

sigma on world insurance: Methodology and data

This study looks at insurance premium volumes data from 147 countries.

This *sigma* study is based on the direct premium volumes of insurance companies, regardless of whether they are privately or state owned. Premiums paid to state social insurers are not included. Life and non-life premium volume in 147 countries is examined. Detailed information on the largest 88 countries in terms of total insurance premium volume can be found in the statistical appendix. Additional country information is available online at www.sigma-explorer.com. Where not indicated, figures and chart information in this report are all sourced from Swiss Re Institute.

All quoted growth rates are in real terms, ie adjusted for local inflation to facilitate international comparison.

Unless otherwise stated, premium growth rates indicate changes in real terms. These real growth rates are calculated using premiums in local currencies and are adjusted for inflation using the consumer price index for each country. The statistical appendix also provides the nominal change in growth for each country. Regional aggregated growth rates are calculated using the previous year's premium volumes and converted into US dollars at market exchange rates. The same procedure applies to the economic aggregates of Table X, where the previous year's nominal GDP figures in US dollars are used as weights. Real growth rates are used to cancel out exchange rate movements while facilitating international comparisons particularly between high and low inflation countries.

Figures are converted into US dollars at running annual average market exchange rates.

Using the average exchange rate for the financial year, premium volumes are converted into US dollars to facilitate comparisons between markets and regions.²⁵ Where no premium data is available (indicated by "na." for the local currency value in the tables), the premium income in US dollars is estimated assuming a constant ratio of insurance premiums to GDP. Regional growth rates are calculated using a weighted average of the real growth rates of the individual countries. The weighting is based on the relevant premiums of the previous year in USD.

Country classifications generally follow IMF conventions.

The designation of the economies in this *sigma* as "advanced" or "emerging" is generally in keeping with the conventions of the International Monetary Fund (IMF). Advanced economies include the US, Canada, Western Europe (excluding Turkey), Israel, Oceania, Japan and the other advanced Asian economies (Hong Kong, Singapore, South Korea and Taiwan). All other countries are classified as "emerging" and generally correspond to the IMF's "emerging and developing" economies.²⁶

Data sources

The insurance data and estimates contained in the study originate primarily from national supervisory authorities and, in some cases, from insurance associations. Macroeconomic data was sourced from the International Financial Statistics of the IMF, Oxford Economics and IHS Markit.

Data revisions

Figures for past years are adjusted as new information becomes available. Since the publication of last year's *sigma*, global premium volume for 2017 has been revised up by 1.3% overall. Life insurance premium volume was revised up by 2.5%, while non-life premiums are unchanged.

Definition of premium income

This report is based on information concerning the premiums written for direct business by all registered insurers. This means:

1. Direct insurance premiums, including commissions and other charges, are considered prior to cession to a reinsurance company.
2. Domestic insurers – regardless of their ownership – and domestic branches of foreign insurers are regarded as domestically domiciled business units. By contrast, business undertaken by the foreign branches of domestic insurers is not regarded as domestic business.

²⁵ In Egypt, India, Iran, Japan, South Korea and Malaysia, the financial year is not the same as the calendar year. Precise details about the differences in dates are given in the notes to the statistical appendix.

²⁶ The only exceptions are the Czech Republic, Estonia, Latvia, Lithuania, Slovenia and Slovakia.

3. Business that has been written in the domestic market includes premiums for cover of domestic risks as well as those covering foreign risks, as long as they are written by domestic insurers (cross-border business).

Health insurance is allocated to non-life business.

Life and non-life business areas in this *sigma* study are categorised according to standard EU and OECD conventions: health insurance is allocated to non-life insurance, even if it is classified differently in the individual countries.

Density and penetration do not include cross-border business.

Only premium income from domestic risks is used to calculate insurance penetration and density. Cross-border business is not included. This has a significant effect in Belgium, France, Liechtenstein, Luxembourg, Ireland, Malta, Norway, Singapore or the UK.

Statistical appendix

The statistical appendix contains additional calculations and the macroeconomic data used for currency conversions.

Acknowledgements

The *sigma* editorial team would like to thank the supervisory authorities, associations and companies that helped with data compilation.