration index (premiums/GDP) reached 1.4 percent in 2016. Penetration of the Bolivian market fell steadily from 2006 but experienced a reversal of this trend in 2013. Even so, the 2016 index was nearly 0.3 percentage points below the figure registered a decade earlier.

Insurance density (premiums per capita) reached 296 bolivianos (42.9 dollars), up 84.5 percent on the 2006 figure (160.4 bolivianos). This index stagnated between 2006 and 2009 before reversing the trend in 2010.

With regard to depth (Life insurance premiums versus total premiums), this indicator reached 28.3 percent in 2016, representing an increase of 15.5 percentage points on the 2006 value. In this case, depth has increased steadily in the Bolivian insurance market during the period analyzed and although still below the average values observed across Latin America it is growing at a similar rate, with a slight improvement in 2016.

This behavior is clearly reflected in the dispersion analysis shown in Chart 3.2.6-o, which illustrates the combined effect of the penetration and depth levels. This aggregate analysis confirms that following a period during which penetration declined (2006-10), the Bolivian insurance industry is now experiencing balanced growth of both penetration (quantitative) and depth (qualitative).

**Estimate of the Insurance Protection Gap**

Chart 3.2.6-p show an estimate of the IPG for the Bolivian insurance market over the period 2006-16. The insurance gap reached 15.754 billion bolivianos in 2016, representing nearly 5 times the actual insurance market in this country at the end of the year.

Chart 3.2.6-n
Bolivia: evolution of penetration, density and depth, 2006-16
(premiums/GDP, percent; premiums per capita, bolivianos and dollars; Life insurance premiums / total premiums, percent, index 2006=100)
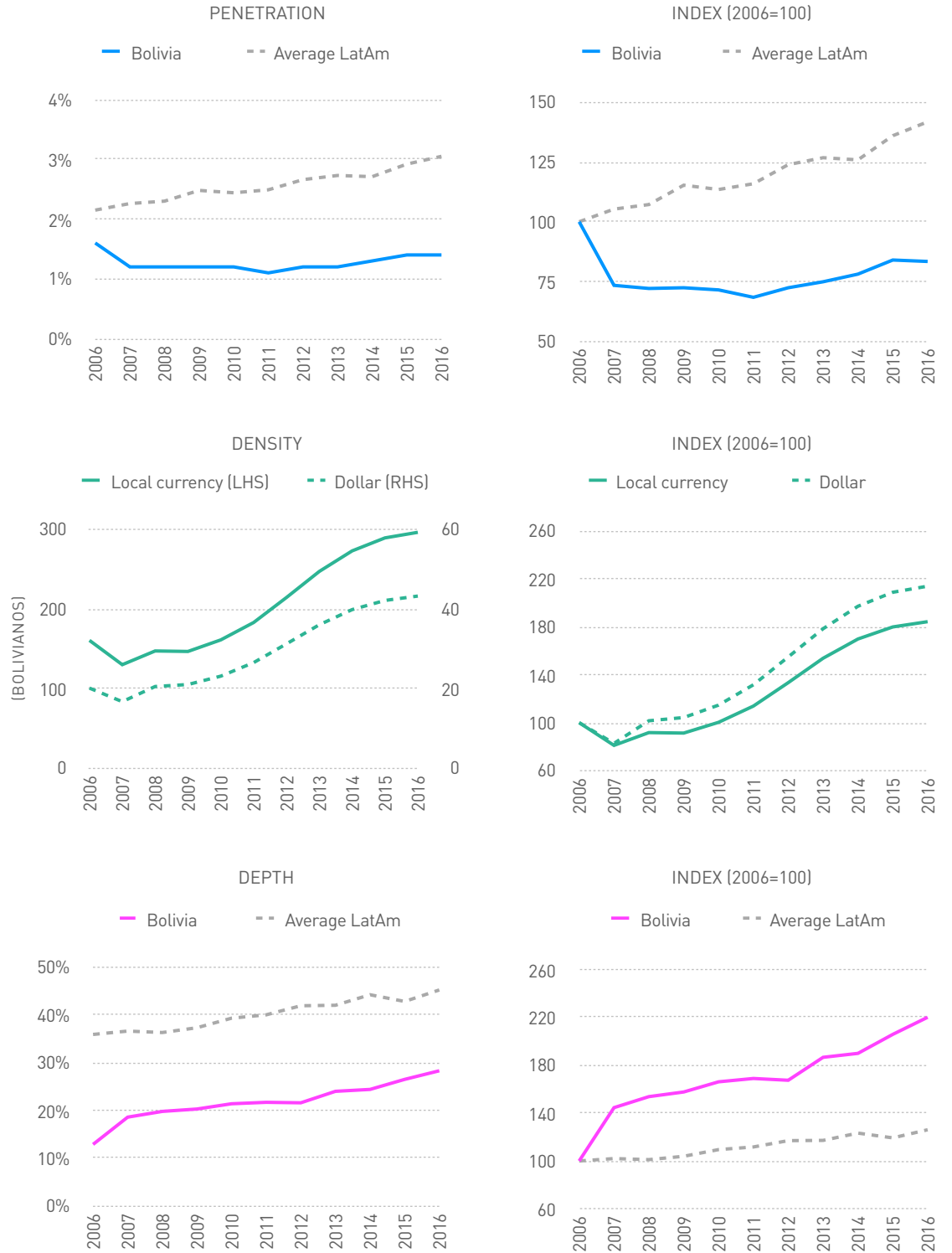


Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)

Chart 3.2.6-o
Bolivia: evolution of insurance market, 2006-16
(penetration vs depth)
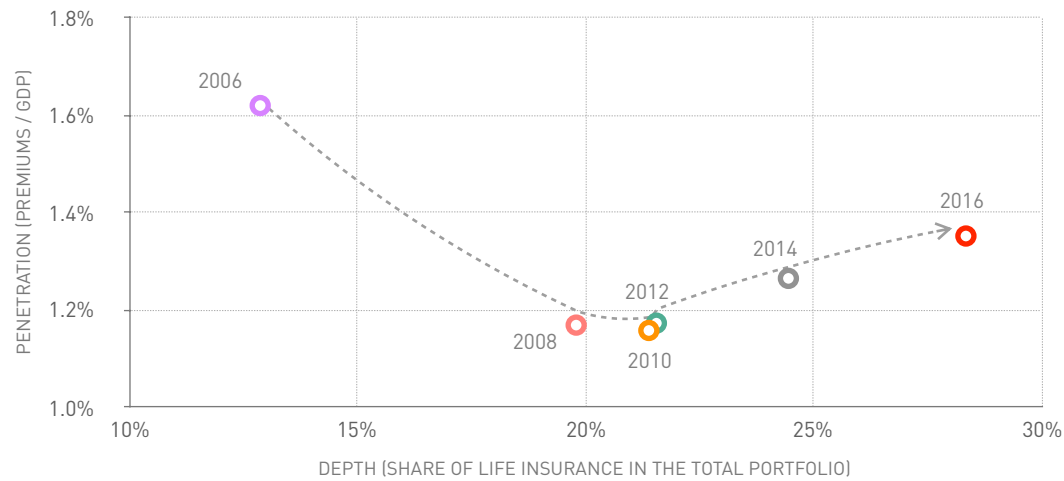


Source: MAPFRE Economic Research

Chart 3.2.6-p
Bolivia: Insurance Protection Gap and potential market, 2006-16
(millions of bolivianos)
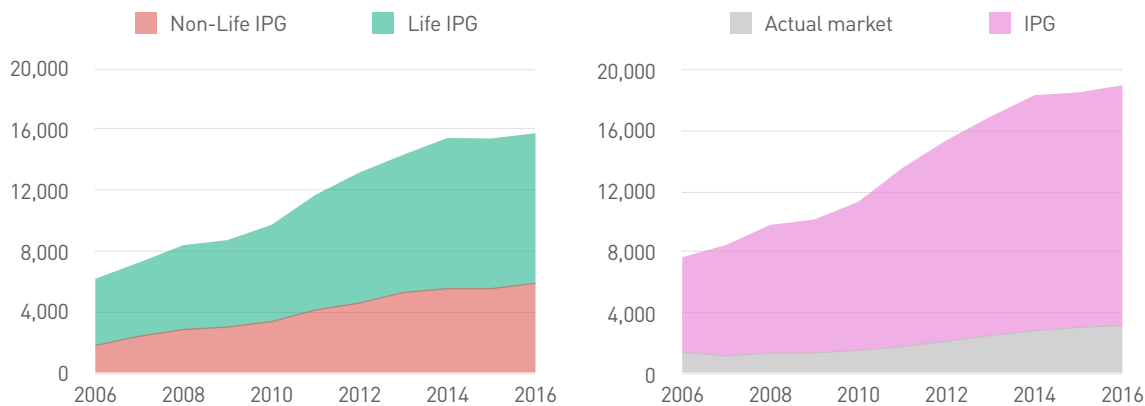


Source: MAPFRE Economic Research

As is the case for other insurance markets in the region, the structure and evolution of the IPG over the last ten years have been conditioned by Life insurance. In 2006, 70.3 percent of the IPG related to Life insurance, the equivalent of 4.348 billion bolivianos. By 2016 this percentage had fallen to 62.4 percent (9.825 billion bolivianos).

Accordingly, the potential insurance market in Bolivia at the end of 2016 (sum of actual market and IPG) was estimated at 18.982 billion bolivianos, representing nearly 6 times the total insurance market that year.

Chart 3.2.6-q shows an estimate of the IPG as a multiple of the actual market in each year. Measured as a multiple of the actual market, the IPG has grown steadily over the period analyzed, both as regards the total gap (up from 4.2 to 4.9 times) and the gap for the Non-Life segment (up

**Chart 3.2.6-q**
**Bolivia: the IPG as a multiple of the actual market, 2006-16**
**(number of times actual insurance market)**

Source: MAPFRE Economic Research
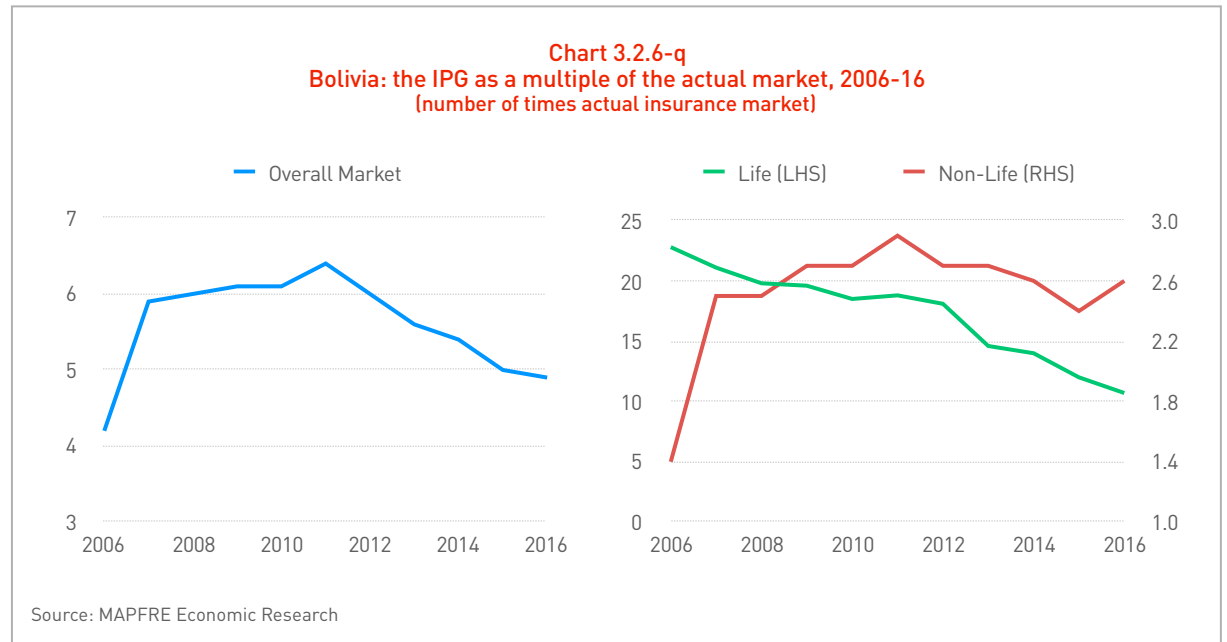
from 1.4 to 2.6 times). Only the Life insurance segment shows a decline of the IPG as a multiple of the actual market over the period 2006-16, falling from 22.8 to 10.7 times.

Overall, however, the insurance gap has shown a distinct downward trend since 2011.

Lastly, Chart 3.2.6-r provides a summary of the assessment regarding the capacity of the Bolivian insurance market to close the IPG based on a comparison of growth rates over the last ten years in relation to the growth rates that would be required in that market to close the IPG established.

The Bolivian insurance market registered an average annual growth of 8.1 percent over the period 2006-16, comprised of an annual growth rate of 16.9 percent in the Life insurance segment and 6 percent in the Non-Life insurance segment.



**Chart 3.2.6-r**
**Bolivia: capacity to close IPG, 2006-16**
**(average annual growth rate, percent; sufficiency or insufficiency, percentage points)**

Source: MAPFRE Economic Research

In accordance with this analysis, if this same growth dynamic were to be sustained over the next ten years, the aggregate growth rate for the Bolivian market would be insufficient (shortfall of -11.3 percentage points) to cover the IPG estimated in 2016. The same applies to both the Life insurance segment (-11 percentage points short) and Non-Life (-7.6 percentage points short) segments. This means that to close the IPG estimated in 2016, the Bolivian insurance market would require annual growth rates substantially higher than those seen in the last ten years: 19.4 percent for the total market, and 27.9 percent and 13.6 percent for the Life and Non-Life segments, respectively.

Compared with the exercise performed in our 2015 report, the shortfall to cover the insurance gap is now marginally higher.

**Market Development Index (MDI)**

Chart 3.2.6-s provides an estimate of the Market Development Index (MDI) for the Bolivian insurance industry. As previously highlighted, the aim of the MDI is to summarize trends in the development and maturity of insurance markets. In the case of the Bolivian insurance industry, the indicator shows a general upward trend over the period 2006-16, becoming more pronounced

from 2012 onwards though still below the average trend observed in Latin American markets as a whole.

**Insurance market rankings**

**Overall ranking**

In December 2016, the Bolivian insurance market comprised 16 insurance companies, eight of which operated exclusively in the Non-Life insurance business and the remaining eight in both types.

Levels of market concentration in the Bolivian insurance market have fallen steadily over the last ten years. Even so, the Herfindahl index is still above the moderate concentration threshold. The top five insurers (in terms of individual companies) collectively represented 68.1 percent of total premiums, down 2.5 percentage points on the previous year. The concentration trend is higher when measured in group terms, reaching the highest level in the Life segment compared with Non-Life insurance (see Chart 2.2.6-t).

Yet again, the total ranking at the end of 2016 continued to be led by Alianza Seguros, with a market share of 24.9 percent. BISA Seguros
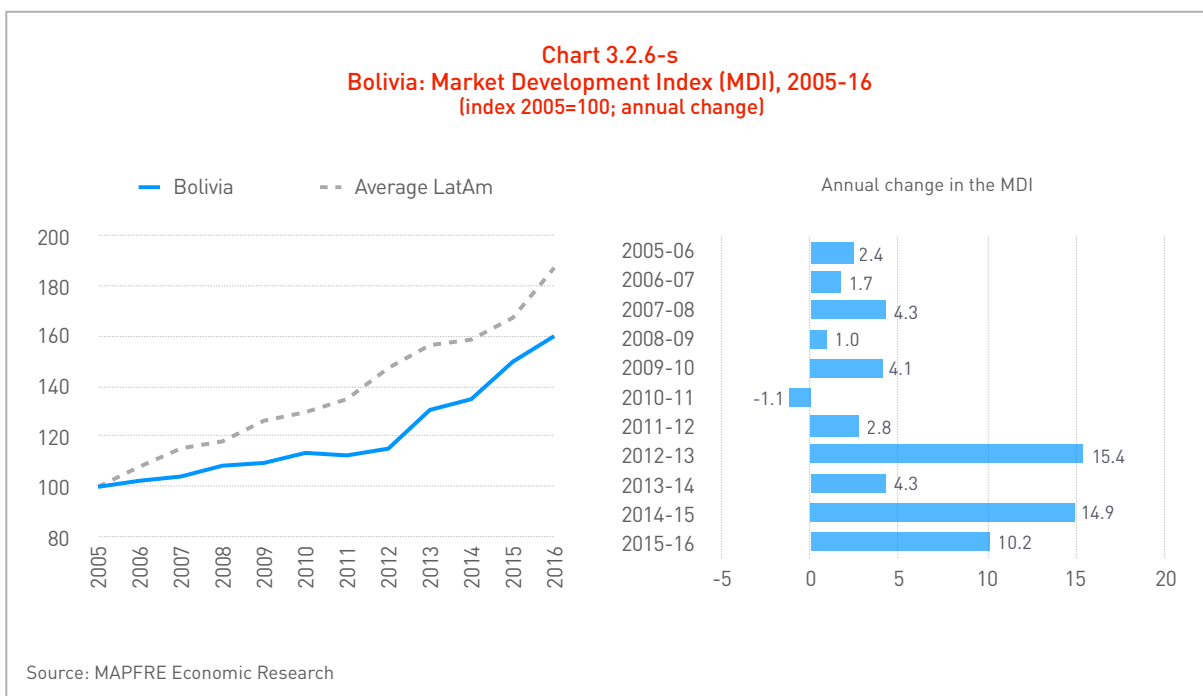
Chart 3.2.6-s
Bolivia: Market Development Index (MDI), 2005-16
(index 2005=100; annual change)



Source: MAPFRE Economic Research

**Chart 3.2.6-t**
**Bolivia: insurance industry concentration, 2006-16**
**(Herfindahl index; CR5 index, percent)**

Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)
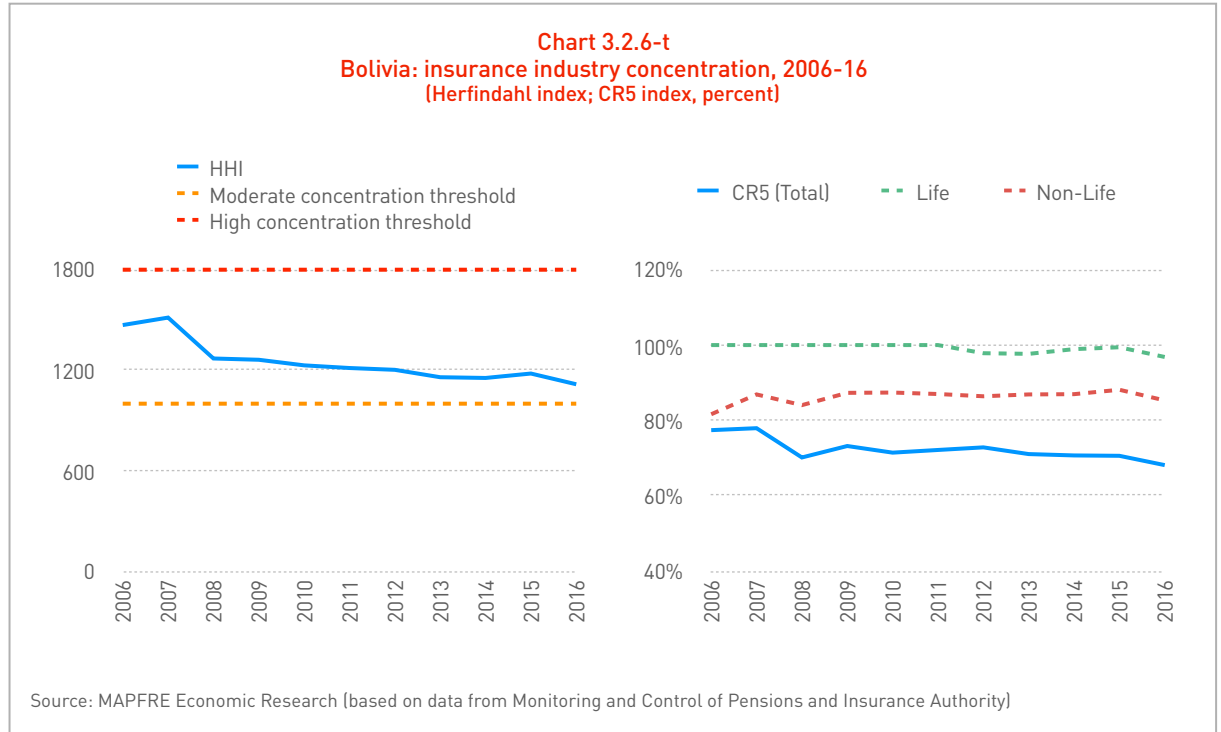
occupied the second slot with 18.2 percent, while Nacional with 18.1 percent overtook La Boliviana Ciacruz with a market share of 15.9 percent (see Chart 2.2.6-u).

**Non-Life Ranking**

The first two slots of the Non-Life ranking are occupied by the same insurers as in the total ranking, reflecting the predominance of the Non-Life insurance segment in the Bolivian market. Alianza Seguros is the leader with a share of 26.1 percent, while BISA Seguros occupies the second slot with a market share of 17.8 percent. In third place is La Boliviana Ciacruz with 17.7 percent (see Chart 3.2.6-v).



**Chart 3.2.6-u**
**Bolivia: overall ranking, 2015-16**
**(market shares, percent)**

Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)
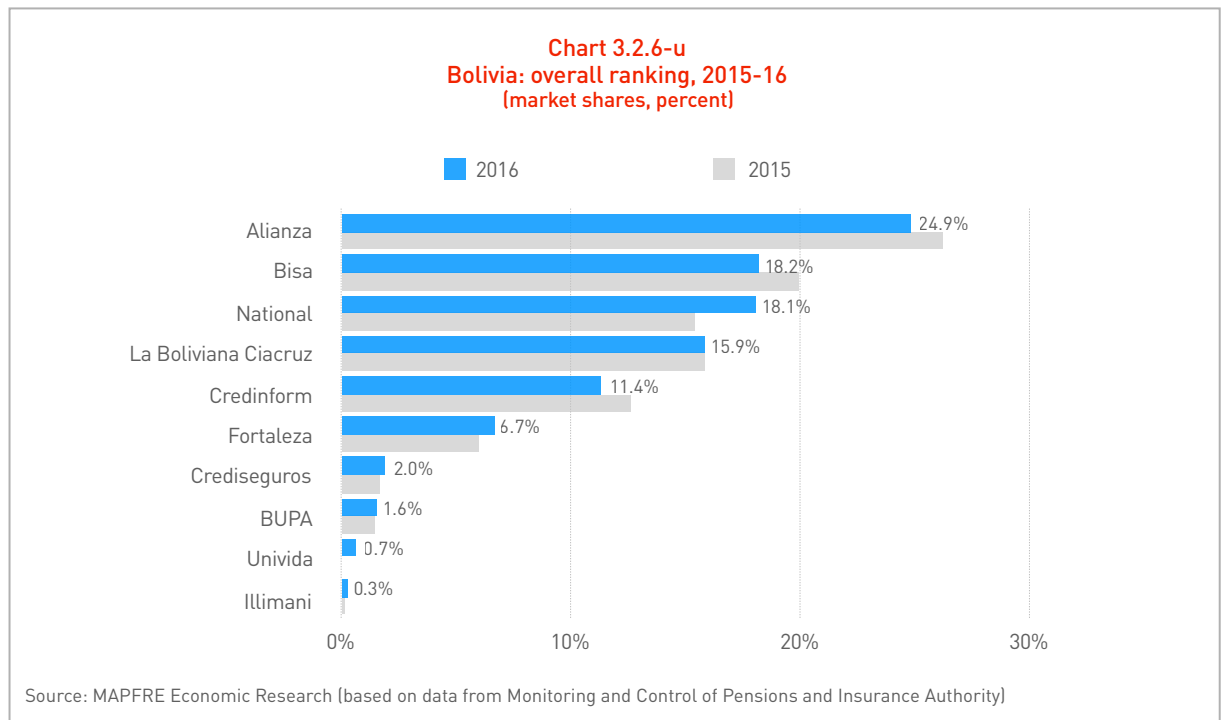
Chart 3.2.6-v
Bolivia: Life and Non-Life ranking, 2015-16
(market shares, percent)
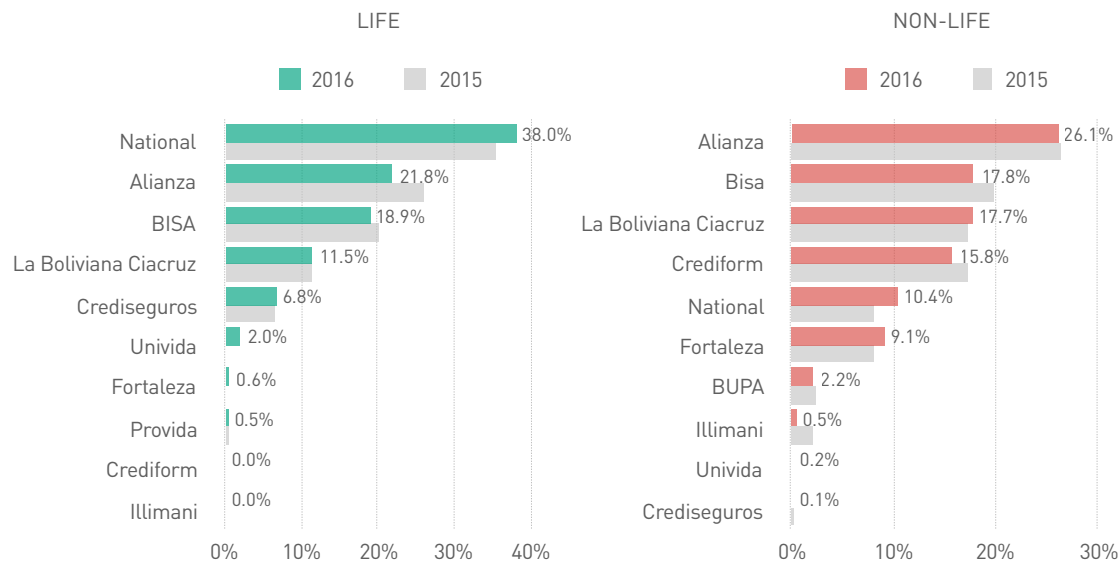
Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)

### Life Ranking

Lastly, the 2016 Life ranking is led by Nacional Seguros with 38 percent of the premiums in the market, followed by Alianza Seguros with 21.8 percent and BISA with a market share of 18.9 percent (see Chart 3.2.6-v).

### Key regulatory aspects

Article 35 of the Insurance Act was amended (through Law 856 of November 2016), establishing the limit of investments in real estate at 30 percent and prohibiting its concentration in a single or group of assets. Regarding investments in these assets, the second half of the year saw the publication of Resolutions 977-2016 and 1,116-2016 amending the rules on investment in non-luxury housing and the constitution of a special technical provision for technical rate risk.

In January 2016 Administrative Resolution 33-2016 made it compulsory for prospective insurance agents to take an exam and obtain a specific score.

That same month, Administrative Resolutions 39-2016 and 208-2016 established the minimum scope for external audits of insurance and reinsurance companies based on Standard NB-ISO-IEC 27001.

Circular 16-2016 published in January set out the minimum contents for the annual reports of insurance and reinsurance companies, and Circular 05-2016 established the deadline for their presentation. In the second quarter of the year Administrative Resolutions 547-2016 and 657-216 approved a standard text for policies guaranteeing compliance with legal and contractual obligations regarding telecommunications.

Administrative Resolution 687-2016 approved the regulation on mortgage protection insurance and the standard text for policies, while Administrative Resolution 755-2016 established the deadlines to bear in mind. This regulation was later amended through Resolution 1394-2016, published in November 2016.

October 2016 saw the approval of both the framework (Administrative Resolution 1429-2016) and standard policy text for this type of insurance (Administrative Resolution 1560-2016), as well as the technical and security specifications for Mandatory Traffic Accident Insurance (SOAT 2017)(Resolution 1442-2016).

Likewise, at the end of 2016 pension insurance companies received authorization to grant direct loans to their annuitants using the mathematical reserves set out in Administrative Resolution 1664-2016.

Lastly, Administrative Resolution 638-2017 authorized insurance companies that administer pension insurance to team up with financial intermediation companies to grant loans for the purchase of homes.

## 3.2.7. Chile

### Macroeconomic environment

The Chilean economy grew by 1.6 percent in real terms in 2016, compared with 2.3 percent in 2015 (see Chart 3.2.7-a). The slowdown in growth was mainly owing to a fall in internal demand (from 2.0 percent to 1.0 percent between 2015 and 2016) and in particular to a contraction in investment and public spending. In spite of this restrictive fiscal policy, the central government's deficit and the public debt increased because the economic slowdown led to a decline in tax receipts. At the same time, the internal conditions had a negative impact on the state of the labor market and pushed up unemployment.

Personal services, trade and transport all grew in 2016 while industry, mining, construction and electricity, gas and water services declined. Lower economic growth and the fall in oil prices helped to curb imports while exports benefited, in part, from the greater buoyancy of non-mining products, pushing the external sector current account deficit down to 1.8 percent in 2016.

Average inflation fell 0.6 percentage points in 2016 to 3.8 percent, while the unemployment rate increased 0.3 percentage points to 6.5 percent. ECLAC sees the Chilean economy growing by between 1.8 percent and 2.0 percent in 2017, while the IMF forecasts 1.7 percent.

**Chart 3.2.7-a**
**Chile: evolution of economic growth and inflation, 2006-16**
**(GDP in local currency, billions of pesos; real growth rate, percent; annual inflation rate, percent)**



Source: MAPFRE Economic Research (based on IMF data)
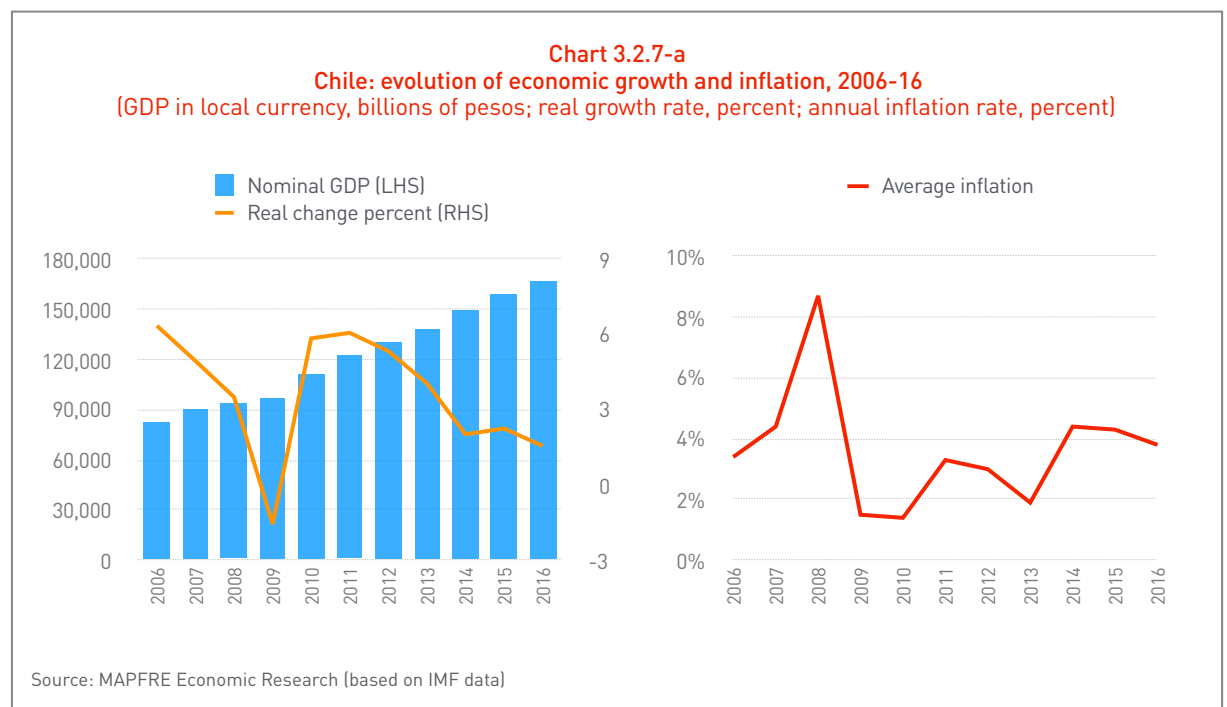
## Insurance Market

### Growth

The Chilean insurance market reached a premium volume of 8.301283 trillion pesos (12.273 billion dollars) in 2016, with a nominal growth of 12.1 percent and real growth of 8.0 (see Table 3.2.7 and Chart 3.2.7-a).

Once again Life insurance, which represents 63.4 percent of the market total, was the principal motor of growth for the industry, rising by a nominal 15.9 percent and 11.7 percent in real terms to reach 5.260639 trillion pesos (7.777 billion dollars). As in 2015, Individual Life and Pension insurance registered the greatest increase of all at 16.9 percent and 17.1 percent, respectively. Within Pension insurance, life annuities reached a premium volume of 2.759472 trillion pesos (4.080 billion dollars), representing more than half of the Life insurance business (52 percent).

Non-Life insurance posted 3.040644 trillion pesos in premiums (4.495 billion dollars), representing a nominal growth of 6.0% and real growth of 2.1%. Nearly all Non-Life types registered increases, the only exceptions being Transport and Third-party Liability which contracted by -8.6 percent and -6.9 percent, respectively. With regard to the two most important types, Fire registered a slight increase of 2.9 percent, though a decline of -0.9 percent in real terms while the Automobile line, which represents 23 percent of all Non-Life insurance, saw a nominal growth of 9.6 percent and real growth of 5.6 percent.

The largest contribution to the 12.1 percent growth registered by Chilean insurance industry in 2016 came from Life insurance, with 9.7 percentage points. Non-Life insurance contributed 2.3 percentage points to the growth of the industry that year (see Chart 3.2.7-c).

### Table 3.2.7
### Chile: premium volume[1] by lines of business (lob), 2016

| Lines of business | Millions of pesos | Millions of dollars | Increase | |
|---|---|---|---|---|
| | | | Nominal (percent) | Real (percent) |
| **Total** | **8,301,283** | **12,273** | **12.1** | **8.0** |
| **Life** | **5,260,639** | **7,777** | **15.9** | **11.7** |
| Individual Life | 870,322 | 1,287 | 16.9 | 12.6 |
| Group Life | 784,661 | 1,160 | 9.8 | 5.8 |
| Pension | 3,605,656 | 5,331 | 17.1 | 12.8 |
| **Non-Life** | **3,040,644** | **4,495** | **6.0** | **2.1** |
| Fire and/or Allied Lines | 815,042 | 1,205 | 2.9 | -0.9 |
| Automobiles | 693,487 | 1,025 | 9.6 | 5.6 |
| Other Damage | 488,831 | 723 | 9.2 | 5.3 |
| Health | 475,917 | 704 | 9.8 | 5.8 |
| Personal accidents[2] | 243,300 | 360 | 5.6 | 1.7 |
| Transport | 108,252 | 160 | -8.6 | -12.0 |
| Third-party liability | 103,484 | 153 | -6.9 | -10.3 |
| Credit and/or Surety | 112,330 | 166 | 9.1 | 5.2 |
| Multiperil | N/A | N/A | N/A | N/A |

Source: MAPFRE Economic Research (based Chilean Insurers Association data)
1/ Direct premiums
2/ Includes the Mandatory Personal Accident Insurance (SOAP)

Chart 3.2.7-b
Chile: growth developments in the insurance market, 2006-16
(premiums, billions of pesos, nominal annual growth rates, percent)
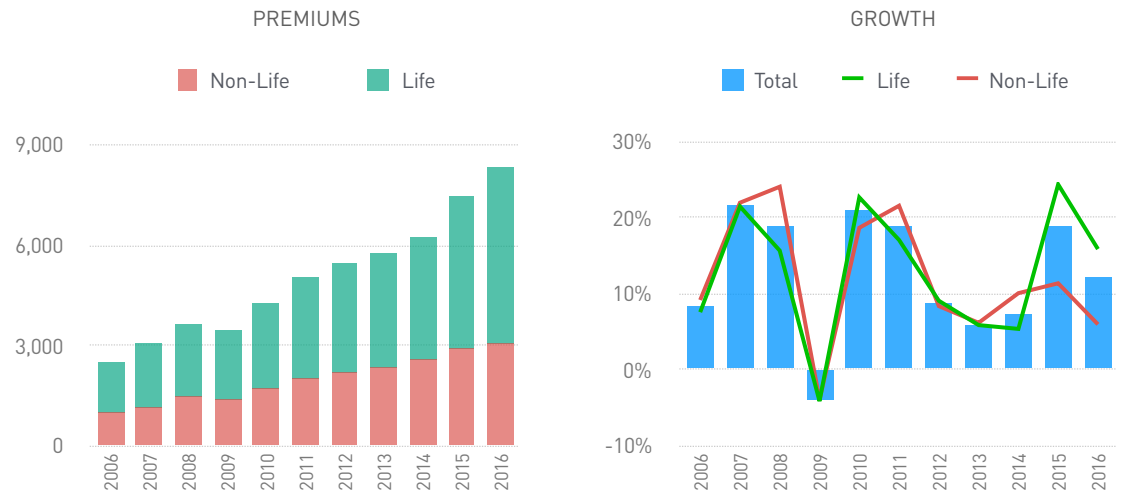
Source: MAPFRE Economic Research (based Chilean Insurers Association data)

## Balance sheet and equity

Chart 3.2.7-d summarizes the aggregate balance sheet at sector level for the Chilean insurance industry over the period 2006-16.

Total assets reached 40.583576 trillion pesos (59.999 billion dollars) at the end of 2016, while equity stood at 4.051105 trillion pesos (5.989 billion dollars), up 9.1 percent on 2015.

The Chilean insurance industry's capital level has grown steadily in absolute values over the period, but in relative terms the capital ratio (capital versus all assets) took a dip in 2010, falling from values of over 12 percent to 10 percent in 2015 and 2016.

## Investment

Charts 3.2.7-e, 3.2.7-f and 3.2.7-g show the evolution and composition of the aggregate investment portfolio at a sector level for insurers in Chile.

In line with these data, investment reached 36.493883 trillion pesos (53.95246 billion dollars) in 2016, concentrated in fixed income (61.9

percent) and, to a significantly smaller proportion (6.9 percent), variable annuities.

The relative weight of fixed-income products in all investments declined over the period



Chart 3.2.7-c
Chile: contribution to insurance market growth, 2006-16
(percentage points, ppts)
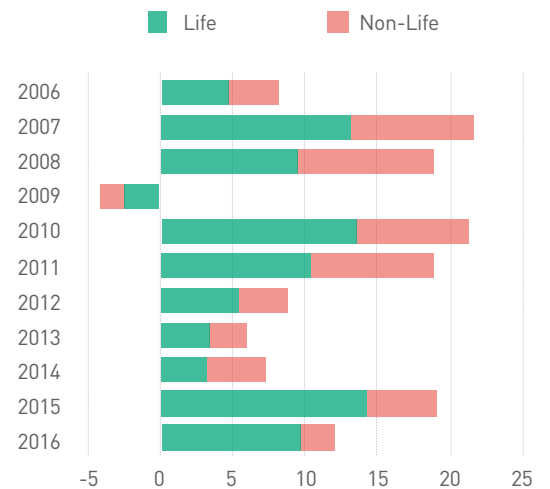
Source: MAPFRE Economic Research (based Chilean Insurers Association data)

**Chart 3.2.7-d**
**Chile: evolution of insurance industry's aggregate balance sheet, 2006-16**
(amounts in local currency, change in equity, percentage points)
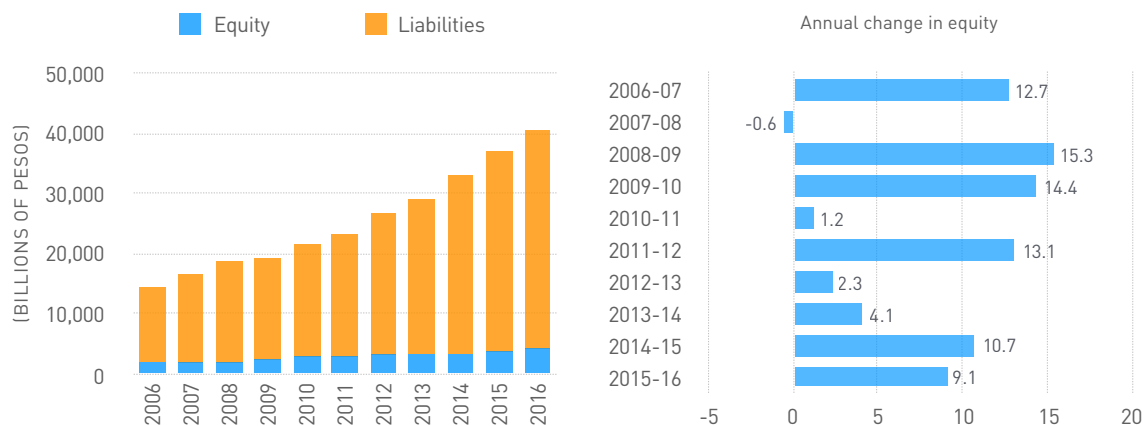
Source: MAPFRE Economic Research (based on Securities and Insurance Superintendence data)

analyzed, falling from 77.3 percent in 2006 to 61.9 percent in 2016. By contrast, the weight of property investments and other types of financial investment (especially bank deposits) grew, climbing in each case from 10 percent of the portfolio in 2006 to 14.9 percent and 15.5 percent, respectively, in 2016.

**Technical provisions**

Charts 3.2.7-h, 3.2.7-i and 3.2.7-j show the evolution and relative composition of technical provisions in the Chilean insurance industry over the period 2006-16.

Technical provisions reached 34.358555 trillion pesos (50.795 billion dollars) last year. Of the total provisions, 90.3 percent relate to Life insurance, 4,7 percent to provisions for unearned premiums and unexpired risks in Non-Life insurance, 3.6 percent to provisions for outstanding claims, 0.1 percent to provisions for catastrophic risks, and the remaining 1.3 percent to other technical provisions.

The relative weight of Non-Life insurance provisions practically doubled over the period analyzed but remains low compared with the weight of provisions for the Life insurance segment.

