

sigma

World insurance: stirred, and not shaken

- 02 Executive summary
- 03 Key takeaways
- 06 Macroeconomic environment for insurers
- 14 Trends in the global insurance markets
- 32 Appendix I: premium developments by region
- 35 Appendix II

Executive summary

The global economic slowdown has been milder than expected, but momentum is waning.

Slowdown and inflation are challenging for insurers, but we expect the industry will demonstrate resilience.

Rate hardening, also now in personal lines, will support non-life premium growth. The motor market is set to return to growth after three years of contraction.

Non-life sector profitability will improve, with ROE estimated to rise to 7.8% this year and the profitability gap to narrow by 3 percentage points.

High interest rates have boosted life insurer profits, and demand for annuities and pension risk transfer products.

Credit downgrades and lapses are two tail risks for life sector profitability.

The global economic slowdown has been milder than anticipated. Even so, with the full effect of monetary policy tightening still pending, we see just near 1% real gross domestic product (GDP) growth in advanced markets in 2023–24. We forecast global growth of 2.3% this year and next in real terms, both lower than market consensus. Emerging Asia is expected to be the engine of growth, with the reopening of China's economy adding impetus. Inflation is still the top global macroeconomic concern. Price pressures remain as labour market tightness prevails and inflation has shifted from goods to the services sector. A recurring stress this year is financial system instability, this time triggered by the lagged effects of monetary tightening on the banking sector. This also adds uncertainty to the inflation outlook, as fresh liquidity measures to shore up banks could delay the return to conventional monetary policy in many economies.

Both the slowdown and inflation raise challenges for insurers, but we believe the industry will be resilient over the next two years. With inflation pressure persistent, hard market conditions in non-life are set to continue as insurers offset elevated claims costs with higher premium prices. Lower claims once disinflation does take hold, and higher returns on interest rate-sensitive investments, should support profitability. With respect to the financial system, we believe insurers' liquidity and capital positions are sound and should enable them to weather, and not be shaken by, any instability still to come. Relative to other financial sectors, insurers are absorbers, not multipliers, of market woes.

We estimate that global insurance premium volumes (non-life and life) will grow by 1.1% in 2023 and by 1.7% in 2024 in real terms (both below the 10-year trend of 2.6%), after a 1.1% decline in 2022. Reflecting the stirrings of growth, we estimate that premium volumes will total USD 7.1 trillion in 2023, a new high. For non-life, we see premium growth strengthening to 1.4% in real terms this year after a 0.5% gain in 2022. This improvement will be largely due to rate hardening in personal and ongoing price strength in commercial lines. We see the motor market returning to growth after three years of contraction, also based on rising premium prices. A decline in health premiums due to the end of the pandemic support policies in the US will likely offset some of the volume increases in other lines of business.

The profitability of non-life business is set to improve, with improved investment and slowing inflation (eventually) taking the edge off claims severity. We estimate that non-life sector return on equity (ROE) will rise to 7.8% in 2023 from 3.4% last year, and to 9.3% in 2024. The cost of capital is rising in parallel with stronger investment return, but we expect the profitability gap to narrow. Reserve adequacy has emerged as a key consideration as a prolonged period of favourable development wanes, due to the current and recent shocks of high inflation and COVID-19. Despite having a large buffer, the pace of industry reserve releases has slowed and there are many uncertainties, such as delayed settlements, which can be a larger problem in periods when high economic and social inflation push claims settlements higher, particularly in the US. More broadly, the shift of inflation from goods to services could impact liability exposures.

In life insurance, we forecast global premiums to grow by a below-trend 0.7% in real terms in 2023. This is still an improvement from 2022, when the market contracted by 3.1% as high inflation eroded consumer savings and nominal premium growth. We estimate that premiums will rise by 1.5% in 2024, above the 10-year trend of 1.3%. The start of the interest rate hiking cycle last year has boosted sector earnings. And this year, rising wages and interest rates in advanced markets are creating favourable growth and profitability tailwinds. We also see new life risk pools in Hong Kong, a result of China's reopening. The higher interest rate environment is creating new tailwinds for the annuity business and pension risk transfer deals (particularly in the US, UK), which benefit from higher crediting rates and funding ratios.

In this low growth and high inflation environment, we flag credit downgrades and surrenders as two potential downside tail risks for life sector profitability. Credit downgrades could weigh on solvency requirements and increase unrealised losses. The risk of lapses is that they reach levels requiring sales of bonds and capital losses to meet redemptions. So far both risks appear contained.

Key takeaways

The global economy is slowing and downside risk is elevated, including an anticipated mild US recession to come this year. We see emerging Asia driving global growth in the coming years.



Inflation risk is still front and centre. Price pressure has shifted from goods to services and financial system instability this year has added uncertainty to the inflation outlook.



Economic slowdown may weigh on premium growth, but rate hardening, better combined ratios and stronger investment returns from higher interest rates should support earnings in Property and Casualty (P&C).



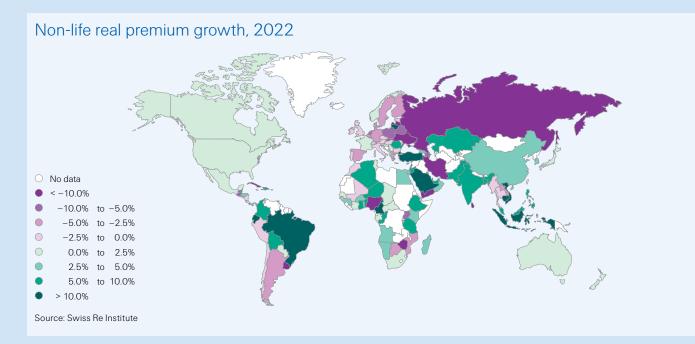
Global P&C financial performance, % of NPE (ROE, CoC % of equity)

Reserve adequacy is a key question. Despite a historically large cushion for incurred but not reported claims, a greater focus on reserve adequacy may be needed.

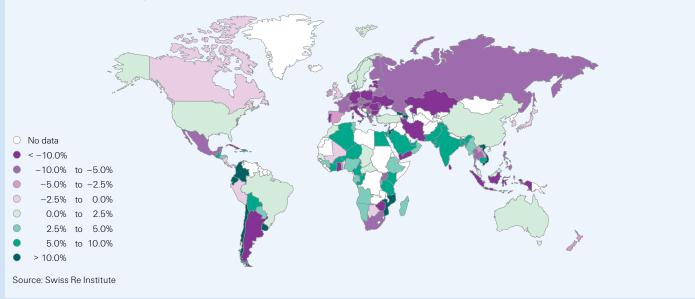


US P&C reserve developments

Source: NAIC, Swiss Re Institute



Life real premium growth, 2022



Macroeconomic environment for insurers

The global slowdown is taking longer than expected and the now firmer-for-longer interest rate environment will likely cut into 2024 recovery momentum. Inflation pressures are concentrated on core components such as shelter and services while labour market resilience continues to support income and consumption levels. In the new high interest rate environment, financial stability risks have seeped into the central banks' traditional trade-off of inflation versus growth. The lingering upside risks for inflation will remain a headwind for P&C underwriting.

Growth and inflation outlook

This year's global cyclical slowdown is milder than anticipated.

Higher-for-longer interest rates to bite 2024 growth momentum

The global economy has proven more resilient than expected during the current cyclical slowdown, with only the euro area crossing the recession threshold by the smallest of margins with revised data. Yet the accumulated effect of 18+ months of rising interest rates, deteriorating credit conditions and further central balance sheet reductions will likely dampen growth prospects in the coming quarters. We forecast global growth of 2.3% this year and next in real terms, both projections below consensus. We hold the view that policymakers will err on the side of inflation caution and maintain monetary restrictions for longer than anticipated. The risk to our growth outlook remains skewed to the downside given 1) the challenges faced by the US banking sector as a result of the fast-paced tightening process; 2) that global disinflation has been more gradual than expected, signalling higher interest rates for longer; and 3) that we see little upside potential from global spill over from China's recovery, which appears to be domestic-demand driven and based on services rather than manufacturing.