**Technical performance**

The consolidated technical result for the Chilean insurance sector was yet again negative in 2016 with a combined ratio of 119.0 percent, which was nevertheless one percentage point better



**Chart 3.2.7-e**
**Chile: Insurance market technical provisions, 2006-16**
(billions of pesos)
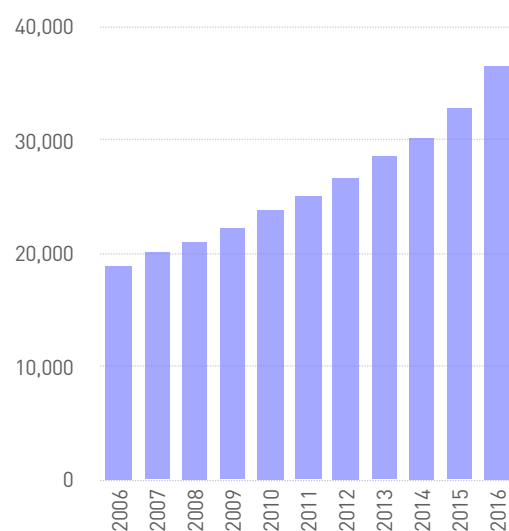
Source: MAPFRE Economic Research (based on Securities and Insurance Superintendence data)

**Chart 3.2.7-f
Chile: structure of
investment, 2006-16
(%)**



Source: MAPFRE Economic Research (based on Securities and Insurance Superintendence data)

**Chart 3.2.7-g
Chile: structure
of investment, 2016
(%)**



Source: MAPFRE Economic Research (based on Securities and Insurance Superintendence data)
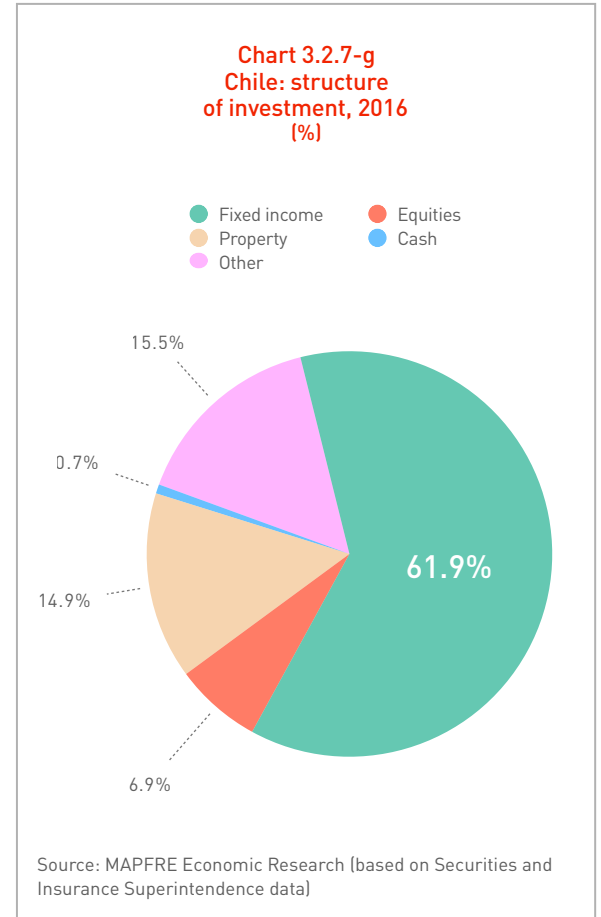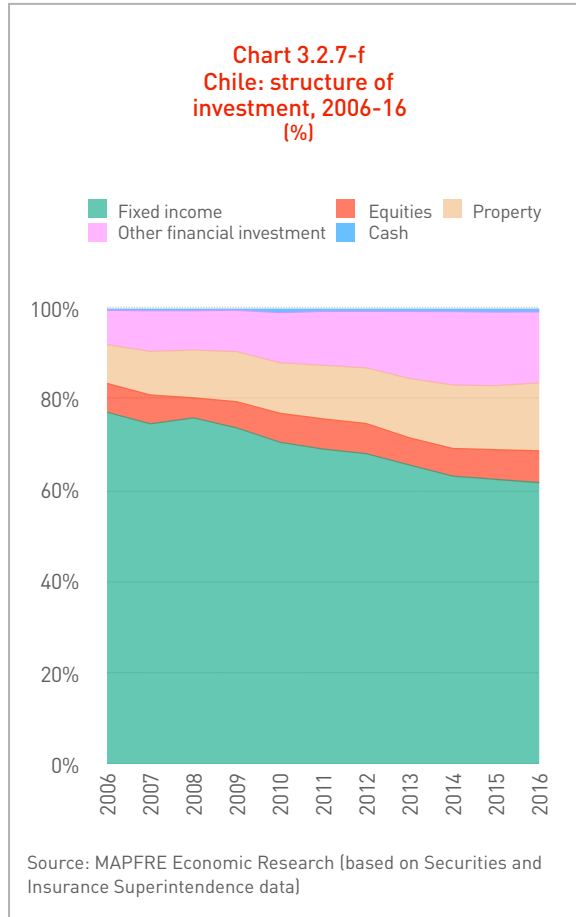
than the 2015 value (0.2 percentage points for the claims ratio and 0.96 percentage points for the expense ratio). The claims ratio remained consistently high over the period analyzed, with values over 90 percent since 2013 and reaching 93.1 percent in 2016 (see Chart 3.2.7-k).

In relation to the technical performance of Non-Life companies, Chart 3.2.7-l shows that the combined ratio improve significantly in the last two years, reaching 100.9 percent in 2016, down 1.7 percentage points on the previous years.

**Results and profitability**

The Chilean insurance industry posted a net result of 496.925 billion pesos (734.7 million dollars) in 2016, representing an increase of 15.8 percent.

As shown in Chart 3.2.7-m, the positive net result obtained throughout nearly all the period
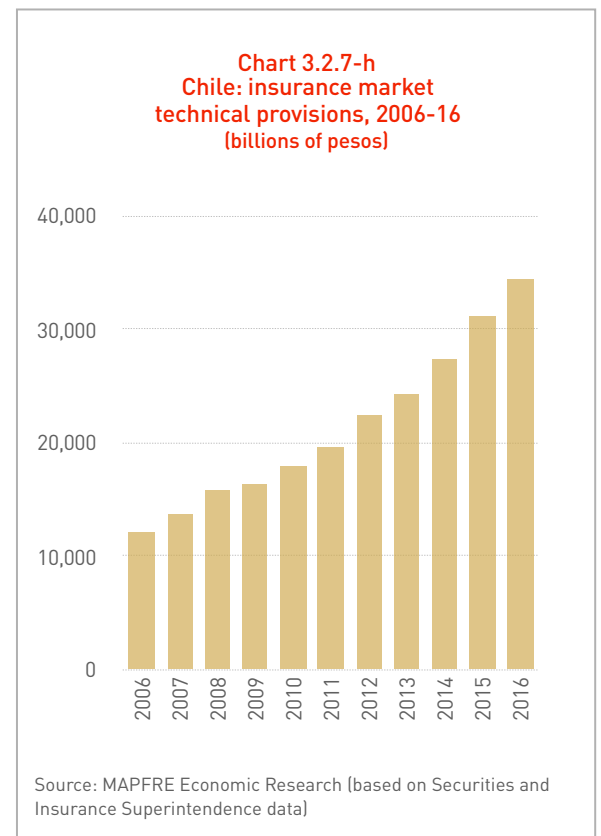
**Chart 3.2.7-h
Chile: insurance market
technical provisions, 2006-16
(billions of pesos)**



Source: MAPFRE Economic Research (based on Securities and Insurance Superintendence data)

**Chart 3.2.7-i**
**Chile: structure of technical provisions, 2006-16**
**(%)**
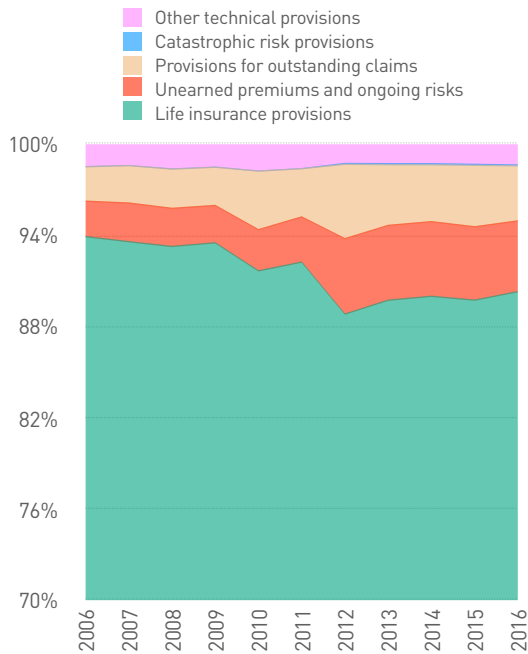


Source: MAPFRE Economic Research (based on Securities and Insurance Superintendence data)

**Chart 3.2.7-j**
**Chile: structure of technical provisions, 2016**
**(%)**
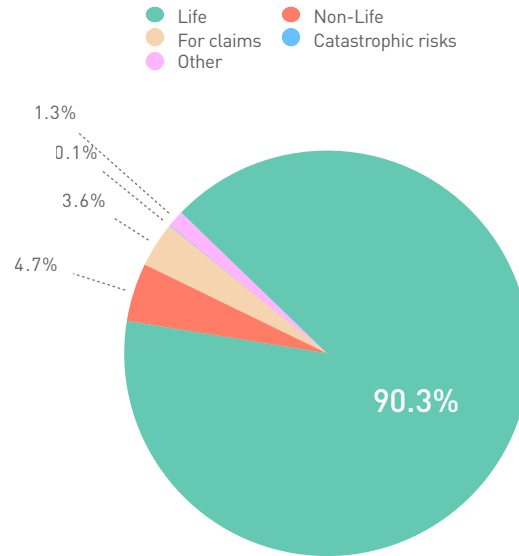


Source: MAPFRE Economic Research (based on Securities and Insurance Superintendence data)

**Chart 3.2.7-k**
**Chile: evolution of market technical performance, 2006-16**
**(total combined ratio, percent; annual change in combined ratio, percentage points)**
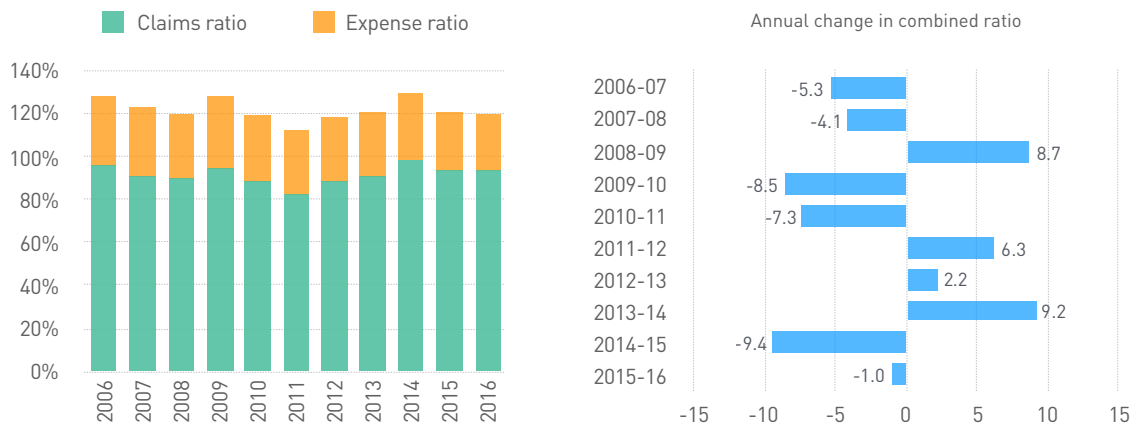


Source: MAPFRE Economic Research (based Chilean Insurers Association data)

**Chart 3.2.7-l
Chile: evolution of the Non-Life market's technical performance, 2006-16
(total combined ratio, percent; annual change in combined ratio, percentage points)**
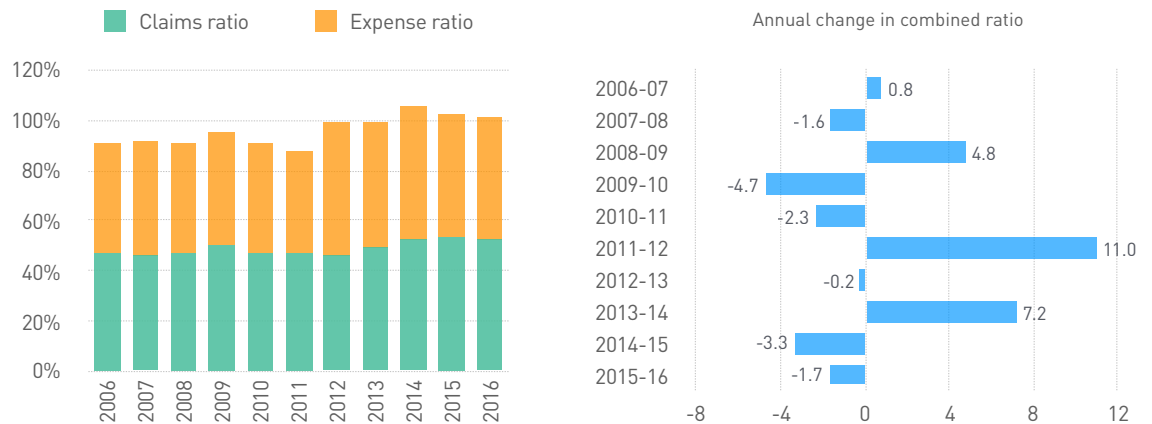


Source: MAPFRE Economic Research (based Chilean Insurers Association data)

analyzed is owing to positive financial results that have been able to offset the negative technical results.

With regard to the profitability of the Chilean insurance market, return on equity (ROE) stood at 12.3 percent in 2016, up 0.71 percentage points on the previous year. The return on assets (ROA) also increased slightly (0.07 percentage points) in relation to 2015, ending the year at 1.2 percent.

**Insurance penetration, density and depth**

Chart 3.2.7-n shows the main structural trends in the development of the Chilean insurance industry over the period 2006-16.

**Chart 3.2.7-m
Chile: evolution of results and profitability, 2006-16
(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)**
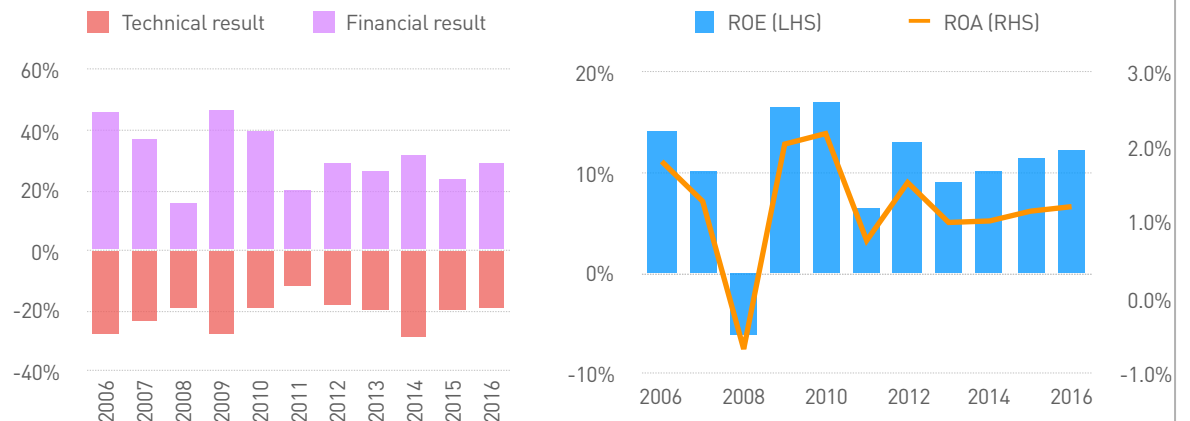


Source: MAPFRE Economic Research (based on Securities and Insurance Superintendence data)

The penetration index (premiums/GDP) reached 5 percent in 2016, representing an increase of 1.9 percentage points on the level registered in 2006 but 0.3 percentage points below the previous year's level. As the chart shows, penetration of the Chilean market has grown steadily since 2006, in line with the average for the Latin American insurance market as a whole and above the absolute average values for the region.

Insurance density in Chile (premiums per capita) reached 459,535 pesos (679 dollars) in 2016, up 11.1 percent on 2015 (413,482 pesos). Like the penetration index, density in Chile (measured in local currency) climbed steadily over the period 2006-16. However, when measured in U.S. dollars it takes a dip between 2013 and 2015, partly as a result of the devaluation of the Chilean peso in relation to the dollar, but then starts climbing again in 2016. The high density level in the Chilean market is greatly determined by the maturity of the contribution of the private insurance industry to the pension scheme through the offer of life annuities.

With regard to the depth of the Chilean market (Life insurance premiums versus total premiums), this reached 63.4 percent in 2016, up 1.8 percentage points on the 2006 level, showing a steady trend throughout most of the period analyzed and a distinct upturn in 2014.

Chart 3.2.7-o shows the performance of the Chilean insurance market based on a dispersion analysis which takes account of the overall effect of the penetration and depth levels. This analysis shows that while the market gradually increased its contribution to GDP (penetration) throughout the period analyzed, in terms of depth there was a contraction over the period 2006-14 but then a return to positive balanced growth from that year onwards.

**Estimate of the
Insurance Protection Gap**

Chart 3.2.7-p provides an estimate of the IPG for the Chilean insurance market between 2006 and 2016. As shown, the insurance gap stood at 4.983 billion pesos in 2016, representing 0.6 times the

actual insurance market in Chile at the end of the year.

The structure and evolution of the IPG over the period analyzed reflect a relative balance between the contribution of Life and Non-Life insurance. At the end of 2016, 45.3 percent of the IPG related to Life insurance (2.256 billion pesos), which is 12.6 percentage points below the 2006 level. The remaining 54.7 percent related to the gap in Non-Life insurance (2.727 billion pesos). In 2016 Non-Life overtook Life insurance as the greatest contributor to the IPG.

Accordingly, the potential insurance market in Chile at the end of 2016 (sum of actual market and IPG) was estimated at 13.2843 billion pesos, representing 1.6 times the total insurance market that year.

Chart 3.2.7-q shows an estimate of the IPG as a multiple of the actual insurance market in Chile. As indicated, there was a marked downward trend in the insurance gap over the period analyzed. During this time the total insurance gap multiple fell from 1.7 to 0.6 times the actual market. The same is true of the multiple for the Life market, which fell from 1.6 to 0.4 times, and for Non-Life insurance where it fell from 1.9 to 0.9.

Chart 3.2.7-r provides a summary of the assessment regarding the capacity of the Chilean insurance market to close the insurance gap based on a comparison of growth rates over the last ten years in relation to the growth rates that would be required to close the IPG established in 2016 over the next ten years.

The exercise (summarized in Chart 3.2.7-r) shows that the Chilean insurance market grew by an average 12.7 percent over the period 2006-16. Specifically, the Life segment saw an increase of 13 percent and Non-Life insurance grew by an average 12.1 percent.

On the basis of this analysis, if the same rate of growth seen in the last ten years were to be sustained over the next ten years, the growth rate of the Chilean insurance market would be

**Chart 3.2.7-n**
**Chile: evolution of penetration, density and depth, 2006-16**
(premiums/GDP, percent; premiums per capita, pesos and dollars; Life insurance premiums / total premiums, percent, index 2006=100)



PENETRATION

INDEX (2006=100)

DENSITY

INDEX (2006=100)

DEPTH

INDEX (2006=100)
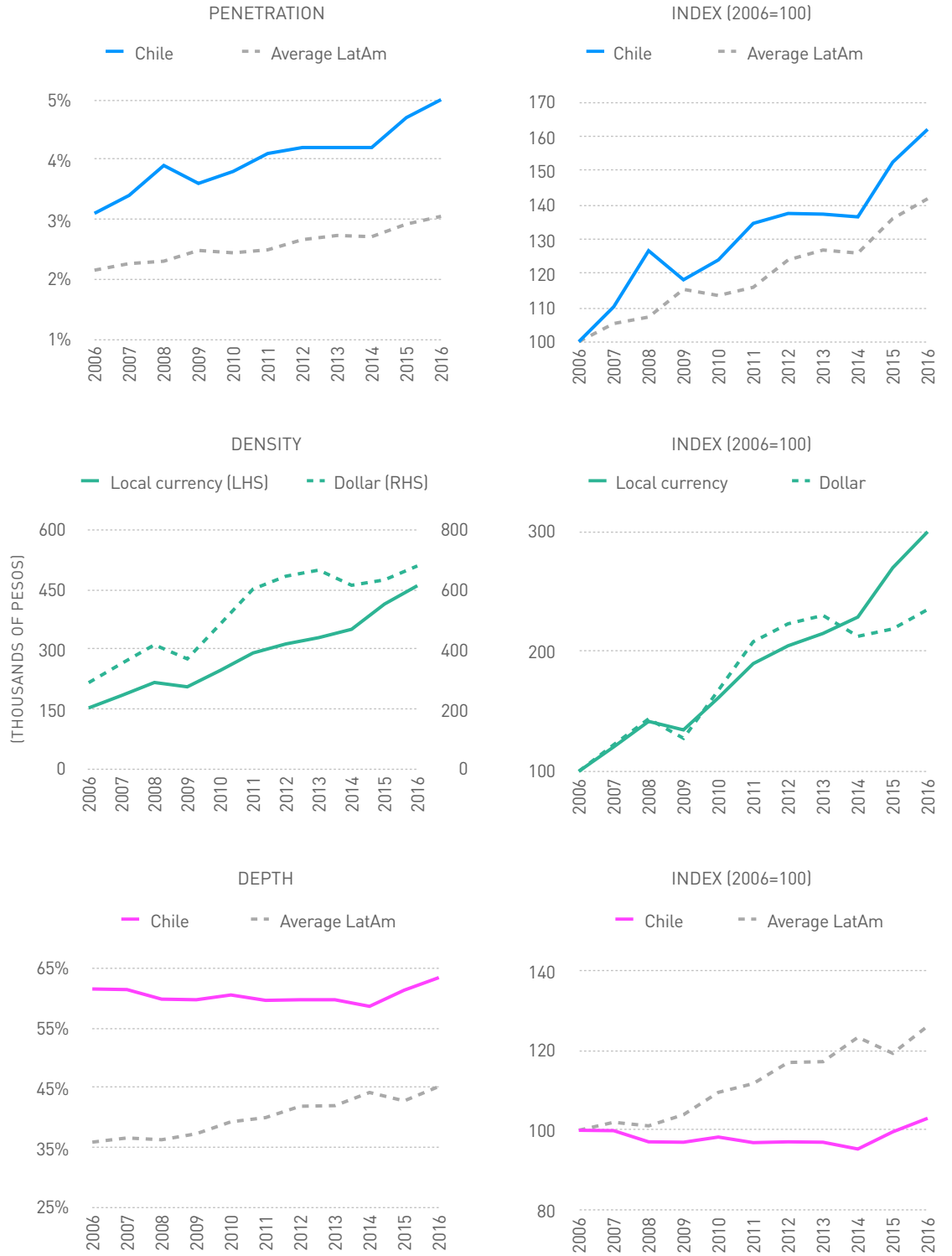
Source: MAPFRE Economic Research (based on data from the Securities and Insurance Superintendence and the Chilean Insurers

Chart 3.2.7-o
Chile: evolution of insurance market, 2006-16
(penetration vs depth)
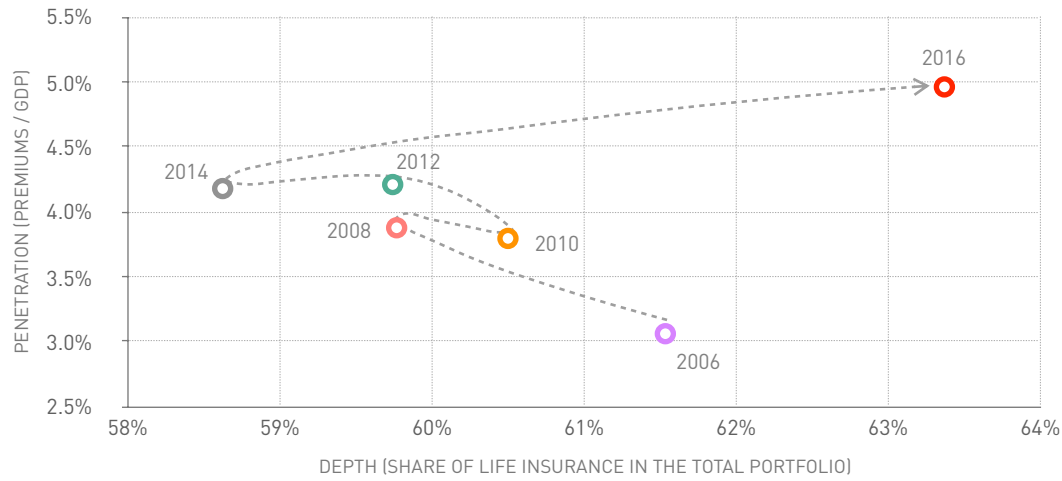


Source: MAPFRE Economic Research

Chart 3.2.7-p
Chile: Insurance Protection Gap and potential market, 2006-16
(billions of pesos)
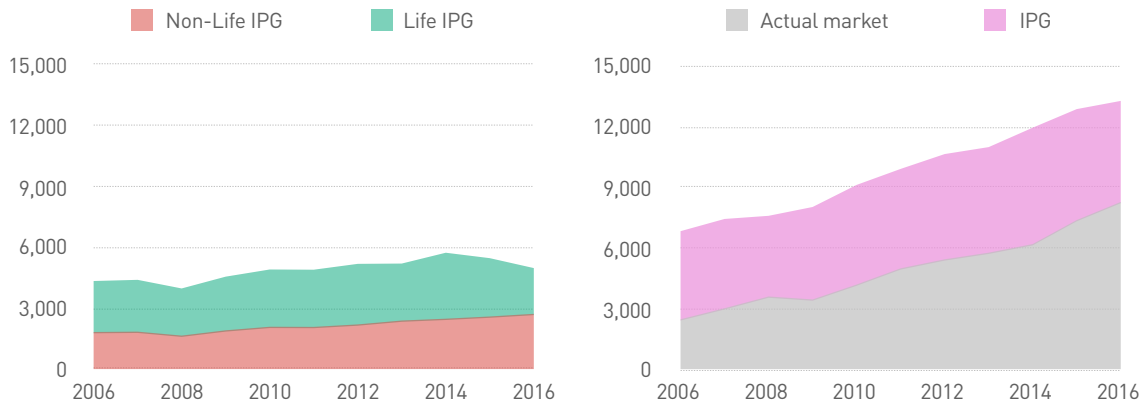


Source: MAPFRE Economic Research

sufficient to close the insurance gap in both the Life and Non-Life segments.

Besides, this sufficiency has been strengthened (especially in the case of the Life insurance segment) in relation to the exercise carried out in 2015.

**Market Development Index (MDI)**

Chart 3.2.7-s provides an estimate of the Market Development Index (MDI) for the Chilean insurance industry. The MDI, which is used as an indicator of general trends in the development and maturity of the insurance market, performed positively over the period 2006-16.

Although the indicator fluctuates around the average for all Latin American insurance

Chart 3.2.7-q
Chile: the IPG as a multiple of the actual market, 2006-16
(number of times actual insurance market)

Source: MAPFRE Economic Research



Chart 3.2.7-r
Chile: capacity to close IPG, 2006-16
(average annual growth rate, percent; sufficiency or insufficiency, percentage points)

Source: MAPFRE Economic Research
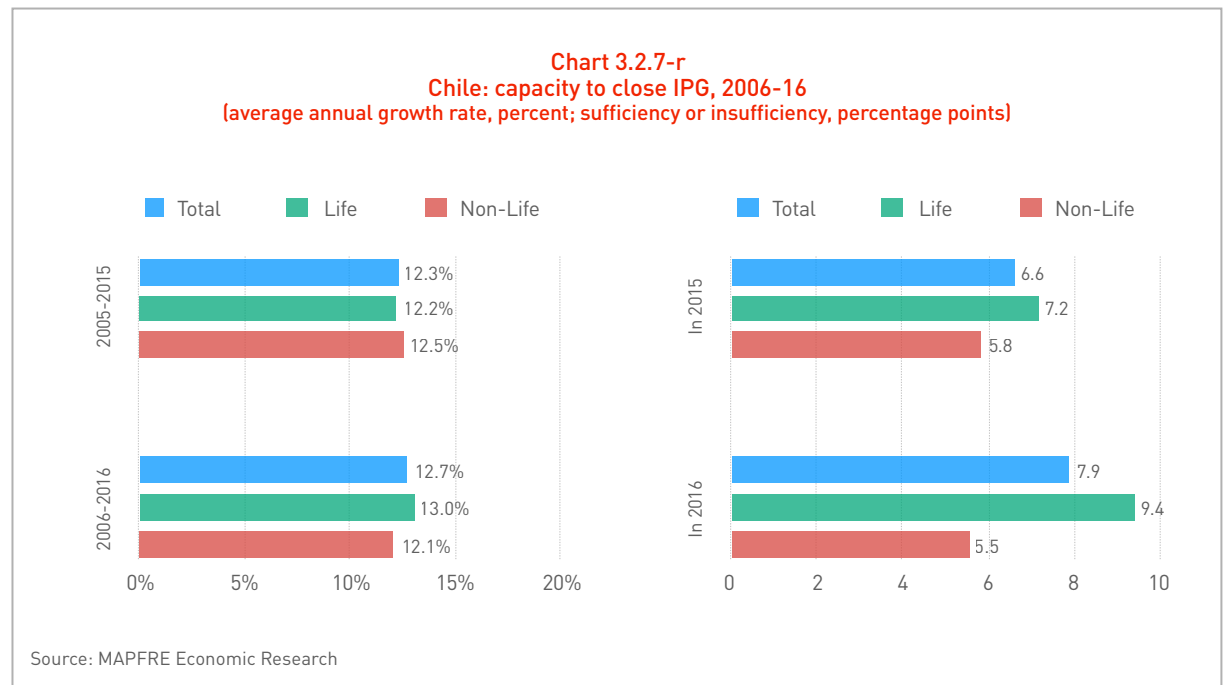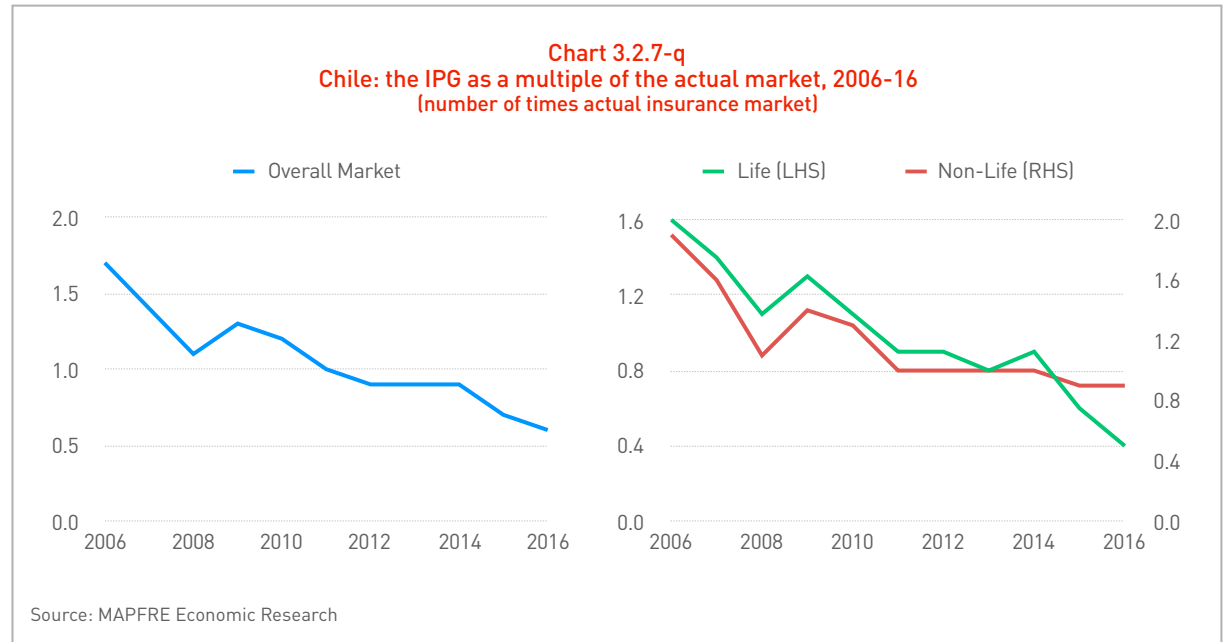
markets through the period analyzed, it converges more closely with the regional average in 2015 and then overtakes it in 2016.

## Insurance market rankings

### Overall ranking

At the end of 2016, 30 general insurance companies and 36 Life insurance companies were operating in the Chilean market. Chart 3.2.7-t shows the concentration indicators for the Chilean insurance industry over the period 2006-16.

The Herfindahl index reveals a low level of concentration in the industry, below the theoretical threshold that indicates moderate concentration (IHH=409). Meanwhile, the CR5 index remained stable throughout the period

**Chart 3.2.7-s**
**Chile: Market Development Index (MDI), 2005-16**
**(index 2005=100; annual change)**
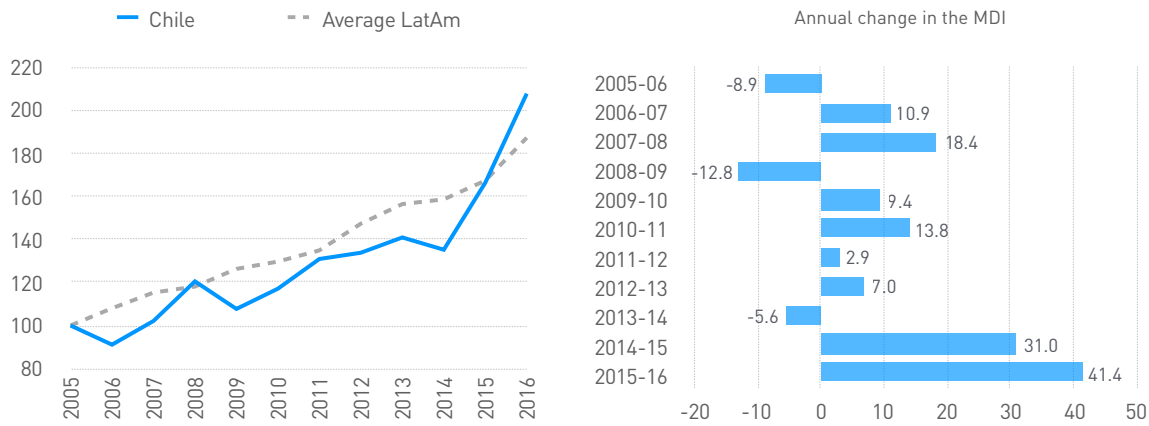


Source: MAPFRE Economic Research

and, as shown in the chart, the Non-Life business saw increasingly lower levels of concentration, falling to below the Life insurance business in 2013.

In the overall ranking of insurance groups, Consorcio Nacional held on to its first place in 2016 with a market share of 10.7 percent, followed by Sura (10.0 percent, after the acquisition of RSA) and MetLife with 8.8 percent of premiums. Zurich moved into the fourth slot, pushing Cámara down to fifth place. Penta climbed from the sixth to the ninth slot, pushing BCI down to seventh. They are followed by Bice, in the same slot as 2015, Liberty, which has lost two slots, and Security Provision, joining the ranking in place of Cardif (see Chart 3.2.7-u).

**Chart 3.2.7-t**
**Chile: insurance industry concentration, 2006-16**
**(Herfindahl index; CR5 index, percent)**
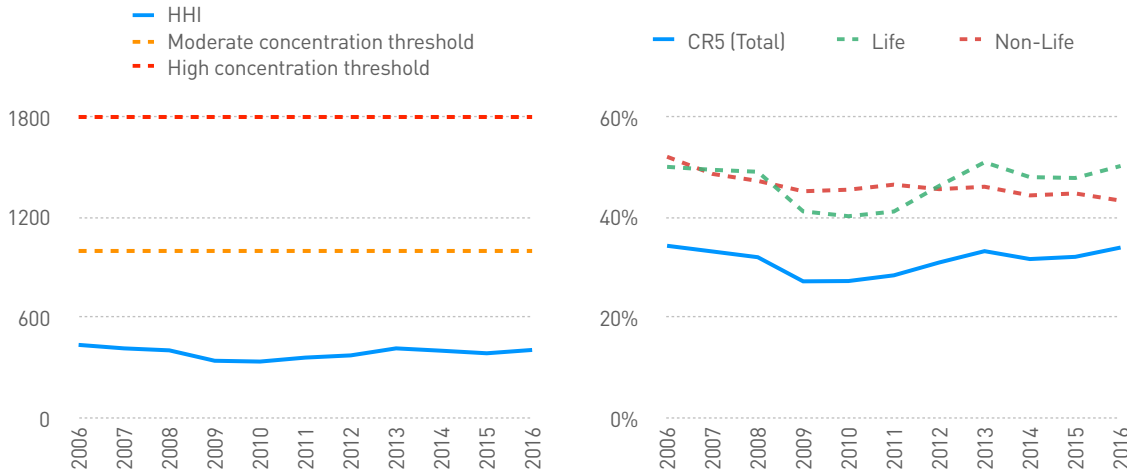


Source: MAPFRE Economic Research (based Chilean Insurers Association data)

**Non-Life Ranking**

The top three positions in the Life ranking of insurance groups continued to be occupied by Liberty, Sura and BCI. They are followed by Zurich and HDI, each of which has climbed one position and pushed MAPFRE down to the sixth slot. Cardif, Chubb and Metlife are in the same position as the previous year, and AIG takes the tenth slot from Consorcio, which has lost its place on the top ten Non-Life groups ranking (see Chart 3.2.7-v).

**Life Ranking**

The groups in the Life ranking remain the same as in 2015, although there are some changes to their relative positions. Consorcio Nacional, MetLife and Cámara continue to lead, Penta, Zurich and Security Provision have improved their position, and Sura, Bice and Principal have all lost ground. Lastly, Euroamérica has held on to its tenth slot (see Chart 3.2.7-v).

## Key regulatory aspects

Law 20,956 of October 26, 2016 sets out measures to improve productivity. The aim of the legal amendments in the law is to increase the country's productivity through: (i) reinforcement of the finance system to facilitate transactions, expand financing possibilities and reduce their cost, making the payment system more efficient; and (ii) promotion of service exports to diversify the economy to new labor-intensive sectors with a particular focus on foreign markets.

With specific regard to the insurance industry, the law amends Statutory Decree 251 of 1931, of the Finance Ministry, on Insurance Companies, Limited Companies and Stock Exchanges, to diversify the investments of insurance companies. Among other measures, it amends the framework for investments in foreign markets by increasing the current limit, at the discretion of the Central Bank following a report from the Securities and Insurance Superintendence, and establishing a minimum limit of 20 percent of the technical reserves and risk assets of companies (it is currently a

minimum of 10 percent and maximum of 20 percent).

In February 2017 the Official Gazette of Chile published Law 21,000 creating the Financial Market Commission, which replaces the current Securities and Insurance Superintendence. The Commission's task will be to ensure the correct operation, development and stability of the financial market, facilitating the participation of market agents and reinforcing due processes. Mutual fund administrators, and other entities and natural or legal persons which the law explicitly exempts, are not subject to oversight by the Commission. The law will enter into force 18 months after its publication or when the Commission is up and running, whichever occurs first.

Beside, in 2016 several partial amendments were made to general standards and circulars applicable to insurance companies, specifically relating to the constitution of technical reserves, application of IFRS standards in establishing technical provisions for life annuity and invalidity and survivor insurance, corporate governance, form and content of information on investments and the system for assessing the market risk of the investment portfolio.

In addition, several legislative projects are currently in progress, the most important rules of which include the following:

• Bill establishing a risk-based supervision system for insurance companies.

 This initiative from the Executive was sent to the Chamber of Deputies in September 2011. It was approved in general and then in particular in 2012 before being sent to the Senate for its second constitutional hearing. In May 2017 the Securities and Insurance Superintendence published the fifth draft on the methodology for establishing risk-based capital for public consultation. This draft included slight changes with respect to the previous one, as follows:

**Chart 3.2.7-u**
**Chile: overall ranking, 2015-16**
**(market shares, percent)**
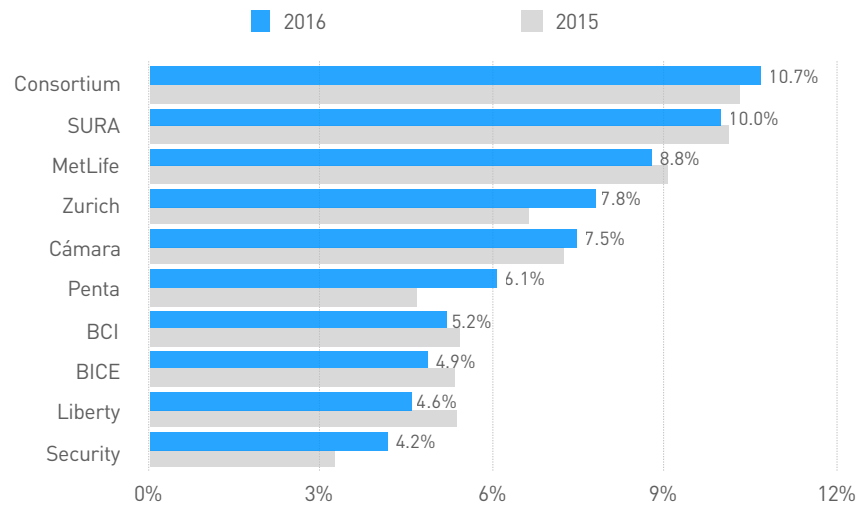


Source: MAPFRE Economic Research (based Chilean Insurers Association data)

**Chart 3.2.7-v**
**Chile: Life and Non-Life ranking, 2015-16**
**(market shares, percent)**
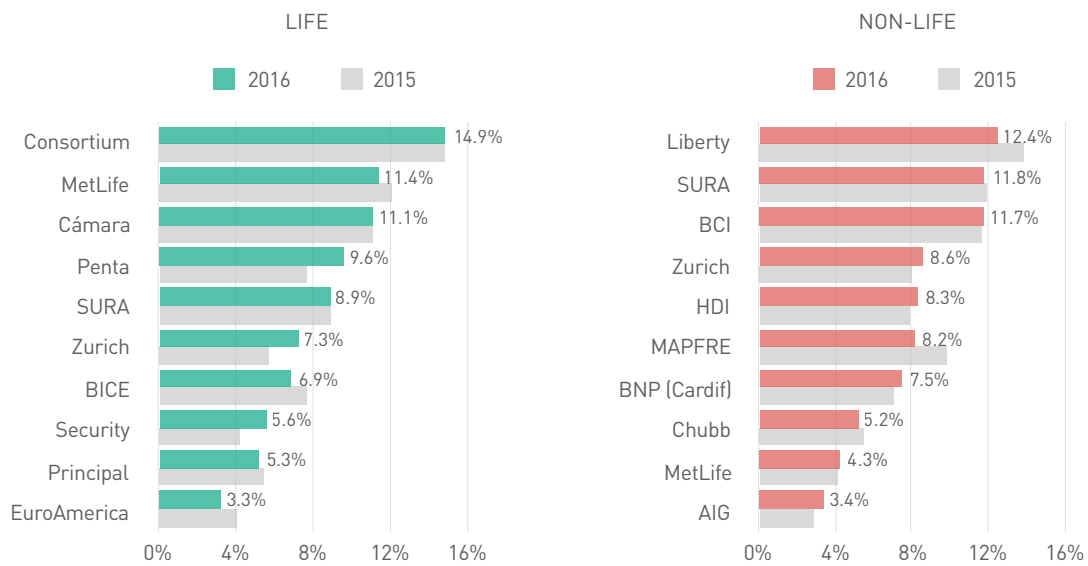


Source: MAPFRE Economic Research (based Chilean Insurers Association data)

- Reduction of the capital associated with the Deferred Tax Assets account (from 100 percent to 50 percent)

- The introduction of a correspondence matrix at geographic level to incorporate the diversification effect on shares.

- Certain amendments to the adjustment factor in premiums to calibrate the concentration risk.

- Bill amending Law 19,496 on the protection of consumer rights.

  The bill had its first hearing in June 2014 and was then sent to the Senate where it was approved in general on September 29, 2015. The Economics Commission is still studying the particular aspects.

  The aim of this project is to strengthen consumer protection mechanisms by reinforcing the institutionality of the National Consumer Service (SERNAC) and widening its scope to oversee, sanction, interpret the law and issue general standards.

### 3.2.8. Paraguay

### Macroeconomic environment

The Paraguayan economy experienced a real growth of 4.1 percent in 2014, 3 percent higher than the value registered the previous year and also higher than the regional average.

This greater buoyancy is explained by positive trends in the secondary sector (in particular, construction, due to greater execution of works by the central government, and electricity production due to the increase in the use of installed capacity and favorable hydrologic conditions) and the primary sector (more livestock farming).

On the expenditure side, the principal contribution to the growth came from investment and the external sector. Private consumption has weakened, possibly due to the impact of the depreciation on durable goods and the enactment of a new law imposing limits on credit card interest (see Chart 3.2.8-a).

The current account balance achieved a surplus of 0.6 percent of GDP in 2016, compared with a deficit of 1.1 percent the previous year. This favorable balance can be traced to a lower level of imports and a slight upturn in exports, influenced by the positive performance of the main products (soya and derivatives, cereals, meat and electricity) in terms of both volume and prices.

Average inflation reached 4.1 percent in 2016 compared with 3.1 percent the previous year, while the unemployment rate fell by 0.2 percentage points to 5.1 percent.

ECLAC sees the Paraguayan economy expanding by around 3.8 percent in 2017, while the IMF puts the forecast half a percentage point lower, at 3.3 percent.

Chart 3.2.8-a
Paraguay: evolution of economic growth and inflation, 2006-16
(GDP in local currency, billions of guaraníes; real growth rate, percent; annual inflation rate, percent)
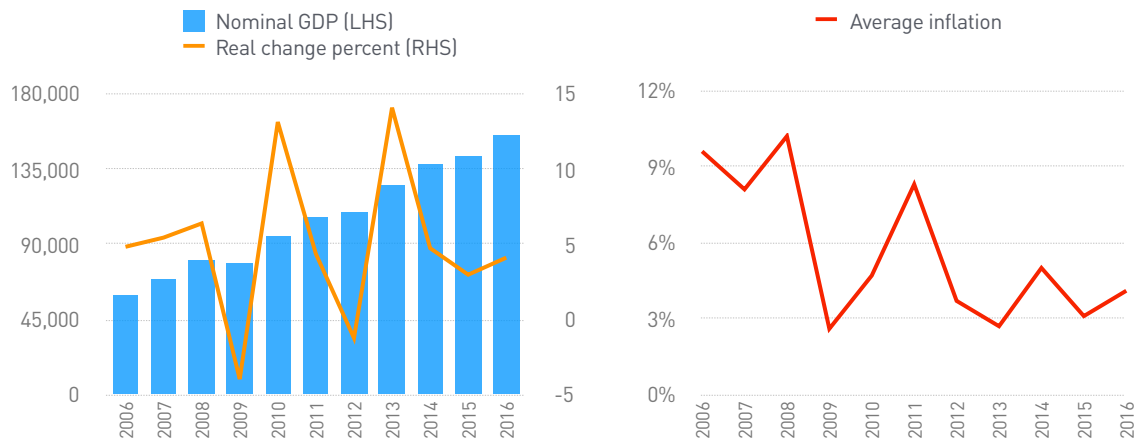
Source: MAPFRE Economic Research (based on IMF data)

## Insurance Market

### Growth

The Paraguayan insurance market achieved a premium volume (annualized in December 2017) of 2.168768 trillion guaraníes (382 million dollars), representing nominal growth of 5.5 percent and 1.3 percent in real terms (see Table 3.2.8 and Chart 3.2.8-c).

Life insurance premiums, which represent 13.9 percent of the total market, grew by a nominal 7.8 percent (3.6 percent real) to 301.748 billion guaraníes (53 million dollars), while Non-Life insurance premiums, which represent the remaining 86.1 percent) saw a nominal increase of 5.1 percent (1 percent real) to 1.867020 trillion guaraníes (329 million dollars). Nearly all insurance types saw nominal increases, with the exception of Theft, which registered a significant nominal contraction of 9 percent. In real terms, the lines with the greatest negative variation were Transport (-3.7 percent), the aforementioned Theft insurance, Surety (-2.4 percent) and Other Damages (-0.1 percent). The most important type, Automobile insurance, grew by around 5 percent, with real growth 1 percent lower.

Out of the 5.5 percent growth registered by the Paraguayan insurance industry in 2016, the greatest contribution came from Non-Life insurance, 4.4 percentage points, whereas Life insurance contributed just 1.1 percentage points (see Chart 3.2.8-b).



Chart 3.2.8-b
Paraguay: contribution to insurance market growth, 2006-16
(percentage points, ppts)
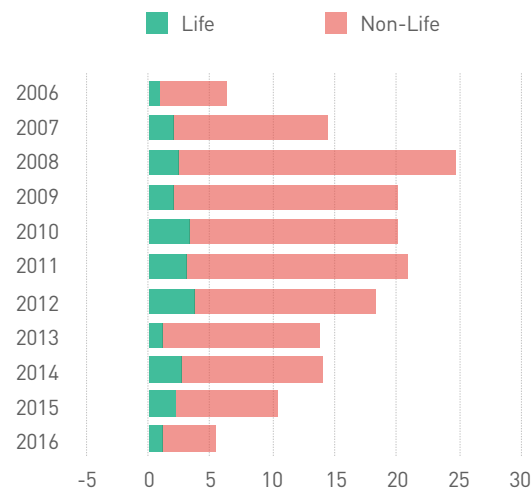
Source: MAPFRE Economic Research (based on data from Superintendence of Insurance, Bank of Paraguay)

### Table 3.2.8
### Paraguay: premium volume[1] by lines of business (lob), 2016

| Lines of business | Millions of guaraníes | Millions of dollars | Increase | |
|---|---|---|---|---|
| | | | Nominal (percent) | Real (percent) |
| **Total** | **2,168,768** | **382** | **5.5** | **1.3** |
| **Life** | **301,748** | **53** | **7.8** | **3.6** |
| **Non-Life** | **1,867,020** | **329** | **5.1** | **1.0** |
| Automobiles | 1,033,252 | 182 | 5.0 | 0.9 |
| Other Damage | 163,991 | 29 | 4.0 | -0.1 |
| Fire | 176,870 | 31 | 7.5 | 3.2 |
| Miscellaneous Risks | 134,233 | 24 | 13.4 | 8.9 |
| Transport | 85,357 | 15 | 0.2 | -3.7 |
| Theft | 63,607 | 11 | -9.0 | -12.6 |
| Surety | 77,347 | 14 | 1.5 | -2.4 |
| Third-party liability | 72,288 | 13 | 9.3 | 5.0 |
| Personal Accidents | 60,075 | 11 | 9.5 | 5.2 |

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance, Bank of Paraguay)
1/ Direct premiums net of cancellations plus administrative surcharges

### Chart 3.2.8-c
### Paraguay: growth developments in the insurance market, 2006-16
(premiums, billions of guaraníes; nominal annual growth rates, percent)
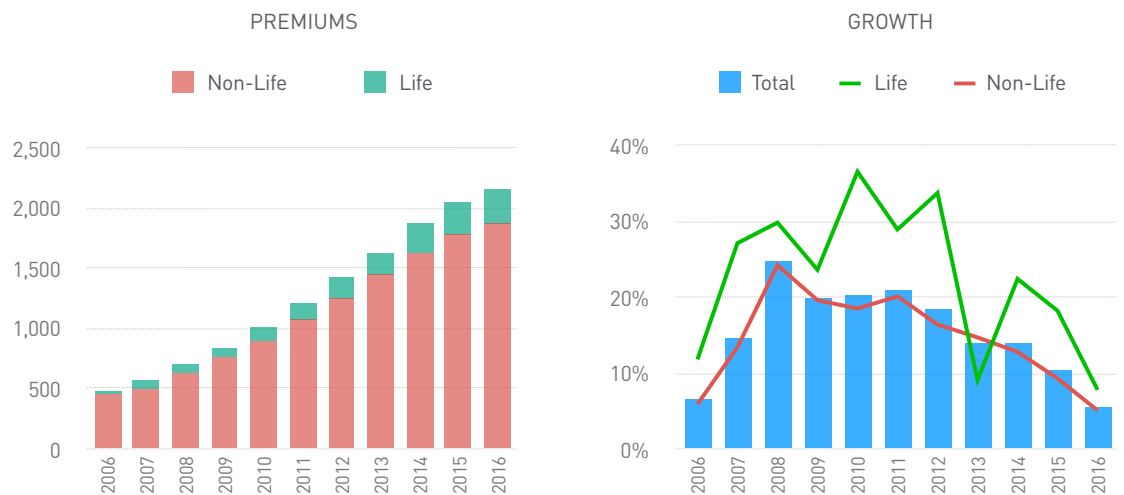


Source: MAPFRE Economic Research (based on data from Superintendence of Insurance, Bank of Paraguay)

**Chart 3.2.8-d**
**Paraguay: evolution of insurance industry's aggregate balance sheet, 2006-16**
(amounts in local currency, change in equity, percentage points)
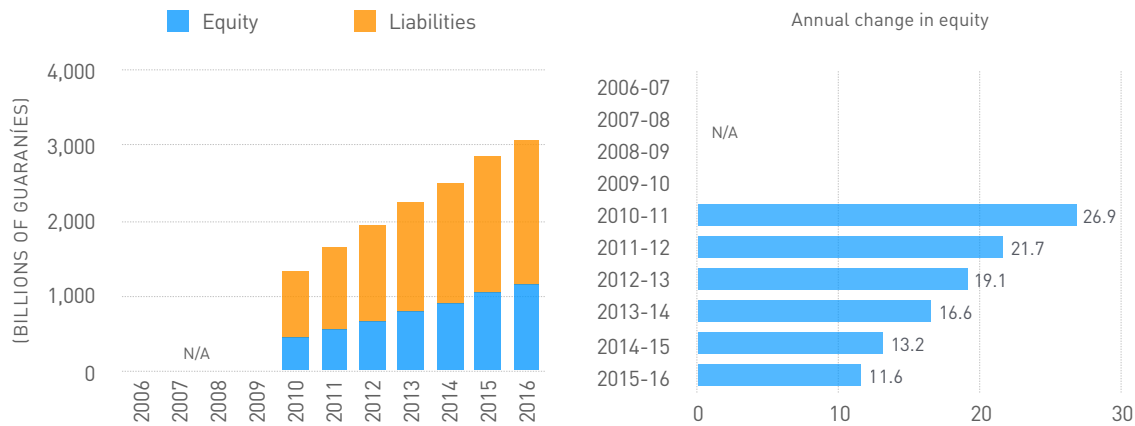


Source: MAPFRE Economic Research (based on data from Superintendence of Insurance, Bank of Paraguay)

## Balance sheet and equity

The evolution of the aggregate balance sheet for the Paraguayan insurance industry is shown in Chart 3.2.8-d. Total assets reached 3.078465 trillion guaraníes (542 million dollars) in 2016, while equity stood at 1.165861 trillion guaraníes (205 million dollars), up 11.6 percentage points on 2015.

Aggregate capital levels in the Paraguayan insurance industry remained high throughout the period analyzed. In 2010 equity stood at 32.6 percent of total assets, gradually climbing to 37.9 percent by the end of 2016.

## Investment and technical provisions

Charts 3.2.8-e and 3.2.8-f show the evolution of investments and technical provisions in the Paraguayan insurance industry. Investments reached 1.130586 trillion guaraníes in 2016 (199 million dollars), nearly 9 percent points higher than the 2015 figure.

Technical provisions amounted to 1.269155 trillion guaraníes (224 million dollars) in 2016, up 5.6 percent in relation to the previous year. It has not been possible on the basis of available data

to undertake a more detailed breakdown of the composition of investments and technical provisions.

**Chart 3.2.8-e**
**Paraguay: Insurance market technical provisions, 2006-16**
(billions of guaraníes)
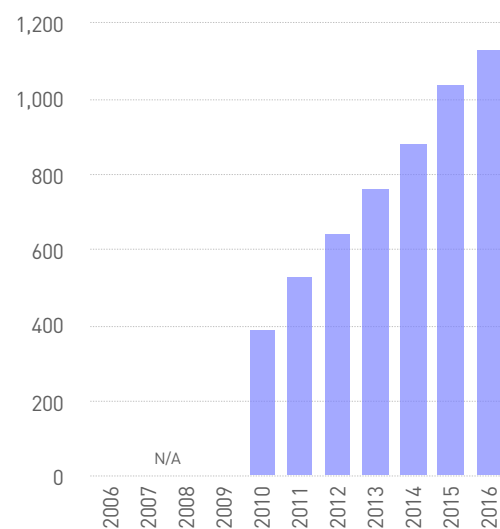


Source: MAPFRE Economic Research (based on data from Superintendence of Insurance, Bank of Paraguay)

## Technical performance

As shown in Chart 3.2.8-g, the Paraguayan insurance industry (with data annualized in December 2016) posted another positive technical result. The combined ratio was 95.6 percent compared with 95.4 percent in 2015, showing a slight increase of 0.2 percentage points due to an increase of 0.46 percentage points in operating expenses, while claims improved their efficiency by 0.26 points. The data registered in recent years indicate a slight upward trend in the claims ratio and a sharper upturn in the expense ratio.

## Results and profitability

The net result for the Paraguayan insurance business in December 2016 was 159.561 billion guaraníes, 22.4 percent down on the previous year. Technical performance sustained similar levels to those observed in 2015 but, as seen in the previous section, the financial result led to a steep decline in the net result of around 40 percent in 2016. Although the return on investments was lower than in 2015, it was close to the values registered in 2014 (see Chart 3.2.8-h).

With regard to profitability, the return on equity (ROE) reached 13.7 percent in 2016, 6 percentage



Chart 3.2.8-f
Paraguay: insurance market technical provisions, 2006-16
(billions of guaraníes)

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance, Bank of Paraguay)
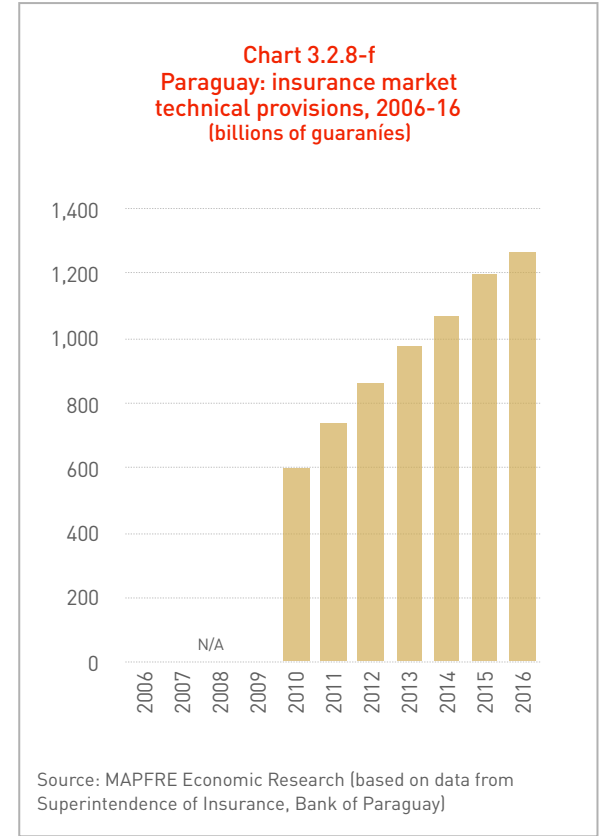
points lower than in 2015. This contraction is explained by the poorer result and the equity dilution due to the increase in the industry's capital levels.



Chart 3.2.8-g
Paraguay: evolution of market technical performance, 2006-16
(total combined ratio, percent; annual change in combined ratio, percentage points)

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance, Bank of Paraguay)
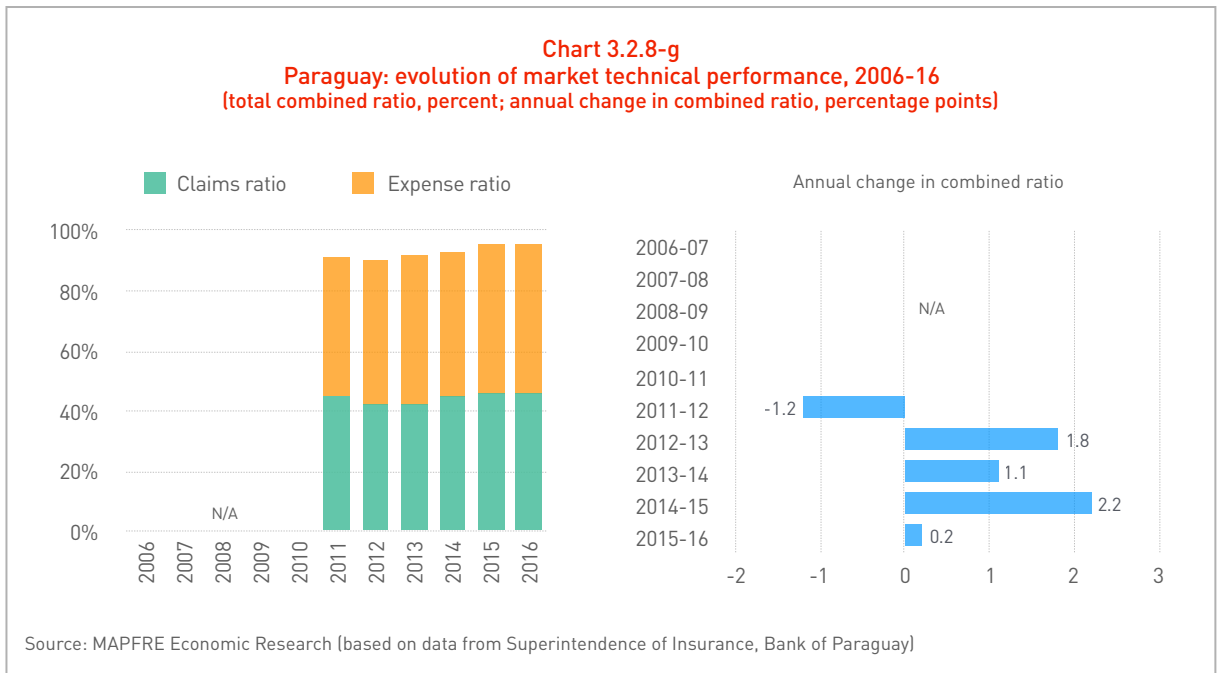
**Chart 3.2.8-h**
**Paraguay: evolution of results and profitability, 2006-16**
**(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)**
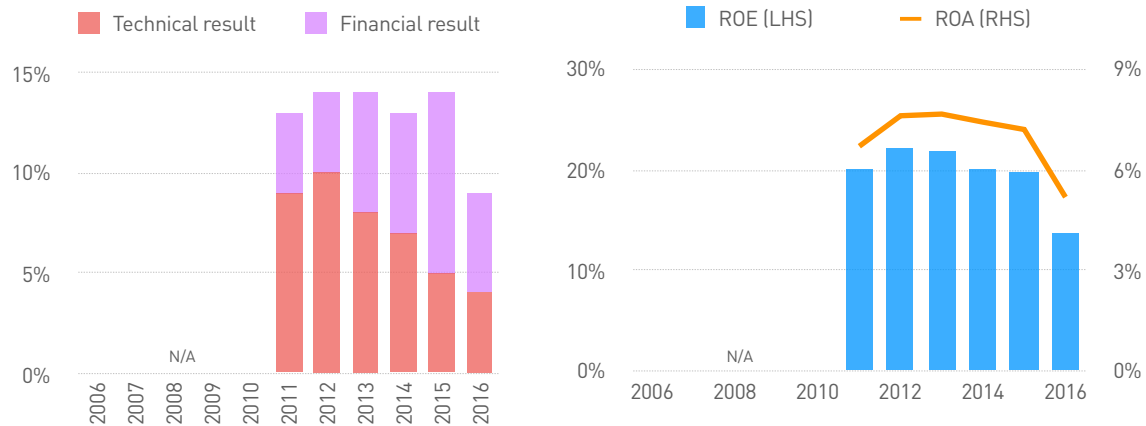
Source: MAPFRE Economic Research (based on data from Superintendence of Insurance, Bank of Paraguay)

This is comparable to the return on assets (ROA), which reached 5.2 percent in 2016, representing a decline of 2 percentage points on the previous year figure. The slighter decline in this case is owing to poorer results and the increase in total assets, albeit to a lesser degree than shareholders' equity.

**Insurance penetration, density and depth**

Chart 3.2.8-i shows the main structural trends in the development of the Paraguayan insurance industry over the period 2006-16. The penetration index (premiums/GDP) was 1.4 percent in 2016, the same as in 2015. As shown, penetration of the Paraguayan market grew steadily over the period analyzed but is still below the average absolute values of the other markets in the region.

Insurance density in Paraguay (premiums per capita) reached 322,609 guaraníes (57 dollars), 4.1 percent above the level reached in 2015 (309,772 guaraníes). As with penetration, density (measured in local currency) grew steadily over the period analyzed, registering a cumulative growth of 289.7 percent between 2006 and 2016.

The depth of insurance in the Paraguayan market (Life insurance premiums relative to total premiums) reached 13.9 percent, 6.3 percentage points above the 2006 value. The growth in the depth of the Paraguayan insurance market is in line with the trend for the combined Latin American markets, although the absolute levels are still well below the regional average.

Chart 3.2.8-j illustrates the performance of the Paraguayan insurance market based on a dispersion analysis which takes account of the overall effect of penetration and depth levels. This analysis shows that the trend in the development of the Paraguayan insurance market conforms to the trend in the region as a whole, with a trajectory in which the increases in penetration have been accompanied by increases in the depth levels.

**Estimate of the Insurance Protection Gap**

Chart 3.2.8-k provides an estimate of the IPG for the Paraguayan insurance market between 2006 and 2016. The insurance gap amounted to 10.193 billion guaraníes in 2016, representing 4.7 times the insurance market in Paraguay at the end of the year.

Chart 3.2.8-i
Paraguay: evolution of penetration, density and depth, 2006-16
(premiums/GDP, percent; premiums per capita, guaraníes and dollars; Life insurance premiums/total premiums, percent. index 2006=100)
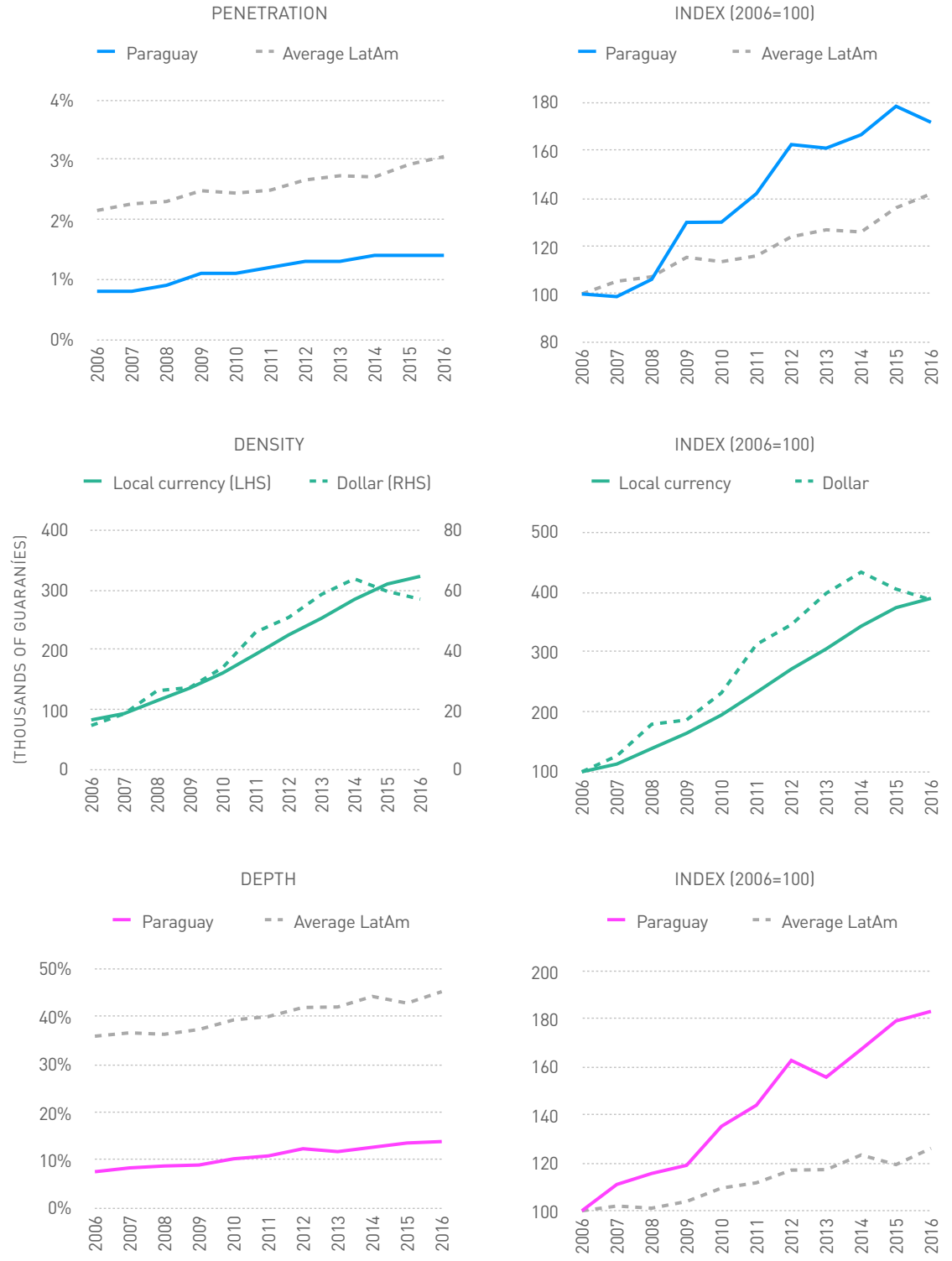


Source: MAPFRE Economic Research (based on data from Superintendence of Insurance, Bank of Paraguay)

**Chart 3.2.8-j
Paraguay: evolution of insurance market, 2006-16
(penetration vs depth)**
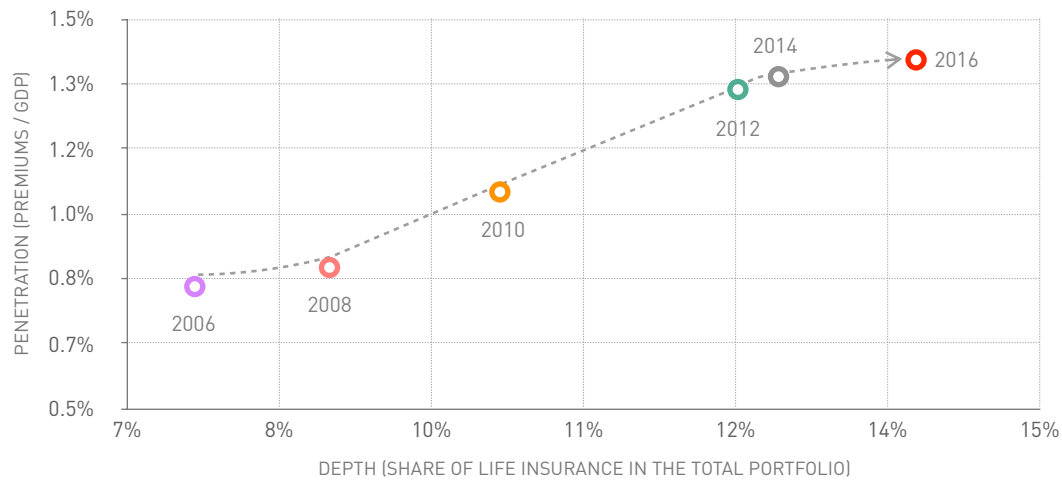


Source: MAPFRE Economic Research

**Chart 3.2.8-k
Paraguay: Insurance Protection Gap and potential market, 2006-16
(billions of guaraníes)**
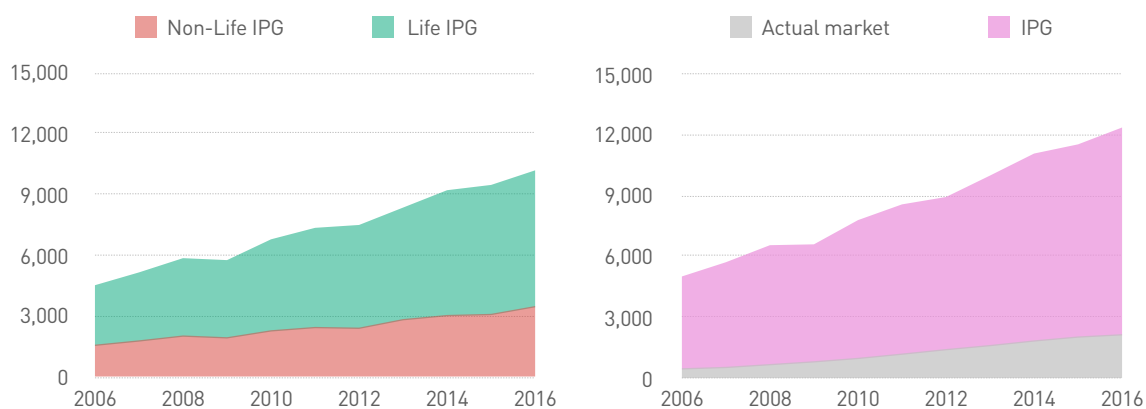


Source: MAPFRE Economic Research

The structure and evolution of the IPG over the period reflects the contribution from Life insurance. In fact, at the end of 2016, 65.7 percent of the IPG related to Life insurance (6.6927 billion guaraníes), nearly 1 percentage point above the share for this segment in 2006. The remaining 34.3 percent of the insurance gap corresponded to Non-Life insurance (3.4999 billion guaraníes).

Accordingly, the potential insurance market in Paraguay at the end of 2016 (sum of actual market and IPG) was estimated at 12.361 billion guaraníes, representing 5.7 times the total insurance market that year.

Chart 3.2.8-l shows an estimate of the IPG as a multiple of the actual insurance market in Paraguay. The insurance gap as a multiple of the market shows a downward trend over the period

**Chart 3.1.17-l**
**Paraguay: the IPG as a multiple of the actual market, 2006-16**
(number of times actual insurance market)

Source: MAPFRE Economic Research
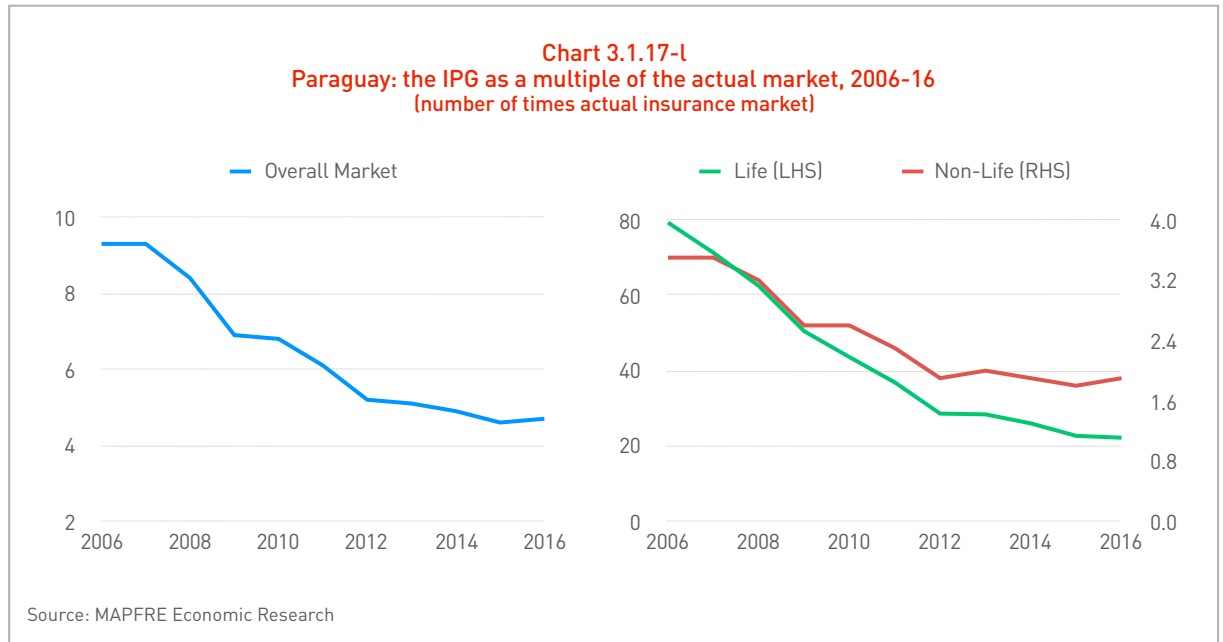
2006-16. This applies to both the Life insurance segment (down from 79.3 to 22.2 times) as well as Non-Life insurance (falling from 3.5 to 1.9 times).

Lastly, Chart 3.2.8-m provides a summary of the assessment regarding the capacity of the Paraguayan insurance market to close the insurance gap based on a comparison of growth rates over the last ten years in relation to the

growth rates that would be required to close the IPG established in 2016 over the next ten years.

The Paraguayan insurance market registered an average annual growth of 16.1 percent, composed of an annual growth rate of 23.4 percent in Life insurance and 15.3 percent in the Non-Life insurance segment. If the same rate of growth seen over the last ten years were to be sustained over the next ten years, the growth rate of the Paraguayan insurance market would



**Chart 3.2.8-m**
**Paraguay: capacity to close IPG, 2006-16**
(average annual growth rate, percent; sufficiency or insufficiency, percentage points)

Source: MAPFRE Economic Research
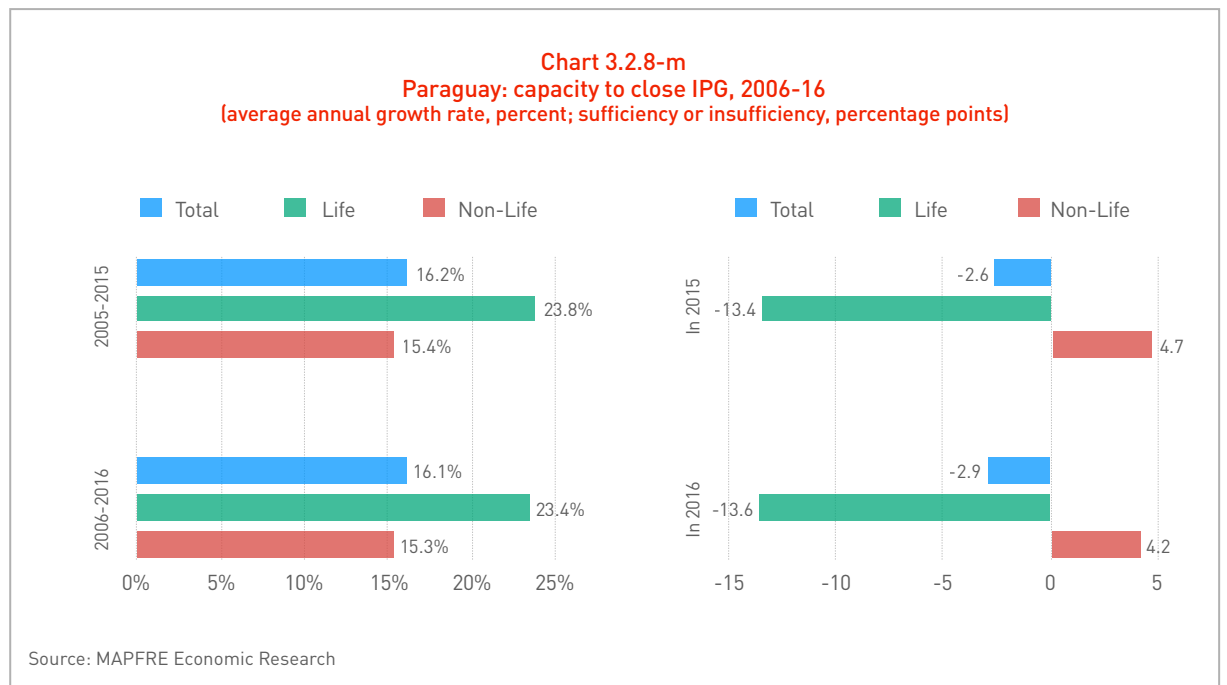
only be sufficient to close the gap in the Non-Life insurance segment. In the case of Life insurance, there would be a shortfall of 13.6 percentage points. This shortfall has varied very little compared with the same exercise performed in 2015.

**Market Development Index (MDI)**

Chart 3.2.8-n provides an estimate of the Market Development Index (MDI) for the Paraguayan insurance industry.

In general, the indicator has followed the same trajectory as the average index for all Latin American insurance markets in the period analyzed, even taking a positive turn in 2009.

**Insurance market rankings**

**Overall ranking**

At the end of 2016, 36 insurance companies were operating in Paraguay. There is no significant concentration in the industry. The Herfindahl index took a new dip in 2016, ending the year at



**Chart 3.1.17-n
Paraguay: Market Development Index (MDI), 2005-16
(index 2005=100; annual change)**

Source: MAPFRE Economic Research
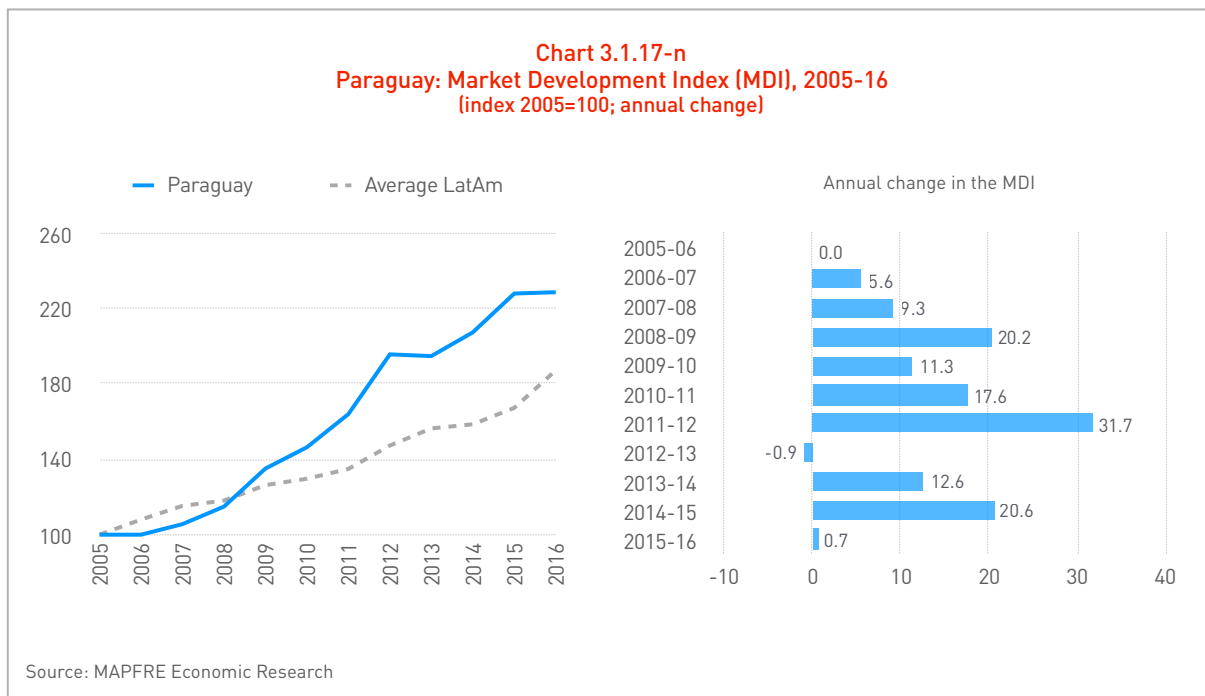
736.9 compared with 758.4 in 2015, which is below the moderate concentration threshold.

The upward trend in concentration observed in the CR5 index over the period slows down in 2014, when the top five companies represented 50.9 percent of total market share, and then starts to fall (see Chart 3.2.8-o).

In terms of the 2016 overall ranking of insurance groups in Paraguay, there are hardly any changes since the previous year. MAPFRE continues to lead the ranking with a market

share of 18.2 percent, followed at some distance by Aseguradora del Este (11.0 percent) and Consolidada (10.1 percent). The only change in the ranking is that Tajy Propiedad Cooperative has moved up to the fifth slot, with a share of 4.7 percent, overtaking Seguridad, now in sixth place. All the other companies consolidated their 2015 positions (see Chart 3.2.8-p).

**Non-Life Ranking**

The 2016 Non-Life ranking has also changed very little since last year. MAPFRE held on to the

Chart 3.2.8-o
Paraguay: insurance industry concentration, 2006-16
(Herfindahl index; CR5 index, percent)

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance, Bank of Paraguay)



Chart 3.2.8-p
Paraguay: overall ranking, 2015-16
(market shares, percent)

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance, Bank of Paraguay)
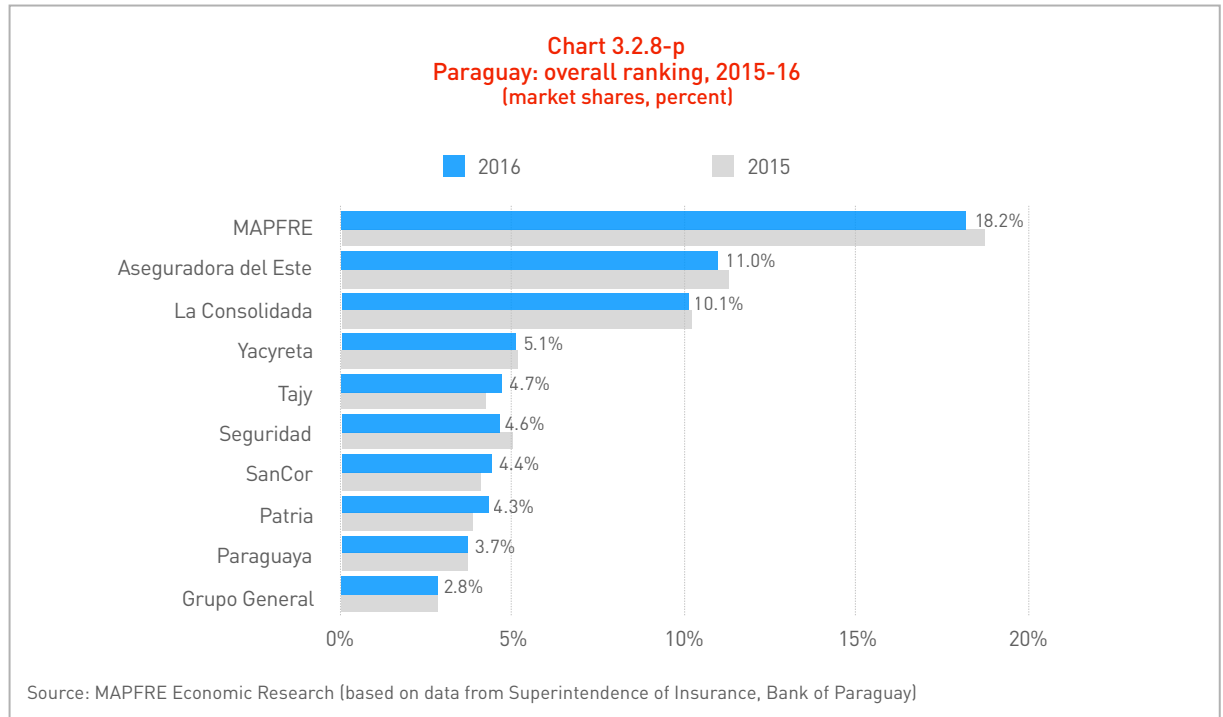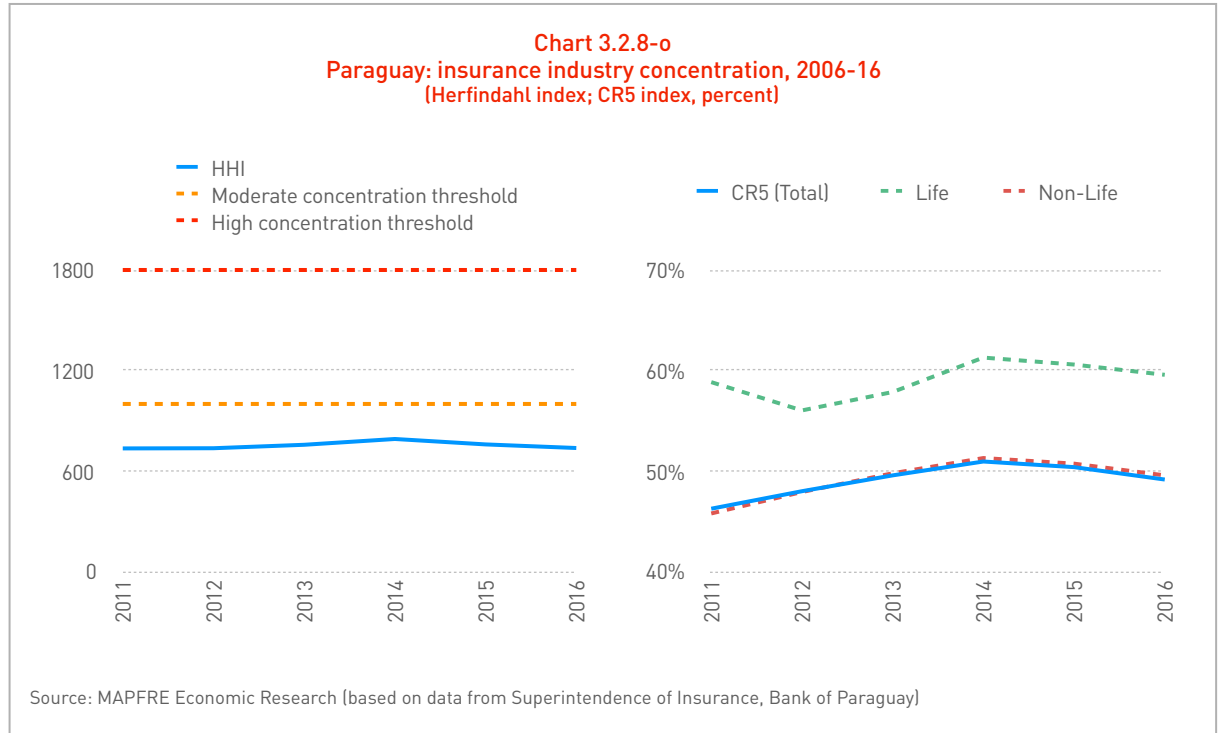
**Chart 3.2.8-q**
**Paraguay: Life and Non-Life ranking, 2015-16**
**(market shares, percent)**

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance, Bank of Paraguay)
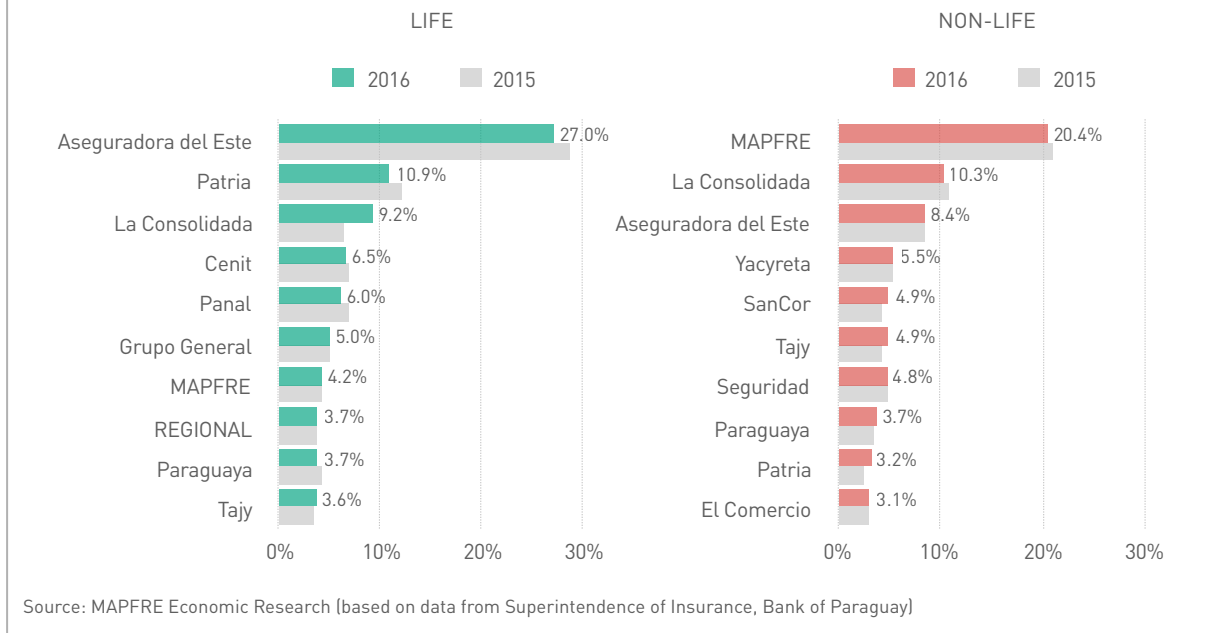
top slot with 20.4 percent of premiums, followed at some distance by Consolidada (10.3 percent), Aseguradora del Este (8.4 percent) and Yacyreta (5.5 percent). The changes occur in the following positions: Sancor and Tajy each move up one slot, to fifth and sixth place, respectively. Seguridad moves down two slots to seventh position. Aseguradora Paraguaya has held on to eighth position, followed by Patria, a new arrival on the top ten ranking, and El Comercio takes tenth place, one below the place it occupied in 2015 (see Chart 3.2.8-q).