Table 1

Key economic forecasts for major markets

	Real GDP growth			Inflation			CB policy rate			10-year govt. yield						
		2023		2024		2023		2024		2023	:	2024		2023		2024
	SRI	Consensus	SRI	Consensus	SRI	Consensus	SRI	Consensus	SRI	Consensus	SRI	Consensus	SRI	Consensus	SRI	Consensus
US	1.5%	1.3%	0.5%	0.7%	4.0%	4.1%	2.8%	2.6%	5.4%	5.35%	3.9%	3.9%	3.6%	3.5%	3.2%	3.3%
Euro area	0.4%	0.6%	0.3%	1.0%	5.5%	5.4%	2.6%	2.5%	4.5%	4.25%	3.5%	3.5%	2.5%	2.3%	2.3%	2.1%
China	5.4%	5.5%	4.9%	4.8%	1.5%	1.2%	2.4%	2.2%	1.8%	-	1.9%	-	3.0%	2.8%	3.0%	2.9%

Source: Swiss Re Institute, consensus numbers on 6 July 2023.

We estimate a 3.3x emerging-to-advanced market growth multiplier in 2023, up from an average of 2.2x in the past two decades.

We see emerging Asia driving global growth, but Latin America being held back by tight credit conditions. The emerging markets will underpin the global economy this year, with aggregate GDP growing by an estimated 3.8% in real terms, compared with just 1.1% in the advanced markets. We estimate a 3.3x emerging-to-advanced market growth multiplier in 2023, up from an average of 2.2% in the past 20 years. Excluding the contribution from China, which we estimate will grow by 5.4%, emerging markets will post an estimated 2.6% increase in GDP in 2023, this rising to 3.5% in next year. We forecast around 1% growth in advanced markets in 2024. Our forecasts suggest that growth in advanced EMEA will not exceed 1% this year or next. Advanced Asia-Pacific (APAC) and North America should both clear 1% in 2023, but only advanced APAC will do so in 2024.

Emerging Asia will be the engine of global growth, with the reopening of China's economy this year and a recovery in demand providing the fuel. We forecast 5.4% growth in emerging Asia over 2023–2024 in compound annual growth rate terms (CAGR). In terms of the different emerging regions, we forecast 2.6% growth in the Middle East & Africa over the same period. Growth in emerging Europe & Central Asia will be held back on account of the war in Ukraine before recovering to 2.5% in 2024. We estimate just 1.5% average real GDP growth in Latin America & the Caribbean over 2023–2024, with the rapid pace of interest rate hikes in the region a main headwind.

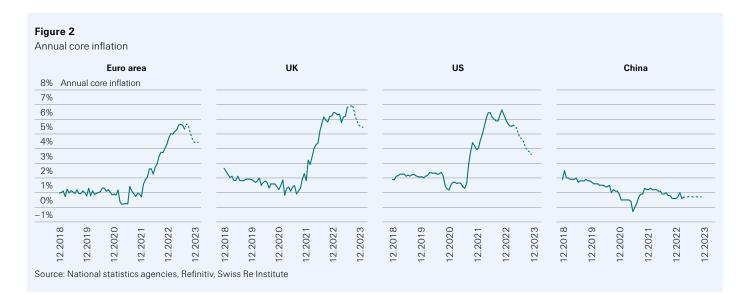


Source: Swiss Re Institute

Inflation has become more entrenched this year as price pressures remain concentrated on core components.

Underlying global inflation pressures remain elevated and persistent

This year, global inflationary pressures stem from stickier core components such as shelter and services, and are largely conditioned by the strength of the labour market. That is a change from last year when inflation stemmed from supply chain bottlenecks, and the effects of the war in Ukraine on commodity prices (energy, food). Attention has turned to the pace of disinflation as central banks seek to get back to inflation targets. To do so while simultaneously trying to avoid triggering recessions will entail a slower return to target and thus risks that expectations of higher inflation could become entrenched. The trade-off also implies less fiscal space to support growth in case of an economic downturn as we expect over the next year.



Ongoing slowing of nominal wage growth is key for disinflation to take hold.

In the US inflation fight, policymakers are increasingly focused on labour market tightness because of the high share of wage-sensitive sectors in total non-housing services spending. These service sectors accounted for 41% of annual core inflation US

	as of April 2023, and have been found to lag nominal wage growth by 10 months. ¹ If wage growth remains stubbornly high, inflation could turn into an unstable price spiral where employers try to make up the higher employment costs by increasing prices, and workers demand higher pay to make up for the higher cost of living. The Philips curve approach, however, has shown spirals to be short-lived, as nominal wage growth typically tends to have an initial acceleration stage followed by a period of stabilisation consistent with inflation and labour market conditions. ² So far in this cycle, nominal wage growth has not been abnormally higher than historical experience, suggesting that the risk of wage-price spirals remains contained. ³ We hence anticipate that inflation and wages will continue to come down over the next two years. The disinflation process may currently feel long and drawn out, but research shows that the average lag period for the full effects of monetary policy to cement is two and a half years (see <i>Monetary policy transmission mechanism lags: help is on the way</i>). This suggests the disinflation effects from the current tightening cycle are not yet all in play.
Inflation in 2023 will be lower than in 2022, but risks remain skewed to the upside.	Regionally speaking, our inflation outlook for Europe is more pessimistic than for the US, as energy prices risks related to the war in the Ukraine remain real and could intensify next winter. In emerging markets, the disinflation process may be more gradual than in the US or Europe, particularly for net commodity importing markets exposed to rising commodity prices. Inflation in China is bucking the global the trend (see <i>Recovery in China: limited impact on global growth and inflation</i>). There has been a sustained disinflation trend since 2021 following the drawn out supply chain normalisation process, and we expect the annual inflation rate to hold below 2.5% through 2024.
Higher wages can increase the claim costs for worker' compensation and healthcare.	With respect to implications of rising price pressures for insurers, we estimate that inflation alone increased claims pay outs in Property and Casualty (P&C) by 5–7.5% across five key markets in 2022. ⁴ This year's robust gains in nominal wages could continue the trend by pushing bodily injury claims higher. Different lines of business, including workers' compensation and medical expenses, would be impacted. We expect current market hardening conditions to remain through 2024 as insurers are likely to raise rates to keep up with claims inflation.
This year's recovery in China will have little spill over impact on the global economy.	Recovery in China: limited impact on global growth and inflation The increasing integration of China into the world economy over many years, including in supply chains, has made developments there a main factor shaping global growth and inflation conditions. Given the reopening of its economy from pandemic-induced shutdowns in December last year, we expect China will be one of the few countries to register stronger growth this year than in 2022. In prior episodes of recovery in China, growth was mostly investment-led but so far this year it has been is based mostly on demand for domestic services. Hence, higher demand in China does not reverse our baseline outlook of global disinflation this year. We anticipate only a limited upside inflationary boost via commodity prices, partly offset by

improving supply chain conditions.

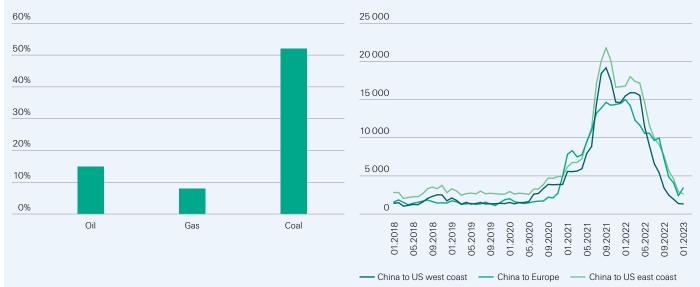
⁴ Economic Insights: Inflation may be easing, but claims severity pressures in P&C are likely to remain, Swiss Re Institute, 20 March 2023.

¹ Wage Sensitivity in Non-Housing Services Inflation, The White House, 31 May 2023.

 ² Wage-Price Spirals: What is the Historical Evidence?, IMF, 11 November 2022.
 ³ Wage-Price Spiral Risks Still Contained, Latest Data Suggests, IMF Blog, 24 February 2023.

Figure 3

China's consumption of commodities as % of world consumption, 2019 (LHS); Freightos ocean freight rate index (USD/40-ft box, RHS))



Source: BP Statistical Review of World Energy, Freightos, Bloomberg, Swiss Re Institute

Inflation in China is subdued, reflecting a weaker-than-expected recovery in demand. Consumer price index (CPI) inflation rose on average by 1% in the first four months of 2023 year-on-year (yoy), also in part because China did not ease interest rates as much as other countries during the pandemic. The outcome is well below the CPI averages of 5.6% for US and 7.7% for the euro area for the same period. We estimate inflation in China will be below 2% in 2023. Weaker overall demand also creates low demand for credit, even though borrowing costs are low, undermining the effectiveness of still-easy monetary policy. Hence, in spite of a stronger-than-anticipated GDP outcome in the first quarter, we keep our full-year real growth forecast at 5.4%, with risks to the downside. Therefore, we expect China's recovery to have relatively muted impact on other Asian economies, in many of which growth is also being driven more by domestic consumption. We also see limited impact on global growth. Growth in some smaller economies with reliance on tourism (eg, Hong Kong, Thailand) may see a boost as visitor numbers from mainland China rebound from low levels.

We expect inflation to remain structurally higher till 2030.

We maintain our view that inflation will remain structurally higher for the reminder of the current decade at least as:

- Decarbonisation remains a net inflationary factor over the short- to medium-term. The transition to renewable energy sources is costly in its early stages and will likely prevail with increasing awareness of global warming and energy security concerns.
- The restructuring of supply chains exacerbates deglobalisation momentum, with heightened geopolitical tensions pushing countries to prioritise security and control over cost consciousness.
- **3.** Policymakers develop a greater tolerance for inflation. Central banks could revise their current targets as the employment and growth trade-off may prove too costly. Tolerating higher (but still manageable) levels of inflation may allow for more robust economic recoveries.

The challenges policymakers currently face impact the insurance industry.

The classic trade-off between inflation and output is being combined with one of inflation versus financial stability.

Central banks have managed to address financial instability with targeted policy measures.

We see terminal rates marginally lower due to additional tightening of financial conditions.

Asia and Latin America managed to avoid contagion, seeing just temporary capital outflows.

Financial conditions and the economic policy mix

This year's economic risks are pushing policymakers to limits of their reach. Their resolve will help shape the long-term equilibria crucial to insurers, such as interest rates, inflation, and debt sustainability. For now, the higher-for-longer rate environment we expect from central banks and the limited space for fiscal stimulus that governments hold suggests insurers will face demand headwinds over the short- and medium-term as growth softens. However greater returns from rate-sensitive investments and less expensive claims from a disinflation process will both be profitability tailwinds for the industry.

Financial instability is stretching the central bank's capabilities

For now, the classic central bank trade-off of inflation versus output has shifted to also include a focus inflation versus financial stability, further complicating the task of fighting inflation. The shift stems from the fragility exposed by recent events in the banking sector that required market intervention. Although central banks use different policy tools to address both challenges, financial instability risks could limit the ability with which they will be able to push terminal rates.

A first episode of financial instability triggered by the current steep hiking cycle occurred in September 2022, as UK pension funds faced a liquidity crisis in the Gilt market for fast-rising long-maturity yields. This forced the Bank of England (BoE) to put forward a two-week purchase programme for long-dated bonds and to delay the bank's planned gilt sales. The BoE embraced both challenges (inflation and stability) with a targeted market intervention and continued thereafter on its policy path of rate hikes. The next episode occurred this year in the US, when four US regional banks (USD 532 billion in assets) succumbed to deposit flight after rapid interest rate hikes sparked large declines in the market value of their Treasury bonds and other securities. The US government stepped in to guarantee depositors' funds to avoid cascading bank failures, while the Federal Reserve (Fed) opened new specific lending facilities to provide liquidity. Meanwhile in Europe, banking jitters ended up toppling Credit Suisse as investors lost further confidence in management following several previous well-publicised issues.⁵ Swiss authorities stepped in with a rescue package of financial guarantees for a takeover by UBS, while the Swiss National Bank continued to hike rates.

In our view, despite successful policy interventions to maintain liquidity, the fight against inflation will be had with terminal rates marginally lower than initially expected but held for a longer period of time. This is also in part because of the additional tightening in lending standards resulting from the bank sector woes, which is effectively doing some of the central bank's work. Research suggests for example that in the US, ongoing credit reductions are the equivalent of 25 to 100bps of policy tightening.⁶ To this point, the Fed cut its end of year projection for the Fed Funds rate by 50 basis points in the subsequent meeting to the collapse of Silicon Valley Bank in March 2023. Other central banks have signalled a similar approach, by opting for a wait-and-see approach while maintaining a tightening bias.

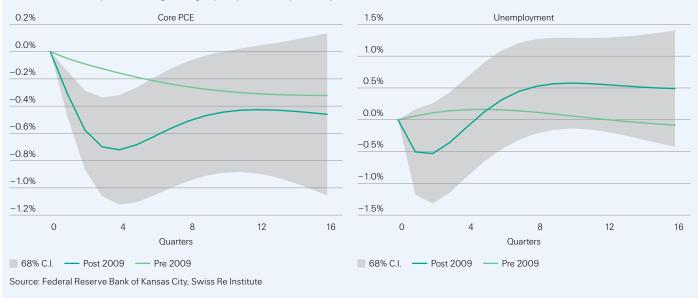
Economies in Asia and in Latin America have so far been able to avoid financial system contagion turmoil. The initial "flight-to-safety" reaction of investors resulted in some capital outflows from emerging markets in the early days of the bank sector events, but they stabilised soon after.⁷ In the case of Asia, interest rates had not been hiked as fast nor as high as in the western world because inflation was lower. That allowed more gradual repricing of assets, mitigating concerns over asset-liability mismatches. In Latin America, because of the usual volatility in inflation, banks tend to invest most of their liquidity in bonds and notes at variables rates linked to CPI. This has helped contain the risks associated with swift swings in interest rates.⁸ Banking sector stock indices in Brazil and Chile for example are up since SVB's collapse (on 9 March 2023), while Mexico's is slightly behind, a difference attributable to its stronger economic and financial ties to the US. Any forthcoming bank stress events could trigger further volatility in financial and asset conditions, but a systemic setback is not part of our baseline scenario.

- ⁵ Factbox: Credit Suisse's scandals spies, lies and money laundering, Reuters, 3 October 2022.
- ⁶ The Macroeconomic Impact of Small Bank Stress, Goldman Sachs, 15 March 2023.
- ⁷ Economic Insights: Asia contagion-another close shave, Swiss Re Institute, 5 April 2023.
- ⁸ Latin American banks to face secondary effects of SVB turmoil, S&P, 23 March 2023.

Insurers are insulated from the recent banking sector woes.	Even as financial market woes will impact insurers' investment portfolios, their asset-liability management operating framework means they are duration matched, and their "long liquidity" business models implies they are not vulnerable to rapid withdrawals like banks.
Transmission graduality: the lay between policy action and real economy impact.	Monetary policy transmission mechanism lags: help is on the way To meet inflation targets, central banks seek to effect adequate and timely policy stances that increase or reduce levels of economic activity. To this pursuit, key are the lags with which policy actions affect financial conditions and the real economy. This year, market commentary has reinforced the graduality with which demand and inflation are reacting to the rapid pace of interest rate hikes ^{9,10} and so far, the waiting window is playing out as slowly as the research literature suggests.
Transmission mechanisms have been found to be as long as 29 months on average.	The usual characterisation of transmission mechanism periods as "long and variable" is vague. Meta-analysis finds the time frame to be 29 months with a standard deviation of 19 months. ¹¹ On average, a 1% hike in the policy rate yields a maximum 0.9% reduction in prices. Countries with greater degree of financial development have more delayed transmission as local institutions have more ways to hedge against a surprise monetary policy decision. There is great variability in the monetary policy transmission mechanism lag research estimates, however there is the general consensus that changes take much longer to affect prices than to affect output, and that the bulk of the effect takes shape in the second year (between the 4 th and the 8 th quarter). ^{12,13}
In the US, the transmission mechanism lag has been shortening since 2009.	A point of optimism on this regard is that, at least for the US, more recent research suggests that the lag may be shortening. The use of forward-looking guidance and balance sheet policy (dubbed "unorthodox policymaking"" prior to 2009) appears to have made it so as the reaction time in financial markets and inflation has come down since the global financial crisis (GFC). Figure 4 compares two eras and how long it takes for inflation and unemployment to react (in quarters) to a 1% increment in a proxy of the Fed Funds rate. As it relates to the lag for the core personal consumption

Figure 4

Macroeconomic responses to a tightening in policy in the US, pre- and post-2009¹⁴



- ⁹ Policy Lags Are Real Inflation's Days Are Numbered, Forbes, 26 May 2023.
- ¹⁰ Beware of Time Lag in Monetary Policy, Institutional Investor, 6 March 2023.
- ¹¹ Transmission lags of monetary policy: a meta-analysis, International Journal of Central Banking, December 2013.
- ¹² Have Monetary Policies Failed?, American Economic Review, vol 62, 1972.
- ¹³ The Lag from Monetary Policy Actions to Inflation: Friedman Revisited, Bank of England. 2002.

expenditures price index (the Fed's favourite measure of inflation), peak effect is estimated to take place at the four-quarters mark, and its full effect eight quarters in.