**Life Ranking**

The top two positions in the Life ranking remain exactly the same as last year. Aseguradora del Este leads with 27.0 percent of premiums, followed at a considerable distance by Patria (10.9 percent) and La Consolidada (9.2 percent), which increases its share by 2.9 percentage points and gains two positions (see Chart 3.2.8-q).

**Key regulatory aspects**

Among the rulings issued in 2016, the Insurance Superintendence decreed the modernization of the system for sending auxiliary insurance data through electronic means, aimed at speeding up processes and minimizing the use of printed material.

Last year also saw amendments to the Coverage Framework for Technical Reserves and Investment in Mutual Funds, specifically regarding the limits allowed for certain assets. The deadline for constituting the Guarantee Fund was also extended.

Lastly, the grievances and complaints form was improved and an inquiry form was introduced to speed up and standardize communications between insurance users and the Superintendence.

The rulings issued were as follows:

- 03/31/2016 - Resolution 101/16, decreeing the monthly presentation in electronic format of the insurance agents and brokers book.

- 07/01/2016 - Resolution 174/16, amending the compliance timeline for the constitution of the Guarantee Fund.

- 08/25/2016 - Resolution 200/16, amending several articles of Resolution 132/15 on the Coverage Framework for Technical Reserves, Investment in Mutual Funds and Corporate Governance.

- 08/31/2016 - Resolution 203/16, decreeing that all companies send their information through the Financial Communication Network using the VPN installed between them and Paraguay's Central Bank.

- 12/18/2016 – Resolution 243/16, introducing amendments to grievances, complaints and inquiry forms for presentation to the Insurance User Help Division of the Insurance Superintendence.

Lastly, in June 2017 Resolution 130/2017 was approved amending Resolution 132/2015 on the Coverage Framework for Technical Reserves, Investment in Mutual Funds and Corporate Governance. The new resolution raises the maximum investment limits in the instruments which must have a risk rating, as specified in subsections c) (instruments issued by banks and financial institutions governed by Law 891/96), d) (Bonds and promissory notes issued by municipal authorities, state-owned companies and private companies) and e) (shares of public corporations) of Article 6 of Resolution 132/2015.

### 3.2.9. Argentina

### Macroeconomic environment

In 2016 Argentina's economy shrank by 2.3 percent in real terms, compared with a growth of 2.6 percent the previous year, following a sharp downturn in investment, lower household consumption and a decrease in public spending, all of which the rise in imports was unable to offset (see Chart 3.2.9-a).

On the supply side, the reduction is explained by a decrease in the production of goods, with a significant contraction in the manufacturing industry and a slight increase in the services sector.

**Chart 3.2.9-a**
**Argentina: evolution of economic growth and inflation, 2006-16**
(GDP in local currency, billions of pesos; real growth rate, percent; annual inflation rate, percent)



Source: MAPFRE Economic Research (based on IMF and OEF data)
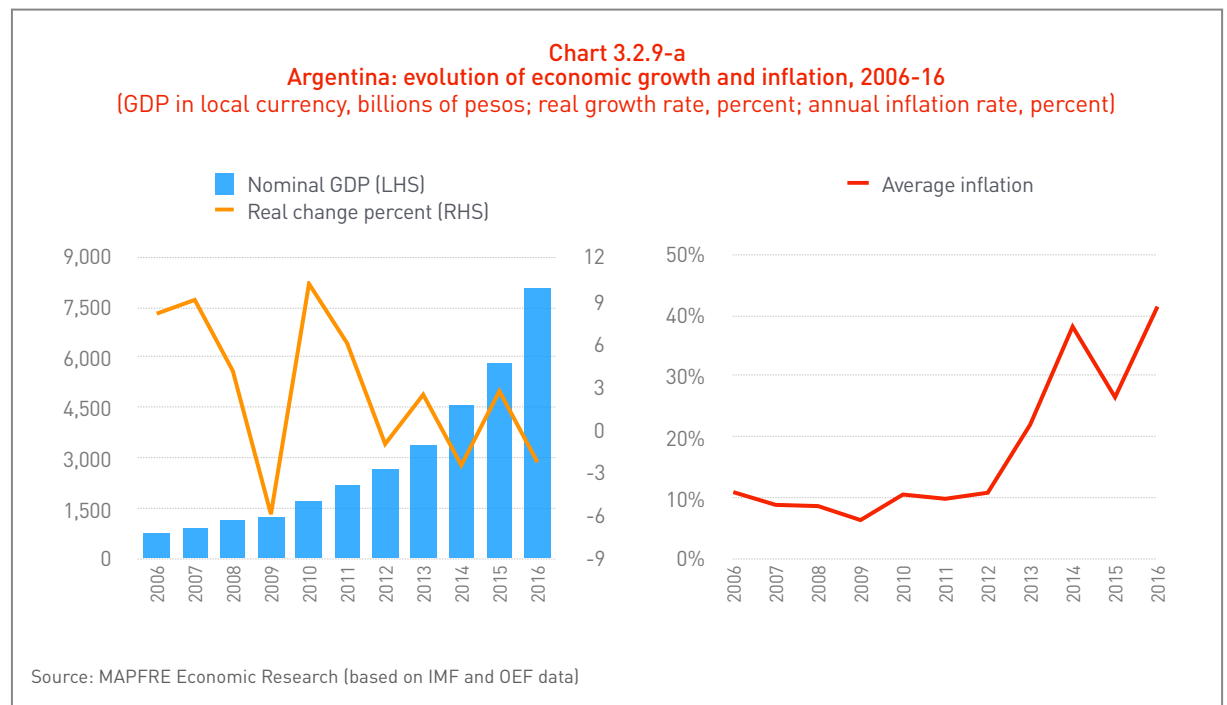
The current account deficit fell 0.1 percentage points in 2016 to 2.6 percent of GDP following better performance by the balance of trade since imports, measured in dollars, contracted more than exports. Both aggregates experienced real growth (imports because of sharp increases in the purchase of vehicles and consumer goods, and exports following the increase in sales of primary products and derivatives), but the prices of marketed goods fell across the board. The estimated inflation rate reached 41.4 percent and unemployment increased to 8.5 percent.

In addition to the decision to adopt a formal inflation targeting regime, in December 2015 the Central Bank started migrating to a more flexible exchange rate regime. The exchange rate liberalization, the resolution of the conflict with creditors, and the return to international credit markets made it possible to stabilize international reserves and practically eliminate the exchange rate tensions of previous years. The inflow of foreign currencies motivated by the capital outflow policy in the second half of the year also helped stabilize the exchange rate,

which in the inflationary context described followed an upward trend in real terms.

The economy is expected to recover in 2017 and ECLAC therefore estimates a GDP growth of 2.3 percent. The IMF puts it 0.1 percentage points lower, at 2.2 percent.

## Insurance Market

### Growth

The Argentine insurance market achieved a premium volume (annualized in December 2016) of 243.602 billion pesos (16.498 billion dollars), representing a nominal increase of 34.8 percent but a contraction of 4.6 percent in real terms compared with the same period the previous year (see Table 3.2.9 and Chart 3.2.9-c).

Life insurance premiums, which account for 15.6 percent of the total market, saw a nominal increase of 34.3 percent but a decrease of 5.0 percent in real terms, reaching 37.979 billion pesos (2.572 billion dollars). All Life insurance

### Table 3.2.9
### Argentina: premium volume[1] by lines of business (lob), 2016

| Lines of business | Millions of pesos | Millions of dollars | Increase Nominal (percent) | Increase Real (percent) |
|---|---|---|---|---|
| **Total** | **243,602** | **16,498** | **34.8** | **-4.6** |
| **Life** | **37,979** | **2,572** | **34.3** | **-5.0** |
| Group Life | 27,744 | 1,879 | 32.5 | -6.3 |
| Individual Life | 6,303 | 427 | 46.7 | 3.8 |
| Retirement | 3,933 | 266 | 29.2 | -8.6 |
| **Non-Life** | **205,622** | **13,926** | **34.9** | **-4.6** |
| Automobiles | 88,424 | 5,988 | 37.0 | -3.1 |
| Other Damage | 11,193 | 758 | 28.0 | -9.5 |
| Fire | 8,606 | 583 | 53.3 | 8.4 |
| Family Combined | 9,756 | 661 | 39.3 | -1.5 |
| Agricultural Insurance | 3,700 | 251 | 80.2 | 27.4 |
| Personal Accidents | 5,256 | 356 | 38.2 | -2.3 |
| Third-party liability | 3,354 | 227 | 28.8 | -8.9 |
| Transport | 3,224 | 218 | 44.7 | 2.3 |
| Credit and Surety | 3,210 | 217 | 29.9 | -8.1 |
| Health | 507 | 34 | 33.6 | -5.5 |
| Workplace accidents | 68,395 | 4,632 | 29.2 | -8.6 |

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance of the Nation)
1/ Premiums and surcharges issued

types experienced nominal increases, led by Individual Life, the only one that also achieved an increase in premiums in real terms. Non-Life insurance premiums, which represent 84.4 percent of the market, saw a nominal increase of 34.9 percent (-4.6 percent real), reaching 205.622 billion pesos (13.926 billion dollars). Most lines registered positive growth in 2016, but only the Agricultural Insurance (27.6 percent), Fire (8.6 percent) and Transport (2.5 percent) lines registered real growth.

Out of the nominal 34.8 percent growth registered by the Argentine insurance market in 2016, the greatest contribution came from Non-Life insurance, 29.5 percentage points, whereas Life insurance contributed just 5.4 percentage points (see Chart 3.2.9-b).

**Balance sheet and equity**

The evolution of the aggregate balance sheet for the Argentine insurance industry over the period 2006-16 is shown in Chart 3.2.9-d. Assets amounted to 379.860 billion pesos (25.726 billion dollars), while equity stood at 80.975 billion pesos (5.485 billion dollars).



Chart 3.2.9-b
Argentina: contribution to insurance market growth, 2006-16
(percentage points, ppts)

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance of the Nation)
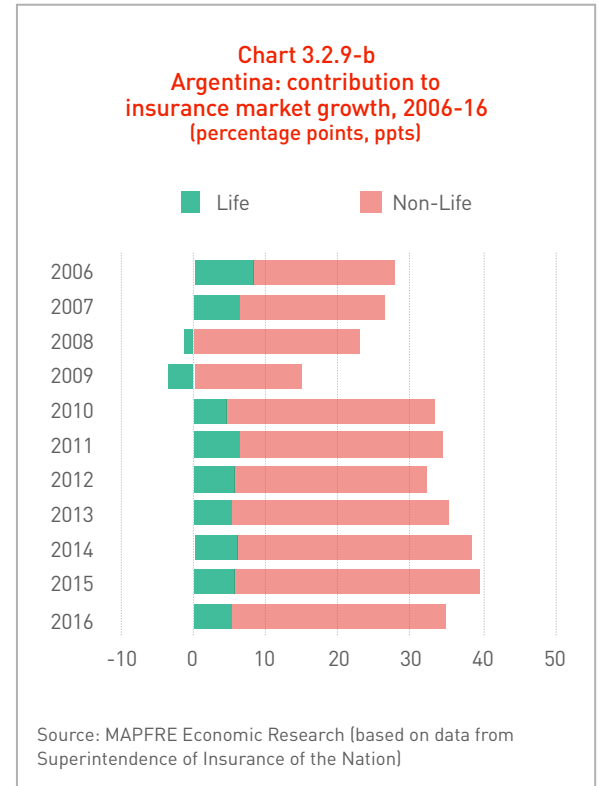
The Argentine insurance industry sustained a capital level (over total assets) of nearly 20 percent during the period 2006-16, representing the highest value in the series in 2016 at 21.3 percent of total assets.



Chart 3.2.9-c
Argentina: growth developments in the insurance market, 2006-16
(premiums, billions of pesos, nominal annual growth rates, percent)

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance of the Nation)
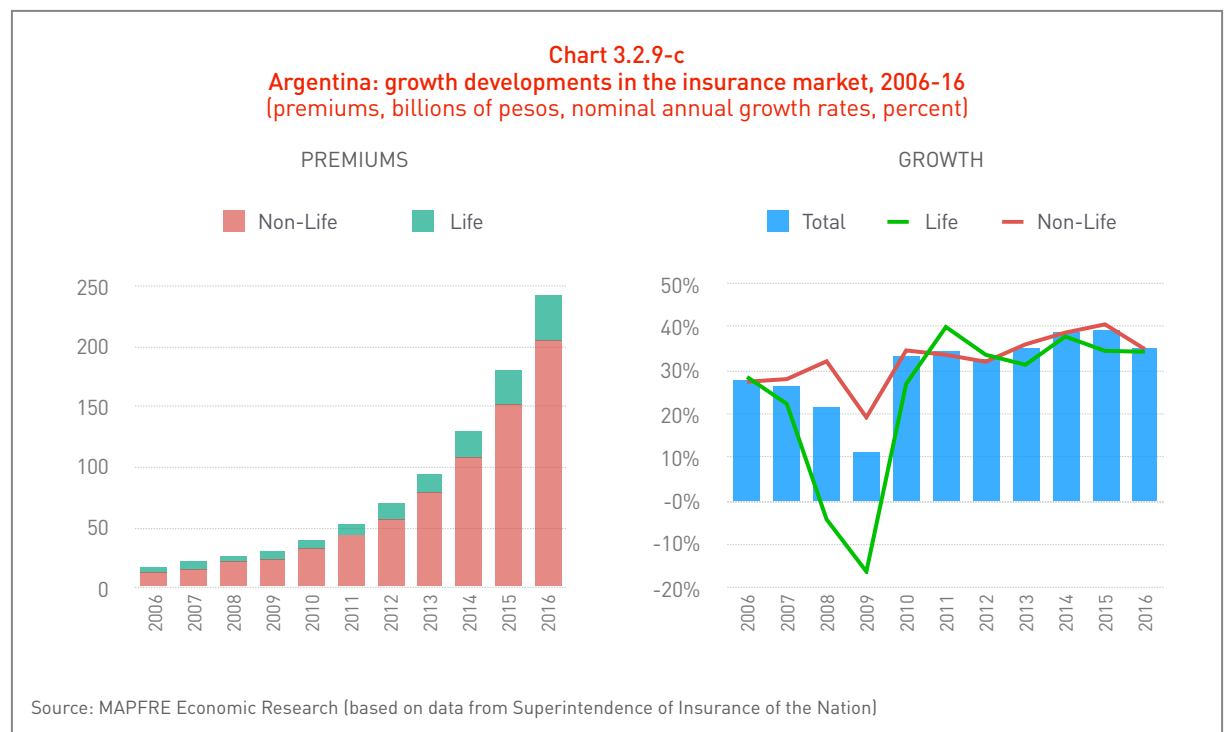
Chart 3.2.9-d
Argentina: evolution of insurance industry's aggregate balance sheet, 2006-16
(amounts in local currency, change in equity, percentage points)
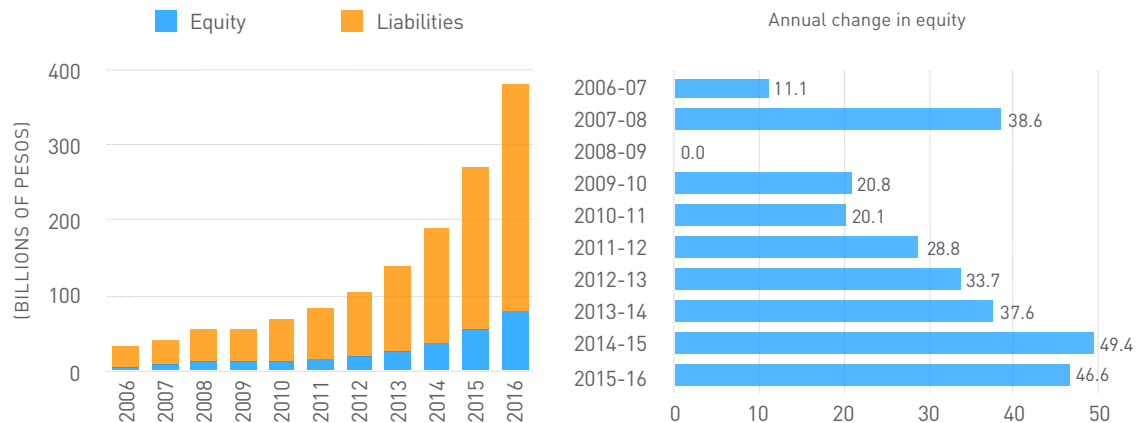
Source: MAPFRE Economic Research (based on data from Superintendence of Insurance of the Nation)

## Investment

Charts 3.2.9-e, 3.2.9-f and 3.2.9-g show the evolution, structure and composition of the aggregate investment portfolio at a sector level for the Argentine insurance industry over the period 2006-16.

In the last year of the period analyzed, investments reached 292.721 billion pesos (19.824 billion dollars), concentrated in fixed income (65.1 percent), mutual funds (24.7 percent), and, to a significantly smaller proportion (6.1 percent), variable annuities.

The analysis of the aggregate investment portfolio reveals a gradual increase in the figures managed through mutual funds, which saw their relative values grow from 6.9 percent of total investments in 2008 to 26.2 percent at the end of 2015. However, in 2016 the percentage of investments in mutual funds lost 1.5 percentage points, while fixed income grew by the same proportion.

## Technical provisions

Charts 3.2.9-h, 3.2.9-i and 3.2.9-j show the evolution and relative composition of the Argentine insurance industry's technical provisions.

Technical provisions reached 245.173 billion pesos (16.604 billion dollars) in 2016. Of the total provisions, 28.8 percent related to Life insurance, 13.3 percent to the provision for unearned premiums and unexpired risks in Non-Life insurance, and 57.9 percent to the provision for outstanding claims.



Chart 3.2.9-e
Argentina: Insurance market technical provisions, 2006-16
(billions of pesos)
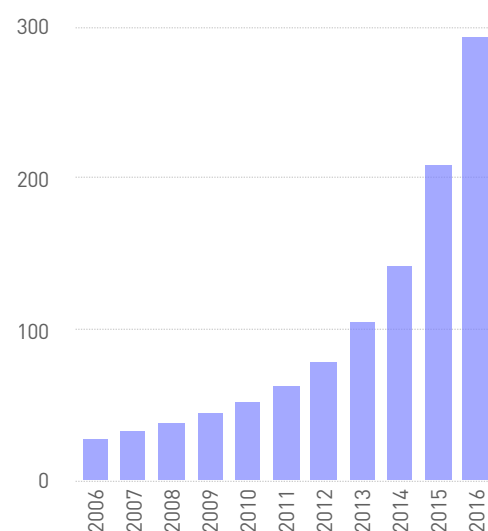
Source: MAPFRE Economic Research (based on data from Superintendence of Insurance of the Nation)

**Chart 3.2.9-f
Argentina: structure of investment, 2006-16
(%)**



Source: MAPFRE Economic Research (based on data from Superintendence of Insurance of the Nation)

**Chart 3.2.9-g
Argentina: structure of investment, 2016
(%)**



Source: MAPFRE Economic Research (based on data from Superintendence of Insurance of the Nation)
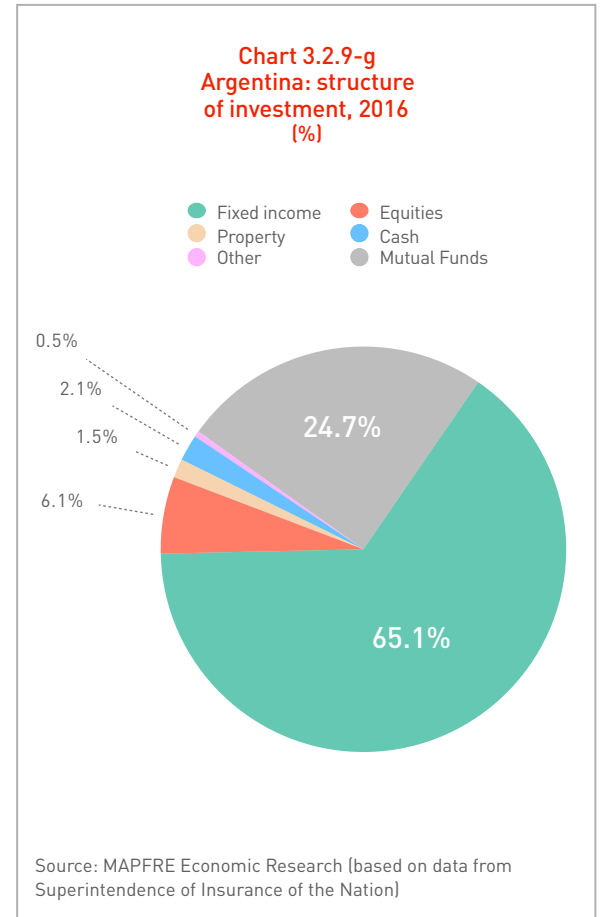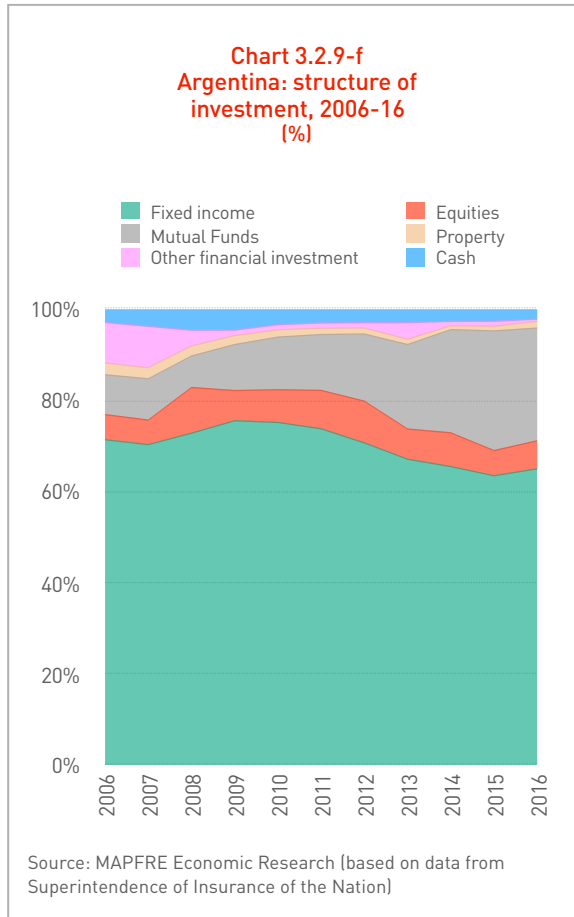
As shown in Chart 3.2.9-i, Life insurance provisions experienced a significant relative loss of weight over the period 2008-16, falling from 51.3 percent of total provisions in 2008 to 28.8 percent in 2016.

**Technical performance**

Once again, the Argentine insurance industry ended the year with a negative technical result. The combined ratio reached 118 percent in 2016, 4.1 percentage points higher than the previous year. The expense ratio fell 1.3 points while the claims ratio increased by 5.4 percentage points. One of the factors that may have caused the claims ratio to rise was the floods that occurred in 2016, leading to major losses for farmers (see Chart 3.2.9-k).

**Results and profitability**

The Argentine insurance industry posted a net result (with data annualized in December) of 19.492 billion pesos (1.320 billion dollars), with a

**Chart 3.2.9-h
Argentina: insurance market technical provisions, 2006-16
(billions of pesos)**



Source: MAPFRE Economic Research (based on data from Superintendence of Insurance of the Nation)

**Chart 3.2.9-i**
**Argentina: structure of technical provisions, 2006-16 (%)**
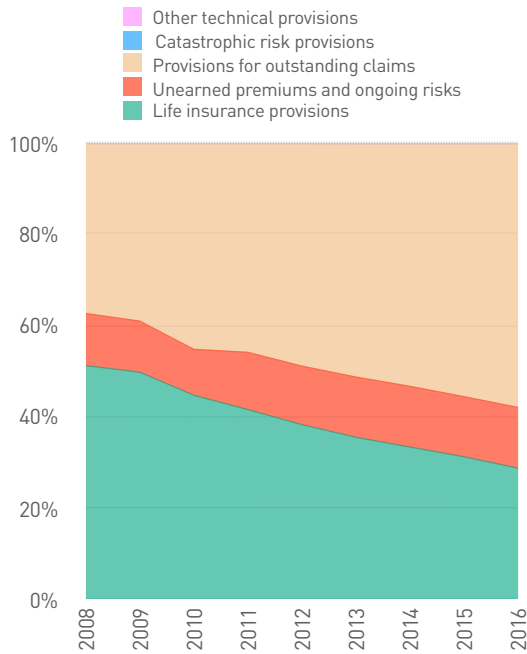
Other technical provisions
Catastrophic risk provisions
Provisions for outstanding claims
Unearned premiums and ongoing risks
Life insurance provisions



Source: MAPFRE Economic Research (based on data from Superintendence of Insurance of the Nation)

**Chart 3.2.9-j**
**Argentina: structure of technical provisions, 2016 (%)**
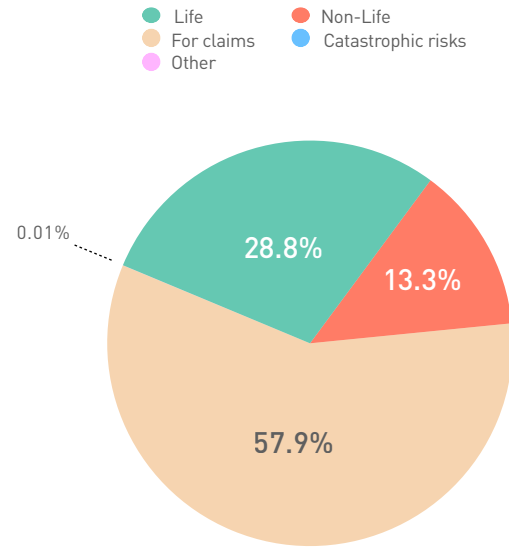
Life          Non-Life
For claims    Catastrophic risks
Other



0.01%
28.8%
13.3%
57.9%

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance of the Nation)

**Chart 3.2.9-k**
**Argentina: evolution of market technical performance, 2006-16**
**(total combined ratio, percent; annual change in combined ratio, percentage points)**

Claims ratio    Expense ratio

Annual change in combined ratio

| Period | Change |
|--------|--------|
| 2006-07 | -8.8 |
| 2007-08 | 0.5 |
| 2008-09 | 9.8 |
| 2009-10 | -7.1 |
| 2010-11 | -3.3 |
| 2011-12 | 6.1 |
| 2012-13 | 2.7 |
| 2013-14 | 0.0 |
| 2014-15 | -2.2 |
| 2015-16 | 4.1 |



Source: MAPFRE Economic Research (based on data from Superintendence of Insurance of the Nation)

nominal increase of 8.5 percent compared with the previous year due to the positive effect of the financial result, which saw a growth of 39.4 percent.

In terms of profitability, the return on equity (ROE) reached 24.1 percent in 2016, down 8.4 percentage points on 2015. In a similar vein, the return on assets (ROA) amounted to 5.1 percent in 2016, a decrease of 1.5 percentage points on 2015 (see Chart 3.2.9-l).

**Insurance penetration, density and depth**

Chart 3.2.9-m shows the main structural trends in the development of the Argentine insurance industry over the period 2006-16.

The penetration index (premiums/GDP) reached 3 percent in 2016. Following a period of stagnation between 2006 and 2010, the indicator took an upturn in 2011 partly explained by the inflationary environment that has characterized this economy in recent years and tends to overestimate the index. As indicated above, in insurance activities the production cycle is inverted and the prices of products are fixed not according to an incurred cost but to a cost estimated to be incurred in the future. In this case, claims are the most important component of that future cost and (particularly in the case of Non-Life insurance) they are greatly impacted by

the general level of prices in the economy. Accordingly, penetration is estimated by comparing the expected cost for the following year with the flow of production in the economy in the current year, which in high-inflation scenarios can lead to an overestimation of the indicator. Consequently, as pointed out in our previous report, it would be wise to continue evaluating the behavior of the penetration index for the Argentine economy in the coming years to determine whether the upward trend is sustained once the general prices in the economy have stabilized, or to confirm that the increased penetration in part of the period analyzed constitutes an effect determined by the increase in prices one year in expectation of a rise in prices the following year.

Regarding insurance density (premiums per capita), this indicator reached 5,573 pesos (377 dollars), up 33.6 percent on the 2015 value (4,173 pesos). As with penetration, density has shown clear signs of improvement over the last ten years and when measured in local currency it is influenced by the general behavior of prices.

With regard to depth (Life insurance premiums versus total premiums), this indicator reached 15.6 percent in 2016, 13.8 percentage points below the 2006 value. In this case, the Argentine insurance market diverges considerably from the average values observed across Latin America.
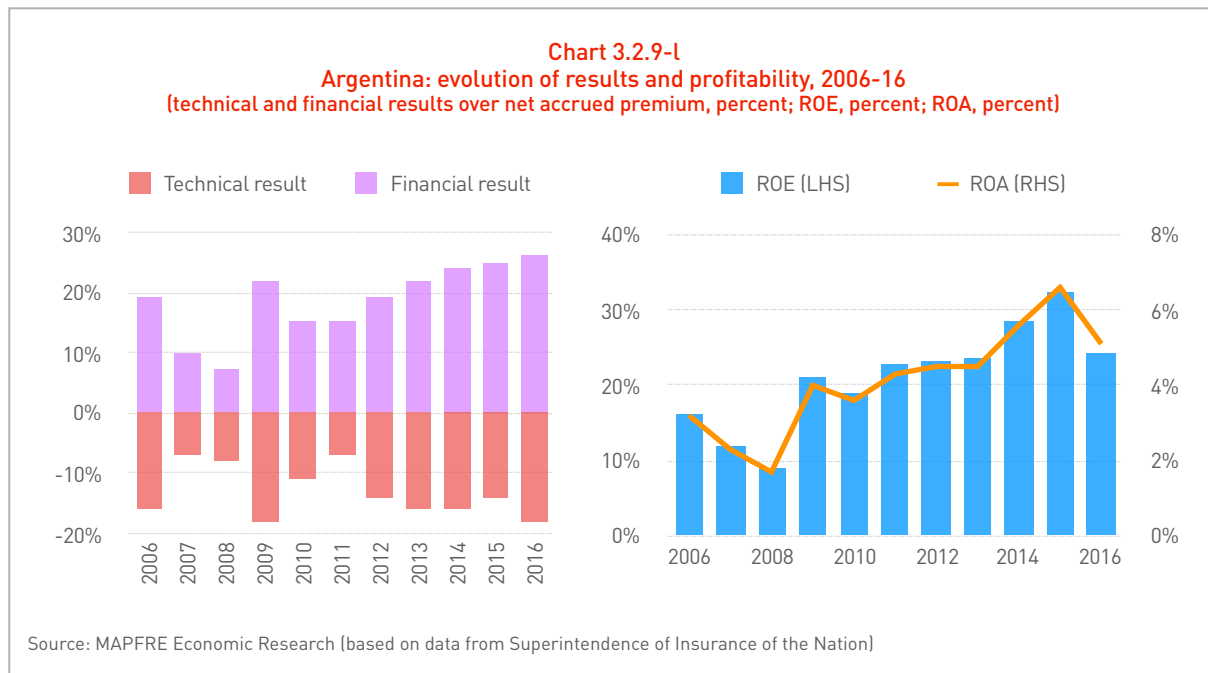


Chart 3.2.9-l
Argentina: evolution of results and profitability, 2006-16
(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance of the Nation)

## Chart 3.2.9-m
### Argentina: evolution of penetration, density and depth, 2006-16
(premiums/GDP, percent; premiums per capita, pesos and dollars; Life insurance premiums / total premiums, percent, index 2006=100)



PENETRATION

INDEX (2006=100)

DENSITY

INDEX (2006=100)

DEPTH

INDEX (2006=100)
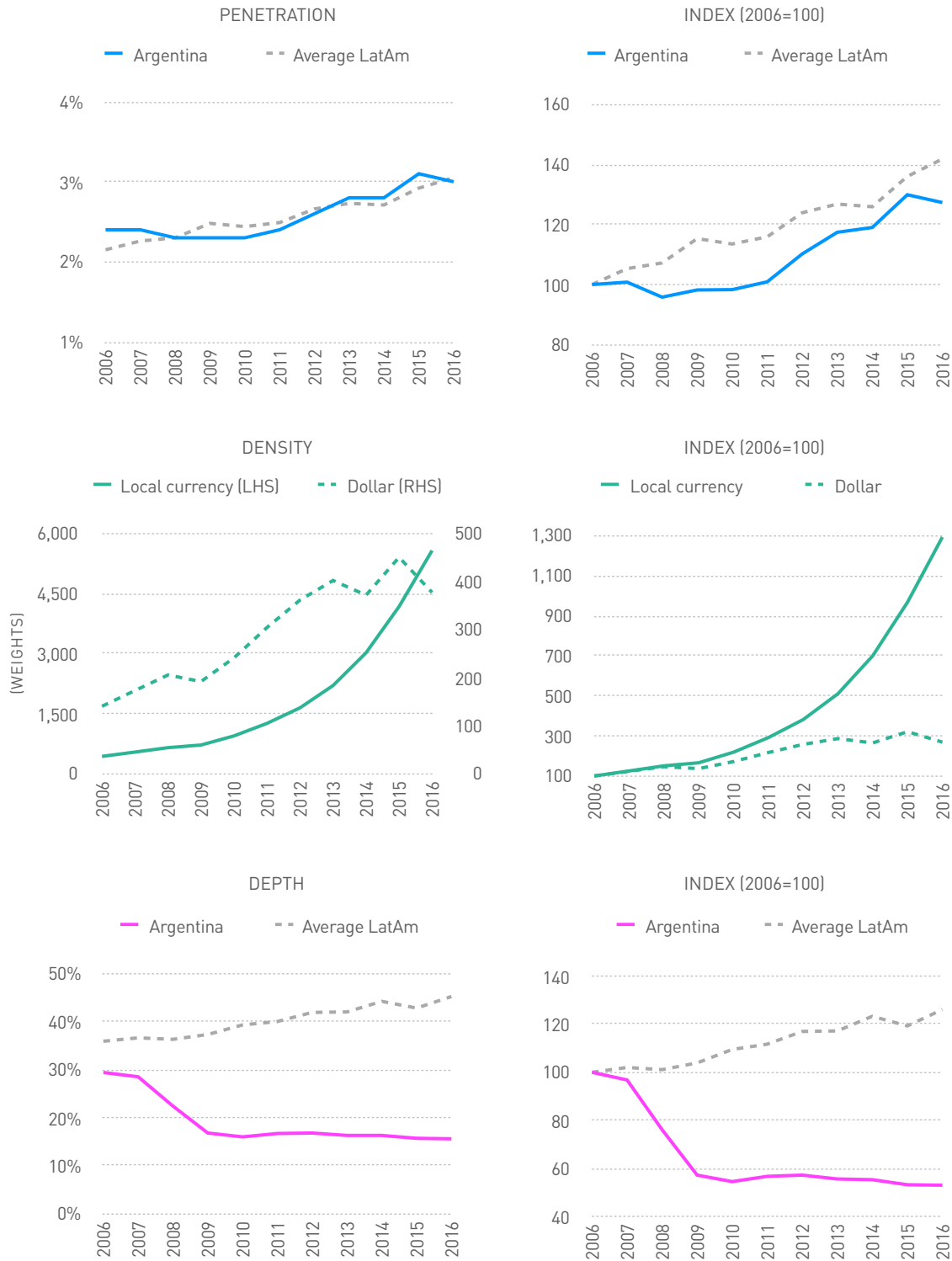
Source: MAPFRE Economic Research (based on data from Superintendence of Insurance of the Nation)

This behavior is clearly reflected in the dispersion analysis shown in Chart 2.2.9-n, which illustrates the combined effect of the penetration and depth levels. The development of the Argentine market has experienced a strong contraction characterized by the decrease in depth levels.

**Estimate of the Insurance Protection Gap**

The calculation of the IPG for the insurance market in Argentina over the period 2006-16 is shown in Chart 3.2.9-o. The gap stood at 396.378 billion pesos in 2016, equivalent to 1.6 times the actual insurance market at the close of the year.

The dominant role of Life insurance is the key factor explaining the structure and evolution of the IPG over the period 2006-16. In 2006, 71 percent of the IPG related to Life insurance, the equivalent of 30.420 billion pesos. However, by 2016 this percentage had risen to 81.8 percent (324.142 billion pesos). By contrast, the contribution of Non-Life insurance to the IPG fell from 29 percent to 18.2 percent during the same period (from 12.298 billion pesos to 72.236 billion).

The potential insurance market in Argentina in 2016 (measured as the sum of the actual market and IPG) stood at 639.980 billion pesos, equivalent to 2.6 times the market in the country that year.

Chart 3.2.9-q shows an estimate of the IPG as a multiple of the actual market in each year. As a multiple, the IPG for the Argentine insurance market has followed a clear downward trend over the last ten years, both when considering the overall market (from 2.5 to 1.6 times) as well as the Non-Life segment (from 1 to 0.4 times). However, the trend is reversed in the Life insurance segment, where the gap rose from 6.1 to 8.5 times between 2006 and 2016, while Non-Life insurance saw a upturn in 2016.

Lastly, Chart 3.2.9-q provides an assessment regarding the capacity of the Argentine insurance market to close the IPG based on a comparison of growth rates over the last ten years in relation to the growth rates that would be required to close the IPG established in 2016 over the next ten years.

Over the period 2006-16, the insurance market in Argentina posted an average annual growth rate of 30.5 percent. This was underpinned by average growth of 22.5 percent in the Life insurance segment and 32.9 percent in the Non-Life insurance segment. As shown, these annual growth rates were strongly influenced by the inflation rates observed in the economy during that time.