¹⁴ Have Lags in Monetary Policy Transmission Shortened? Federal Reserve Bank of Kansas City, 21 December 2022.

The lag for the peak financial and inflation response to US monetary policy has shortened since 2009.

In the case of the transmission lag to financial markets, a proxy for the Fed funds rate that assesses the broader stance of monetary policy has shown to be substantially tighter than what the official Fed Funds rate would indicate since late 2021.15 In February of 2022 for example, the proxy had already risen 2 percentage points (ppt) before the FOMC had officially increased its target. On the inflation front, the peak response seems to have come down from 12 guarters in the pre-2009 period to eight guarters in the post-2009 period - albeit with a greater degree of uncertainty in the estimations.¹⁶

The fiscal and monetary policy mix revisited

Last year, we flagged a new interest rate regime in the making, with the ultra-low interest rate landscape of the 2010s set to disappear. In this new reality, the post-pandemic economy born of extraordinary fiscal and monetary rescue efforts has resurfaced the need to recalibrate the fiscal and monetary policy mix because in their recent form, they are pitted against one another.

The lower-for-longer interest rate environment of the 2010s reduced the relative debt service burden, which promoted public and private indebtedness and took it to today's historically high levels (e.g., the euro area public debt as a share of GDP grew 20 ppt from 2007 to 2019). Today's higher interest rates make debt more expensive, making debt sustainability a global concern; while, the inflation environment makes fiscal stimulus more incendiary.



High inflation is masking underlying fiscal accommodation

Policymakers run the risk of de-anchoring inflation expectations.

For now, high inflation is masking fiscal accommodation. As long as nominal GDP grows faster than the sovereign debt, debt-to-GDP ratios will continue to fall (see Figure 5). However, the eventual return to target inflation and a consequent normalisation of nominal GDP growth will require a similar fiscal alignment. An alternative could be to raise the inflation target or switching to a nominal GDP targeting framework. These would give debt-taking a bit more leeway as they would create a more inflation-tolerant environment. However, they could erode policymaking credibility as it could be perceived as a moving of the goalpost.

For now, remaining overly accommodative in fiscal spending and not firm enough in monetary tightening would further risk de-anchoring inflation expectations. On the fiscal front and over the long term, deficits require surpluses via tax hikes or less spending. On the monetary front and in the short term, given the transmission lag, central banks run the risk of wrongly assuming that the current level of interest rates guarantee a path towards sustained disinflation. In the case of the US, real rates for the next year are

¹⁵ Monetary Policy Stance Is Tighter than Federal Funds Rate, Federal Reserve Bank of San Francisco, 7 November 2022

¹⁶ Reserve Bank of Kansas City, December 2022, op cit.

policy have been acting against one another.

In their recent form, fiscal and monetary

Current interest rates make debt more expensive, and current inflation makes fiscal spending more incendiary.

Figure 5

expected to remain well below the peak real rates that prevailed prior to past recessions (see Table 2). A credible commitment to long-term goals with high enough real rates can help. Either lever will likely inflict pain to the economy sooner or later. Insurers' asset managers can expect elevated sovereign bond yield volatility as high uncertainty over the future path of monetary policy, growth and inflation prevails throughout the back end of the current cycle.

Table 2

Real interest rates in the US (%)

	2023				2024		Peak prior to recession		
	10	20	3QE	4QE	1QF	2QF	1989	2000	2007
Fed Funds rate	4.9	5.1	5.4	5.4	4.6	4.1			
Core CPI	5.6	4.8	4.0	3.5	2.6	2.3			
Real rate	-0.7	0.3	1.4	1.9	2.0	1.8	5.5	4.3	3.5
Real rate adjusted for r*	-1.8	-0.8	0.3	0.8	1.0	0.8	2.9	1.7	2.4

Note: r* is the real interest rate expected to prevail when the economy is operating at its full sustainable level. Assumptions obtained from the two-sided Laubach-Williams estimates from the Federal Reserve Bank of New York. Source: Swiss Re Institute

Trends in the global insurance markets

Persistent inflation remains the top risk for insurers. Economic slowdown will drag on the market, with total global premiums (non-life and life) forecast to grow at a below-trend 1.1% and 1.7% in real terms in 2023 and 2024, respectively. Even so, reflecting stirrings of growth, we estimate that premium volumes will total USD 7.1 trillion in 2023, a new high. And we expect insurers to prove resilient against any further financial instability like that experienced earlier this year, given very strong solvency ratios and balance sheets. Rate hardening in commercial and now also personal lines will support nominal premium growth in non-life, but higher claims on the back of rising wage and medical expense costs could weigh on sector profitability. Life insurance should benefit from a rise in pension, annuity and savings product sales. High interest rates will support industry profits via improved investment returns.

Stirred, and not shaken

Cyclical slowdown, high inflation and geopolitical uncertainties cloud the outlook for the Global insurance premiums will grow by an estimated 1.1% and 1.7% this year and insurance industry. That said, we expect industry results to be stronger this year and next than in 2022, when real premium growth was hit by rapid gains in global inflation rates. next, respectively, below trend. We estimate that global insurance premium volumes (non-life and life) will grow by 1.1% in 2023 and by 1.7% in 2024 in real terms, after a 1.1% decline in 2022 (see Figure 6). Non-life premiums were up just 0.5% in real terms last year, even with rate gains in commercial lines. The main offsetting factor was a decline in health insurance business. Life premiums contracted by 3.1% in real terms, with higher and persistent inflation eroding household disposable incomes and demand. Even so premium volumes will be 16% Still-high inflation will continue to weigh, keeping real growth in global premiums over higher this year than before the pandemic. 2023–24 below the 10-year average of 2.6% (2012–2021). Even so, with 3.7% average annual growth over the last four years, we estimate that volumes will total USD 7.1 trillion by the year end, a record high, 16% higher than at the end of 2019 before the onset of COVID-19. We also project improved profitability, with tailwinds rate hardening in P&C markets and higher interest rates. Current financial stability issues cast a shadow over the outlook, but most insurers have strong balance sheets, with high solvency ratios and

solid liquidity positions. If anything, we see insurers as volatility stabilisers.

Figure 6

Real premium growth, 2020-2024F, total, non-life and life



Source: Swiss Re Institute

The US, China and the UK are the world's

three largest insurance markets.

Ranking the world's insurance markets

The US is and remains the largest insurance market in the world, with total premiums of close to USD 3 trillion in 2022, according to sigma data. Its global market share rose from 40% to 44%, driven by strong premium growth in nominal terms (8.6%) and US dollar appreciation against virtually all major currencies. China is the second largest market with premium volumes of USD 698 billion. The UK moved up to third place last year (premiums of USD 363 billion, this total including premiums from Lloyd's), switching position with Japan, which slipped to fourth (see Table 3). The UK gained one ranking pace, even with a decline in premium volumes. France, Germany and South Korea

maintained their rankings, albeit losing premium market share as a result of negative growth and currency devaluations.