In line with the exercise summarized in Chart 3.2.9-q, if the same rate of growth were to be sustained over the next ten years, the combined



Chart 3.2.9-n
Argentina: evolution of insurance market, 2006-16
(penetration vs depth)

Source: MAPFRE Economic Research
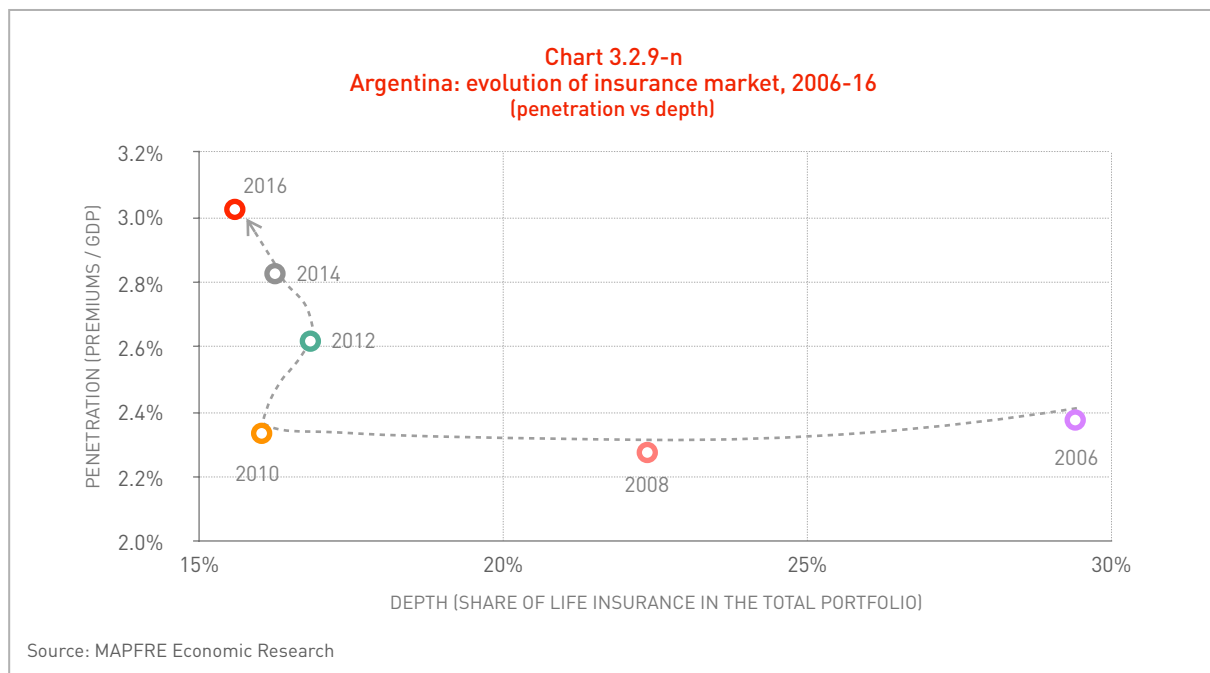
**Chart 3.2.9-o**
**Argentina: Insurance Protection Gap and potential market, 2006-16**
(billions of pesos)
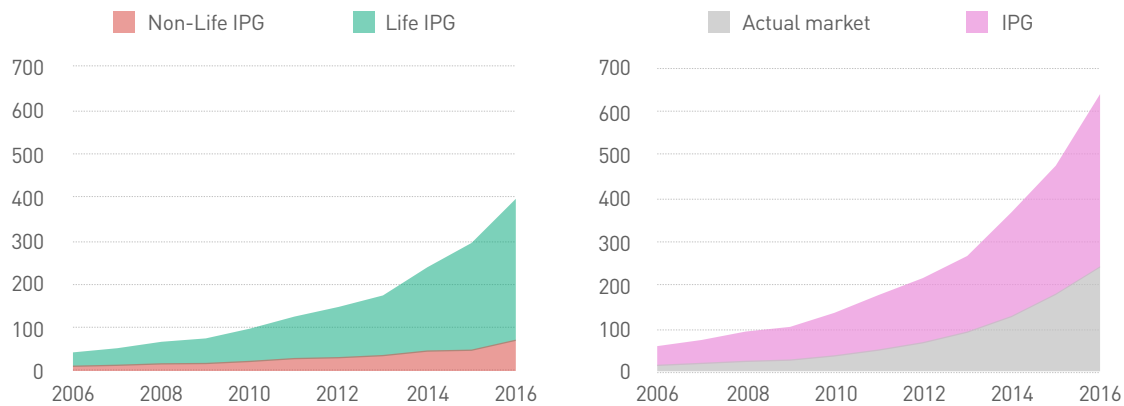


Source: MAPFRE Economic Research

**Chart 3.2.9-p**
**Argentina: the IPG as a multiple of the actual market, 2006-16**
(number of times actual insurance market)
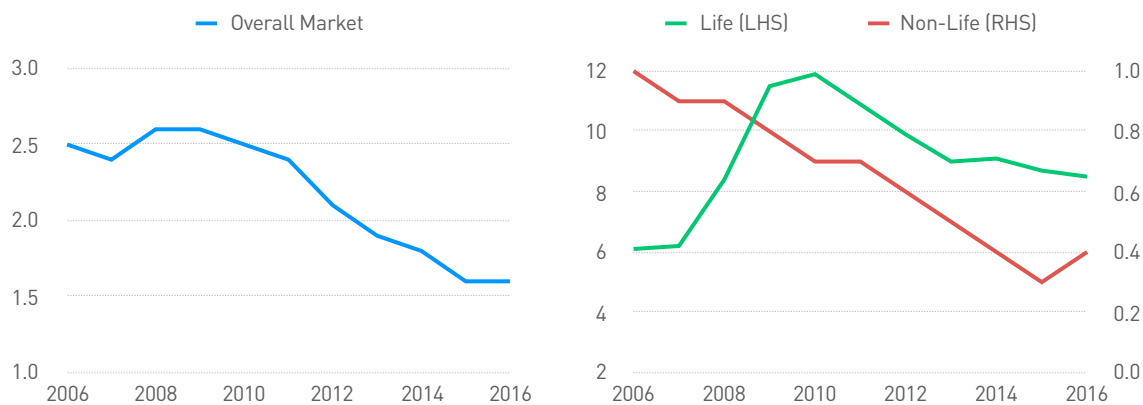


Source: MAPFRE Economic Research

market growth rate would prove sufficient to close the IPG established in 2016 as regards Non-Life insurance. However, the Argentine insurance market would require an annual growth rate of 25.3 percent (2.8 percentage points higher than the value seen in the last ten years) over the next ten years to close the IPG estimated in 2016 for the Life insurance segment. This estimation is nevertheless affected by the impact of an inflationary environment on the key variables that explain the behavior of the insurance market.

**Market Development Index (MDI)**

Chart 3.2.9-r provides an estimate of the Market Development Index (MDI) for the Argentine insurance industry. The aim of the MDI is to summarize the trends in the development and maturity of insurance markets.

In the case of the Argentine insurance industry, the trend diverges considerably from the pattern observed across Latin America as a whole. The MDI started falling in 2007 but has returned to its

**Chart 3.2.9-q**
**Argentina: capacity to close IPG, 2006-16**
(average annual growth rate, percent; sufficiency or insufficiency, percentage points)
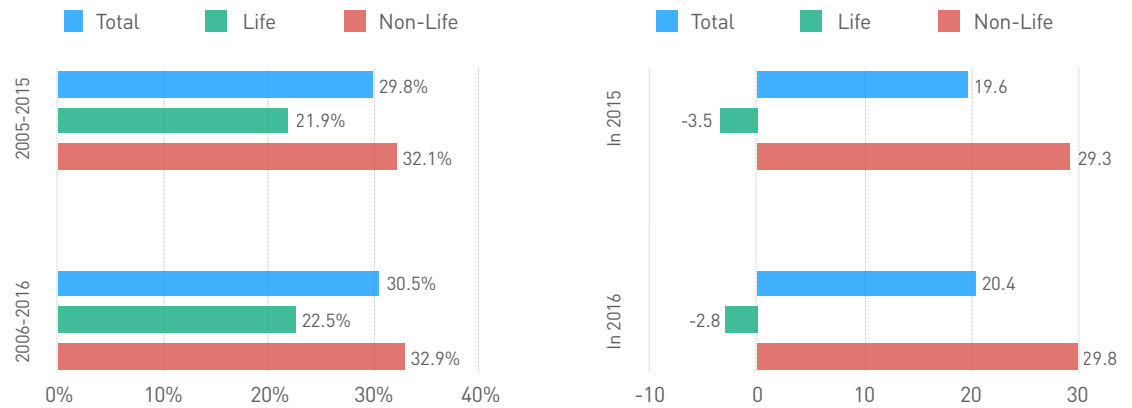
Source: MAPFRE Economic Research

reference value in the last two years, a behavior strongly determined by the trends indicated above for the Life insurance segment.

### Insurance market rankings

**Overall ranking**

In 2016 there were 174 insurance companies operating in Argentina. The Herfindahl and CR5 indexes show a low degree of concentration, albeit with a slight upturn in 2007 growing steeper from 2013 onwards (see Chart 3.2.9-s).

Certain business movements influenced the positioning of the country's main insurance groups in 2016. In May of that year Suramericana (Sura) successfully completed the legal procedure with the National Insurance Superintendence (SSN) to acquire Royal & Sun Alliance Seguros Argentina, assuming total control of the local operation.

In July 2016 Sancor Seguros announced the purchase of 30 percent of Banco Finansur and there were several bids to buy the remaining 70 percent. However, the parties involved are still negotiating the final deal.

In October 2016 AIG announced the sale to Fairfax Financial Holdings of its commercial insurance and local insurance operations in Argentina carried out through Meridional

Seguros. Lastly, in March 2017 the SSN approved the merger of Ace and Chubb Seguros Argentina through Resolution No. 40.334.

In the overall ranking of insurance groups in Argentina, Sancor held on to its top slot in 2016 with 9.5 percent of all premiums, followed by Provincia Seguros (7.2 percent) and Federación Patronal (7 percent).

They are followed by Caja Seguros and San Cristóbal, both with a market share of 5.7 percent and a difference of only one million pesos between the two companies. All the other positions are similar to those seen in 2015 (see Chart 3.2.9-t).

**Non-Life Ranking**

Given the importance of Non-Life insurance in Argentina, the companies in the 2016 Non-Life ranking are practically the same as those in the overall ranking (see Chart 3.2.9-u). Sancor leads the list with 10.7 percent of the market premiums. Federación Patronal and Provincia follow with 8.2 percent and 7.5 percent, respectively. Caja Seguros and Galeno swap slots with respect to the 2015 ranking and all the other groups remain in the same positions.

**Chart 3.2.9-r**
**Argentina: Market Development Index (MDI), 2005-16**
**(index 2005=100; annual change)**
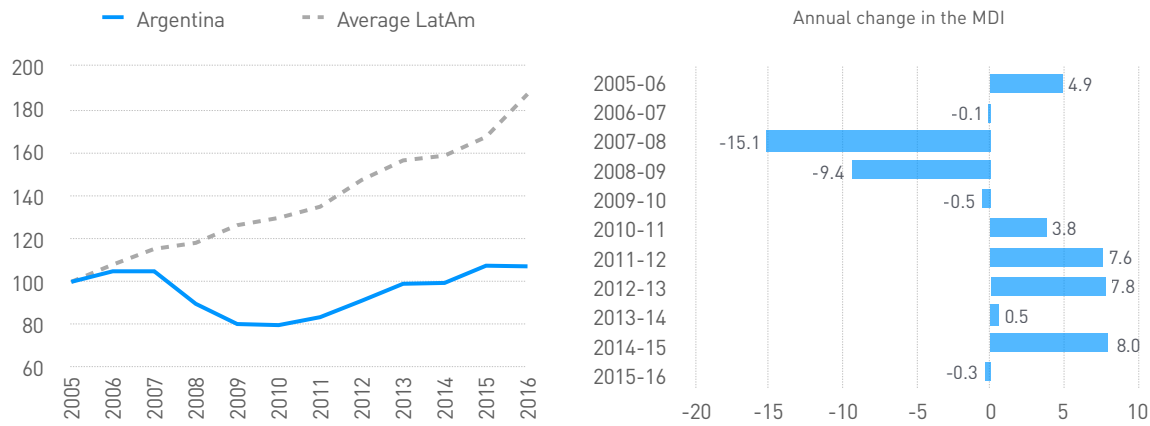


Source: MAPFRE Economic Research

## Life Ranking

Lastly, Zurich tops the Life ranking with 8 percent of premiums, overtaking the Werthein group, which slips to second place with 7.4 percent, followed by Nación and Caja Seguros, each with a market share of 6 percent, and Provincia with a share of 5.2 percent (see Chart 3.2.9-u).

## Key regulatory aspects

Based on information from the Argentine National Insurance Superintendence, there have been several key legislative changes recently. With regard to solvency:

**Chart 3.2.9-s**
**Argentina: insurance industry concentration, 2006-16**
**(Herfindahl index; CR5 index, percent)**
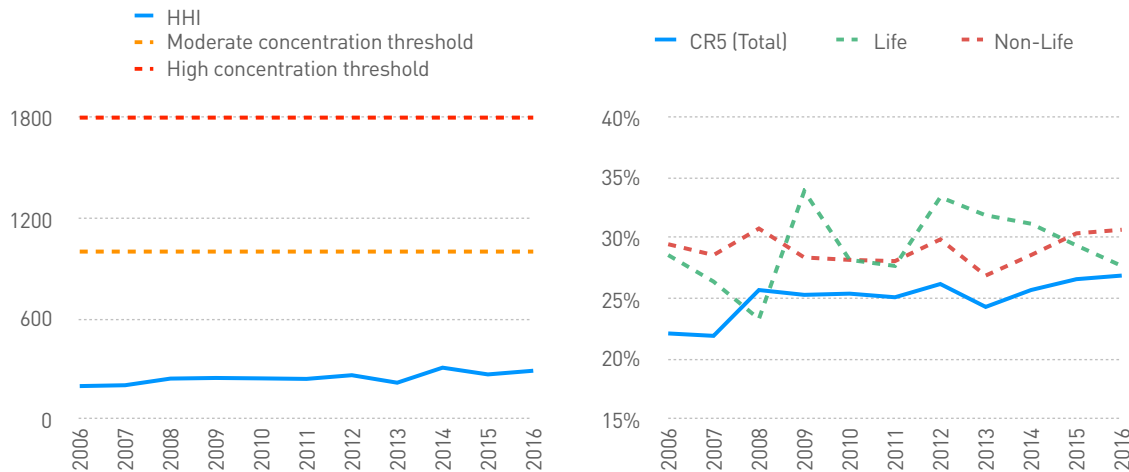


Source: MAPFRE Economic Research (based on data from Superintendence of Insurance of the Nation)

**Chart 3.2.9-t
Argentina: overall ranking, 2015-16
(market shares, percent)**

■ 2016    ■ 2015

| | |
|---|---|
| Sancor | 9.5% |
| Provinvia | 7.2% |
| Federación Patronal | 7.0% |
| Caja Seguros | 5.7% |
| San Cristobal | 5.7% |
| Grupo Werthein | 4.6% |
| Galeno | 4.6% |
| Segunda | 4.4% |
| Zurich | 3.8% |
| Allianz | 3.1% |
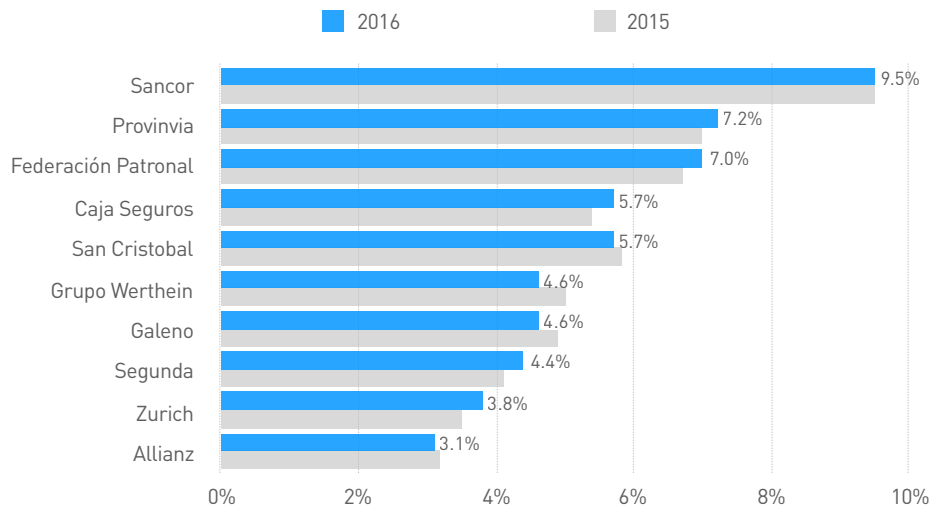
Source: MAPFRE Economic Research (based on National Insurance Superintendence data)

- Capitalization of the Occupational Risks Regime. Adaptation of legal action liabilities, taking the disability percentage point from 5,000 to 10,000 pesos. Absorption of the year-end utilities to cover the increase. This measure injected 7 billion pesos into the regime capital and prevented the distribution of dividends.

- Minimum initial capital increases of 200 percent required, maintaining the system for the requirement of variable capitals based on premiums and claims.

- Resolution 40,512 introduced a new system of minimum reserves for the General Third-Party Liability and Automobile Third-Party Liability lines.

Regarding reinsurance, Resolution 40,422 substantially amended the reinsurance system decreed via Resolution 35,615. The most important amendments are:

- Accelerated liberation of placements of all types of reinsurance contracts with admitted reinsurers, beginning with 50 percent for contracts with an effective date after 07/01/2017 and ending with a liberation of 75 percent by 2019.

- Catastrophe contracts and facultative insurance with insured sums equal to or higher than 35 million pesos may be fully placed with admitted reinsurers.

- The minimum capital required will gradually increase as follows:

  - 31/3/2017, $60.000.000

  - 31/12/2017, $130.000.000

  - 31/12/2018 , $250.000.000

  - 31/12/2019, $350.000.000

Chart 3.2.9-u
Argentina: Life and Non-Life ranking, 2015-16
(market shares, percent)
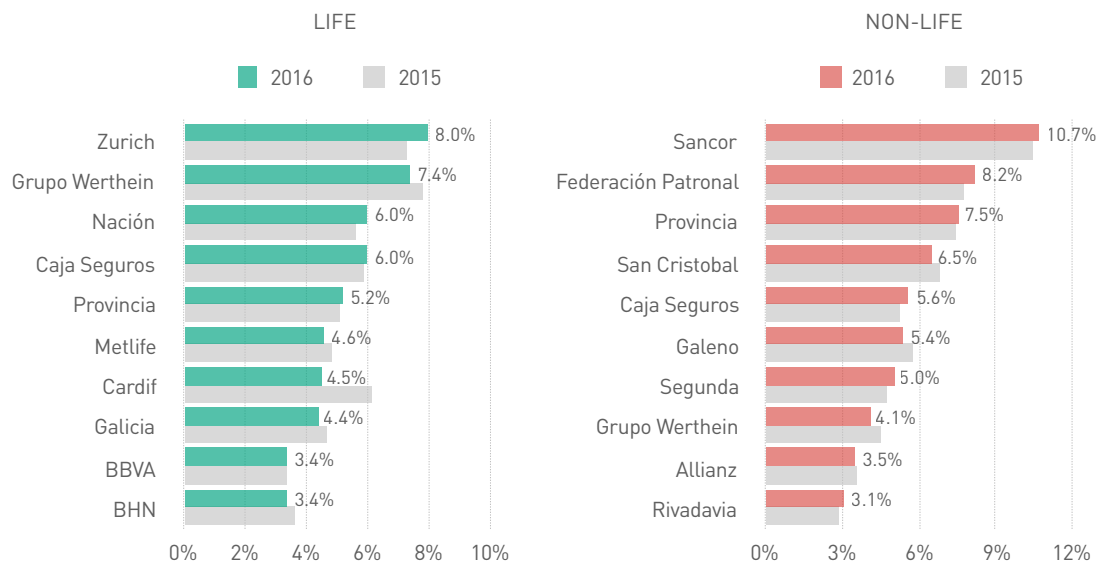
Source: MAPFRE Economic Research (based on data from Superintendence of Insurance of the Nation)

The process to amend the plan authorization procedure and turn it into a minimum guidelines scheme with policy deposits was also initiated. Following the entry into force of SSN Resolution 40,375 the process is well underway. Plans no longer expire, allowing companies to join them, and a maximum deadline for authorizing new coverages has been reinstated. The resolution introducing the minimum guidelines scheme and the details of those guidelines for the first lines of business have reached the final analysis stage.

Regarding investments, the obligation to invest in productive projects in regional economies, imposed in 2012, has been lifted and a timeline for liquidating positions has been defined. The obligation imposed in 2015 to withdraw from investments in dollars was also lifted.

The National Executive enacted Law 27,348 supplementing the Occupational Risk Act, approved on February 15, 2017 through Decree 132, published in the Official Gazette of February 24, 2017.

The first article of the new law, which is designed to reduce workplace accident litigation, stipulates that "the actions of the jurisdictional medical commissions created by virtue of Article 51 of Law 24,241 and its amendments will necessarily constitute the prior administrative instance, excluding all other interventions, so that the affected worker, with due legal counsel, is able to request the definition of the professional nature of his or her illness or circumstance as well as the definition of his or her disability and the relevant monetary benefits provided for under the Occupational Risk Act".

Article 2 states that once the stipulated instance has been exhausted "the parties may request a review of the resolution by the Central Medical Commission", and the worker "will have the option of filing an appeal against the ruling of the jurisdictional medical commission before the ordinary labor courts in the provincial

ordinary labor courts in the provincial jurisdiction or autonomous city of Buenos Aires".

Public Provincial Self-Insurance was also set up to enable the provinces, municipalities and the autonomous city of Buenos Aires to self-insure occupational risks.

Pursuant to the new law, the Occupational Risk Superintendence must send the Permanent Consultative Committee created by virtue of Article 40 of Law 24,557 a bill concerning occupational risk prevention and protection designed to guarantee that working conditions and environments conform to best practices and the relevant international standards and that these general principles are adapted to each specific activity through collective bargaining agreements. This bill must be prepared and sent to the aforementioned committee within three months of the entry into force of this law.

### 3.2.10. Uruguay

### Macroeconomic environment

Uruguay's economy grew by 1.4 percent in real terms in 2016, compared with 1.0 percent the previous year. The most buoyant sectors were electricity, gas and water, all of which experienced significant expansion in the second quarter.

However, its effect was offset by the decline in other sectors like construction, influenced by the decrease in private investment, and primary activities, following the fall in external demand. On the expenditure side, consumption and investment both stagnated (see Chart 3.2.10-a).

The inflation rate increased one percentage point to 9.6 percent in 2016, while unemployment rose 0.4 percentage points to 7.9 percent. Real wages increased 3.3 percent, higher than the figure registered in 2015.

Regarding the external sector, exports and imports both fell but the relatively sharper decline in the latter, as opposed to the former, cut one point off the current account deficit, which ended the year at 1.4 percent of GDP. As for the growth forecasts for 2017, ECLAC estimates an increase of 1.0 percent while the IMF puts it slightly higher at 1.6 percent.



Chart 3.2.10-a
Uruguay: evolution of economic growth and inflation, 2006-16
(GDP in local currency, billions of pesos; real growth rate, percent; annual inflation rate, percent)

Source: MAPFRE Economic Research (based on IMF and OEF data)

## Insurance Market

### Growth

The premium volume of Uruguay's insurance market in 2016 was 38.531 billion pesos (1.280 billion dollars), which represents a nominal increase of 10.4 percent and an increase of 0.7 percent in real terms compared with the previous year.

The market is still growing but experienced a slowdown in relation to 2015 when the nominal and real growth rates were 15.3 percent and 5.3 percent, respectively. In 2016 the Life insurance business, which represents 38.2 percent of the total, grew in both nominal and real terms but the Non-Life business, accounting for the remaining 61.8 percent, only grew in nominal terms and took a dip in real terms (see Table 3.2.10 and Chart 3.2.10-b).

Life insurance business lines grew steeply in 2016 (26 percent nominal and 14.9 real), reaching 14.707 billion pesos (489 million dollars). However, their pace of growth slowed down compared to the previous year, when nominal growth was 30.6 percent and real growth was 19.3 percent. Pensions insurance performed particularly well with a real increase of 27 percent in premiums. Non-Life premiums reached 23.824 billion pesos (792 million dollars), with a nominal increase of 2.5 percent in relation to the previous year but a contraction of -6.5 percent in real terms.

The stagnation of the Non-Life segment was owing to the contraction registered in 2016 of the two most important lines, Automobile and Traffic Accidents, which saw their premiums fall -1.2 percent and -13.8 percent in real terms, respectively. In addition to these two lines, all the other Non-Life types registered contractions. There was one exception: Fire, up 4.5 percent.

Out of the 10.4 percent growth registered in 2016, the greatest contribution came from Life insurance, 8.7 percentage points, whereas Non-Life insurance contributed just 1.7 percentage points (see Chart 3.2.10-c).

Table 3.2.10
Uruguay: premium volume[1] by lines of business (lob), 2016

| Lines of business | Millions of pesos | Millions of dollars | Increase | |
|---|---|---|---|---|
| | | | Nominal (percent) | Real (percent) |
| **Total** | **38,531** | **1,280** | **10.4** | **0.7** |
| **Life** | **14,707** | **489** | **26.0** | **14.9** |
| Pension | 9,442 | 314 | 39.3 | 27.0 |
| Non-Pension | 5,265 | 175 | 7.6 | -1.9 |
| **Non-Life** | **23,824** | **792** | **2.5** | **-6.5** |
| Automobiles | 10,056 | 334 | 8.4 | -1.2 |
| Workplace accidents | 7,351 | 244 | -5.5 | -13.8 |
| Other Lines | 2,380 | 79 | 2.5 | -6.5 |
| Fire | 1,786 | 59 | 14.5 | 4.5 |
| Transport | 750 | 25 | -11.2 | -19.0 |
| Third-party liability | 541 | 18 | 6.6 | -2.8 |
| Theft | 514 | 17 | 5.6 | -3.6 |
| Surety and Credit | 447 | 15 | -3.2 | -11.8 |

Source: MAPFRE Economic Research (based on data from Central Bank of Uruguay)
1/ Premiums issued net of cancellation.
2/ The premium volume of *Workplace accidents* refers to Banco de Seguros del Estado.

**Chart 3.2.10-b**
**Uruguay: growth developments in the insurance market, 2006-16**
(premiums, billions of pesos, nominal annual growth rates, percent)
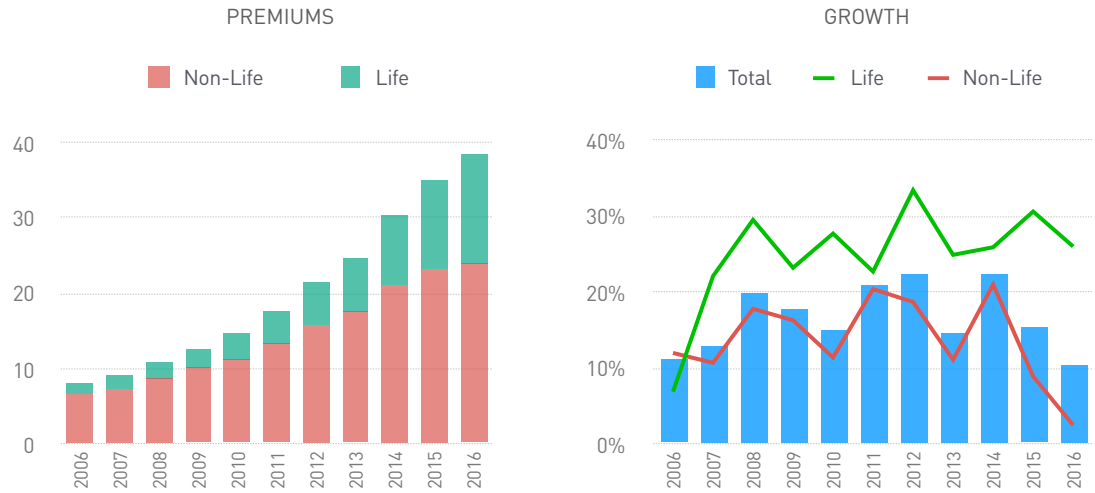
Source: MAPFRE Economic Research (based on data from Central Bank of Uruguay)

## Balance sheet and equity

The evolution of the aggregate balance sheet for the Uruguayan insurance industry over the period 2006-16 is shown in Chart 3.2.10-d. As indicated, total assets reached 115.866 billion pesos in 2016, while equity stood at 15.752 billion pesos, up 9.8 percentage points on the 2015 value.

The evolution of the aggregate capital levels in the Uruguayan insurance industry (relative to total assets) merit special mention, having gradually fallen from around 27 percent in 2006-07 to just 13.6 percent of total assets by the end of 2016.

## Investment

Chart 3.2-10-e shows the evolution of investments in the Uruguayan insurance industry over the period 2006-16, while Charts 3.2.10-f and 3.2.10-g show the composition of the aggregate investment portfolio at a sector level during that time.

Investment reached 99.900 billion pesos (3.319 billion dollars) in 2016, with 83.8 percent focused on fixed income and variable annuities, 15.6 percent on other financial investments (mainly bank deposits), 0.5 percent on property investments, and the remaining 0.03 percent on cash.



**Chart 3.2.10-c**
**Uruguay: contribution to insurance market growth, 2006-16**
(percentage points, ppts)
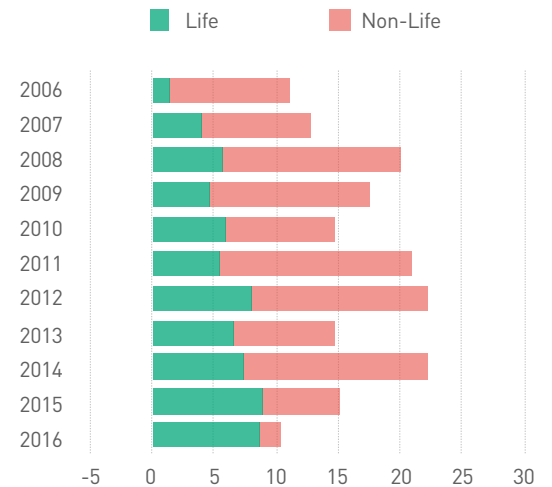
Source: MAPFRE Economic Research (based on data from Central Bank of Uruguay)

**Chart 3.2.10-d**
**Uruguay: evolution of insurance industry's aggregate balance sheet, 2006-16**
(amounts in local currency, change in equity, percentage points)
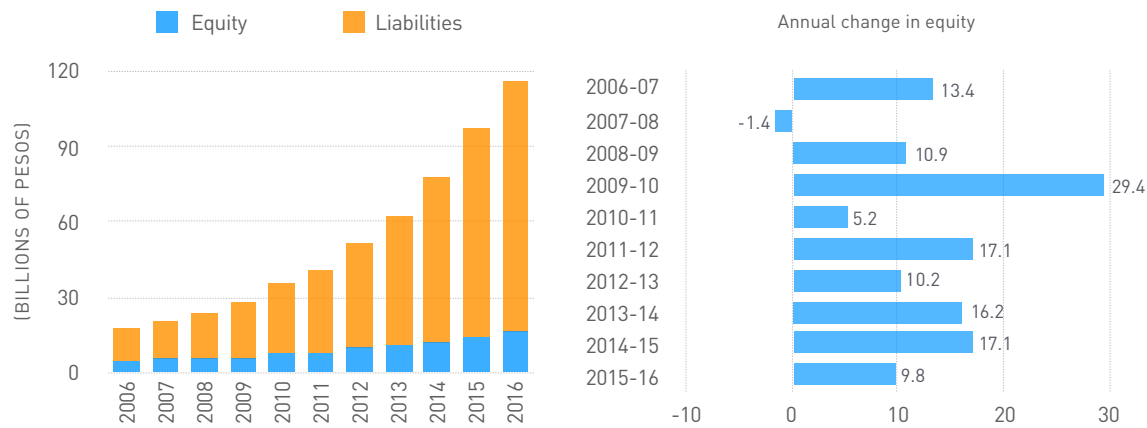


Source: MAPFRE Economic Research (based on data from Central Bank of Uruguay)

The analysis of the evolution of the aggregate investment portfolio for the insurance industry reveals a change in the relative weight of property investments, which represented 8.4 percent of the portfolio in 2006 and just 0.5 percent in 2016.

**Technical provisions**

Charts 3.2.10-h, 3.2.10-i and 3.2.10-j show the evolution and relative composition of the Uruguayan insurance industry's technical provisions over the period 2006-16.

Total technical provisions amounted to 90.779 billion pesos (3.016 billion dollars) in 2016. Of the total provisions, 62.6 percent related to Life insurance, 7 percent to the provision for unearned premiums and unexpired risks in Non-Life insurance, and the remaining 30.4 percent to the provision for outstanding claims.

The relative weight of technical provisions for Life insurance grew steadily over the period 2006-16, rising from 44.3 percent of total provisions in 2006 to 62.6 percent in 2016.

**Technical performance**

In spite of a reduction of 1.4 percentage points in the expense ratio, which ended the year at 38.1 percent, the increase of more than 2.6 points in the claims ratio to 67.8 percent pushed the

**Chart 3.2.10-e**
**Uruguay: Insurance market technical provisions, 2006-16**
(billions of pesos)
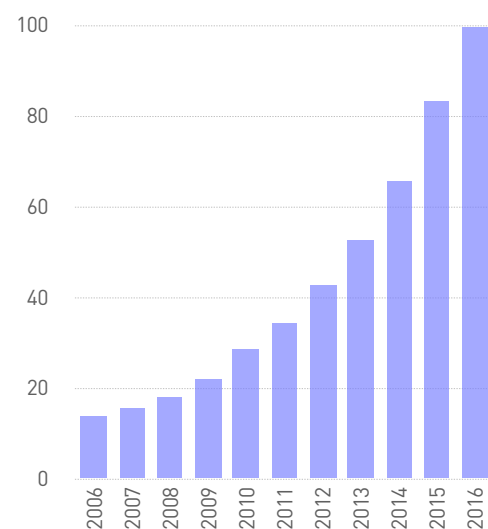


Source: MAPFRE Economic Research (based on data from Central Bank of Uruguay)

**Chart 3.2.10-f
Uruguay: structure of investment, 2006-16
(%)**

Fixed income and equities   Property
Other financial investment   Cash



Source: MAPFRE Economic Research (based on data from Central Bank of Uruguay)

**Chart 3.2.10-g
Uruguay: structure of investment, 2016
(%)**

Fixed income and equities
Property
Cash
Other



0.03%
0.5%
15.6%
83.8%

Source: MAPFRE Economic Research (based on data from Central Bank of Uruguay)
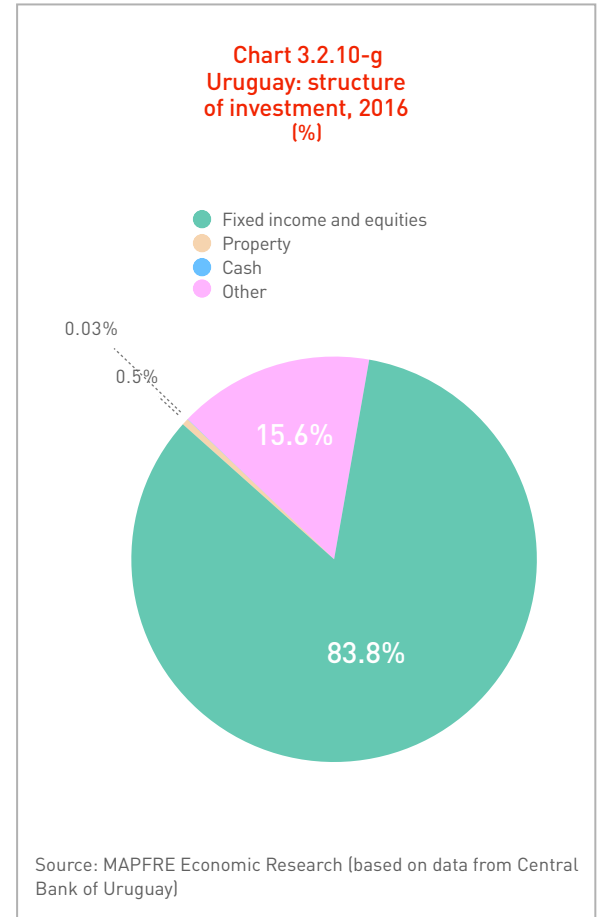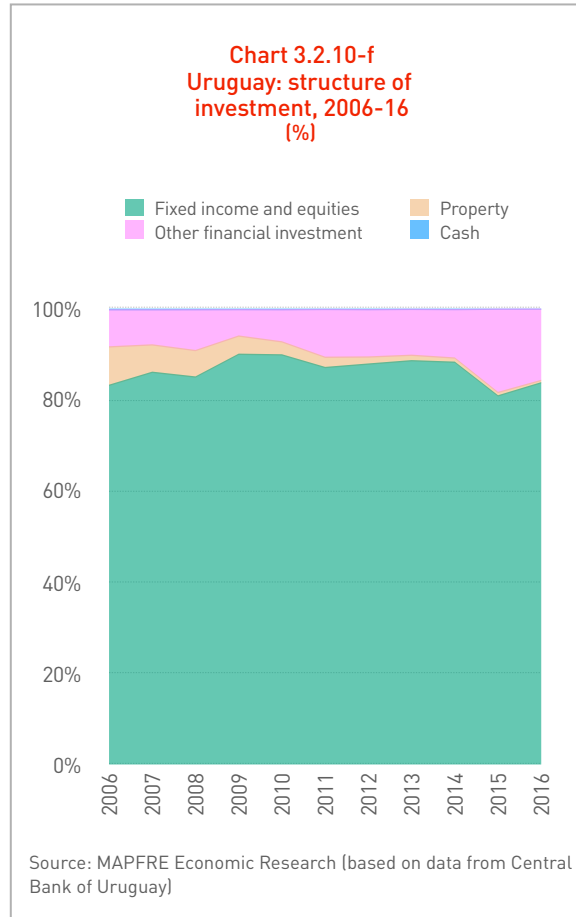
combined ratio of the Uruguayan market up by 1.3 percentage points to 105.9 percent, leading to a negative technical result in 2016 (see Chart 3.2.10-k).

Taking a longer-term perspective, expenses followed a slight downward trajectory while the trend was upward in the case of claims.

**Results and profitability**

The net result for 2016 was 763 million pesos (25 million dollars), down 12.2 percent in relation to the previous year. This was sustained by the positive effect of the financial result, which was able to offset the industry's negative technical result (see Chart 3.2.10-l).

In terms of profitability, the return on equity (ROE) reached 4.8 percent in 2016, down 1.2 percentage points on 2015. In a similar vein, the return on assets (ROA) amounted to 0.7 percent in 2016, a decrease of 0.2 percentage points on

**Chart 3.2.10-h
Uruguay: insurance market technical provisions, 2006-16
(billions of pesos)**



Source: MAPFRE Economic Research (based on data from Central Bank of Uruguay)

**Chart 3.2.10-i**
**Uruguay: structure of**
**technical provisions, 2006-16**
**(%)**

Other technical provisions
Catastrophic risk provisions
Provisions for outstanding claims
Unearned premiums and ongoing risks
Life insurance provisions
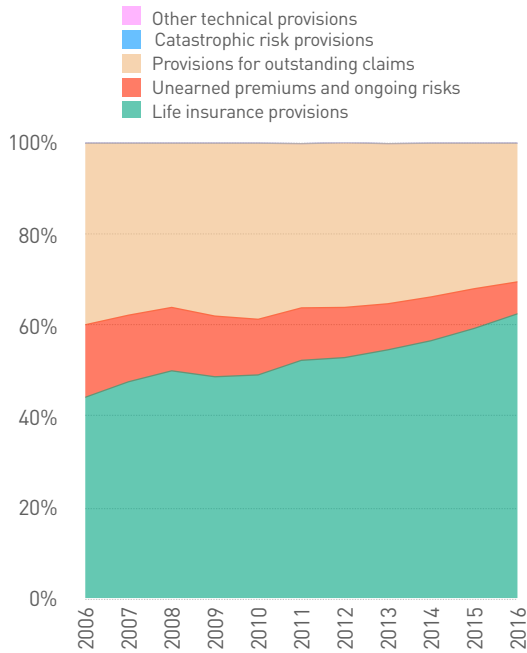
Source: MAPFRE Economic Research (based on data from Central Bank of Uruguay)

**Chart 3.2.10-j**
**Uruguay: structure**
**of technical provisions, 2016**
**(%)**

Life
For claims
Other
Non-Life
Catastrophic risks

7.0%
30.4%
62.6%
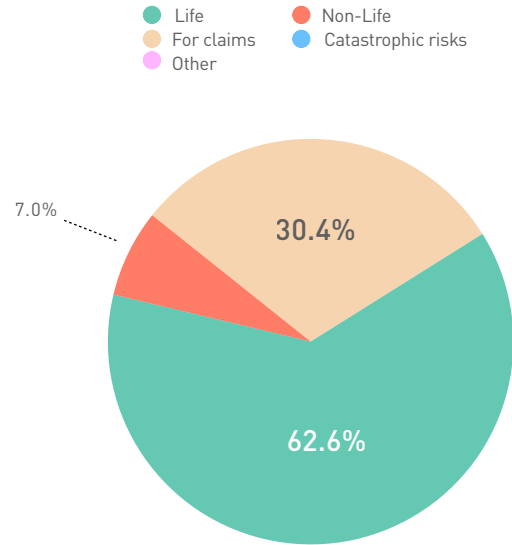
Source: MAPFRE Economic Research (based on data from Central Bank of Uruguay)

**Chart 3.2.10-k**
**Uruguay: evolution of market technical performance, 2006-16**
**(total combined ratio, percent; annual change in combined ratio, percentage points)**

Claims ratio    Expense ratio

Annual change in combined ratio

| Period | Value |
|--------|-------|
| 2006-07 | -4.0 |
| 2007-08 | 4.2 |
| 2008-09 | 11.5 |
| 2009-10 | -7.5 |
| 2010-11 | -4.7 |
| 2011-12 | 3.8 |
| 2012-13 | 1.7 |
| 2013-14 | -4.9 |
| 2014-15 | 2.8 |
| 2015-16 | 1.3 |

Source: MAPFRE Economic Research (based on data from Central Bank of Uruguay)

2015, confirming a downward trend in the industry's profitability since 2010.

**Insurance penetration, density and depth**

Chart 3.2.10-m shows the main structural trends in the development of the Uruguayan insurance industry over the period 2006-16.

The penetration index (premiums/GDP) was 2.4 percent in 2016, 0.7 percentage points higher than the level registered in 2006. In general, penetration of the Uruguayan market grew steadily over the period analyzed but is still below the average absolute values of the other markets in the region.

Insurance density in Uruguay (premiums per capita) reached 11,192 pesos (372 dollars) in 2016, up 10 percent on 2015 (10,177 pesos).



Chart 3.2.10-l
Uruguay: evolution of results and profitability, 2006-16
(technical and financial results over net accrued premium, percent; ROE, percent; ROA, percent)

Source: MAPFRE Economic Research (based on data from Central Bank of Uruguay)
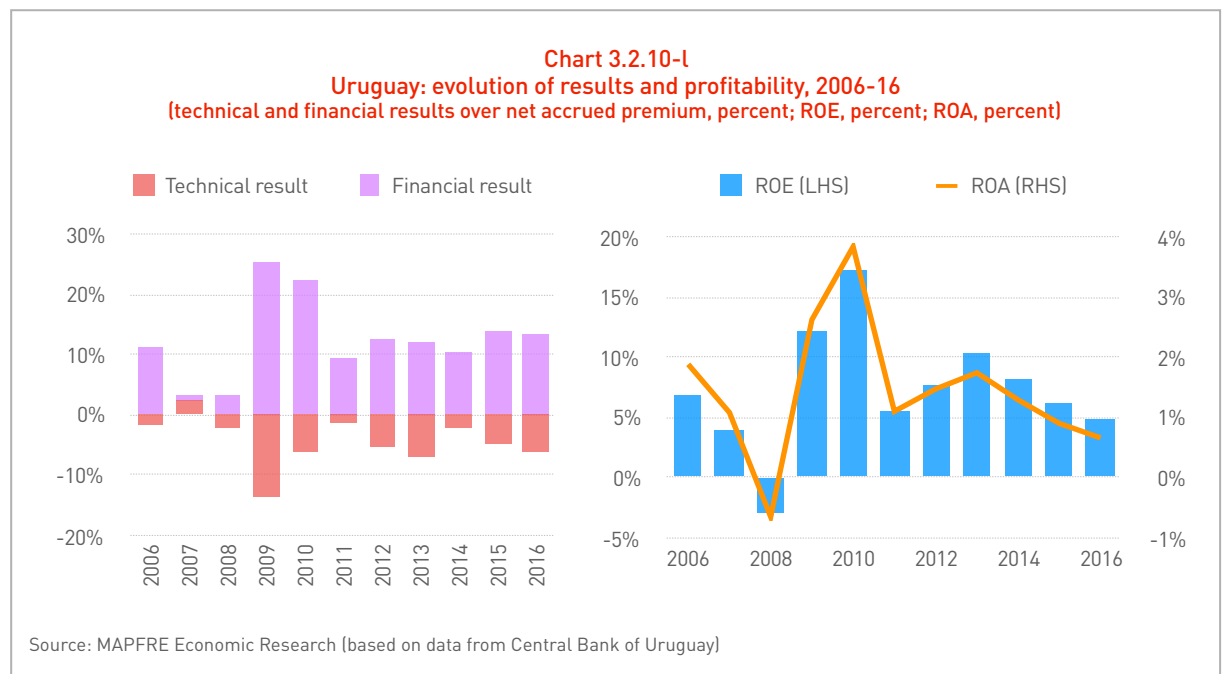
Density (measured in local currency) also grew steadily over the period analyzed, registering a cumulative growth of 367.4 percent between 2006 and 2016. However, when analyzed in dollars the indicator reveals a stagnation from 2015 onwards due to the devaluation of the Uruguayan peso against the dollar.

The depth of insurance in the Uruguayan market (Life insurance premiums relative to total premiums) reached 38.2 percent, up 20.7 percentage points on the level registered in 2006. This clearly demonstrates that the Life insurance segment has developed considerably over the period analyzed. The depth of the Uruguayan insurance market reflects the same trend as that seen in Latin American markets in

general but is still below the average absolute values for the region.

The performance of the Uruguayan insurance market is illustrated by the dispersion analysis summarized in Chart 3.2.10-n, which takes account of penetration and depth levels. The former offers a quantitative perspective of the process, while the latter is a proxy of market maturity.

Overall, the analysis confirms that the Uruguayan insurance market has developed in a balanced and positive way over the period analyzed, though at a slightly slower pace since 2014.

### Chart 3.2.10-m
### Uruguay: evolution of penetration, density and depth, 2006-16
### (premiums/GDP, percent; premiums per capita, pesos and dollars; Life insurance premiums / total premiums, percent, index 2006=100)

PENETRATION

INDEX (2006=100)

DENSITY

INDEX (2006=100)

DEPTH

INDEX (2006=100)
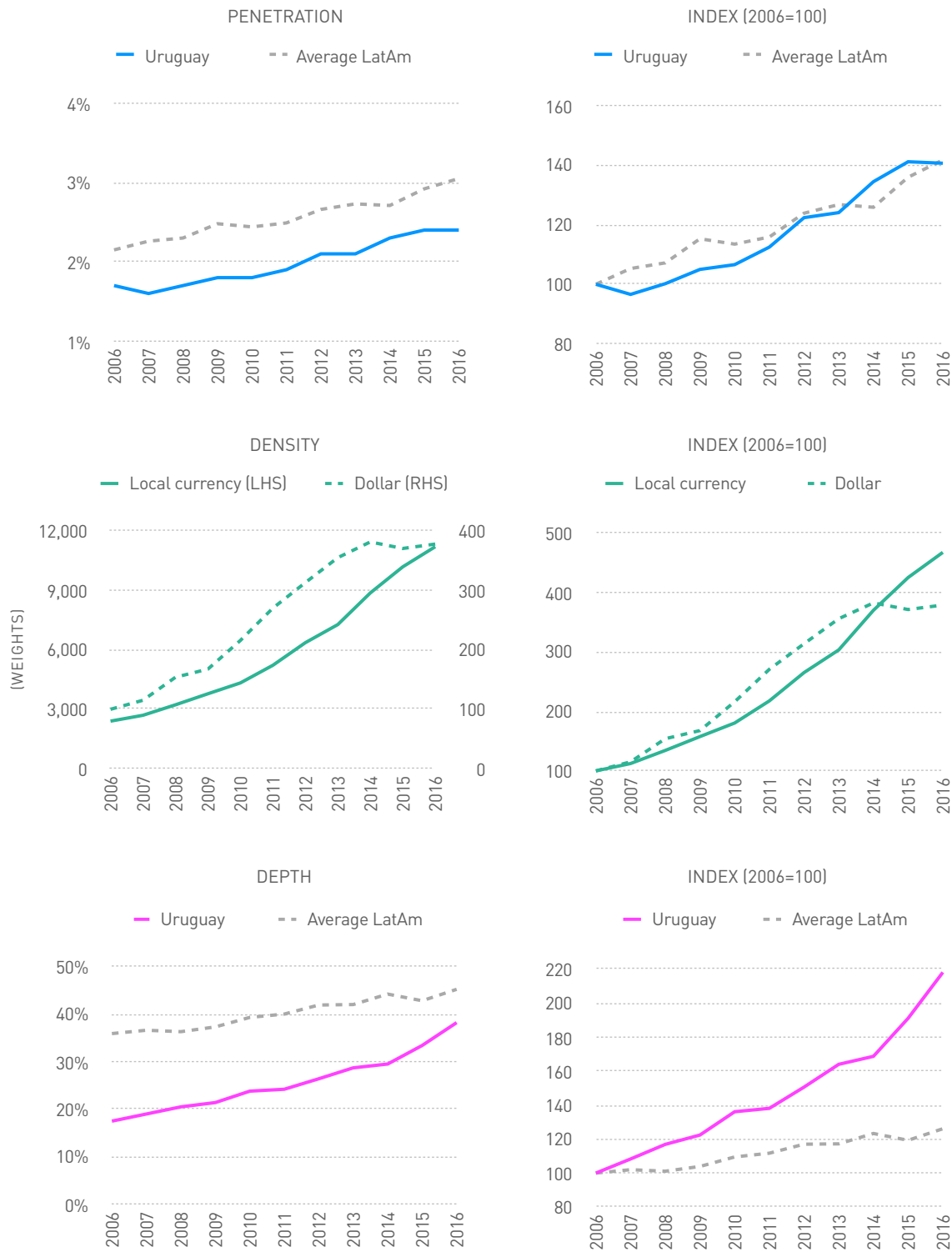
Source: MAPFRE Economic Research (based on data from Central Bank of Uruguay)

**Estimate of the Insurance Protection Gap**

Chart 3.2.10-o provides an estimate of the IPG for the Uruguayan insurance market between 2006 and 2016. The insurance gap amounted to 89.981 billion pesos in 2016, representing 2.3 times the Uruguayan insurance market at the end of the year.

The structure and evolution of the IPG over the period reflects the major contribution from Life insurance. At the close of 2016, 64.5 percent of the IPG related to Life insurance (58.010 billion soles), 5.3 percentage points below the share for this segment in 2006. The remaining 35.5 percent of the insurance gap in 2016 related to Non-Life insurance (31.972 billion pesos).

Accordingly, the potential insurance market in Uruguay at the end of 2016 (sum of actual market and IPG) was estimated at 128.513 billion pesos, representing 3.3 times the total insurance market.

Chart 3.2.10-p shows an estimate of the insurance gap as a multiple of the actual insurance market in Uruguay. The IPG as a multiple of the market continually declined over the period 2006-16, both for Life insurance (falling from 15.7 to 3.9 times) and Non-Life insurance (down from 1.4 to 1.3 times).

Meanwhile, Chart 3.2.10-q provides a summary of the assessment regarding the capacity of the Uruguayan insurance market to close the IPG based on a comparison of growth rates over the last ten years in relation to the growth rates that would be required over the next ten years to close the gap established in 2016.

The Uruguayan insurance market registered an average annual growth of 17.1 percent over the period 2006-16, comprised of an annual growth rate of 26.6 percent in the Life insurance segment and 13.7 percent in the Non-Life insurance segment.

Based on this analysis, if the same rate of growth seen over the last ten years were to be sustained over the next ten, the growth rate of the Uruguayan insurance market would be sufficient to close the insurance gap estimated in 2016 during that time, for both the Life and Non-Life segments.



Chart 3.2.10-n
Uruguay: evolution of insurance market, 2006-16
(penetration vs depth)

Source: MAPFRE Economic Research
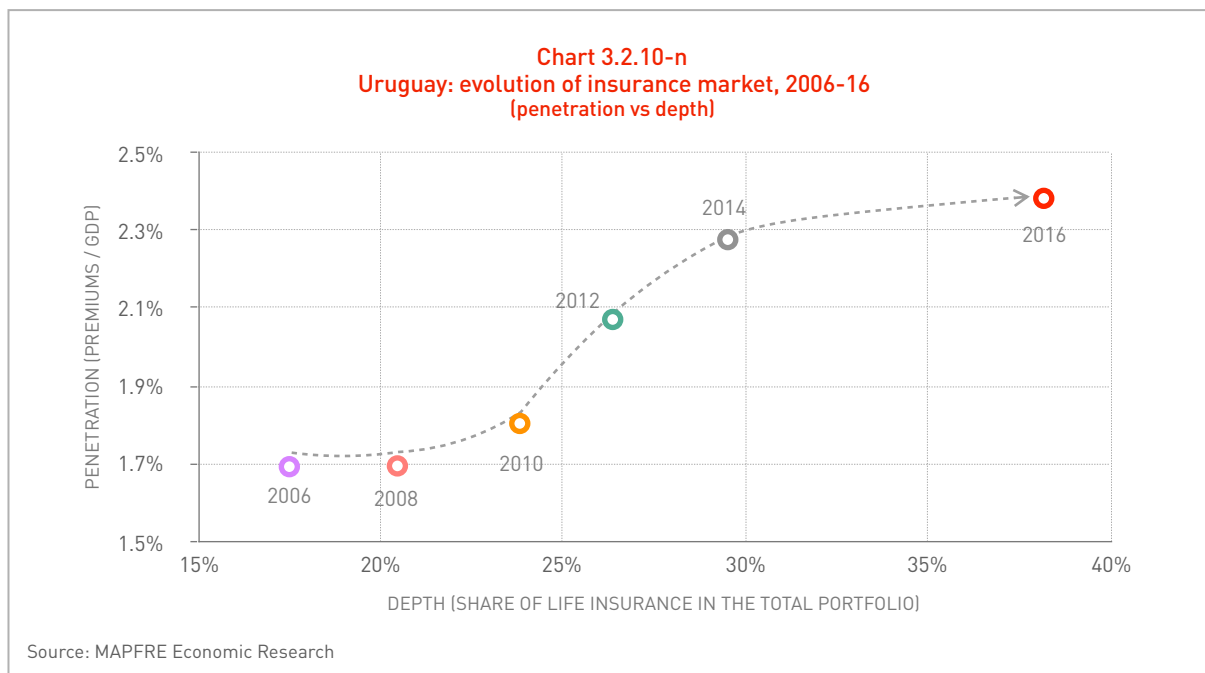
Chart 3.2.10-o
Uruguay: Insurance Protection Gap and potential market, 2006-16
(billions of pesos)
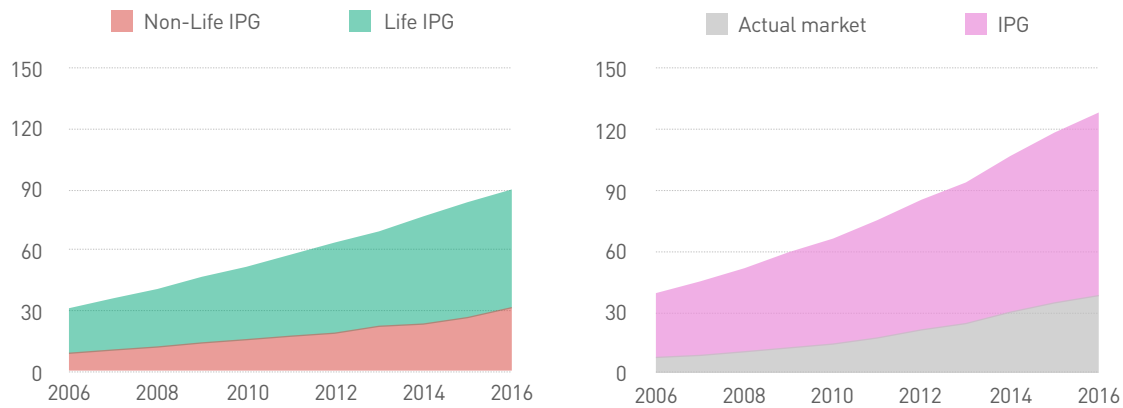
Source: MAPFRE Economic Research



Chart 3.2.10-p
Uruguay: the IPG as a multiple of the actual market, 2006-16
(number of times actual insurance market)
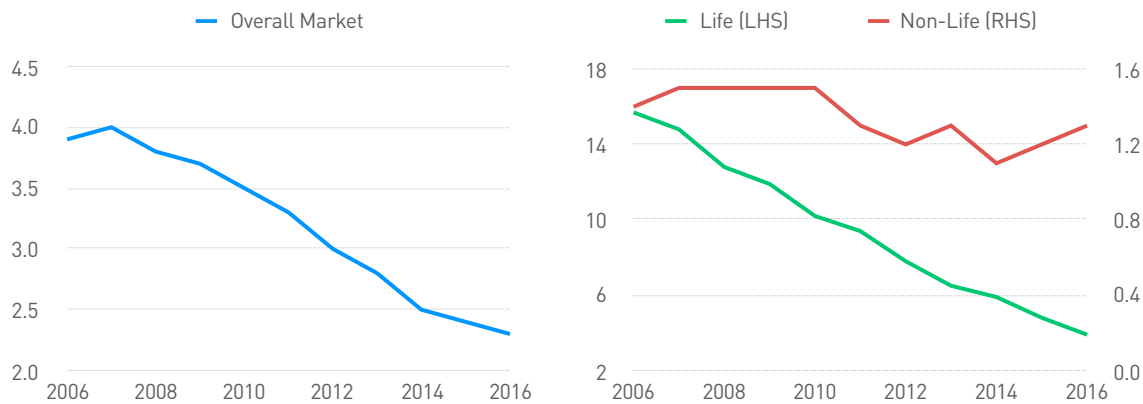
Source: MAPFRE Economic Research

## Market Development Index (MDI)

Chart 3.2.10-r provides an estimate of the Market Development Index (MDI) for the Uruguayan insurance industry.

In this case, the MDI shows a positive trajectory over the period 2006-16 and from 2013 onwards even surpasses the average performance of Latin American insurance markets.

## Insurance market rankings

### Overall ranking

At the end of 2016, there were 15 insurance companies operating in Uruguay, comprising 14 private and one state-owned company (Banco de Seguros del Estado), which has a monopoly in the Workplace Accidents line. The market is extremely concentrated, with high values for both the Herfindahl and CR5 indexes over the period analyzed, mainly due to the enormous market share enjoyed by the state-owned

Chart 3.2.10-q
Uruguay: capacity to close IPG, 2006-16
(average annual growth rate, percent; sufficiency or insufficiency, percentage points)
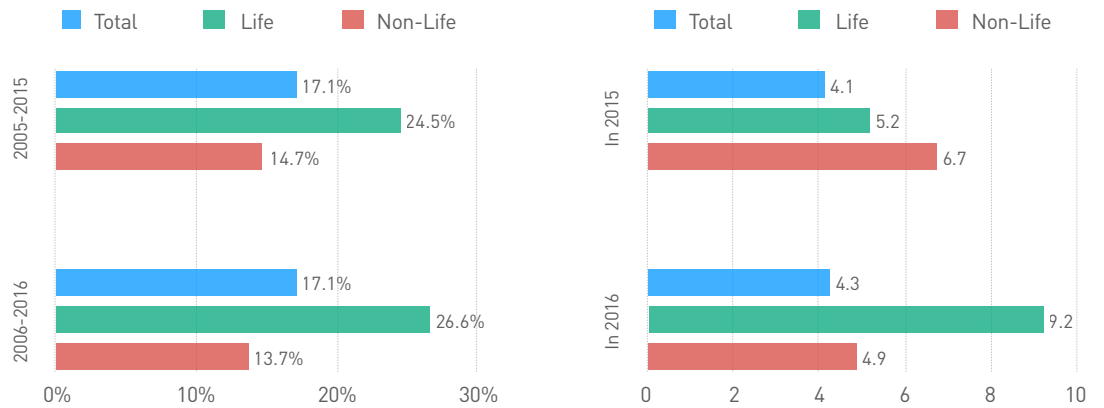
Source: MAPFRE Economic Research

market share enjoyed by the state-owned company (see Chart 3.2.10-s).

With regard to the 2016 overall ranking for the Uruguayan insurance market, Banco de Seguros del Estado issued 65.8 percent of all premiums, followed at a great distance by MAPFRE (9 percent) and Sura (6.8 percent). All the other companies in the ranking occupy the same positions as in 2015 (see Chart 3.2.10-t).

**Non-Life Ranking**

Regarding the 2016 Non-Life ranking, Banco de Seguros del Estado leads with 61.7 percent of the market share, again followed at a great distance by Sura (10.3 percent) and MAPFRE, overtaking Porto with shares of 8.4 percent and 7.9 percent, respectively. As with the overall ranking, the other companies have similar positions and shares as those of 2015, except for the aforementioned case of MAPFRE, and Surco



Chart 3.2.10-r
Uruguay: Market Development Index (MDI), 2005-16
(index 2005=100; annual change)
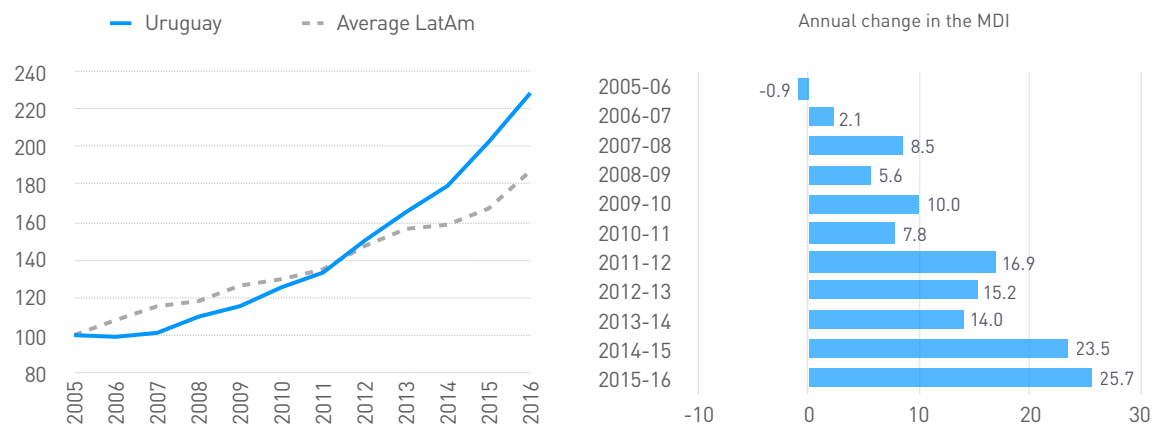
Source: MAPFRE Economic Research

### Chart 3.2.10-s
### Uruguay: insurance industry concentration, 2006-16
### (Herfindahl index; CR5 index, percent)
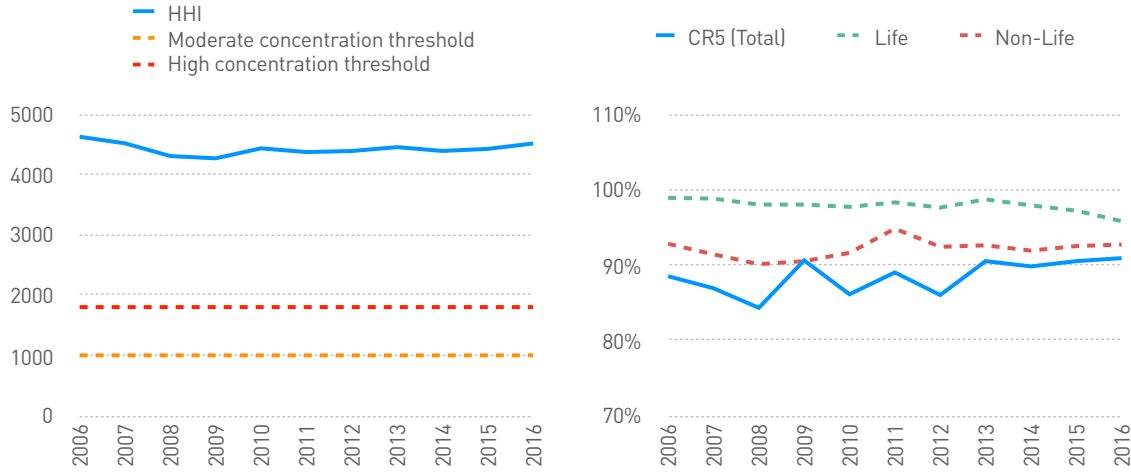


Source: MAPFRE Economic Research (based on data from Central Bank of Uruguay)

### Chart 3.2.10-t
### Uruguay: overall ranking, 2015-16
### (market shares, percent)
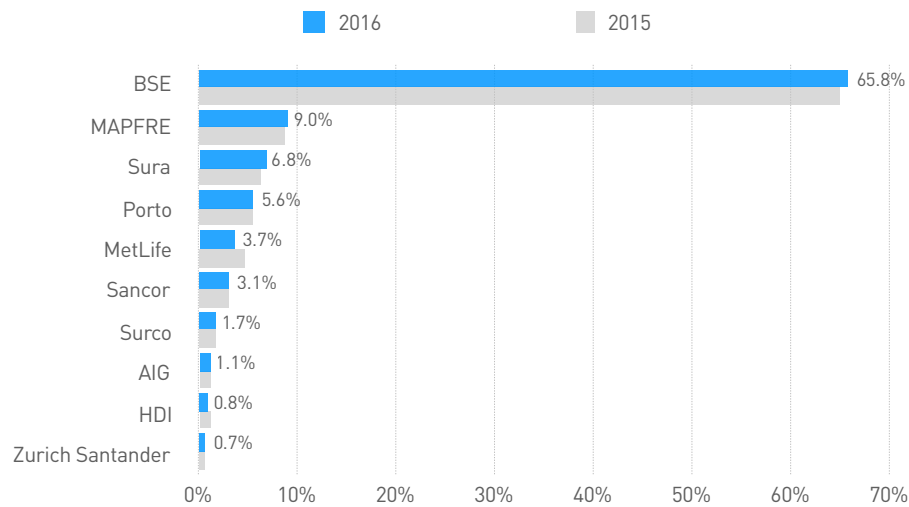


Source: MAPFRE Economic Research (based on data from Central Bank of Uruguay)

which takes the seventh slot from HDI (see Chart 3.2.10-u).

**Life Ranking**

The Non-Life ranking also reflects the overall ranking with Banco de Seguros del Estado at the top of the list with 72.3 percent of premiums. It is followed by MAPFRE, which overtakes MetLife, with shares of 10 percent and 9.5 percent, respectively (see chart 3.2.10-u).

## Key regulatory aspects

Circular 2,248 of January 2016 (regulated through communications 2016/031 and 2016/032) makes it compulsory for insurers and reinsurers to present quarterly statements on their operational risk indicators to the Financial Services Superintendence. They must also maintain a record of operational risk events.

Circular 2,267 of October 2016 imposes the obligation to report any significant change that could have a negative impact on the equity or suitability of partners or shareholders with a stake of at least 3 percent in the capital or of the institution exercising control. This information must be reported within two business days of the change occurring. The circular only applies to institutions that are not supervised by Uruguay's Central Bank and do not belong to the public sector. Also set out in the circular is the scope of the existing information requirements for direct shareholders, which will only apply to those who own at least 3 percent of the capital.

Communication 2016/208 issued in October 2016 contains instructions regarding the outsourcing of services by providers in the country. It states that non-strategic services do not require authorization for subcontracting purposes and provides a (non-exhaustive) list of such services for guidance purposes. Also specified are the services whose subcontracting is deemed to be
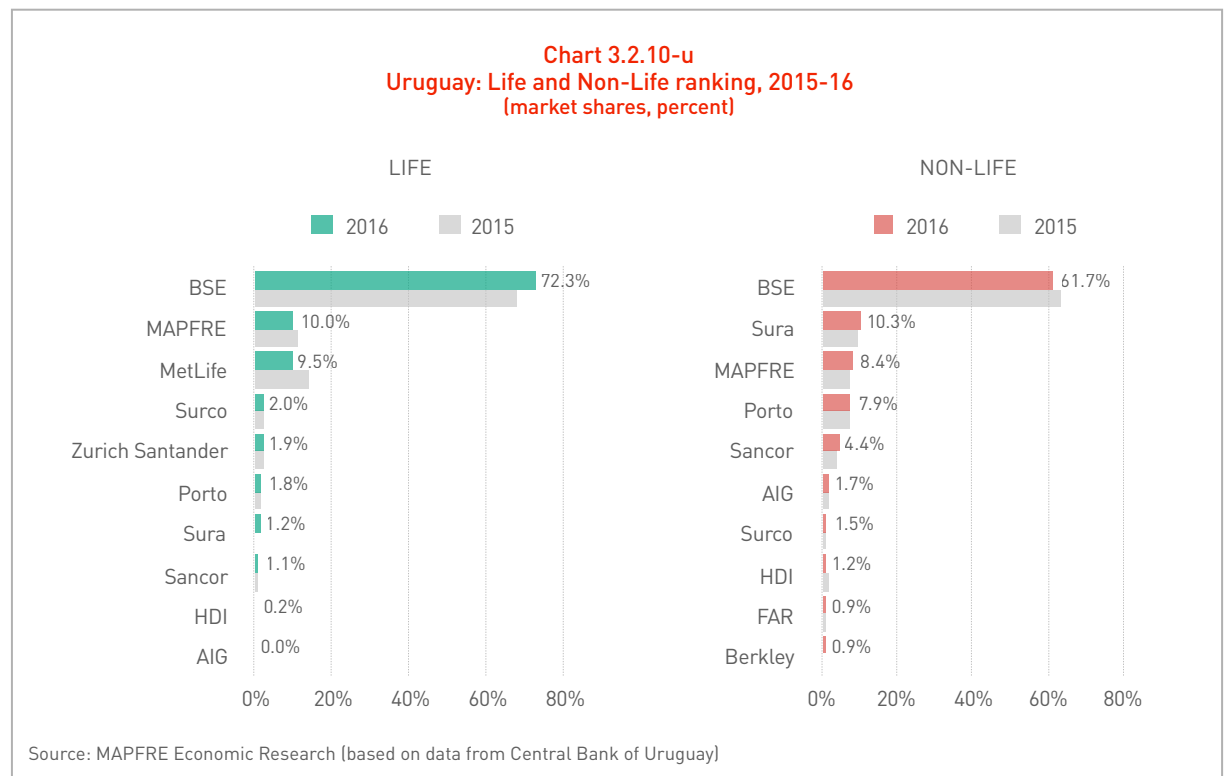


**Chart 3.2.10-u**
**Uruguay: Life and Non-Life ranking, 2015-16**
**(market shares, percent)**

LIFE

| | 2016 | 2015 |

| | |
| --- | --- |
| BSE | 72.3% |
| MAPFRE | 10.0% |
| MetLife | 9.5% |
| Surco | 2.0% |
| Zurich Santander | 1.9% |
| Porto | 1.8% |
| Sura | 1.2% |
| Sancor | 1.1% |
| HDI | 0.2% |
| AIG | 0.0% |

NON-LIFE

| | 2016 | 2015 |

| | |
| --- | --- |
| BSE | 61.7% |
| Sura | 10.3% |
| MAPFRE | 8.4% |
| Porto | 7.9% |
| Sancor | 4.4% |
| AIG | 1.7% |
| Surco | 1.5% |
| HDI | 1.2% |
| FAR | 0.9% |
| Berkley | 0.9% |

Source: MAPFRE Economic Research (based on data from Central Bank of Uruguay)

services whose subcontracting is deemed to be authorized when certain conditions are met:

- They must be clearly stated in a contract between parties, which must cover certain minimum contents.

- The contract must be made available to the Financial Services Superintendence along with the documents that confirm the financial and technical solvency of the third party providing the services.

- The Superintendence must receive notification of outsourced services within ten business days of the contract signature.

Lastly, in December 2016 draft legislation regarding pension annuities was published for consultation by institutions subject to supervision and the public in general. The draft proposes the revision of the actuarial parameters used to determine pension annuities by adopting dynamic mortality tables and defining a minimum benchmark yield curve (to be updated twice a year) to determine the current actuarial values of the benefits granted.

The long-term aim of these changes is to provide a stable and predictable framework for defining these parameters in the most realistic way possible. Other parameters such as the probability of having pension beneficiaries and the insurance company's management margin are also explained. The proposed changes to these variables will also entail adjustments to the articles that refer to the reserves for Life Annuity Insurance and Disability and Death Group Insurance.

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# References

1/ The insurance protection gap (IPG) is not a static concept that entails an unchanging amount across time. The potential insurance coverage gap is constantly changing in accordance with the economic growth of each country and the emergence of new risks to cover which are inherent to the economic and social development of nations. Because of its characteristics, the IPG bears a strong relation to market growth. The gap narrows quantitatively as the penetration index increases, and it also tends to narrow qualitatively as markets become more sophisticated and mature. Factors such as sustained economic growth, control of inflation, increases in personal disposable income, the general development of the financial system, an efficient regulatory framework, and the application of public policies aimed at increasing financial inclusion and education all help to narrow the IPG.

2/ From a methodological standpoint, the IPG can be estimated in two ways. The first is an *ex-post* approach, based on observed losses. In this case, the IPG would be the difference between recorded economic losses over a certain period and the portion of those losses that was covered by the insurance compensation mechanism. And the second is an *ex-ante* approach, analyzing the optimum level of protection, estimated as the difference between the socially and economically appropriate level of risk coverage and the real level of protection. The second approach has been used in this report, identifying the difference between the optimum level and the actual level of protection as the difference in the penetration indexes of each Latin American insurance market in relation to the average for advanced markets (United States, Canada, Japan and 27 countries of the European Union).

3/ The Market Development Index (MDI) is a composite index constructed from four individual indicators based on 2005: (i) the penetration index, (ii) the depth index, (iii) an index showing the evolution of the IPG (inverse index of the IPG as a multiple of the market), and (iv) an index showing the evolution of the Life insurance IPG (inverse index of the Life insurance IPG as a multiple of the market).

4/ The data on penetration, density and depth, as well as those relating to the measurement of the Insurance Protection Gap (IPG) and Market Development Index (MDI) in 2015 and previous years, may differ from the data presented in our report "The Latin American Insurance Market in 2015", due to updates to Latin American insurance market premium figures reported by the supervisory bodies, revisions to data on gross domestic product published by the relevant bodies in each country, and adjustments to parameters on the penetration of insurance markets used in the estimation of the IPG due to updates to the figures on insurance premiums and gross domestic product.

5/ Unlike the European Solvency II scheme, the standard model for calculating capital requirements is based on a random methodology, which introduces a model that is sensitive to the risks of each company and therefore reduces the modeling risk.

6/ The Insurance and Financial Institutions Act (LISF) allows companies to use internal models (total or partial). During the first year of the implementation of the LISF (2016), no company requested permission from the National Insurance and Finance Commission (CNSF) to use internal models.

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# Statistical appendix

## Table A.1. Mexico: main insurance market figures and indicators, 2006-16
### (millions of pesos)

| Year | Premiums | | | Premium growth | | Assets | Investment | Liabilities | Technical provisions | Equity | Combined ratio[1] | Technical result | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Nominal | Real | | | | | | | | | | |
| 2006 | 163,618 | 73,813 | 89,805 | 16.7% | 12.6% | 376,763 | 302,789 | 321,569 | 284,850 | 55,194 | 104.8 | -5,474 | 19,585 | 18.8% | 2.8% |
| 2007 | 190,330 | 83,634 | 106,696 | 16.3% | 11.9% | 444,793 | 356,609 | 373,820 | 330,464 | 70,973 | 102.0 | -2,732 | 18,789 | 17.7% | 2.8% |
| 2008 | 206,253 | 92,688 | 113,565 | 8.4% | 3.1% | 533,536 | 413,945 | 454,299 | 406,936 | 79,237 | 109.7 | -13,447 | 31,024 | 16.4% | 2.4% |
| 2009 | 232,901 | 103,431 | 129,470 | 12.9% | 7.2% | 590,308 | 460,415 | 498,970 | 444,101 | 91,338 | 108.3 | -12,678 | 35,126 | 17.9% | 2.8% |
| 2010 | 241,891 | 113,033 | 128,858 | 3.9% | -0.3% | 653,738 | 520,469 | 549,120 | 493,603 | 104,618 | 109.1 | -14,616 | 38,030 | 14.4% | 2.3% |
| 2011 | 276,185 | 125,260 | 150,925 | 14.2% | 10.4% | 760,855 | 593,981 | 640,174 | 572,675 | 120,681 | 107.6 | -13,356 | 40,627 | 14.3% | 2.3% |
| 2012 | 305,194 | 142,809 | 162,385 | 10.5% | 6.1% | 834,069 | 663,036 | 703,352 | 635,864 | 130,718 | 106.4 | -12,289 | 46,402 | 18.2% | 2.9% |
| 2013 | 341,277 | 159,058 | 182,219 | 11.8% | 7.7% | 927,429 | 726,451 | 791,825 | 714,968 | 135,604 | 105.2 | -11,465 | 43,024 | 16.9% | 2.5% |
| 2014 | 353,821 | 167,701 | 186,120 | 3.7% | -0.3% | 1,038,144 | 806,795 | 896,113 | 812,993 | 142,031 | 106.1 | -14,431 | 50,546 | 17.9% | 2.4% |
| 2015 | 388,545 | 181,918 | 206,628 | 9.8% | 6.9% | 1,164,846 | 906,063 | 1,014,786 | 920,402 | 150,060 | 105.5 | -14,606 | 47,648 | 14.1% | 1.8% |
| 2016 | 440,512 | 207,125 | 233,388 | 13.4% | 10.3% | 1,333,539 | 1,022,961 | 1,147,457 | 1,027,596 | 186,082 | 104.1 | -12,612 | 63,719 | 20.8% | 2.9% |

| Year | Penetration (premiums/GDP) | | | Density (premiums per capita, pesos) | | | Depth index[4] | Insurance Protection Gap | | | IPG as a multiple of actual market | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Total | Life | Non-Life | | Total | Life | Non-Life | Total | Life | Non-Life |
| 2006 | 1.6% | 0.7% | 0.9% | 1,501 | 677 | 824 | 45.1% | 717,004 | 447,590 | 269,414 | 4.4 | 6.1 | 3.0 |
| 2007 | 1.7% | 0.7% | 0.9% | 1,717 | 755 | 963 | 43.9% | 748,448 | 474,236 | 274,213 | 3.9 | 5.7 | 2.6 |
| 2008 | 1.7% | 0.8% | 0.9% | 1,830 | 823 | 1,008 | 44.9% | 789,067 | 495,283 | 293,784 | 3.8 | 5.3 | 2.6 |
| 2009 | 1.9% | 0.9% | 1.1% | 2,033 | 903 | 1,130 | 44.4% | 775,702 | 489,257 | 286,445 | 3.3 | 4.7 | 2.2 |
| 2010 | 1.8% | 0.9% | 1.0% | 2,079 | 972 | 1,108 | 46.7% | 848,283 | 528,779 | 319,504 | 3.5 | 4.7 | 2.5 |
| 2011 | 1.9% | 0.9% | 1.0% | 2,340 | 1,061 | 1,279 | 45.4% | 908,882 | 568,842 | 340,040 | 3.3 | 4.5 | 2.3 |
| 2012 | 2.0% | 0.9% | 1.0% | 2,550 | 1,193 | 1,357 | 46.8% | 977,411 | 609,613 | 367,798 | 3.2 | 4.3 | 2.3 |
| 2013 | 2.1% | 1.0% | 1.1% | 2,812 | 1,311 | 1,502 | 46.6% | 945,395 | 573,934 | 371,460 | 2.8 | 3.6 | 2.0 |
| 2014 | 2.1% | 1.0% | 1.1% | 2,877 | 1,364 | 1,513 | 47.4% | 1,033,381 | 632,560 | 400,821 | 2.9 | 3.8 | 2.2 |
| 2015 | 2.1% | 1.0% | 1.1% | 3,118 | 1,460 | 1,658 | 46.8% | 1,092,578 | 670,788 | 421,791 | 2.8 | 3.7 | 2.0 |
| 2016 | 2.3% | 1.1% | 1.2% | 3,489 | 1,641 | 1,849 | 47.0% | 1,110,397 | 670,430 | 439,967 | 2.5 | 3.2 | 1.9 |

Source: MAPFRE Economic Research (based on data from National Insurance and Bonding Commission)
[1] Estimate relative to net accrued premium; [2] Return on equity; [3] Return on assets; [4] Life insurance premiums / total premiums

## Table A.2. Guatemala: main insurance market figures and indicators, 2006-16 (millions of quetzals)

| Year | Premiums | | | Premium growth | | Assets | Investment | Liabilities | Technical provisions | Equity | Combined ratio[1] | Technical result | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Nominal | Real | | | | | | | | | | |
| 2006 | 2,543 | 437 | 2,106 | 3.9% | -2.5% | 3,386 | 2,280 | 2,499 | 1,849 | 887 | 100.7 | -11 | 143 | 17.5% | 4.6% |
| 2007 | 2,968 | 525 | 2,443 | 16.7% | 9.3% | 3,594 | 2,465 | 2,618 | 2,024 | 976 | 101.8 | -36 | 165 | 16.8% | 4.6% |
| 2008 | 3,249 | 602 | 2,647 | 9.5% | -1.7% | 3,879 | 2,703 | 2,804 | 2,346 | 1,074 | 100.3 | -8 | 180 | 17.4% | 4.8% |
| 2009 | 3,543 | 667 | 2,876 | 9.1% | 7.1% | 4,279 | 3,054 | 2,968 | 2,552 | 1,311 | 100.9 | -21 | 208 | 17.5% | 5.3% |
| 2010 | 3,805 | 745 | 3,060 | 7.4% | 3.4% | 4,665 | 3,276 | 3,254 | 3,005 | 1,410 | 98.1 | 48 | 230 | 18.0% | 5.4% |
| 2011 | 4,718 | 923 | 3,796 | 24.0% | 16.8% | 6,662 | 4,277 | 4,737 | 3,366 | 1,925 | 95.3 | 135 | 283 | 21.2% | 6.1% |
| 2012 | 4,646 | 952 | 3,694 | -1.5% | -5.1% | 6,671 | 4,591 | 4,543 | 3,340 | 2,128 | 94.5 | 170 | 310 | 21.2% | 6.8% |
| 2013 | 5,219 | 1,057 | 4,162 | 12.3% | 7.6% | 7,359 | 5,041 | 4,916 | 3,398 | 2,443 | 91.2 | 293 | 343 | 24.6% | 8.2% |
| 2014 | 5,639 | 1,187 | 4,452 | 8.1% | 4.5% | 7,889 | 5,463 | 5,121 | 3,648 | 2,768 | 91.0 | 318 | 363 | 23.2% | 8.1% |
| 2015 | 5,966 | 1,176 | 4,790 | 5.8% | 3.3% | 8,686 | 5,640 | 5,619 | 3,993 | 3,067 | 93.3 | 256 | 378 | 21.7% | 7.7% |
| 2016 | 6,313 | 1,271 | 5,042 | 5.8% | 1.3% | 9,132 | 5,951 | 5,817 | 4,964 | 3,314 | 93.3 | 284 | 389 | 19.7% | 7.2% |

| Year | Penetration (premiums/GDP) | | | Density (premiums per capita, quetzals) | | | Depth index[4] | Insurance Protection Gap | | | IPG as a multiple of actual market | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Total | Life | Non-Life | | Total | Life | Non-Life | Total | Life | Non-Life |
| 2006 | 1.1% | 0.2% | 0.9% | 195 | 33 | 161 | 17.2% | 16,664 | 10,935 | 5,729 | 6.6 | 25.0 | 2.7 |
| 2007 | 1.1% | 0.2% | 0.9% | 222 | 39 | 183 | 17.7% | 18,582 | 12,281 | 6,301 | 6.3 | 23.4 | 2.6 |
| 2008 | 1.1% | 0.2% | 0.9% | 237 | 44 | 193 | 18.5% | 20,778 | 13,591 | 7,186 | 6.4 | 22.6 | 2.7 |
| 2009 | 1.2% | 0.2% | 0.9% | 253 | 48 | 205 | 18.8% | 22,141 | 14,425 | 7,715 | 6.2 | 21.6 | 2.7 |
| 2010 | 1.1% | 0.2% | 0.9% | 265 | 52 | 214 | 19.6% | 23,535 | 15,351 | 8,184 | 6.2 | 20.6 | 2.7 |
| 2011 | 1.3% | 0.2% | 1.0% | 322 | 63 | 259 | 19.6% | 25,500 | 16,776 | 8,723 | 5.4 | 18.2 | 2.3 |
| 2012 | 1.2% | 0.2% | 0.9% | 310 | 64 | 247 | 20.5% | 27,751 | 18,053 | 9,698 | 6.0 | 19.0 | 2.6 |
| 2013 | 1.2% | 0.2% | 1.0% | 341 | 69 | 272 | 20.3% | 28,556 | 18,184 | 10,373 | 5.5 | 17.2 | 2.5 |
| 2014 | 1.2% | 0.3% | 1.0% | 361 | 76 | 285 | 21.1% | 30,856 | 19,866 | 10,990 | 5.5 | 16.7 | 2.5 |
| 2015 | 1.2% | 0.2% | 1.0% | 375 | 74 | 301 | 19.7% | 33,683 | 21,651 | 12,033 | 5.6 | 18.4 | 2.5 |
| 2016 | 1.2% | 0.2% | 1.0% | 389 | 78 | 311 | 20.1% | 35,624 | 22,458 | 13,166 | 5.6 | 17.7 | 2.6 |

Source: MAPFRE Economic Research (based on data from Banking Superintendence)
[1] Estimate relative to net accrued premium; [2] Return on equity; [3] Return on assets; [4] Life insurance premiums / total premiums

## Table A.3. Honduras: main insurance market figures and indicators, 2006-16
### (millions of lempiras)

| Year | Premiums Total | Life | Non-Life | Premium growth Nominal | Real | Assets | Investment | Liabilities | Technical provisions | Equity | Combined ratio[1] | Technical result | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 3,790 | 919 | 2,870 | 11.6% | 5.7% | 5,680 | 4,268 | 3,301 | 2,352 | 2,378 | 86.7 | 249 | 285 | 20.9% | 8.8% |
| 2007 | 4,674 | 1,143 | 3,531 | 23.3% | 15.3% | 6,707 | 4,881 | 4,041 | 2,911 | 2,666 | 91.0 | 204 | 304 | 17.9% | 7.1% |
| 2008 | 5,344 | 1,373 | 3,971 | 14.3% | 2.6% | 7,979 | 5,605 | 4,930 | 3,681 | 3,050 | 92.9 | 202 | 410 | 18.7% | 7.1% |
| 2009 | 5,353 | 1,441 | 3,912 | 0.2% | -5.0% | 8,782 | 5,905 | 5,568 | 3,970 | 3,214 | 89.7 | 353 | 480 | 22.1% | 8.1% |
| 2010 | 5,693 | 1,505 | 4,187 | 6.3% | 1.6% | 9,132 | 6,554 | 5,546 | 3,962 | 3,586 | 89.0 | 361 | 406 | 20.8% | 8.2% |
| 2011 | 6,237 | 1,799 | 4,438 | 9.6% | 2.6% | 9,591 | 7,061 | 5,784 | 4,293 | 3,807 | 88.2 | 434 | 387 | 19.5% | 7.7% |
| 2012 | 6,903 | 2,026 | 4,877 | 10.7% | 5.2% | 10,974 | 8,057 | 6,461 | 4,939 | 4,513 | 89.1 | 440 | 548 | 19.7% | 8.1% |
| 2013 | 7,499 | 2,315 | 5,184 | 8.6% | 3.3% | 11,622 | 8,371 | 7,220 | 5,107 | 4,402 | 94.0 | 255 | 713 | 17.1% | 6.5% |
| 2014 | 7,961 | 2,421 | 5,541 | 6.2% | 0.1% | 12,477 | 8,328 | 7,937 | 5,533 | 4,540 | 92.0 | 337 | 756 | 15.7% | 5.7% |
| 2015 | 8,726 | 2,792 | 5,934 | 9.6% | 6.2% | 13,401 | 8,877 | 8,622 | 5,765 | 4,779 | 85.3 | 665 | 639 | 19.0% | 6.8% |
| 2016 | 9,581 | 3,288 | 6,294 | 9.8% | 6.9% | 14,910 | 9,648 | 9,454 | 6,165 | 5,456 | 84.5 | 755 | 591 | 19.3% | 7.1% |

| Year | Penetration (premiums/GDP) Total | Life | Non-Life | Density (premiums per capita, lempiras) Total | Life | Non-Life | Depth index[4] | Insurance Protection Gap Total | Life | Non-Life | IPG as a multiple of actual market Total | Life | Non-Life |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 1.8% | 0.4% | 1.4% | 541 | 131 | 410 | 24.3% | 13,449 | 9,287 | 4,161 | 3.5 | 10.1 | 1.4 |
| 2007 | 2.0% | 0.5% | 1.5% | 655 | 160 | 495 | 24.5% | 14,554 | 10,283 | 4,271 | 3.1 | 9.0 | 1.2 |
| 2008 | 2.0% | 0.5% | 1.5% | 736 | 189 | 547 | 25.7% | 15,966 | 11,215 | 4,750 | 3.0 | 8.2 | 1.2 |
| 2009 | 1.9% | 0.5% | 1.4% | 725 | 195 | 530 | 26.9% | 17,634 | 12,067 | 5,567 | 3.3 | 8.4 | 1.4 |
| 2010 | 1.9% | 0.5% | 1.4% | 759 | 201 | 558 | 26.4% | 18,872 | 12,957 | 5,916 | 3.3 | 8.6 | 1.4 |
| 2011 | 1.9% | 0.5% | 1.3% | 818 | 236 | 582 | 28.8% | 21,051 | 14,183 | 6,867 | 3.4 | 7.9 | 1.5 |
| 2012 | 1.9% | 0.6% | 1.3% | 892 | 262 | 630 | 29.3% | 22,755 | 15,373 | 7,383 | 3.3 | 7.6 | 1.5 |
| 2013 | 2.0% | 0.6% | 1.4% | 955 | 295 | 660 | 30.9% | 22,559 | 14,809 | 7,750 | 3.0 | 6.4 | 1.5 |
| 2014 | 1.9% | 0.6% | 1.3% | 1,000 | 304 | 696 | 30.4% | 25,365 | 16,805 | 8,560 | 3.2 | 6.9 | 1.5 |
| 2015 | 1.9% | 0.6% | 1.3% | 1,081 | 346 | 735 | 32.0% | 28,414 | 18,590 | 9,824 | 3.3 | 6.7 | 1.7 |
| 2016 | 2.0% | 0.7% | 1.3% | 1,171 | 402 | 769 | 34.3% | 29,447 | 18,796 | 10,651 | 3.1 | 5.7 | 1.7 |