Table 3

The world's 20 largest insurance markets by nominal premium volumes, 2022 vs 2021

Rank	Market	Tota	al premium volumes (US	D bn)	Global ma	rket share
		2022	2021	% change	2022	2021
1	US	2 960	2 725	8.6%	43.7%	40.3%
2	China	698	696	0.2%	10.3%	10.3%
3	UK	363	374	-2.8%	5.4%	5.5%
4	Japan	338	398	-15.1%	5.0%	5.9%
5	France	261	293	-10.7%	3.9%	4.3%
6	Germany	242	272	-11.3%	3.6%	4.0%
7	South Korea	183	193	-5.3%	2.7%	2.9%
8	Canada	171	166	2.8%	2.5%	2.5%
9	Italy	160	192	-16.5%	2.4%	2.8%
10	India	131	123	6.5%	1.9%	1.8%
11	Taiwan	86	113	-23.8%	1.3%	1.7%
12	Netherlands	84	92	-9.2%	1.2%	1.4%
13	Brazil	76	63	20.7%	1.1%	0.9%
14	Australia	72	72	-0.7%	1.1%	1.1%
15	Hong Kong	69	73	-5.6%	1.0%	1.1%
16	Spain	68	73	-6.7%	1.0%	1.1%
17	Switzerland	56	58	-3.2%	0.8%	0.9%
18	Sweden	54	59	-8.5%	0.8%	0.9%
19	Singapore	47	45	3.9%	0.7%	0.7%
20	South Africa	46	50	-7.9%	0.7%	0.7%
	Top 20 markets	6 165	6 131	-0.5%	91.0%	90.7%
	World	6 782	6 765	0.3%		

Source: Swiss Re Institute

India is on course to be the sixth largest market in the world by 2032.

Yet, there are large protection gaps in India; many families cannot afford private insurance cover. Canada, India and most notably Brazil increased their shares of global premiums last year. The share of the five largest markets rose from 66.4% to 68.2%. Asian markets have eight seats in our Top 20 rankings, with a 24% market share in 2022. India is one of the fastest growing insurance markets in the world, and we forecast that it will be the sixth largest by 2032 ahead of Germany, Canada and South Korea. Our outlook is based on expectations of strong economic growth, rising levels of disposable income, India's young population, increased risk awareness and also digital penetration, and regulatory developments.¹⁷

The life market in India is more developed than non-life. The penetration of life insurance was 3.0% in 2022, almost twice the emerging market and slightly above the global average. However, as per Swiss Re Institute estimates, the mortality resilience index in India was still low in 2021, with a household asset and insurance coverage shortfall of around 91%. Another issue in India's market is inequality of coverage. A great proportion of the country's burgeoning population works in the informal sector and many cannot afford private insurance. India's so-called "missing middle" number around 400 million or 30% of the population. Household income levels are characterised as being "too poor to be rich, and too rich to be poor". The missing middle are not poor enough to be eligible for the state health insurance scheme, but also cannot afford private cover. Out of pocket expenses on health can be high and force families into poverty. A separate Swiss Re Institute study found that lack of affordability is a main reason for lack on inclusivity of India's Life and Health insurance market. ¹⁸ This can be a common theme among emerging markets. The same study found that in Brazil and most prominently South Africa, lack of affordability is a main driver of lack of insurance market inclusivity.

¹⁷ India's insurance market: poised for rapid growth, Swiss Re Institute, January 2023.

¹⁸ The Life and Health Insurance Inclusion Radar, Swiss Re Institute, 14 March 2023.

Key developments

Non-life insurance

Non-life premiums grew 0.5% year-on-year in real terms in 2022, well below the previous 10-year average of 3.6%. The outcome was mainly driven by weak pricing in personal lines and high inflation. We forecast an improvement to 1.4% premium growth this year. This will be largely based on rate hardening in mostly personal and also in some commercial lines. These positives will likely be offset by a decline in health premium volumes (estimated to fall 0.6%) mainly due to the end of the pandemic healthcare support policies in the US.

...and further slow market strengthening next year.

We forecast 1.4% growth in non-life global

premiums in 2023...

We expect the gradual improvement will continue in 2024, with non-life premiums up an estimated 1.8% in real terms from the year before. We anticipate growth in both the advanced and emerging markets to remain below the 2012–2021 average, and that health lines will continue to underperform. Profitability should improve in 2023–24, supported by better pricing, higher interest rates and reduced claims severity as inflation rates retreat from recent highs.



Over the longer-term, the personal motor

market risk pool will shrink...

Taking a longer-term view, the non-life market is set to undergo fundamental structural shifts. For example, a likely shrinking of the personal motor risk pool, given the move to autonomous vehicles and diminishing use of private cars. One estimate is that premiums in the US personal motor market could shrink by USD 140–160 billion by 2030, on account of improvements in car safety and also as consumers move to more efficient and convenient shared-transportation modes (eg, driverless, networked shared minibuses).¹⁹ And while the personal motor sector contacts, the market share of lines of business such as product liability and specialised forms of cyber insurance will likely grow. Other business areas, such as credit and surety, could also become main engines of growth for the non-life sector.

...and other lines of business will become main drivers of non-life sector growth.

There are signs of life in personal line pricing...

...despite political pressures on insurance prices in some markets.

Commercial pricing is likely to remain relatively hard.

Credit and surety business has performed well over the last 20 years, with annual premiums up 5.1% in nominal terms on average, slightly more than the growth in total P&C premiums over the same period of time (4.4%). One reason is the segment's strong correlation with the economic cycle; it is not exposed to the same mark-to-market volatilities that, for instance, property insurance is vulnerable to. Credit insurance has benefited from a low level of claims during the pandemic as fiscal support helped limit bankruptcies. We expect premiums to continue to grow in 2023, although economic slowdown, higher interest rates and ongoing inflation will likely create headwinds and lead to more insolvencies. Surety could also be impacted by higher claims and lower construction sector activity. Longer-term, however, investments in big infrastructure projects in advanced and emerging markets will support demand.

P&C pricing outlook

Profitability in personal lines, in particular motor own-damage insurance, has been pressured by rising costs of repair and replacement, and also high claims frequency as mobility patterns returned to normal after the pandemic.²⁰ Personal line pricing lagged claims growth in 2021–22, but latest data show signs of improvement. In the UK for example, *confused.com* reported a 20% gain in motor insurance policies in the first quarter of 2023 from the same year-earlier period.²¹ And in the euro area, Eurostat reported that the price of motor insurance was up 2% in the first four months of 2023, and that of personal property insurance rose 3.5% over the same period relative to the year before.²² Pricing in personal lines are expected to continue to rise during the rest of the year, although regulatory and competitive pressures will weigh to a degree.

In France, for example, insurers have agreed to keep growth in personal insurance pricing below the pace of headline inflation in 2023. This follows pressure from the government to protect the purchasing power of consumers.²³ We also see political pressure on prices in Latin America, with interventionist policies aiming to keep car ownership affordable. For example, last year Colombia's government mandated a 50% cut in the price of the compulsory motor third-party liability (MTPL) insurance cover for some vehicles,²⁴ causing surge in demand. COVID-19 impacted living standards in Latin America, and such policies may be a political response. Another example of political pressure, but in this case not pricing related, is that in Argentina, since 2014 insurers have been required to allocate 8–18% of their asset portfolio to potentially risky local infrastructure and SME projects.²⁵

To date, commercial insurance pricing outperformed that of personal lines business and rose again in the first quarter of this year, the 22nd consecutive quarter of rate gains. Commercial property pricing accelerated to 10% year-on-year growth (see Figure 8) fuelled by capacity shortages, high catastrophe activity and the impact of inflation on losses. In casualty, elevated wage, medical and social inflation²⁶ pressures will likely support continued, but more muted rate hardening in the near and medium terms. Prices in Financial and Professional Liability (FinPro) have softened recently after strong gains from 2019 to the middle of 2022.

- ²² Data are available on *Eurostat*.
- ²³ Insurers promise that their rates will not increase faster than prices, News in France, September 2022
- ²⁴ Colombia reduces the cost of SOAT for low-cylinder motorcycles and other vehicles by 50%, Rival Times, 14 December 2022
- ²⁵ Argentina's new Inciso K requirements to hit insurers' liquidity and credit quality, Moody's, February 2014.
- ²⁶ Social inflation unpredictable, costly and on the rise, Swiss Re, 8 September 2022.