Source: MAPFRE Economic Research (based on data from National Commission of Banks and Insurance)
1 Estimate relative to net accrued premium; 2 Return on equity; 3 Return on assets; 4 Life insurance premiums / total premiums

Table A.4. El Salvador: main insurance market figures and indicators, 2006-16
(millions of dollars)

| Year | Premiums | | | Premium growth | | Assets | Investment | Liabilities | Technical provisions | Equity | Combined ratio[1] | Technical result | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Nominal | Real | | | | | | | | | | |
| 2006 | 371 | 113 | 258 | 12.2% | 7.8% | 381 | 269 | 227 | 150 | 154 | 89.5 | 19 | 21 | 18.7% | 7.6% |
| 2007 | 394 | 118 | 276 | 6.3% | 1.7% | 443 | 329 | 257 | 163 | 186 | 86.4 | 25 | 20 | 18.9% | 7.9% |
| 2008 | 439 | 145 | 294 | 11.4% | 3.8% | 520 | 390 | 282 | 183 | 238 | 82.5 | 38 | 21 | 18.3% | 8.4% |
| 2009 | 441 | 153 | 288 | 0.4% | -0.1% | 567 | 427 | 287 | 188 | 280 | 85.1 | 35 | 18 | 18.1% | 8.9% |
| 2010 | 453 | 159 | 295 | 2.8% | 1.6% | 625 | 475 | 298 | 200 | 327 | 85.9 | 36 | 12 | 14.2% | 7.4% |
| 2011 | 478 | 171 | 307 | 5.4% | 0.2% | 629 | 479 | 323 | 216 | 305 | 87.3 | 35 | 14 | 15.0% | 7.3% |
| 2012 | 503 | 187 | 315 | 5.2% | 3.5% | 663 | 497 | 340 | 228 | 323 | 90.0 | 30 | 19 | 14.2% | 6.9% |
| 2013 | 546 | 210 | 336 | 8.6% | 7.8% | 724 | 561 | 381 | 254 | 343 | 90.6 | 31 | 19 | 13.8% | 6.6% |
| 2014 | 572 | 225 | 347 | 4.7% | 3.5% | 775 | 600 | 410 | 282 | 365 | 92.8 | 25 | 20 | 12.9% | 6.1% |
| 2015 | 609 | 233 | 376 | 6.4% | 7.2% | 841 | 645 | 461 | 295 | 380 | 98.7 | 5 | 22 | 9.7% | 4.4% |
| 2016 | 621 | 216 | 405 | 2.0% | 1.4% | 817 | 607 | 448 | 299 | 369 | 98.8 | 5 | 25 | 8.1% | 3.7% |

| Year | Penetration (premiums/GDP) | | | Density (premiums per capita, USD) | | | Depth index[4] | Insurance Protection Gap | | | IPG as a multiple of actual market | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Total | Life | Non-Life | | Total | Life | Non-Life | Total | Life | Non-Life |
| 2006 | 2.0% | 0.6% | 1.4% | 61 | 19 | 42 | 30.5% | 1,179 | 805 | 375 | 3.2 | 7.1 | 1.5 |
| 2007 | 2.0% | 0.6% | 1.4% | 65 | 19 | 45 | 29.9% | 1,261 | 865 | 395 | 3.2 | 7.3 | 1.4 |
| 2008 | 2.0% | 0.7% | 1.4% | 72 | 24 | 48 | 33.0% | 1,301 | 883 | 418 | 3.0 | 6.1 | 1.4 |
| 2009 | 2.1% | 0.7% | 1.4% | 72 | 25 | 47 | 34.7% | 1,282 | 859 | 423 | 2.9 | 5.6 | 1.5 |
| 2010 | 2.1% | 0.7% | 1.4% | 73 | 26 | 48 | 35.0% | 1,304 | 876 | 428 | 2.9 | 5.5 | 1.5 |
| 2011 | 2.1% | 0.7% | 1.3% | 77 | 28 | 50 | 35.8% | 1,407 | 933 | 474 | 2.9 | 5.5 | 1.5 |
| 2012 | 2.1% | 0.8% | 1.3% | 81 | 30 | 51 | 37.3% | 1,452 | 959 | 493 | 2.9 | 5.1 | 1.6 |
| 2013 | 2.2% | 0.9% | 1.4% | 87 | 34 | 54 | 38.4% | 1,398 | 898 | 500 | 2.6 | 4.3 | 1.5 |
| 2014 | 2.3% | 0.9% | 1.4% | 91 | 36 | 55 | 39.4% | 1,442 | 937 | 505 | 2.5 | 4.2 | 1.5 |
| 2015 | 2.4% | 0.9% | 1.5% | 97 | 37 | 60 | 38.2% | 1,490 | 976 | 514 | 2.4 | 4.2 | 1.4 |
| 2016 | 2.3% | 0.8% | 1.5% | 98 | 34 | 64 | 34.9% | 1,501 | 984 | 517 | 2.4 | 4.5 | 1.3 |

Source: MAPFRE Economic Research (based on data from Superintendence of Financial System)
[1] Estimate relative to net accrued premium; [2] Return on equity; [3] Return on assets; [4] Life insurance premiums / total premiums

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Table A.5. Nicaragua: main insurance market figures and indicators, 2006-16
(millions of córdobas)

| Year | Premiums | | | Premium growth | | Assets | Investment | Liabilities | Technical provisions | Equity | Combined ratio[1] | Technical result | Financial result | ROE[2] | ROA[3] |
|------|-------|------|----------|---------|--------|--------|------------|-------------|----------------------|--------|-------------------|------------------|------------------|--------|--------|
|      | Total | Life | Non-Life | Nominal | Real   |        |            |             |                      |        |                   |                  |                  |        |        |
| 2006 | 1,534 | 214  | 1,320    | 17.9%   | 8.0%   | 1,950  | 1,252      | 1,550       | 1,134                | 400    | 97.6              | 20               | 58               | 23.8%  | 4.9%   |
| 2007 | 1,834 | 270  | 1,563    | 19.5%   | 7.6%   | 2,368  | 1,529      | 1,887       | 1,339                | 481    | 103.4             | -33              | 91               | 22.1%  | 4.5%   |
| 2008 | 2,090 | 340  | 1,750    | 14.0%   | -4.9%  | 2,860  | 1,894      | 2,254       | 1,639                | 606    | 94.4              | 69               | 127              | 25.0%  | 5.3%   |
| 2009 | 2,255 | 359  | 1,897    | 7.9%    | 4.1%   | 3,272  | 2,170      | 2,458       | 1,823                | 814    | 91.9              | 110              | 150              | 30.8%  | 7.7%   |
| 2010 | 2,478 | 367  | 2,110    | 9.9%    | 4.2%   | 3,667  | 2,530      | 2,646       | 1,949                | 1,021  | 94.5              | 82               | 180              | 26.6%  | 7.4%   |
| 2011 | 2,765 | 418  | 2,347    | 11.6%   | 3.3%   | 4,193  | 3,003      | 2,929       | 2,217                | 1,264  | 99.5              | 8                | 174              | 22.7%  | 6.8%   |
| 2012 | 3,255 | 514  | 2,741    | 17.7%   | 9.8%   | 4,944  | 3,486      | 3,490       | 2,598                | 1,453  | 94.4              | 103              | 166              | 17.8%  | 5.2%   |
| 2013 | 3,878 | 668  | 3,210    | 19.1%   | 11.2%  | 5,793  | 4,096      | 4,190       | 2,997                | 1,603  | 89.6              | 236              | 178              | 22.3%  | 6.2%   |
| 2014 | 4,615 | 823  | 3,792    | 19.0%   | 12.2%  | 6,795  | 4,788      | 4,820       | 3,450                | 1,975  | 87.2              | 350              | 213              | 22.8%  | 6.6%   |
| 2015 | 5,198 | 916  | 4,282    | 12.6%   | 8.3%   | 7,857  | 5,533      | 5,521       | 3,916                | 2,336  | 86.6              | 431              | 269              | 23.6%  | 7.0%   |
| 2016 | 5,848 | 1,111| 4,737    | 12.5%   | 9.1%   | 9,268  | 6,493      | 6,529       | 4,709                | 2,738  | 89.1              | 403              | 347              | 21.4%  | 6.3%   |

| Year | Penetration (premiums/GDP) | | | Density (premiums per capita, córdobas) | | | Depth index[4] | Insurance Protection Gap | | | IPG as a multiple of actual market | | |
|------|-------|------|----------|-------|------|----------|----------------|-------|----------|-------|------------------------------------|------|----------|
|      | Total | Life | Non-Life | Total | Life | Non-Life |                | Total | Life     | Non-Life | Total | Life | Non-Life |
| 2006 | 1.3%  | 0.2% | 1.1%     | 281   | 39   | 242      | 14.0%          | 8,430 | 5,685    | 2,745 | 5.5   | 26.6 | 2.1      |
| 2007 | 1.3%  | 0.2% | 1.1%     | 332   | 49   | 283      | 14.7%          | 9,494 | 6,461    | 3,033 | 5.2   | 23.9 | 1.9      |
| 2008 | 1.3%  | 0.2% | 1.1%     | 374   | 61   | 313      | 16.3%          | 11,267| 7,550    | 3,717 | 5.4   | 22.2 | 2.1      |
| 2009 | 1.3%  | 0.2% | 1.1%     | 398   | 63   | 335      | 15.9%          | 11,961| 7,995    | 3,966 | 5.3   | 22.3 | 2.1      |
| 2010 | 1.3%  | 0.2% | 1.1%     | 432   | 64   | 368      | 14.8%          | 12,845| 8,654    | 4,192 | 5.2   | 23.6 | 2.0      |
| 2011 | 1.3%  | 0.2% | 1.1%     | 476   | 72   | 404      | 15.1%          | 15,053| 10,018   | 5,035 | 5.4   | 24.0 | 2.1      |
| 2012 | 1.3%  | 0.2% | 1.1%     | 554   | 87   | 466      | 15.8%          | 16,919| 11,321   | 5,598 | 5.2   | 22.0 | 2.0      |
| 2013 | 1.4%  | 0.2% | 1.2%     | 652   | 112  | 540      | 17.2%          | 17,584| 11,559   | 6,026 | 4.5   | 17.3 | 1.9      |
| 2014 | 1.5%  | 0.2% | 1.2%     | 767   | 137  | 630      | 17.8%          | 19,985| 13,368   | 6,617 | 4.3   | 16.2 | 1.7      |
| 2015 | 1.5%  | 0.3% | 1.2%     | 854   | 151  | 704      | 17.6%          | 22,891| 15,256   | 7,636 | 4.4   | 16.7 | 1.8      |
| 2016 | 1.6%  | 0.3% | 1.3%     | 951   | 181  | 770      | 19.0%          | 23,819| 15,676   | 8,144 | 4.1   | 14.1 | 1.7      |

Source: MAPFRE Economic Research (based on data from Superintendence of Banks and Other Financial Institutions)
1 Estimate relative to net accrued premium; 2 Return on equity; 3 Return on assets; 4 Life insurance premiums / total premiums

Table A.6. Costa Rica: main insurance market figures and indicators, 2006-16
(millions of colóns)

| Year | Premiums Total | Premiums Life | Premiums Non-Life | Premium growth Nominal | Premium growth Real | Assets | Investment | Liabilities | Technical provisions | Equity | Combined ratio[1] | Technical result | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 207,100 | 9,025 | 198,075 | 17.4% | 5.4% | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 2007 | 253,674 | 8,396 | 245,278 | 22.5% | 12.0% | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 2008 | 336,365 | 12,817 | 323,548 | 32.6% | 16.9% | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 2009 | 353,823 | 32,879 | 320,944 | 5.2% | -2.5% | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 2010 | 377,750 | 33,235 | 344,515 | 6.8% | 1.0% | 1,155,893 | N/A | 689,849 | 545,786 | 466,044 | 101.8 | -4,378 | 61,717 | 9.2% | 3.7% |
| 2011 | 401,191 | 42,428 | 358,762 | 6.2% | 1.3% | 1,340,977 | 1,012,246 | 806,556 | 602,105 | 534,421 | 106.4 | -17,020 | 70,042 | 10.2% | 4.1% |
| 2012 | 466,156 | 55,542 | 410,614 | 16.2% | 11.2% | 1,484,494 | 1,121,715 | 897,830 | 670,748 | 586,664 | 104.4 | -14,203 | 83,428 | 8.4% | 3.3% |
| 2013 | 517,980 | 69,625 | 448,355 | 11.1% | 5.6% | 1,634,857 | 1,259,540 | 956,010 | 709,259 | 678,847 | 112.7 | -45,863 | 80,619 | 6.0% | 2.5% |
| 2014 | 622,592 | 76,621 | 545,972 | 20.2% | 15.0% | 1,851,783 | 1,350,464 | 1,114,450 | 818,676 | 737,333 | 110.8 | -44,132 | 100,903 | 6.3% | 2.5% |
| 2015 | 564,060 | 72,182 | 491,878 | -9.4% | -10.1% | 1,946,158 | 1,451,305 | 1,144,461 | 801,335 | 801,698 | 111.1 | -50,555 | 97,502 | 6.8% | 2.8% |
| 2016 | 654,715 | 101,881 | 552,835 | 16.1% | 16.1% | 2,128,211 | 1,542,933 | 1,273,229 | 827,324 | 854,982 | 105.4 | -27,856 | 90,305 | 6.4% | 2.6% |

| Year | Penetration (premiums/GDP) Total | Penetration Life | Penetration Non-Life | Density (premiums per capita, cólons) Total | Density Life | Density Non-Life | Depth index[4] | Insurance Protection Gap Total | IPG Life | IPG Non-Life | IPG as a multiple of actual market Total | IPG multiple Life | IPG multiple Non-Life |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 1.8% | 0.1% | 1.7% | 47,965 | 2,090 | 45,875 | 4.4% | 758,552 | 562,724 | 195,829 | 3.7 | 62.4 | 1.0 |
| 2007 | 1.8% | 0.1% | 1.8% | 57,946 | 1,918 | 56,028 | 3.3% | 883,763 | 667,527 | 216,236 | 3.5 | 79.5 | 0.9 |
| 2008 | 2.1% | 0.1% | 2.0% | 75,796 | 2,888 | 72,908 | 3.8% | 971,818 | 759,973 | 211,845 | 2.9 | 59.3 | 0.7 |
| 2009 | 2.0% | 0.2% | 1.8% | 78,677 | 7,311 | 71,366 | 9.3% | 1,107,393 | 825,779 | 281,614 | 3.1 | 25.1 | 0.9 |
| 2010 | 1.9% | 0.2% | 1.8% | 82,926 | 7,296 | 75,630 | 8.8% | 1,230,741 | 913,723 | 317,019 | 3.3 | 27.5 | 0.9 |
| 2011 | 1.9% | 0.2% | 1.7% | 86,994 | 9,200 | 77,794 | 10.6% | 1,339,410 | 977,053 | 362,356 | 3.3 | 23.0 | 1.0 |
| 2012 | 2.0% | 0.2% | 1.8% | 99,896 | 11,902 | 87,993 | 11.9% | 1,452,091 | 1,069,770 | 382,321 | 3.1 | 19.3 | 0.9 |
| 2013 | 2.1% | 0.3% | 1.8% | 109,764 | 14,754 | 95,010 | 13.4% | 1,466,622 | 1,060,965 | 405,657 | 2.8 | 15.2 | 0.9 |
| 2014 | 2.3% | 0.3% | 2.0% | 130,509 | 16,061 | 114,448 | 12.3% | 1,569,175 | 1,187,784 | 381,391 | 2.5 | 15.5 | 0.7 |
| 2015 | 1.9% | 0.2% | 1.7% | 117,006 | 14,973 | 102,033 | 12.8% | 1,816,169 | 1,298,152 | 518,016 | 3.2 | 18.0 | 1.1 |
| 2016 | 2.1% | 0.3% | 1.8% | 134,443 | 20,921 | 113,522 | 15.6% | 1,830,802 | 1,304,505 | 526,297 | 2.8 | 12.8 | 1.0 |

Source: MAPFRE Economic Research (based on data from General Superintendence of Insurance)
[1] Estimate relative to net accrued premium; [2] Return on equity; [3] Return on assets; [4] Life insurance premiums / total premiums

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Table A.7. Panama: main insurance market figures and indicators, 2006-16
(millions of balboas)

| Year | Premiums | | | Premium growth | | Assets | Investment | Technical provisions | Liabilities | Equity | Combined ratio[1] | Technical result | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Nominal | Real | | | | | | | | | | |
| 2006 | 496 | 162 | 334 | 15.4% | 12.7% | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 2007 | 607 | 182 | 424 | 22.3% | 17.4% | 1,013 | 754 | 476 | 663 | 350 | 96.7 | 12 | 52 | 15.8% | 5.4% |
| 2008 | 774 | 222 | 552 | 27.5% | 17.2% | 1,145 | 819 | 528 | 760 | 386 | 96.6 | 15 | 48 | 10.9% | 3.7% |
| 2009 | 847 | 239 | 608 | 9.5% | 6.9% | 1,339 | 960 | 600 | 893 | 444 | 95.4 | 22 | 64 | 15.0% | 5.0% |
| 2010 | 919 | 233 | 686 | 8.5% | 4.8% | 1,390 | 1,099 | 655 | 921 | 468 | 95.5 | 24 | 51 | 11.8% | 4.0% |
| 2011 | 1,053 | 234 | 819 | 14.6% | 8.2% | 1,588 | 1,157 | 673 | 984 | 604 | 94.9 | 31 | 56 | 10.4% | 4.0% |
| 2012 | 1,139 | 255 | 884 | 8.2% | 2.3% | 1,899 | 1,374 | 689 | 1,143 | 756 | 96.5 | 21 | 79 | 12.1% | 4.8% |
| 2013 | 1,244 | 280 | 965 | 9.3% | 5.1% | 2,389 | 1,549 | 982 | 1,483 | 906 | 98.5 | 11 | 68 | 8.0% | 3.0% |
| 2014 | 1,343 | 312 | 1,032 | 7.9% | 5.2% | 2,602 | 1,679 | 1,080 | 1,513 | 1,089 | 97.6 | 18 | 75 | 7.5% | 3.1% |
| 2015 | 1,389 | 323 | 1,066 | 3.4% | 3.3% | 2,729 | 1,747 | 1,129 | 1,627 | 1,102 | 94.6 | 44 | 64 | 7.9% | 3.2% |
| 2016 | 1,396 | 346 | 1,050 | 0.5% | -0.2% | N/A | N/A | N/A | N/A | N/A | 92.5 | 66 | N/A | N/A | N/A |

| Year | Penetration (premiums/GDP) | | | Density (premiums per capita, balboas) | | | Depth index[4] | Insurance Protection Gap | | | IPG as a multiple of actual market | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Total | Life | Non-Life | | Total | Life | Non-Life | Total | Life | Non-Life |
| 2006 | 2.7% | 0.9% | 1.8% | 147 | 48 | 99 | 32.7% | 1,020 | 735 | 284 | 2.1 | 4.5 | 0.9 |
| 2007 | 2.9% | 0.9% | 2.0% | 176 | 53 | 123 | 30.1% | 1,119 | 843 | 276 | 1.8 | 4.6 | 0.6 |
| 2008 | 3.2% | 0.9% | 2.2% | 221 | 63 | 158 | 28.7% | 1,218 | 954 | 263 | 1.6 | 4.3 | 0.5 |
| 2009 | 3.2% | 0.9% | 2.3% | 238 | 67 | 171 | 28.2% | 1,371 | 1,064 | 306 | 1.6 | 4.5 | 0.5 |
| 2010 | 3.2% | 0.8% | 2.4% | 254 | 64 | 190 | 25.3% | 1,455 | 1,165 | 290 | 1.6 | 5.0 | 0.4 |
| 2011 | 3.1% | 0.7% | 2.4% | 286 | 64 | 222 | 22.2% | 1,747 | 1,406 | 341 | 1.7 | 6.0 | 0.4 |
| 2012 | 2.8% | 0.6% | 2.2% | 304 | 68 | 236 | 22.4% | 2,141 | 1,669 | 472 | 1.9 | 6.5 | 0.5 |
| 2013 | 2.8% | 0.6% | 2.2% | 327 | 74 | 254 | 22.5% | 2,336 | 1,760 | 576 | 1.9 | 6.3 | 0.6 |
| 2014 | 2.7% | 0.6% | 2.1% | 347 | 81 | 267 | 23.2% | 2,609 | 1,968 | 640 | 1.9 | 6.3 | 0.6 |
| 2015 | 2.7% | 0.6% | 2.0% | 353 | 82 | 271 | 23.3% | 2,844 | 2,114 | 730 | 2.0 | 6.5 | 0.7 |
| 2016 | 2.5% | 0.6% | 1.9% | 350 | 87 | 263 | 24.8% | 2,983 | 2,132 | 851 | 2.1 | 6.2 | 0.8 |

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance and Reinsurance)
1 Estimate relative to net accrued premium; 2 Return on equity; 3 Return on assets; 4 Life insurance premiums / total premiums

## Table A.8. Dominican Republic: main insurance market figures and indicators, 2006-16
(millions of pesos)

| Year | Premiums | | | Premium growth | | Assets | Investment | Liabilities | Technical provisions | Equity | Combined ratio[1] | Technical result | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Nominal | Real | | | | | | | | | | |
| 2006 | 17,242 | 1,694 | 15,548 | 19.6% | 11.2% | 17,238 | 7,652 | 12,054 | 6,236 | 5,184 | 95.3 | 406,076 | 459,873 | 21.5% | 6.5% |
| 2007 | 19,587 | 2,081 | 17,506 | 13.6% | 7.0% | 20,399 | 9,320 | 14,544 | 7,767 | 5,800 | 95.0 | 517,160 | 466,056 | 21.2% | 6.0% |
| 2008 | 21,770 | 2,467 | 19,303 | 11.1% | 0.5% | 22,348 | 10,349 | 15,206 | 8,689 | 7,142 | 96.1 | 455,099 | 634,697 | 19.1% | 6.1% |
| 2009 | 23,194 | 3,378 | 19,816 | 6.5% | 5.0% | 25,614 | 12,603 | 17,194 | 9,718 | 8,422 | 96.3 | 453,843 | 873,735 | 18.3% | 6.0% |
| 2010 | 24,797 | 3,506 | 21,291 | 6.9% | 0.5% | 28,273 | 14,318 | 19,094 | 10,973 | 9,179 | 97.3 | 353,230 | 893,892 | 16.5% | 5.4% |
| 2011 | 26,828 | 3,957 | 22,871 | 8.2% | -0.2% | 31,425 | 16,808 | 21,573 | 12,091 | 9,852 | 98.7 | 177,655 | 1,180,658 | 18.0% | 5.7% |
| 2012 | 29,201 | 4,464 | 24,737 | 8.8% | 5.0% | 34,550 | 18,243 | 24,130 | 13,570 | 10,421 | 100.9 | -136,509 | 1,441,191 | 16.6% | 5.0% |
| 2013 | 30,893 | 5,002 | 25,891 | 5.8% | 0.9% | 37,514 | 20,800 | 26,261 | 14,639 | 11,253 | 102.0 | -295,739 | 1,403,593 | 15.6% | 4.7% |
| 2014 | 33,207 | 5,326 | 27,881 | 7.5% | 4.4% | 42,397 | 21,532 | 29,980 | 15,533 | 12,417 | 99.7 | 54,272 | 1,625,913 | 16.4% | 4.8% |
| 2015 | 35,628 | 6,314 | 29,315 | 7.3% | 6.4% | 46,790 | 23,991 | 33,261 | 16,652 | 13,529 | 98.1 | 358,319 | 1,846,167 | 19.7% | 5.7% |
| 2016 | 40,589 | 7,453 | 33,136 | 13.9% | 12.1% | 52,191 | 26,620 | 37,257 | 19,747 | 14,935 | 99.6 | 92,195 | 2,074,308 | 18.1% | 5.2% |

| Year | Penetration (premiums/GDP) | | | Density (premiums per capita, pesos) | | | Depth index[4] | Insurance Protection Gap | | | IPG as a multiple of actual market | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Total | Life | Non-Life | | Total | Life | Non-Life | Total | Life | Non-Life |
| 2006 | 1.4% | 0.1% | 1.2% | 1,840 | 181 | 1,659 | 9.8% | 89,108 | 61,274 | 27,834 | 5.2 | 36.2 | 1.8 |
| 2007 | 1.3% | 0.1% | 1.2% | 2,061 | 219 | 1,842 | 10.6% | 100,478 | 69,268 | 31,210 | 5.1 | 33.3 | 1.8 |
| 2008 | 1.3% | 0.1% | 1.2% | 2,259 | 256 | 2,003 | 11.3% | 113,164 | 77,243 | 35,921 | 5.2 | 31.3 | 1.9 |
| 2009 | 1.3% | 0.2% | 1.1% | 2,374 | 346 | 2,028 | 14.6% | 121,588 | 81,701 | 39,888 | 5.2 | 24.2 | 2.0 |
| 2010 | 1.3% | 0.2% | 1.1% | 2,505 | 354 | 2,151 | 14.1% | 137,896 | 92,275 | 45,621 | 5.6 | 26.3 | 2.1 |
| 2011 | 1.2% | 0.2% | 1.0% | 2,675 | 395 | 2,281 | 14.7% | 152,988 | 101,363 | 51,625 | 5.7 | 25.6 | 2.3 |
| 2012 | 1.2% | 0.2% | 1.0% | 2,875 | 440 | 2,436 | 15.3% | 166,493 | 110,337 | 56,156 | 5.7 | 24.7 | 2.3 |
| 2013 | 1.2% | 0.2% | 1.0% | 3,004 | 486 | 2,518 | 16.2% | 175,916 | 112,813 | 63,103 | 5.7 | 22.6 | 2.4 |
| 2014 | 1.2% | 0.2% | 1.0% | 3,191 | 512 | 2,679 | 16.0% | 195,157 | 126,415 | 68,742 | 5.9 | 23.7 | 2.5 |
| 2015 | 1.2% | 0.2% | 1.0% | 3,383 | 600 | 2,784 | 17.7% | 213,484 | 137,104 | 76,380 | 6.0 | 21.7 | 2.6 |
| 2016 | 1.2% | 0.2% | 1.0% | 3,810 | 700 | 3,111 | 18.4% | 223,349 | 141,891 | 81,457 | 5.5 | 19.0 | 2.5 |

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance and Reinsurance)
[1] Estimate relative to net accrued premium; [2] Return on equity; [3] Return on assets; [4] Life insurance premiums / total premiums

## Table A.9. Puerto Rico: main insurance market figures and indicators, 2006-16
(millions of dollars)

| Year | Premiums Total | Life | Non-Life | Premium growth Nominal | Real | Assets | Investment | Liabilities | Technical provisions | Equity | Combined ratio[1] | Technical result | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 8,322 | 658 | 7,664 | 19.5% | 13.7% | 6,100 | N/A | 4,226 | N/A | 1,873 | N/A | N/A | N/A | -31.3% | -9.6% |
| 2007 | 9,254 | 750 | 8,503 | 11.2% | 6.7% | 6,581 | N/A | 4,467 | N/A | 2,114 | N/A | N/A | N/A | 15.1% | 4.9% |
| 2008 | 9,297 | 716 | 8,582 | 0.5% | -4.5% | 6,460 | N/A | 4,357 | N/A | 2,103 | N/A | N/A | N/A | 14.0% | 4.6% |
| 2009 | 9,805 | 706 | 9,098 | 5.5% | 5.2% | 6,912 | N/A | 4,533 | N/A | 2,378 | N/A | N/A | N/A | 16.5% | 5.7% |
| 2010 | 10,428 | 801 | 9,626 | 6.4% | 3.8% | 7,135 | 5,752 | 4,732 | 3,275 | 2,403 | N/A | N/A | N/A | 16.3% | 5.5% |
| 2011 | 11,059 | 898 | 10,161 | 6.1% | 3.1% | 7,143 | 5,824 | 4,691 | 3,238 | 2,452 | N/A | N/A | N/A | 15.0% | 5.1% |
| 2012 | 10,577 | 980 | 9,597 | -4.4% | -5.6% | 7,477 | 6,136 | 4,835 | 3,321 | 2,643 | N/A | N/A | N/A | 12.8% | 4.5% |
| 2013 | 10,518 | 1,053 | 9,465 | -0.6% | -1.6% | 7,463 | 6,091 | 4,906 | 3,278 | 2,557 | N/A | N/A | N/A | 12.0% | 4.1% |
| 2014 | 9,967 | 1,237 | 8,730 | -5.2% | -5.8% | 7,437 | 5,841 | 4,994 | 3,127 | 2,443 | N/A | N/A | N/A | 4.8% | 1.6% |
| 2015 | 12,113 | 1,252 | 10,861 | 21.5% | 22.5% | 8,106 | 6,122 | 5,549 | 3,452 | 2,557 | N/A | N/A | N/A | 4.6% | 1.5% |
| 2016 | 12,869 | 1,265 | 11,605 | 6.2% | 6.0% | 8,241 | 6,294 | 5,749 | 3,400 | 2,492 | N/A | N/A | N/A | 6.8% | 2.1% |

| Year | Penetration (premiums/GDP) Total | Life | Non-Life | Density (premiums per capita, USD) Total | Life | Non-Life | Depth index[4] | Insurance Protection Gap Total | Life | Non-Life | IPG as a multiple of actual market Total | Life | Non-Life |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 9.5% | 0.8% | 8.8% | 2,219 | 176 | 2,044 | 7.9% | 3,660 | 3,660 | - | 0.4 | 5.6 | - |
| 2007 | 10.3% | 0.8% | 9.5% | 2,475 | 201 | 2,275 | 8.1% | 3,629 | 3,629 | - | 0.4 | 4.8 | - |
| 2008 | 9.9% | 0.8% | 9.2% | 2,494 | 192 | 2,302 | 7.7% | 3,776 | 3,776 | - | 0.4 | 5.3 | - |
| 2009 | 10.2% | 0.7% | 9.4% | 2,637 | 190 | 2,447 | 7.2% | 4,018 | 4,018 | - | 0.4 | 5.7 | - |
| 2010 | 10.6% | 0.8% | 9.8% | 2,811 | 216 | 2,595 | 7.7% | 3,952 | 3,952 | - | 0.4 | 4.9 | - |
| 2011 | 11.0% | 0.9% | 10.1% | 2,987 | 243 | 2,745 | 8.1% | 3,889 | 3,889 | - | 0.4 | 4.3 | - |
| 2012 | 10.4% | 1.0% | 9.4% | 2,862 | 265 | 2,597 | 9.3% | 3,910 | 3,910 | - | 0.4 | 4.0 | - |
| 2013 | 10.3% | 1.0% | 9.2% | 2,850 | 285 | 2,565 | 10.0% | 3,606 | 3,606 | - | 0.3 | 3.4 | - |
| 2014 | 9.8% | 1.2% | 8.6% | 2,704 | 336 | 2,368 | 12.4% | 3,497 | 3,497 | - | 0.4 | 2.8 | - |
| 2015 | 11.8% | 1.2% | 10.6% | 3,289 | 340 | 2,949 | 10.3% | 3,559 | 3,559 | - | 0.3 | 2.8 | - |
| 2016 | 12.7% | 1.2% | 11.5% | 3,496 | 344 | 3,153 | 9.8% | 3,289 | 3,289 | - | 0.3 | 2.6 | - |

Source: MAPFRE Economic Research (based on data from Office of the Commissioner of Insurance of Puerto Rico)
[1] Estimate relative to net accrued premium; [2] Return on equity; [3] Return on assets; [4] Life insurance premiums / total premiums

## Table A.10. Colombia: main insurance market figures and indicators, 2006-16
(millions of pesos)

| Year | Premiums Total | Premiums Life | Premiums Non-Life | Premium growth Nominal | Premium growth Real | Assets | Investment | Liabilities | Technical provisions | Equity | Technical result[1] | Combined ratio[1] | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 7,555,040 | 2,166,147 | 5,388,893 | 17.1% | 12.3% | 14,744,993 | 10,315,669 | 10,582,268 | 8,549,650 | 4,162,724 | -180,935 | 103.3 | 739,410 | 13.1% | 3.7% |
| 2007 | 8,526,256 | 2,313,598 | 6,212,657 | 12.9% | 6.9% | 16,605,512 | 11,625,445 | 12,075,509 | 9,819,597 | 4,530,003 | -264,194 | 104.1 | 692,191 | 14.7% | 4.0% |
| 2008 | 10,470,809 | 3,515,479 | 6,955,330 | 22.8% | 14.8% | 23,378,291 | 17,510,697 | 18,089,952 | 15,206,359 | 5,288,338 | -636,820 | 109.0 | 1,415,345 | 13.3% | 3.0% |
| 2009 | 11,436,694 | 3,535,050 | 7,901,643 | 9.2% | 4.8% | 27,176,830 | 20,876,177 | 20,506,159 | 17,479,795 | 6,670,671 | -1,080,246 | 113.5 | 2,442,565 | 18.1% | 4.5% |
| 2010 | 11,849,969 | 3,344,106 | 8,505,863 | 3.6% | 1.3% | 30,723,343 | 23,604,933 | 22,887,250 | 19,540,989 | 7,836,093 | -889,033 | 110.4 | 2,131,454 | 15.4% | 3.9% |
| 2011 | 13,581,554 | 3,819,524 | 9,762,029 | 14.6% | 10.8% | 34,160,398 | 25,735,842 | 26,131,154 | 22,356,789 | 8,029,244 | -890,427 | 109.2 | 1,495,277 | 7.7% | 1.8% |
| 2012 | 15,964,766 | 4,764,043 | 11,200,722 | 17.5% | 13.9% | 38,485,408 | 28,997,894 | 29,305,428 | 25,324,006 | 9,179,981 | -1,216,912 | 110.6 | 2,405,145 | 12.1% | 2.9% |
| 2013 | 18,833,416 | 6,690,847 | 12,142,569 | 18.0% | 15.6% | 42,857,016 | 32,926,391 | 33,746,620 | 29,208,392 | 9,110,396 | -1,129,101 | 108.6 | 1,822,198 | 6.4% | 1.4% |
| 2014 | 19,036,166 | 5,656,006 | 13,380,160 | 1.1% | -1.8% | 47,590,990 | 36,689,492 | 37,599,677 | 32,297,179 | 9,991,312 | -1,523,216 | 110.4 | 2,747,916 | 10.9% | 2.3% |
| 2015 | 21,508,936 | 6,313,957 | 15,194,979 | 13.0% | 7.6% | 51,585,889 | 38,230,909 | 41,720,926 | 35,213,941 | 9,864,962 | -1,718,318 | 110.8 | 2,928,678 | 10.8% | 2.1% |
| 2016 | 23,849,424 | 7,461,856 | 16,387,568 | 10.9% | 3.1% | 58,252,927 | 43,438,209 | 47,104,482 | 40,622,613 | 11,148,445 | -1,980,927 | 111.8 | 2,126,952 | 14.9% | 2.9% |

| Year | Penetration (premiums/GDP) Total | Life | Non-Life | Depth index[4] | Density (premiums per capita, pesos) Total | Life | Non-Life | Insurance Protection Gap Total | Life | Non-Life | IPG as a multiple of actual market Total | Life | Non-Life |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 2.0% | 0.6% | 1.4% | 28.7% | 172,357 | 49,417 | 122,940 | 24,525,570 | 16,828,311 | 7,697,258 | 3.2 | 7.8 | 1.4 |
| 2007 | 2.0% | 0.5% | 1.4% | 27.1% | 192,152 | 52,141 | 140,012 | 26,961,920 | 18,775,291 | 8,186,630 | 3.2 | 8.1 | 1.3 |
| 2008 | 2.2% | 0.7% | 1.4% | 33.6% | 233,200 | 78,295 | 154,905 | 28,514,718 | 19,514,652 | 9,000,068 | 2.7 | 5.6 | 1.3 |
| 2009 | 2.3% | 0.7% | 1.6% | 30.9% | 251,819 | 77,837 | 173,982 | 30,649,754 | 21,196,311 | 9,453,443 | 2.7 | 6.0 | 1.2 |
| 2010 | 2.2% | 0.6% | 1.6% | 28.2% | 258,067 | 72,828 | 185,240 | 32,876,686 | 22,987,566 | 9,889,120 | 2.8 | 6.9 | 1.2 |
| 2011 | 2.2% | 0.6% | 1.6% | 28.1% | 292,667 | 82,306 | 210,360 | 36,907,478 | 25,752,253 | 11,155,220 | 2.7 | 6.7 | 1.1 |
| 2012 | 2.4% | 0.7% | 1.7% | 29.8% | 340,533 | 101,618 | 238,914 | 38,553,848 | 27,218,513 | 11,335,332 | 2.4 | 5.7 | 1.0 |
| 2013 | 2.7% | 0.9% | 1.7% | 35.5% | 397,798 | 141,323 | 256,474 | 37,884,210 | 25,620,097 | 12,264,113 | 2.0 | 3.8 | 1.0 |
| 2014 | 2.5% | 0.7% | 1.8% | 29.7% | 398,302 | 118,343 | 279,959 | 41,813,522 | 29,447,465 | 12,366,058 | 2.2 | 5.2 | 0.9 |
| 2015 | 2.7% | 0.8% | 1.9% | 29.4% | 445,979 | 130,917 | 315,062 | 43,389,701 | 31,049,177 | 12,340,524 | 2.0 | 4.9 | 0.8 |
| 2016 | 2.8% | 0.9% | 1.9% | 31.3% | 490,220 | 153,377 | 336,843 | 44,682,794 | 31,315,881 | 13,366,915 | 1.9 | 4.2 | 0.8 |

Source: MAPFRE Economic Research (based on data from Financial Superintendence of Colombia)
[1] Estimate relative to net accrued premium; [2] Return on equity; [3] Return on assets; [4] Life insurance premiums / total premiums

## Table A.11. Venezuela: main insurance market figures and indicators, 2006–16
### (millions of bolivars)

| Year | Premiums Total | Premiums Life | Premiums Non-Life | Premium growth Nominal | Premium growth Real | Assets | Investment | Liabilities | Technical provisions | Equity | Combined ratio[1] | Technical result | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 10,499 | 246 | 10,253 | 49.9% | 31.9% | 8,901 | 7,395 | 5,848 | 4,060 | 3,053 | 91.2 | 668 | 492 | 18.9% | 6.5% |
| 2007 | 15,399 | 383 | 15,016 | 46.7% | 23.6% | 12,924 | 9,953 | 8,653 | 6,040 | 4,271 | 92.9 | 787 | 475 | 16.9% | 5.6% |
| 2008 | 22,334 | 555 | 21,779 | 45.0% | 11.3% | 17,865 | 14,563 | 11,431 | 8,823 | 6,434 | 98.6 | 220 | 1,085 | 16.0% | 5.8% |
| 2009 | 27,550 | 685 | 26,865 | 23.4% | -2.9% | 21,920 | 17,361 | 13,859 | 10,633 | 8,061 | 100.1 | -21 | 1,207 | 11.0% | 4.0% |
| 2010 | 36,924 | 878 | 36,045 | 34.0% | 4.6% | 33,121 | 25,844 | 21,015 | 14,352 | 12,107 | 98.0 | 559 | 1,308 | 19.8% | 7.2% |
| 2011 | 46,471 | 913 | 45,558 | 25.9% | -0.2% | 42,562 | 33,832 | 27,838 | 18,555 | 14,724 | 97.1 | 1,016 | 1,942 | 16.4% | 5.7% |
| 2012 | 59,692 | 1,132 | 58,560 | 28.4% | 6.1% | 51,984 | 41,106 | 33,802 | 23,074 | 18,182 | 97.5 | 1,112 | 3,085 | 20.4% | 7.1% |
| 2013 | 85,624 | 1,568 | 84,056 | 43.4% | 2.0% | 80,103 | 64,892 | 48,035 | 33,107 | 32,068 | 99.4 | 362 | 3,753 | 15.7% | 6.3% |
| 2014 | 142,413 | 2,279 | 140,133 | 66.3% | 2.6% | 157,474 | 131,215 | 81,824 | 57,172 | 75,649 | 101.1 | -992 | 5,517 | 9.0% | 4.3% |
| 2015 | 329,970 | 4,055 | 325,914 | 131.7% | 4.5% | 583,874 | 478,371 | 211,901 | 132,590 | 371,973 | 105.3 | -10,312 | 21,005 | 2.5% | 1.6% |
| 2016 | 872,901 | 10,081 | 862,820 | 164.5% | -25.5% | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

| Year | Penetration (premiums/GDP) Total | Life | Non-Life | Density (premiums per capita, bolivars) Total | Life | Non-Life | Depth index[4] | Insurance Protection Gap Total | Life | Non-Life | IPG as a multiple of actual market Total | Life | Non-Life |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 2.7% | 0.1% | 2.6% | 391 | 9 | 382 | 2.3% | 22,420 | 19,244 | 3,175 | 2.1 | 78.2 | 0.3 |
| 2007 | 3.1% | 0.1% | 3.0% | 564 | 14 | 550 | 2.5% | 25,319 | 23,813 | 1,505 | 1.6 | 62.2 | 0.1 |
| 2008 | 3.3% | 0.1% | 3.2% | 806 | 20 | 786 | 2.5% | 32,690 | 31,950 | 741 | 1.5 | 57.6 | 0.0 |
| 2009 | 3.9% | 0.1% | 3.8% | 979 | 24 | 955 | 2.5% | 33,976 | 33,976 | - | 1.2 | 49.6 | - |
| 2010 | 3.6% | 0.1% | 3.5% | 1,293 | 31 | 1,262 | 2.4% | 48,257 | 48,257 | - | 1.3 | 55.0 | - |
| 2011 | 3.4% | 0.1% | 3.4% | 1,604 | 32 | 1,573 | 2.0% | 64,093 | 63,845 | 248 | 1.4 | 69.9 | 0.0 |
| 2012 | 3.6% | 0.1% | 3.6% | 2,032 | 39 | 1,994 | 1.9% | 77,614 | 77,614 | - | 1.3 | 68.6 | - |
| 2013 | 3.8% | 0.1% | 3.7% | 2,876 | 53 | 2,823 | 1.8% | 100,565 | 100,565 | - | 1.2 | 64.1 | - |
| 2014 | 4.7% | 0.1% | 4.6% | 4,721 | 76 | 4,645 | 1.6% | 138,273 | 138,273 | - | 1.0 | 60.7 | - |
| 2015 | 5.5% | 0.1% | 5.4% | 10,800 | 133 | 10,667 | 1.2% | 277,593 | 277,593 | - | 0.8 | 68.4 | - |
| 2016 | 3.1% | 0.0% | 3.1% | 28,217 | 326 | 27,891 | 1.2% | 1,367,681 | 1,257,713 | 109,969 | 1.6 | 124.8 | 0.1 |