²⁰ See recent analysis on this topic in our April 2023 US P&C Outlook and in sigma 6/2022, section Motor in focus: a rebalancing after COVID-19 disruption. Swiss Re Institute, 17 November 2022.

²¹ Car insurance price index – Q1 2023, confused.com



Premium outlook: pricing boosts P&C premiums, health growth softens

Personal and commercial premium growth diverged in 2022 but we expect that will end this year. Global personal gross premiums written, which account for 25% of total nonlife volumes, grew by 0.5% in real terms, mainly due to weak pricing. Global supply shortages dampened new car sales, meaning that a limited number of new policies were underwritten. We estimate 3.0% growth in personal line premiums in 2023, in line with the 2012–2021 annual average, as prices rise and inflation shifts from goods to services. Premiums in commercial lines (26% of non-life) grew by 2.6% in real terms in 2022, and we estimate a slight improvement to 3% in 2023, just below the 10-year annual average. The main driver here too will be rising rates.

Motor insurance: we estimate a rebound to 2.8% growth in global premiums in real terms in 2023 for this second largest non-life line of business (21% of premiums). The driver will be rate hardening. This after three consecutive years of decline (premium volumes down 0.2% in 2022). For 2024, our growth forecast is 2.2%, based on improved economic conditions and the release of pent-up demand for new cars as global supply chain disruptions ease (see *Motor in focus: a rebalancing act after COVID-19 disruptions*).

In **property** (14% of total volumes), the long period of hard market conditions that started in 2018 should continue through this year. Long-run investments into infrastructure needed for the energy transition, rebuilding aging structures and providing greener buildings will also be supportive.^{27,28} We estimate that global premiums will grow by 4.2% in real terms in 2023 and by 2.6% in 2024.

Liability insurance premiums increased by only 1.6% in real terms in 2022 after growing by 12.3% in 2021. Growth was soft in all regions except Asia. This marked a normalisation after a significant repricing in 2020–21. With price changes likely to remain small, we estimate real growth of 2.1% in 2023. There is an upside risk to this forecast: the elevated wage and medical expenditure growth anticipated in the near to mid-term could translate into more rate hardening. Social inflation could also contribute. To date, social inflation has been a theme in the US, Australia and the UK. It has been much less an issue for continental Europe, where there has been a trend for higher indemnities, but one that is weaker and more stable. There have been fears of more class actions but many European jurisdictions that have so far resisted legal mechanisms.²⁹

- ²⁸ Fact Sheet: Biden-Harris Administration Kicks off Infrastructure Week by Highlighting Tremendous Progress Rebuilding America's Infrastructure 18 Months In, The White House, 12 May 2023
- ²⁹ A collective effort: European class action (finally) on the way, or is it? DFW, 13 March 2023.

Commercial line premium volumes grew faster than personal 2022; we expect convergence this year.

Rate hardening should support motor insurance market growth.

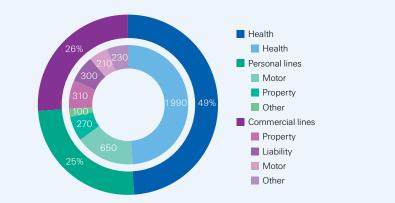
Hard market conditions in property are set to continue.

Liability premium volumes grew by 1.6% last year; we estimate a 2.1% rise in 2023.

²⁷ sigma 3/2020: Power up: investing in infrastructure to drive sustainable growth in emerging markets, Swiss Re Institute, 17 June 2020

Figure 9

Global non-life premiums market share and volumes in 2022, by line of business (USD billion)



Note: The allocation of lines of business is harmonised, to allow regional comparisons. Accident & health business is allocated to non-life insurance, independent of whether it is written by life, non-life or composite insurers. Source: Swiss Re Institute

Health premiums will likely contract in 2023 as post-pandemic normalisation continues.

Motor claims frequency and severity are

Premium income in accident and property

damage has lagged claims trends.

rapidly increasing

The remainder of global non-life premiums come from **health insurance** (49%). Premiums were flat globally in 2022, as the demand sparked by increased risk awareness as a result of the pandemic waned. In the US, the largest market in the world (80% share of global premiums), pandemic-era healthcare support policies will end this year.³⁰ We see that as triggering a 1.4% fall in US health premiums in real terms in 2023. We see no change in advanced Europe and modest growth in most other regions outside of emerging Asia. In China, we estimate premiums will grow by 8.9% in 2023, supported by government-backed medical covers such as Huiminbao³¹ and increased digitalisation. We estimate that global medex premiums will fall by 0.6% in 2023, with a return to 0.6% growth in 2024, well down on 2012–2012 annual average of 4.5%.

Motor in focus: a rebalancing act after COVID-19 disruption

There was a strong increase in claims frequency and severity in motor insurance in 2022, in major markets. Premium income, however, remained largely stable. Windfall gains due to reduced traffic from COVID-19 lockdowns in 2020 turned into windfall losses from elevated inflation. This affected mainly motor-own damage claims.

Figure 10 shows premium and claims trends in the US, the UK and Germany. Premium income has lagged claim trends. In the UK, claims frequency in 2022 was still 13% below pre-pandemic levels. Claims severity was much stronger, however. For accident and property damage it was more than 30% higher in 2022 than pre-COVID-19. Bodily injury claims were only 9% higher, reflecting a much lower health care cost index as opposed to replacement parts. Premiums per policy further increased in the first quarter of 2023, further approaching pre-pandemic levels. But this may be insufficient while, in a persistent inflationary environment, claims frequency and severity continue to rise. Without a similar rise in premium rates, the outlook will be challenging.

³¹ Huiminbao is a low-cost, inclusive supplementary medical insurance plan aiming to encourage enrollment of city dwellers.

³⁰ Unwinding the Medicaid Continuous Enrollment Provision, ASPE, August 2022.

Figure 10



Rising claims and sluggish premiums in Germany.

In the US, personal auto faced its worst result in over 25 years...

...but the worst is over; rate momentum should support combined ratios in 2023–24.

We expect P&C sector ROE to improve notably this year.

In Germany, motor insurance claims picked up 11% for liability covers in 2022, and by 14% for own-damage. Claims frequency in liability remained around 15% below prepandemic levels, and claims paid were just slightly above. For own-damage claims, frequency returned to pre COVID-19 levels, while claim amounts were 22% higher. Premium income has remained sluggish over the last few years. It grew slightly in nominal terms (and declined 10% in real terms) between 2019 and 2022, based on a slightly growing exposure base.

In the US, personal motor posted its worst result in over 25 years in 2022. The net combined ratio exceeded 112% compared to a 25-year average of 101%. Commercial auto fared slightly better but experienced 7 ppt of loss ratio deterioration, with the combined ratio above 105%. Severity was the main driver, but frequency increased as well as miles traveled and work-life patterns normalised. The surge in used car prices was a driver of claims inflation, with over 1 million cars written off as total losses per year. Higher repair costs and wages added to physical damage claims; and medical and social inflation contributed to higher liability severities. The normalisation of driving habits amidst increased prevalence of remote work affected accident frequency as well as severity. 2021 had the highest number of traffic fatalities of any year since 2006, and 2022 was close behind. Less congestion during traditional commute times has contributed to faster driving overall and more severe accidents,³² and the claims impact has become increasingly evident as courts reopen.

Adverse results continued into the first quarter of this year, with our data sources indicating that US motor insurers reported a direct loss ratio of 76% compared to a longrun average of 65%. However, the worst is likely over. The loss ratio is down from 80% in 2022 with rate increases taking effect and used car prices beginning to decline. Personal motor premiums rose by more than 12% in the first quarter from a year earlier, and we anticipate rate hardening momentum will continue through 2023. We forecast strong combined ratio improvement this year and next, and a return to average (2010–2019) levels of profitability by 2024.

Profitability: optimism for investment and underwriting results

P&C sector profitability is likely to improve notably in 2023. Contributing factors will include rate hardening in personal lines business; still firm prices in commercial insurance; higher interest rates leading to improved investment returns; and easing (slowly), inflation. Slow GDP growth is a headwind and real premium growth may be below trend in many markets, but we nevertheless estimate that as a measure of

³² Traffic Safety Impact of the COVID-19 Pandemic: Fatal Crashes Relative to Pre-Pandemic Trends, United States, May-December 2020, AAA Foundation for Traffic Safety, December 2022.