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance Activity)
[1] Estimate relative to net accrued premium; [2] Return on equity; [3] Return on assets; [4] Life insurance premiums / total premiums

## Table A.12. Brazil: main insurance market figures and indicators, 2006-16 (millions of reals)

| Year | Premiums Total | Premiums Life | Premiums Non-Life | Premium growth Nominal | Premium growth Real | Assets | Investment | Liabilities | Technical provisions | Equity | Combined ratio[1] | Technical result | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 49,588 | 23,235 | 26,352 | 16.5% | 11.8% | 165,795 | 144,808 | 131,471 | 116,333 | 34,324 | 98.1 | 534 | 5,822 | 25.2% | 5.2% |
| 2007 | 58,443 | 29,028 | 29,415 | 17.9% | 13.7% | 204,980 | 181,225 | 163,228 | 143,815 | 41,752 | 97.8 | 679 | 5,833 | 21.9% | 4.5% |
| 2008 | 67,816 | 33,410 | 34,407 | 16.0% | 9.8% | 230,574 | 201,481 | 189,204 | 170,883 | 41,370 | 96.7 | 1,173 | 5,080 | 21.4% | 3.8% |
| 2009 | 76,611 | 41,368 | 35,243 | 13.0% | 7.7% | 291,557 | 249,732 | 236,625 | 216,903 | 54,932 | 94.6 | 2,171 | 5,854 | 17.7% | 3.3% |
| 2010 | 90,089 | 49,616 | 40,473 | 17.6% | 12.0% | 345,903 | 300,020 | 283,074 | 262,177 | 62,829 | 94.7 | 2,413 | 6,366 | 18.1% | 3.3% |
| 2011 | 105,001 | 58,511 | 46,490 | 16.6% | 9.3% | 409,926 | 354,677 | 344,088 | 317,384 | 65,838 | 97.3 | 1,465 | 13,278 | 19.1% | 3.1% |
| 2012 | 129,401 | 77,147 | 52,255 | 23.2% | 16.9% | 499,599 | 433,224 | 424,253 | 391,208 | 75,346 | 96.3 | 2,210 | 14,177 | 18.0% | 2.7% |
| 2013 | 145,184 | 83,357 | 61,828 | 12.2% | 5.6% | 547,428 | 470,528 | 475,329 | 442,642 | 72,098 | 92.8 | 4,985 | 11,888 | 21.8% | 2.9% |
| 2014 | 165,235 | 94,153 | 71,082 | 13.8% | 7.0% | 637,696 | 549,907 | 562,118 | 520,471 | 75,579 | 95.2 | 3,630 | 16,682 | 23.4% | 2.8% |
| 2015 | 184,201 | 111,024 | 73,177 | 11.5% | 2.2% | 740,603 | 643,058 | 668,983 | 624,843 | 71,620 | 95.2 | 3,941 | 19,422 | 27.7% | 2.7% |
| 2016 | 205,480 | 130,722 | 74,757 | 11.6% | 2.6% | 873,463 | 776,339 | 792,216 | 753,576 | 81,247 | 95.3 | 4,074 | 18,932 | 22.0% | 2.0% |

| Year | Penetration (premiums/GDP) Total | Penetration Life | Penetration Non-Life | Density (premiums per capita, reals) Total | Density Life | Density Non-Life | Depth index[4] | Insurance Protection Gap Total | Insurance Protection Gap Life | Insurance Protection Gap Non-Life | IPG as a multiple of actual market Total | IPG Life | IPG Non-Life |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 2.1% | 1.0% | 1.1% | 262 | 123 | 139 | 46.9% | 151,759 | 95,979 | 55,780 | 3.1 | 4.1 | 2.1 |
| 2007 | 2.1% | 1.1% | 1.1% | 305 | 151 | 153 | 49.7% | 165,504 | 104,053 | 61,451 | 2.8 | 3.6 | 2.1 |
| 2008 | 2.2% | 1.1% | 1.1% | 350 | 172 | 177 | 49.3% | 184,716 | 115,770 | 68,946 | 2.7 | 3.5 | 2.0 |
| 2009 | 2.3% | 1.2% | 1.1% | 391 | 211 | 180 | 54.0% | 201,357 | 121,975 | 79,382 | 2.6 | 2.9 | 2.3 |
| 2010 | 2.3% | 1.3% | 1.0% | 454 | 250 | 204 | 55.1% | 228,856 | 138,155 | 90,702 | 2.5 | 2.8 | 2.2 |
| 2011 | 2.4% | 1.3% | 1.1% | 524 | 292 | 232 | 55.7% | 251,446 | 150,263 | 101,183 | 2.4 | 2.6 | 2.2 |
| 2012 | 2.7% | 1.6% | 1.1% | 640 | 382 | 258 | 59.6% | 265,778 | 154,680 | 111,099 | 2.1 | 2.0 | 2.1 |
| 2013 | 2.7% | 1.6% | 1.2% | 711 | 408 | 303 | 57.4% | 280,429 | 159,107 | 121,322 | 1.9 | 1.9 | 2.0 |
| 2014 | 2.9% | 1.6% | 1.2% | 802 | 457 | 345 | 57.0% | 299,252 | 173,805 | 125,448 | 1.8 | 1.8 | 1.8 |
| 2015 | 3.1% | 1.9% | 1.2% | 887 | 534 | 352 | 60.3% | 303,004 | 169,468 | 133,536 | 1.6 | 1.5 | 1.8 |
| 2016 | 3.3% | 2.1% | 1.2% | 981 | 624 | 357 | 63.6% | 292,372 | 150,978 | 141,394 | 1.4 | 1.2 | 1.9 |

Source: MAPFRE Economic Research (based on data from Superintendence of Private Insurance)
[1] Estimate relative to net accrued premium; [2] Return on equity; [3] Return on assets; [4] Life insurance premiums / total premiums

### Table A.13. Ecuador: main insurance market figures and indicators, 2006–16
(millions of dollars)

| Year | Premiums | | | Premium growth | | Assets | Investment | Liabilities | Technical provisions | Equity | Combined ratio[1] | Technical result | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Nominal | Real | | | | | | | | | | |
| 2006 | 616 | 86 | 530 | 13.5% | 9.9% | 445 | 270 | 270 | 91 | 174 | 85.9 | 31 | 12 | 14.9% | 5.9% |
| 2007 | 678 | 107 | 572 | 10.1% | 7.6% | 509 | 279 | 314 | 90 | 195 | 84.3 | 39 | 15 | 14.2% | 5.4% |
| 2008 | 884 | 141 | 743 | 30.3% | 20.2% | 651 | 366 | 425 | 122 | 226 | 80.6 | 59 | 15 | 14.4% | 5.0% |
| 2009 | 943 | 157 | 786 | 6.6% | 1.4% | 720 | 395 | 468 | 135 | 252 | 80.7 | 66 | 17 | 14.2% | 5.0% |
| 2010 | 1,108 | 181 | 926 | 17.5% | 13.5% | 849 | 480 | 548 | 162 | 301 | 76.7 | 96 | 18 | 16.7% | 5.9% |
| 2011 | 1,337 | 231 | 1,105 | 20.7% | 15.5% | 1,045 | 583 | 697 | 199 | 348 | 74.0 | 130 | 21 | 19.1% | 6.4% |
| 2012 | 1,485 | 255 | 1,230 | 11.1% | 5.7% | 1,356 | 674 | 970 | 384 | 385 | 75.8 | 147 | 31 | 11.9% | 3.4% |
| 2013 | 1,659 | 282 | 1,377 | 11.7% | 8.8% | 1,645 | 761 | 1,223 | 546 | 422 | 76.6 | 164 | 33 | 9.3% | 2.4% |
| 2014 | 1,703 | 276 | 1,427 | 2.6% | -0.9% | 1,853 | 847 | 1,372 | 607 | 482 | 70.5 | 214 | 37 | 14.6% | 3.8% |
| 2015 | 1,665 | 295 | 1,370 | -2.2% | -6.0% | 2,017 | 919 | 1,448 | 663 | 569 | 76.5 | 208 | 41 | 8.9% | 2.5% |
| 2016 | 1,618 | 347 | 1,271 | -2.8% | -4.5% | 2,321 | 952 | 1,704 | 895 | 617 | 74.9 | 250 | 40 | 10.3% | 2.7% |

| Year | Penetration (premiums/GDP) | | | Density (premiums per capita, USD) | | | Depth index[4] | Insurance Protection Gap | | | IPG as a multiple of actual market | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Total | Life | Non-Life | | Total | Life | Non-Life | Total | Life | Non-Life |
| 2006 | 1.3% | 0.2% | 1.1% | 44 | 6 | 38 | 14.0% | 3,295 | 2,230 | 1,065 | 5.3 | 25.9 | 2.0 |
| 2007 | 1.3% | 0.2% | 1.1% | 48 | 8 | 40 | 15.7% | 3,521 | 2,389 | 1,132 | 5.2 | 22.4 | 2.0 |
| 2008 | 1.4% | 0.2% | 1.2% | 61 | 10 | 51 | 15.9% | 4,132 | 2,822 | 1,310 | 4.7 | 20.0 | 1.8 |
| 2009 | 1.5% | 0.3% | 1.3% | 64 | 11 | 53 | 16.6% | 4,271 | 2,907 | 1,364 | 4.5 | 18.5 | 1.7 |
| 2010 | 1.6% | 0.3% | 1.3% | 74 | 12 | 62 | 16.4% | 4,601 | 3,180 | 1,422 | 4.2 | 17.5 | 1.5 |
| 2011 | 1.7% | 0.3% | 1.4% | 88 | 15 | 73 | 17.3% | 5,120 | 3,551 | 1,570 | 3.8 | 15.4 | 1.4 |
| 2012 | 1.7% | 0.3% | 1.4% | 96 | 17 | 80 | 17.2% | 5,732 | 3,979 | 1,753 | 3.9 | 15.6 | 1.4 |
| 2013 | 1.7% | 0.3% | 1.4% | 106 | 18 | 88 | 17.0% | 5,935 | 4,044 | 1,891 | 3.6 | 14.3 | 1.4 |
| 2014 | 1.7% | 0.3% | 1.4% | 107 | 17 | 90 | 16.2% | 6,519 | 4,467 | 2,052 | 3.8 | 16.2 | 1.4 |
| 2015 | 1.7% | 0.3% | 1.4% | 103 | 18 | 85 | 17.7% | 6,469 | 4,388 | 2,081 | 3.9 | 14.9 | 1.5 |
| 2016 | 1.7% | 0.4% | 1.3% | 99 | 21 | 78 | 21.4% | 6,168 | 4,059 | 2,109 | 3.8 | 11.7 | 1.7 |

Source: MAPFRE Economic Research (based on data from Superintendence of Companies, Securities and Insurance)
1 Estimate relative to net accrued premium; 2 Return on equity; 3 Return on assets; 4 Life insurance premiums / total premiums

## Table A.14. Peru: main insurance market figures and indicators, 2006-16 (millions of soles)

| Year | Premiums | | | Premium growth | | Assets | Investment | Liabilities | Technical provisions | Equity | Technical result | Combined ratio[1] | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Nominal | Real | | | | | | | | | | |
| 2006 | 3,544 | 1,439 | 2,106 | 10.3% | 8.1% | 9,822 | 8,544 | 7,992 | 7,229 | 1,830 | -404 | 121.0 | 669 | 21.8% | 4.1% |
| 2007 | 3,712 | 1,465 | 2,247 | 4.7% | 2.9% | 10,970 | 9,526 | 8,921 | 7,925 | 2,049 | -732 | 134.9 | 1,097 | 20.8% | 3.9% |
| 2008 | 4,331 | 1,642 | 2,690 | 16.7% | 10.3% | 12,746 | 10,898 | 10,659 | 9,406 | 2,087 | -672 | 126.8 | 703 | 4.4% | 0.7% |
| 2009 | 5,190 | 1,799 | 3,392 | 19.8% | 16.4% | 14,137 | 12,041 | 11,335 | 9,933 | 2,803 | -288 | 109.4 | 872 | 17.5% | 3.5% |
| 2010 | 6,552 | 2,885 | 3,667 | 26.2% | 24.3% | 17,359 | 15,259 | 13,598 | 11,852 | 3,761 | -393 | 111.7 | 1,107 | 15.9% | 3.4% |
| 2011 | 7,212 | 3,088 | 4,124 | 10.1% | 6.5% | 19,786 | 17,371 | 15,680 | 13,568 | 4,106 | -540 | 113.8 | 1,481 | 21.9% | 4.5% |
| 2012 | 7,906 | 3,302 | 4,604 | 9.6% | 5.8% | 22,261 | 19,397 | 17,634 | 15,275 | 4,627 | -809 | 119.0 | 1,545 | 14.8% | 3.1% |
| 2013 | 9,069 | 3,747 | 5,322 | 14.7% | 11.6% | 28,172 | 22,282 | 23,607 | 20,482 | 4,564 | -867 | 117.1 | 1,591 | 15.1% | 2.4% |
| 2014 | 10,154 | 4,447 | 5,707 | 12.0% | 8.4% | 33,303 | 26,271 | 27,770 | 24,073 | 5,534 | -861 | 115.9 | 1,840 | 16.4% | 2.7% |
| 2015 | 11,744 | 5,114 | 6,630 | 15.7% | 11.7% | 39,373 | 31,116 | 33,437 | 28,771 | 5,936 | -843 | 113.4 | 2,001 | 17.4% | 2.6% |
| 2016 | 11,256 | 4,589 | 6,667 | -4.2% | -7.5% | 42,187 | 33,725 | 35,056 | 30,676 | 7,131 | -1,082 | 116.4 | 2,214 | 14.4% | 2.4% |

| Year | Penetration (premiums/GDP) | | | Density (premiums per capita, soles) | | | Depth index[4] | Insurance Protection Gap | | | IPG as a multiple of actual market | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Total | Life | Non-Life | | Total | Life | Non-Life | Total | Life | Non-Life |
| 2006 | 1.2% | 0.5% | 0.7% | 127 | 51 | 75 | 40.6% | 20,499 | 12,797 | 7,702 | 5.8 | 8.9 | 3.7 |
| 2007 | 1.2% | 0.5% | 0.7% | 131 | 52 | 79 | 39.5% | 22,607 | 14,175 | 8,431 | 6.1 | 9.7 | 3.8 |
| 2008 | 1.2% | 0.5% | 0.8% | 151 | 57 | 94 | 37.9% | 24,550 | 15,419 | 9,130 | 5.7 | 9.4 | 3.4 |
| 2009 | 1.4% | 0.5% | 0.9% | 179 | 62 | 117 | 34.7% | 25,202 | 16,061 | 9,141 | 4.9 | 8.9 | 2.7 |
| 2010 | 1.6% | 0.7% | 0.9% | 223 | 98 | 125 | 44.0% | 27,769 | 17,321 | 10,448 | 4.2 | 6.0 | 2.8 |
| 2011 | 1.6% | 0.7% | 0.9% | 242 | 104 | 139 | 42.8% | 30,648 | 19,086 | 11,561 | 4.2 | 6.2 | 2.8 |
| 2012 | 1.6% | 0.7% | 0.9% | 262 | 109 | 153 | 41.8% | 33,013 | 20,702 | 12,311 | 4.2 | 6.3 | 2.7 |
| 2013 | 1.7% | 0.7% | 1.0% | 297 | 123 | 174 | 41.3% | 33,615 | 20,569 | 13,046 | 3.7 | 5.5 | 2.5 |
| 2014 | 1.8% | 0.8% | 1.0% | 328 | 144 | 184 | 43.8% | 36,169 | 22,276 | 13,893 | 3.6 | 5.0 | 2.4 |
| 2015 | 1.9% | 0.8% | 1.1% | 374 | 163 | 211 | 43.5% | 38,010 | 23,530 | 14,480 | 3.2 | 4.6 | 2.2 |
| 2016 | 1.7% | 0.7% | 1.0% | 354 | 144 | 210 | 40.8% | 41,073 | 25,020 | 16,053 | 3.6 | 5.5 | 2.4 |

Source: MAPFRE Economic Research (based on data from Superintendence of Banking, Insurance and PFA)
1 Estimate relative to net accrued premium; 2 Return on equity; 3 Return on assets; 4 Life insurance premiums / total premiums

Fundación MAPFRE

## Table A.15. Bolivia: main insurance market figures and indicators, 2006-16
(millions of bolivianos)

| Year | Premiums Total | Premiums Life | Premiums Non-Life | Premium growth Nominal | Premium growth Real | Investment | Assets | Liabilities | Technical provisions | Equity | Combined ratio[1] | Technical result | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 1,485 | 191 | 1,294 | 10.9% | 6.3% | 3,406 | 3,817 | 3,063 | 2,670 | 754 | 113.8 | -82 | 203 | 15.9% | 3.1% |
| 2007 | 1,224 | 228 | 996 | -17.6% | -22.8% | 3,551 | 4,040 | 3,250 | 2,878 | 790 | 113.2 | -74 | 150 | 14.8% | 2.9% |
| 2008 | 1,409 | 279 | 1,130 | 15.2% | 1.0% | 3,985 | 4,512 | 3,537 | 3,076 | 975 | 93.6 | 52 | 81 | 17.2% | 3.7% |
| 2009 | 1,428 | 290 | 1,138 | 1.3% | -2.0% | 4,019 | 4,752 | 3,684 | 3,147 | 1,069 | 105.2 | -48 | 208 | 16.2% | 3.6% |
| 2010 | 1,595 | 341 | 1,254 | 11.7% | 9.0% | 4,052 | 4,902 | 3,788 | 3,167 | 1,056 | 98.1 | 20 | 220 | 12.4% | 2.7% |
| 2011 | 1,841 | 400 | 1,441 | 15.4% | 5.0% | 4,251 | 5,176 | 4,097 | 3,395 | 1,078 | 103.4 | -41 | 193 | 10.5% | 2.2% |
| 2012 | 2,194 | 473 | 1,721 | 19.1% | 14.0% | 4,445 | 5,346 | 4,167 | 3,206 | 1,179 | 102.3 | -33 | 180 | 11.1% | 2.4% |
| 2013 | 2,569 | 617 | 1,952 | 17.1% | 10.8% | 4,543 | 5,624 | 4,294 | 3,165 | 1,326 | 92.9 | 130 | 133 | 14.2% | 3.4% |
| 2014 | 2,883 | 705 | 2,178 | 12.2% | 6.1% | 4,635 | 5,957 | 4,485 | 3,121 | 1,472 | 95.4 | 87 | 263 | 13.2% | 3.2% |
| 2015 | 3,103 | 822 | 2,281 | 7.6% | 3.4% | 4,895 | 6,600 | 4,893 | 3,179 | 1,707 | 96.8 | 64 | 300 | 13.8% | 3.6% |
| 2016 | 3,228 | 915 | 2,313 | 4.0% | 0.4% | 5,183 | 6,953 | 5,164 | 3,214 | 1,789 | 100.5 | -11 | 280 | 13.2% | 3.4% |

| Year | Penetration Total | Penetration Life | Penetration Non-Life | Density Total | Density Life | Density Non-Life | Depth index[4] | IPG Total | IPG Life | IPG Non-Life | IPG multiple Total | IPG multiple Life | IPG multiple Non-Life |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 1.6% | 0.2% | 1.4% | 160 | 21 | 140 | 12.9% | 6,182 | 4,348 | 1,833 | 4.2 | 22.8 | 1.4 |
| 2007 | 1.2% | 0.2% | 1.0% | 130 | 24 | 106 | 18.6% | 7,257 | 4,812 | 2,445 | 5.9 | 21.1 | 2.5 |
| 2008 | 1.2% | 0.2% | 0.9% | 147 | 29 | 118 | 19.8% | 8,392 | 5,511 | 2,881 | 6.0 | 19.8 | 2.5 |
| 2009 | 1.2% | 0.2% | 0.9% | 147 | 30 | 117 | 20.3% | 8,724 | 5,676 | 3,048 | 6.1 | 19.6 | 2.7 |
| 2010 | 1.2% | 0.2% | 0.9% | 161 | 34 | 127 | 21.4% | 9,721 | 6,321 | 3,400 | 6.1 | 18.5 | 2.7 |
| 2011 | 1.1% | 0.2% | 0.9% | 183 | 40 | 143 | 21.7% | 11,698 | 7,530 | 4,168 | 6.4 | 18.8 | 2.9 |
| 2012 | 1.2% | 0.3% | 0.9% | 214 | 46 | 168 | 21.6% | 13,167 | 8,539 | 4,629 | 6.0 | 18.1 | 2.7 |
| 2013 | 1.2% | 0.3% | 0.9% | 247 | 59 | 188 | 24.0% | 14,343 | 9,017 | 5,326 | 5.6 | 14.6 | 2.7 |
| 2014 | 1.3% | 0.3% | 1.0% | 273 | 67 | 206 | 24.4% | 15,443 | 9,867 | 5,576 | 5.4 | 14.0 | 2.6 |
| 2015 | 1.4% | 0.4% | 1.0% | 289 | 77 | 212 | 26.5% | 15,411 | 9,836 | 5,574 | 5.0 | 12.0 | 2.4 |
| 2016 | 1.4% | 0.4% | 1.0% | 296 | 84 | 212 | 28.3% | 15,754 | 9,826 | 5,928 | 4.9 | 10.7 | 2.6 |

Source: MAPFRE Economic Research (based on data from Monitoring and Control of Pensions and Insurance Authority)
[1] Estimate relative to net accrued premium; [2] Return on equity; [3] Return on assets; [4] Life insurance premiums / total premiums

## Table A.16. Chile: main insurance market figures and indicators, 2006-16 (millions of pesos)

| Year | Premiums | | | Premium growth | | Assets | Investment | Liabilities | Technical provisions | Equity | Combined ratio[1] | Technical result | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Nominal | Real | | | | | | | | | | |
| 2006 | 2,514,002 | 1,547,008 | 966,994 | 8.2% | 4.6% | 14,443,164 | 18,958,563 | 12,580,078 | 11,976,530 | 1,863,085 | 128.2 | -552,766 | 894,366 | 14.1% | 1.8% |
| 2007 | 3,058,946 | 1,879,597 | 1,179,348 | 21.7% | 16.5% | 16,418,015 | 19,985,551 | 14,318,494 | 13,630,641 | 2,099,521 | 122.9 | -548,433 | 876,345 | 10.1% | 1.3% |
| 2008 | 3,638,056 | 2,174,445 | 1,463,611 | 18.9% | 9.4% | 18,691,752 | 21,036,181 | 16,604,169 | 15,866,311 | 2,087,583 | 118.8 | -547,596 | 469,363 | -6.0% | -0.7% |
| 2009 | 3,491,354 | 2,084,863 | 1,406,491 | -4.0% | -5.4% | 19,416,520 | 22,256,545 | 17,009,252 | 16,209,583 | 2,407,269 | 127.5 | -721,408 | 1,221,828 | 16.5% | 2.0% |
| 2010 | 4,228,291 | 2,558,164 | 1,670,127 | 21.1% | 19.4% | 21,417,926 | 23,766,697 | 18,665,080 | 17,813,497 | 2,752,846 | 119.0 | -609,520 | 1,269,471 | 17.0% | 2.2% |
| 2011 | 5,027,445 | 2,996,333 | 2,031,111 | 18.9% | 15.1% | 23,278,241 | 25,082,990 | 20,493,396 | 19,451,724 | 2,784,845 | 111.7 | -409,867 | 697,379 | 6.4% | 0.8% |
| 2012 | 5,471,147 | 3,268,621 | 2,202,526 | 8.8% | 5.7% | 26,865,447 | 26,737,945 | 23,715,846 | 22,259,531 | 3,149,601 | 118.0 | -771,039 | 1,225,596 | 13.1% | 1.5% |
| 2013 | 5,799,279 | 3,460,278 | 2,339,001 | 6.0% | 4.0% | 28,983,911 | 28,463,050 | 25,762,739 | 24,171,607 | 3,221,172 | 120.2 | -926,618 | 1,190,212 | 9.1% | 1.0% |
| 2014 | 6,223,280 | 3,648,398 | 2,574,881 | 7.3% | 2.8% | 32,735,709 | 30,259,750 | 29,381,835 | 27,347,299 | 3,353,874 | 129.4 | -1,380,138 | 1,495,595 | 10.1% | 1.0% |
| 2015 | 7,408,342 | 4,539,451 | 2,868,891 | 19.0% | 14.1% | 37,046,460 | 32,821,107 | 33,332,714 | 30,994,962 | 3,713,746 | 120.0 | -1,149,424 | 1,399,500 | 11.6% | 1.2% |
| 2016 | 8,301,283 | 5,260,639 | 3,040,644 | 12.1% | 8.0% | 40,583,576 | 36,493,884 | 36,532,471 | 34,358,555 | 4,051,105 | 119.0 | -1,240,876 | 1,870,502 | 12.3% | 1.2% |

| Year | Penetration (premiums/GDP) | | | Density (premiums per capita, pesos) | | | Depth index[4] | Insurance Protection Gap | | | IPG as a multiple of actual market | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Total | Life | Non-Life | | Total | Life | Non-Life | Total | Life | Non-Life |
| 2006 | 3.1% | 1.9% | 1.2% | 153,064 | 94,189 | 58,875 | 61.5% | 4,344,799 | 2,513,988 | 1,830,812 | 1.7 | 1.6 | 1.9 |
| 2007 | 3.4% | 2.1% | 1.3% | 184,285 | 113,236 | 71,049 | 61.4% | 4,402,453 | 2,554,347 | 1,848,106 | 1.4 | 1.4 | 1.6 |
| 2008 | 3.9% | 2.3% | 1.6% | 216,905 | 129,643 | 87,262 | 59.8% | 3,977,929 | 2,324,587 | 1,653,342 | 1.1 | 1.1 | 1.1 |
| 2009 | 3.6% | 2.2% | 1.5% | 206,042 | 123,038 | 83,004 | 59.7% | 4,559,869 | 2,646,297 | 1,913,572 | 1.3 | 1.3 | 1.4 |
| 2010 | 3.8% | 2.3% | 1.5% | 247,044 | 149,464 | 97,579 | 60.5% | 4,913,060 | 2,823,572 | 2,089,488 | 1.2 | 1.1 | 1.3 |
| 2011 | 4.1% | 2.5% | 1.7% | 290,875 | 173,360 | 117,515 | 59.6% | 4,902,596 | 2,819,760 | 2,082,834 | 1.0 | 0.9 | 1.0 |
| 2012 | 4.2% | 2.5% | 1.7% | 313,551 | 187,324 | 126,227 | 59.7% | 5,191,106 | 2,986,236 | 2,204,869 | 0.9 | 0.9 | 1.0 |
| 2013 | 4.2% | 2.5% | 1.7% | 329,325 | 196,500 | 132,825 | 59.7% | 5,206,222 | 2,809,345 | 2,396,877 | 0.9 | 0.8 | 1.0 |
| 2014 | 4.2% | 2.5% | 1.7% | 350,300 | 205,363 | 144,937 | 58.6% | 5,739,931 | 3,253,038 | 2,486,894 | 0.9 | 0.9 | 1.0 |
| 2015 | 4.7% | 2.9% | 1.8% | 413,482 | 253,360 | 160,121 | 61.3% | 5,471,892 | 2,875,896 | 2,595,996 | 0.7 | 0.6 | 0.9 |
| 2016 | 5.0% | 3.1% | 1.8% | 459,535 | 291,214 | 168,321 | 63.4% | 4,983,008 | 2,256,041 | 2,726,968 | 0.6 | 0.4 | 0.9 |

Source: MAPFRE Economic Research (based on data from Superintendence of Securities and Insurance)
[1] Estimate relative to net accrued premium; [2] Return on equity; [3] Return on assets; [4] Life insurance premiums / total premiums

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Table A.17. Paraguay: main insurance market figures and indicators, 2006-16
(millions of guaranies)

| Year | Premiums | | | Premium growth | | Assets | Investment | Liabilities | Technical provisions | Equity | Combined ratio[1] | Technical result | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Nominal | Real | | | | | | | | | | |
| 2006 | 487,037 | 36,959 | 450,078 | 6.4% | -2.9% | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 2007 | 557,466 | 46,971 | 510,495 | 14.5% | 5.9% | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 2008 | 695,203 | 60,967 | 634,237 | 24.7% | 13.2% | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 2009 | 833,972 | 75,340 | 758,632 | 20.0% | 16.9% | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 2010 | 1,001,832 | 102,823 | 899,009 | 20.1% | 14.8% | 1,321,113 | 389,444 | 890,240 | 594,659 | 430,874 | N/A | N/A | N/A | 16.5% | 5.4% |
| 2011 | 1,212,157 | 132,555 | 1,079,602 | 21.0% | 11.8% | 1,634,863 | 526,164 | 1,088,238 | 739,285 | 546,625 | 91.4 | 80,701 | 36,172 | 20.0% | 6.7% |
| 2012 | 1,434,355 | 177,160 | 1,257,195 | 18.3% | 14.1% | 1,944,590 | 641,682 | 1,279,459 | 860,589 | 665,132 | 90.3 | 109,222 | 48,618 | 22.2% | 7.6% |
| 2013 | 1,634,685 | 193,270 | 1,441,415 | 14.0% | 11.0% | 2,266,305 | 763,105 | 1,474,367 | 978,520 | 791,938 | 92.0 | 103,509 | 80,826 | 21.9% | 7.7% |
| 2014 | 1,862,298 | 236,639 | 1,625,659 | 13.9% | 8.5% | 2,502,884 | 884,133 | 1,579,631 | 1,071,207 | 923,253 | 93.1 | 100,904 | 89,640 | 20.1% | 7.4% |
| 2015 | 2,056,627 | 279,820 | 1,776,807 | 10.4% | 7.1% | 2,856,288 | 1,038,009 | 1,811,512 | 1,201,741 | 1,044,776 | 95.4 | 75,641 | 140,355 | 19.7% | 7.2% |
| 2016 | 2,168,768 | 301,748 | 1,867,020 | 5.5% | 1.3% | 3,078,466 | 1,130,586 | 1,912,605 | 1,269,155 | 1,165,861 | 95.6 | 74,631 | 84,295 | 13.7% | 5.2% |

| Year | Penetration (premiums/GDP) | | | Density (premiums per capita, guaranies) | | | Depth index[4] | Insurance Protection Gap | | | IPG as a multiple of actual market | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Total | Life | Non-Life | | Total | Life | Non-Life | Total | Life | Non-Life |
| 2006 | 0.8% | 0.1% | 0.8% | 82,786 | 6,282 | 76,504 | 7.6% | 4,526,598 | 2,931,541 | 1,595,057 | 9.3 | 79.3 | 3.5 |
| 2007 | 0.8% | 0.1% | 0.7% | 93,438 | 7,873 | 85,565 | 8.4% | 5,158,079 | 3,349,498 | 1,808,581 | 9.3 | 71.3 | 3.5 |
| 2008 | 0.9% | 0.1% | 0.8% | 114,971 | 10,082 | 104,888 | 8.8% | 5,860,873 | 3,811,940 | 2,048,933 | 8.4 | 62.5 | 3.2 |
| 2009 | 1.1% | 0.1% | 1.0% | 136,108 | 12,296 | 123,812 | 9.0% | 5,764,225 | 3,801,974 | 1,962,251 | 6.9 | 50.5 | 2.6 |
| 2010 | 1.1% | 0.1% | 1.0% | 161,330 | 16,558 | 144,771 | 10.3% | 6,790,248 | 4,484,564 | 2,305,684 | 6.8 | 43.6 | 2.6 |
| 2011 | 1.2% | 0.1% | 1.0% | 192,555 | 21,057 | 171,498 | 10.9% | 7,356,418 | 4,886,119 | 2,470,298 | 6.1 | 36.9 | 2.3 |
| 2012 | 1.3% | 0.2% | 1.2% | 224,765 | 27,761 | 197,004 | 12.4% | 7,498,236 | 5,063,015 | 2,435,220 | 5.2 | 28.6 | 1.9 |
| 2013 | 1.3% | 0.2% | 1.2% | 252,722 | 29,879 | 222,842 | 11.8% | 8,355,981 | 5,498,221 | 2,857,760 | 5.1 | 28.4 | 2.0 |
| 2014 | 1.4% | 0.2% | 1.2% | 284,126 | 36,103 | 248,022 | 12.7% | 9,213,298 | 6,152,742 | 3,060,556 | 4.9 | 26.0 | 1.9 |
| 2015 | 1.4% | 0.2% | 1.3% | 309,772 | 42,147 | 267,625 | 13.6% | 9,473,070 | 6,358,003 | 3,115,068 | 4.6 | 22.7 | 1.8 |
| 2016 | 1.4% | 0.2% | 1.2% | 322,610 | 44,886 | 277,724 | 13.9% | 10,192,538 | 6,692,677 | 3,499,861 | 4.7 | 22.2 | 1.9 |

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance, Bank of Paraguay)
1 Estimate relative to net accrued premium; 2 Return on equity; 3 Return on assets; 4 Life insurance premiums / total premiums

## Table A.18. Argentina: main insurance market figures and indicators, 2006–16
(millions of pesos)

| Year | Premiums | | | Premium growth | | Assets | Investment | Liabilities | Technical provisions | Equity | Combined ratio[1] | Technical result | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Nominal | Real | | | | | | | | | | |
| 2006 | 17,006 | 5,001 | 12,005 | 27.7% | 15.2% | 34,773 | 27,632 | 27,794 | 23,704 | 6,979 | 116.1 | -1,981 | 2,392 | 15.9% | 3.2% |
| 2007 | 21,488 | 6,118 | 15,370 | 26.4% | 16.1% | 40,575 | 31,854 | 32,821 | 28,150 | 7,754 | 107.4 | -1,194 | 1,659 | 11.9% | 2.3% |
| 2008 | 26,157 | 5,852 | 20,305 | 21.7% | 12.1% | 56,132 | 37,367 | 45,386 | 33,188 | 10,746 | 107.9 | -1,577 | 1,494 | 9.0% | 1.7% |
| 2009 | 29,097 | 4,898 | 24,198 | 11.2% | 4.7% | 56,132 | 43,780 | 45,386 | 38,042 | 10,746 | 117.7 | -4,004 | 4,897 | 21.0% | 4.0% |
| 2010 | 38,784 | 6,218 | 32,566 | 33.3% | 20.7% | 67,612 | 52,114 | 54,630 | 42,329 | 12,982 | 110.7 | -3,290 | 4,758 | 18.9% | 3.6% |
| 2011 | 52,213 | 8,704 | 43,509 | 34.6% | 22.6% | 82,077 | 61,866 | 66,480 | 55,231 | 15,597 | 107.4 | -3,139 | 6,259 | 22.8% | 4.3% |
| 2012 | 69,062 | 11,625 | 57,437 | 32.3% | 19.4% | 105,071 | 78,310 | 84,977 | 69,572 | 20,094 | 113.5 | -7,662 | 10,685 | 23.3% | 4.5% |
| 2013 | 93,389 | 15,262 | 78,127 | 35.2% | 10.8% | 139,358 | 103,916 | 112,499 | 92,121 | 26,858 | 116.2 | -12,274 | 16,772 | 23.6% | 4.5% |
| 2014 | 129,421 | 21,032 | 108,389 | 38.6% | 0.4% | 188,896 | 142,120 | 151,932 | 123,804 | 36,964 | 116.2 | -16,835 | 24,876 | 28.6% | 5.6% |
| 2015 | 180,672 | 28,285 | 152,387 | 39.6% | 10.3% | 271,656 | 208,840 | 216,415 | 175,855 | 55,241 | 114.0 | -20,591 | 37,335 | 32.5% | 6.6% |
| 2016 | 243,602 | 37,979 | 205,622 | 34.8% | -4.6% | 379,860 | 292,721 | 298,885 | 245,173 | 80,975 | 118.1 | -35,988 | 52,057 | 24.1% | 5.1% |

| Year | Penetration (premiums/GDP) | | | Density (premiums per capita, pesos) | | | Depth index[4] | Insurance Protection Gap | | | IPG as a multiple of actual market | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Total | Life | Non-Life | | Total | Life | Non-Life | Total | Life | Non-Life |
| 2006 | 2.4% | 0.7% | 1.7% | 431 | 127 | 304 | 29.4% | 42,819 | 30,420 | 12,398 | 2.5 | 6.1 | 1.0 |
| 2007 | 2.4% | 0.7% | 1.7% | 539 | 153 | 385 | 28.5% | 52,356 | 37,765 | 14,592 | 2.4 | 6.2 | 0.9 |
| 2008 | 2.3% | 0.5% | 1.8% | 649 | 145 | 504 | 22.4% | 67,201 | 49,298 | 17,903 | 2.6 | 8.4 | 0.9 |
| 2009 | 2.3% | 0.4% | 1.9% | 715 | 120 | 594 | 16.8% | 74,978 | 56,259 | 18,719 | 2.6 | 11.5 | 0.8 |
| 2010 | 2.3% | 0.4% | 2.0% | 943 | 151 | 792 | 16.0% | 97,608 | 74,079 | 23,528 | 2.5 | 11.9 | 0.7 |
| 2011 | 2.4% | 0.4% | 2.0% | 1,256 | 209 | 1,047 | 16.7% | 125,264 | 95,245 | 30,019 | 2.4 | 10.9 | 0.7 |
| 2012 | 2.6% | 0.4% | 2.2% | 1,644 | 277 | 1,368 | 16.8% | 147,450 | 115,388 | 32,062 | 2.1 | 9.9 | 0.6 |
| 2013 | 2.8% | 0.5% | 2.3% | 2,201 | 360 | 1,841 | 16.3% | 173,900 | 137,007 | 36,893 | 1.9 | 9.0 | 0.5 |
| 2014 | 2.8% | 0.5% | 2.4% | 3,019 | 491 | 2,528 | 16.3% | 238,627 | 191,291 | 47,336 | 1.8 | 9.1 | 0.4 |
| 2015 | 3.1% | 0.5% | 2.6% | 4,173 | 653 | 3,519 | 15.7% | 294,634 | 245,356 | 49,278 | 1.6 | 8.7 | 0.3 |
| 2016 | 3.0% | 0.5% | 2.6% | 5,573 | 869 | 4,704 | 15.6% | 396,378 | 324,142 | 72,236 | 1.6 | 8.5 | 0.4 |

Source: MAPFRE Economic Research (based on data from Superintendence of Insurance of the Nation)
[1] Estimate relative to net accrued premium; [2] Return on equity; [3] Return on assets; [4] Life insurance premiums / total premiums

## Table A.19. Uruguay: main insurance market figures and indicators, 2006–16
### (millions of pesos)

| Year | Premiums | | | Premium growth | | Assets | Investment | Liabilities | Technical provisions | Equity | Combined ratio[1] | Technical result | Financial result | ROE[2] | ROA[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Nominal | Real | | | | | | | | | | |
| 2006 | 7,978 | 1,396 | 6,582 | 11.1% | 4.4% | 17,626 | 13,482 | 12,780 | 10,276 | 4,846 | 101.8 | -116 | 725 | 6.9% | 1.9% |
| 2007 | 8,987 | 1,704 | 7,284 | 12.7% | 4.2% | 20,064 | 15,295 | 14,570 | 12,120 | 5,494 | 97.8 | 173 | 85 | 3.9% | 1.1% |
| 2008 | 10,784 | 2,206 | 8,578 | 20.0% | 11.2% | 23,677 | 17,687 | 18,261 | 15,009 | 5,416 | 102.0 | -178 | 299 | -2.8% | -0.6% |
| 2009 | 12,693 | 2,719 | 9,975 | 17.7% | 9.9% | 28,006 | 22,027 | 21,999 | 18,592 | 6,007 | 113.5 | -1,452 | 2,733 | 12.2% | 2.6% |
| 2010 | 14,581 | 3,472 | 11,109 | 14.9% | 7.7% | 35,109 | 28,237 | 27,334 | 23,547 | 7,775 | 106.0 | -743 | 2,801 | 17.3% | 3.8% |
| 2011 | 17,637 | 4,261 | 13,377 | 21.0% | 11.9% | 40,986 | 33,942 | 32,806 | 29,069 | 8,180 | 101.3 | -192 | 1,455 | 5.5% | 1.1% |
| 2012 | 21,564 | 5,684 | 15,880 | 22.3% | 13.1% | 50,863 | 42,461 | 41,286 | 36,799 | 9,576 | 105.1 | -963 | 2,343 | 7.8% | 1.5% |
| 2013 | 24,749 | 7,100 | 17,648 | 14.8% | 5.7% | 62,405 | 52,154 | 51,851 | 46,470 | 10,554 | 106.8 | -1,470 | 2,595 | 10.3% | 1.7% |
| 2014 | 30,285 | 8,937 | 21,347 | 22.4% | 12.4% | 77,793 | 65,068 | 65,535 | 58,548 | 12,259 | 101.9 | -487 | 2,699 | 8.2% | 1.3% |
| 2015 | 34,910 | 11,672 | 23,238 | 15.3% | 6.1% | 96,715 | 83,041 | 82,363 | 74,257 | 14,352 | 104.6 | -1,432 | 4,249 | 6.1% | 0.9% |
| 2016 | 38,531 | 14,707 | 23,824 | 10.4% | 0.7% | 115,866 | 99,900 | 100,114 | 90,779 | 15,752 | 105.9 | -2,073 | 4,641 | 4.8% | 0.7% |

| Year | Penetration (premiums/GDP) | | | Density (premiums per capita, pesos) | | | Depth index[4] | Insurance Protection Gap | | | IPG as a multiple of actual market | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Total | Life | Non-Life | | Total | Life | Non-Life | Total | Life | Non-Life |
| 2006 | 1.7% | 0.3% | 1.4% | 2,394 | 419 | 1,975 | 17.5% | 31,410 | 21,925 | 9,485 | 3.9 | 15.7 | 1.4 |
| 2007 | 1.6% | 0.3% | 1.3% | 2,690 | 510 | 2,180 | 19.0% | 36,248 | 25,177 | 11,071 | 4.0 | 14.8 | 1.5 |
| 2008 | 1.7% | 0.3% | 1.3% | 3,218 | 658 | 2,560 | 20.5% | 40,874 | 28,310 | 12,564 | 3.8 | 12.8 | 1.5 |
| 2009 | 1.8% | 0.4% | 1.4% | 3,775 | 809 | 2,967 | 21.4% | 46,897 | 32,298 | 14,598 | 3.7 | 11.9 | 1.5 |
| 2010 | 1.8% | 0.4% | 1.4% | 4,322 | 1,029 | 3,293 | 23.8% | 51,745 | 35,576 | 16,170 | 3.5 | 10.2 | 1.5 |
| 2011 | 1.9% | 0.5% | 1.4% | 5,212 | 1,259 | 3,953 | 24.2% | 57,813 | 39,931 | 17,882 | 3.3 | 9.4 | 1.3 |
| 2012 | 2.1% | 0.5% | 1.5% | 6,351 | 1,674 | 4,677 | 26.4% | 63,896 | 44,450 | 19,446 | 3.0 | 7.8 | 1.2 |
| 2013 | 2.1% | 0.6% | 1.5% | 7,265 | 2,084 | 5,181 | 28.7% | 69,315 | 46,486 | 22,829 | 2.8 | 6.5 | 1.3 |
| 2014 | 2.3% | 0.7% | 1.6% | 8,860 | 2,615 | 6,245 | 29.5% | 76,656 | 52,755 | 23,900 | 2.5 | 5.9 | 1.1 |
| 2015 | 2.4% | 0.8% | 1.6% | 10,177 | 3,403 | 6,775 | 33.4% | 83,668 | 56,595 | 27,072 | 2.4 | 4.8 | 1.2 |
| 2016 | 2.4% | 0.9% | 1.5% | 11,192 | 4,272 | 6,920 | 38.2% | 89,981 | 58,010 | 31,972 | 2.3 | 3.9 | 1.3 |

Source: MAPFRE Economic Research (based on data from Central Bank of Uruguay)
[1] Estimate relative to net accrued premium; [2] Return on equity; [3] Return on assets; [4] Life insurance premiums / total premiums

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