The insurance cost of capital is expected to

...meaning that in most large markets,

insurers will need to maintain underwriting

The stock market performance of non-life insurers has been stable so far this year.

Investment returns are likely near their

rise in parallel with ROE...

discipline.

profitability, return on equity (ROE) will improve to 7.8% in 2023 from 3.4% last year, and strengthen to 9.3% in 2024.³³

All told, the improvement has to be weighed against parallel increases in returns desired by investors. Higher risk premiums make investors more risk averse and they expect better rewards. Also, rising risk-free rates reduce the attractiveness of the insurance sector as an investment proposition. Taken together, this led to an increase in the global non-life cost of capital (CoC) for insurers of 2.5 ppt to about 11% between 2020 and 2022. We expect it to remain broadly stable in 2023.

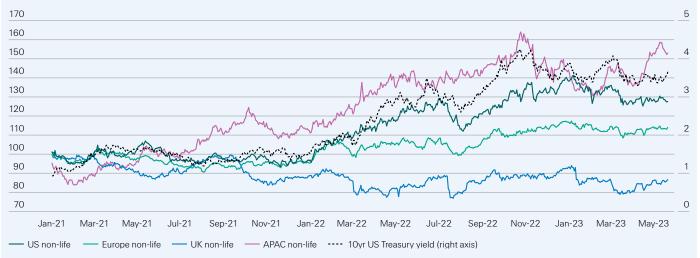
Assuming that insurers aim to match their targeted ROE with the CoC, the above changes translate into a profitability gap of around 3 ppt in 2023, down from 7% in 2022. Among our sample of eight large insurance markets, Canada and Australia were the only two countries in which insurers exceeded their ROE targets in 2022. We expect continued outperformance but with reversion toward target. Meanwhile, we see significant ROE improvement for insurers in the US, the UK, Germany, France and Italy. Those markets benefit from the tailwinds previously outlined – higher interest rates and better pricing, in particular. The gap in Japan was already lower than in most other markets in 2022, and we do not see a significant narrowing in 2023. The global profitability level can therefore still be seen as too low, supporting a call for further underwriting discipline, including possibly still- higher rates and tighter coverage.

Despite the encouraging financial outlook, the stock market performance of non-life insurers has been broadly stable since the start of 2023. Comparing non-life insurers with the broader market shows that sector stock price ratios have trended sideways. This likely reflects the losses seen in motor earlier in 2023, changing COVID-19 policy for US health insurance, and also large natural catastrophe events early this year.³⁴ The currently near flat 10-year US Treasury yield also highlights that investment returns are close to peak (see Figure 11).

Figure 11

peak.

Non-life insurance sector stock price index performance relative to main stock indices: Dec 2020 = 100 (LHS); US 10-year Treasury yield, % (RHS)



Indices: US = Dow Jones US Non-life Insurance Index, Europe = STOXX Europe Non-life Insurance Index, UK = FTSE 350 Non-life Insurance Index, APAC = BI APAC Non-life Insurance Valuation Peers, UST10 corresponds to the market yield on U.S. 10-year Treasury securities. Each regional index is divided by the corresponding stock market index to obtain the relative valuation.

Source: Bloomberg, Fred St. Louis Fed, Swiss Re Institute

- ³³ This is based on a sample of eight large, advanced economies (Australia, Canada, France, Germany, Italy, Japan, UK and US). Realized investment results are considered in the modelled income statement but unrealized ones only appear in the balance sheet.
- ³⁴ That includes the Turkey-Syria earthquake, flooding in New Zealand and California as well as storms in the US. See Natural Catastrophe Report: Q1 2023, Gallagher Re, April 2023 for an early assessment.

Financial market stresses can impact non-life insurers via reduced capital and loss-making realised investments	Non-life insurers not a source of systemic financial risk Recent stress in the global financial system – largely caused by high and rising interest rates – has created market volatility, notably in the banking sector. Financial market woes can impact non-life insurers (in particular those with reduced capital interest rate effects, depending on accounting regime) through realised reinvestment returns and possible asset write-offs.
but non-life insurers are by construction more resilient than most other financial services.	However. we see non-life insurance as one sector of financial services that is more insulated from interest rate and market liquidity risks. Unlike banks and asset managers, non-life insurers cannot experience panic withdrawals or early redemptions, as liabilities are not callable by clients. Unrealised losses from rising interest rates are less problematic since assets and liabilities are mostly duration matched. Therefore, bonds can be held to maturity and benefit from the so-called pull-to-par effect, meaning the notional values of assets and liabilities converge as they come due. Further, non-life insurers' asset leverage is typically lower than other categories of financial firms and most insurers have strong balance sheets with high solvency ratios and liquidity. The exposure of non-life insurers to risky assets which experienced financial stress in early 2023 is also fairly limited.
Moreover, the exposure of non-life insurers to interest rate sensitive sectors like commercial real estate is limited.	Apart from bonds, there have also been concerns about the exposure of insurers to regional US banks, commercial real estate (CRE) and residential mortgages. Some insurers have a consequent share of their investment portfolio in CRE. But when looking at non-life, sector exposure is moderate. In the fourth quarter of 2022, only about 1% of assets of non-life firms in Europe covered by the European Insurance and Occupational Pensions Authority (EIOPA) were subordinated bonds. ³⁵ Around 7% of assets were held in mortgage or CRE. In the US, insurers' exposure to mortgages or CRE is similar that in Europe, but mortgages carry more weight. ³⁶ The limited exposures imply that insurers could absorb sizeable mark-downs or write-offs in CRE, mortgages and subordinated bonds with limited consequence. And hence, we do not consider non-life insurers to be a source of systemic risk.
Better insurance pricing and slightly slower inflation should improve sector underwriting results.	We expect a meaningful improvement in the P&C underwriting result in 2023, with a combined ratio of 97%, vs 99% in 2022 and in line with the long-term average. The key drivers are rate hardening, rising values of insured assets boosting premium income, and an eventual easing in core inflation dampening claims growth. As the direction of travel in these factors persists, underwriting results are set to improve in 2024 also.
The transition from goods to services inflation will likely pressure certain lines.	The impact of inflation on claims growth should ease slightly in 2023 from the highs of 2022, but remain elevated as specific sectors see further price rises. For example, we forecast that construction costs in the US, relevant for property insurance, will rise by more than 11% in 2023 following a 17.5% increase in 2022. The transition from goods inflation to services inflation is likely to be a key story for 2023 and 2024 for many lines of business. It should see motor and property results improve while putting earnings in liability and accident lines under renewed pressure (see Table 4).

Table 4

Impact of inflationary shock by line of P&C business

	Current state	Persistence	Reason
Property	0	0	High construction prices, downward trend
Motor, physical damage	0	0	High prices for used and new cars, bodywork. Some components now easing
Motor, bodily injury	0	0	High healthcare spending, social inflation, rising wages
Accidents	0	0	High healthcare spending, social inflation, rising wages
Liability	0	0	High healthcare spending, social inflation (with high weight), rising wages

Forecasts for price categories relevant for each lines (eg, construction prices for property). Source: Swiss Re Institute

³⁵ This is based on fourth-quarter 2022 data accessible at *EIOPA's website*.
 ³⁶ Year-end 2022 Capital markets special report, NAIC

The duration of the hard market will depend on an array of factors.

Most of the current step-up in prices can be attributed to uncertainty around claims and high inflation. But other economic drivers provide additional fuel to the hard market. The duration of the hard market will depend on the continued presence of these factors (see Table 5).

Table 5

Economic drivers of the pricing cycle

	Current trend	Current impact on pricing power	Medium-term trend	Future impact on pricing power	Comment
Underwriting profitability of new business	improving	Ы	high	\checkmark	peak in 24–25?
Claims uncertainty	elevated: inflation surge & model uncertainties	\uparrow	disinflation, u/w uncertainties continue	7	structurally higher
Investment yields	up for new business, re-pricing of yield curve	Ы	re-set at higher level, positive term premium	\checkmark	multi-year transition of average yields
Cat losses	recalibration to higher trend	\uparrow	continued real exposure growth at 5–7% CAGR	7	structurally higher
Overall balance of trend factors		\uparrow		Ы	turning point in 24–25?

Source: Swiss Re Institute

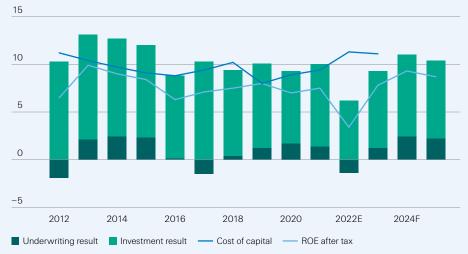
While most key insurance countries will improve, Australia and Canada performance will ease to more normal levels. Regionally, insurers in Australia and Canada reported strong underwriting results in 2022, and we see a reversion to mean performance in the coming years. In the US, a historically bad year for personal motor contributed to a negative industry result, but we anticipate rapid improvement by the second half of 2023 as auto rate rise finally outpace claims trends.³⁷ The large advanced European markets and Japan will likely also see marked gains. China is not part of our sample, but we estimate underwriting profits were strong in 2022 due to low natural catastrophe activity and lower motor claims during the pandemic. We anticipate profits may reduce to a normalised level in 2023.

The industry investment result should climb to an estimated 8.1% of NPE in 2023 and 8.6% in 2024.

High interest rates will strengthen investment results in P&C globally as higher yields trickle through into asset portfolios. For 2023, we estimate that the industry investment result will move up to 8.1% of net premiums earned (NPE) (6.2% in 2022) before a further gain in 2024 to 8.6%. While investment results as a share of NPE will continue to make up the bulk of the operating income, their contribution to the it will soften in 2023–24.

Figure 12

Profitability of the eight major non-life markets, 2007–2022F, underwriting and investment results are in % of NPE, ROE and CoC are in % of equity

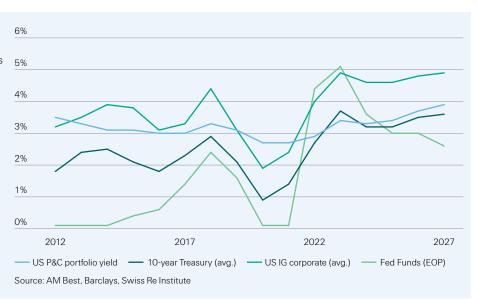


Note: Aggregate of eight major advanced markets (Australia, Canada, France, Germany, Italy, Japan, UK and US). Source: Swiss Re Institute US P&C investment results should rise steadily each year to 2027.

US P&C investment results are benefiting from higher reinvestment rates in bond portfolios, although these accrue gradually, with a weighted average time to maturity is six years. We project that the portfolio yield (excluding realised capital gains) will rise from 2.9% in 2022 to 3.4% in 2023, and anticipate a steady uptick to 2027 (see Figure 13).

Figure 13

Yield on US P&C insurer portfolios vs market yields for cash, corporate and 10-year Treasuries



Japan sees slightly different investment trends to other markets, but better returns.

Industry reserves buffers are significant but uncertainty is heightened and releases have slowed...

...due to factors including economic and social inflation, and delayed settlements. Liability lines likely to be most impacted. In **Japan**, insurer investment yields are higher than still-accommodative Bank of Japan policy rates suggest. This is because insurers in the country, in search of yield typically allocate about 30% of their investments to foreign securities and less than 15% in JGBs. We expect further gradual improvement in returns.

Reserving: more uncertainty and pressure around adequacy

Reserve adequacy has emerged as a key risk for insurers in the current economic environment. A prolonged period of favourable development is waning and being stressed by inflation. Excluding workers' compensation, US industry reserve development was already unfavourable in 2021 and 2022. Industry analysts generally view industry reserve buffers as elevated but acknowledge a range of uncertainties, which are heightened as inflation persists.

Court backlogs, the inflation shock, and changing consumer, transportation and workplace behaviours magnify the uncertainty inherent in any reserve analysis. Delayed settlements can be a larger problem during inflationary episodes, linking economic and social inflation, and pushing jury verdicts and claim settlements higher. The rotation from goods to services inflation will impact liability exposures in particular, with an outsized impact on reserves. In the US, liability lines accounted for 52% of industry premiums in 2022 but 87% of year-end reserves. Inadequate reserving in general liability lines has been offset by favourable development in workers' compensation over the several years (see Figure 14). Insurers have responded with a historically large cushion for incurred but not reported claims, primarily for the 2020 and 2021 accident years in response to COVID-19 claim risk. With uncertainty high, insurers may reduce risk appetite and new business capacity, which may in turn sustain current hard market conditions.

Figure 14

Changes in US P&C reserves (positive implies strengthening, LHS); total reserve developments (RHS)



There are also pressures on reserves in Europe.

Uncertainty and pressures from inflation are felt outside the US also. In some key European markets like the UK, the historical trend of significant reserve releases has continued in 2021–22, but to a slightly lesser degree than before.

We expect global life premiums to turn positive this year, with a below-trend real growth of 0.7%...

...and that performance will improve further in 2024.

Life insurance

Key developments

We estimate that global life premiums will grow by a below-trend 0.7% in real terms (4.6% nominal) in 2023, and that premium volumes will rise to USD 2.9 trillion by the year-end. This after the market contracted 3.1% in 2022, with high inflation eroding consumer savings and nominal premium growth. We see premiums rising by 1.5% in 2024. The start and rapid acceleration of the interest rate hiking cycle last year has boosted sector profitability. And this year, rising wages and interest rates in advanced markets are creating favourable market and profitability tailwinds. We also see the emergence of new demand pools in Hong Kong, a result of China's reopening. The higher interest rate environment is creating new tailwinds for the annuity business and pension risk transfer deals (in the US, UK), which benefit from higher crediting rates and funding ratios. We expect these factors to offset pressures from still elevated inflation rates. Credit and lapse risks are so far contained, but they do represent a downside risk to sector profitability.

This year's premium growth forecast is below the 1.4% annual average of the 2012–2021 period and is based on anticipation of slowdown across advanced markets. High base effects from 2022 in North America, still-elevated inflation in western Europe and regulatory headwinds in advanced APAC underpin our forecast.³⁸ Offsetting factors include nominal wage growth, rising interest rates, and the growing size of pension de-risking deals in both the US and the UK. Emerging market premiums will grow by an estimated 4.2% in 2023, below the historical annual average of 6%, with strengthening to 4.8% in 2024. Rising aggregate nominal incomes are supporting saving and protection business in emerging markets.



³⁸ Since 2019, Taiwan's insurance supervisor is tightening its regulatory oversight on saving products sales, capital strength and ALM by insurers ahead of the IFRS 17 transition. The objective is to limit the sale of high-yielding guaranteed products in favour of protection products. This came in response to rising sales of high-yielding guaranteed products in earlier years deemed as risky from an ALM perspective and vulnerable to FX risks, especially for small industry players. See *EDITORIAL: Weaning Taiwan off savings policies*, Taipei Times, 3 June 2019.

The share of risk premiums of the global life market should stabilise at an estimated 23% in 2028, as pandemic-driven risk awareness fades.

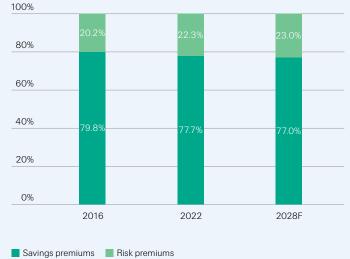
Premium outlook: the share of risk premiums should stabilise

Savings products premiums should grow by 0.7%, with below average (negative) growth across advanced markets. We project 4.3% growth in savings premiums in the emerging markets, with most momentum coming from emerging Asia. We forecast that the share of risk business in the global life insurance sector to stabilise at 23% by 2028, up from 22.3% in 2022. Global risk premiums will grow by an estimated 1.7% in 2023, below the long-term trend (CAGR 2011–21: 4.2%). Protection business is slowing in western Europe and North America, as pandemic-driven risk awareness gradually fades away.³⁹ In emerging markets, we estimate 4% growth in protection business this year. Above-average growth in most emerging regions will likely be offset by slowdown in China, where risk business peaked in 2022. Global medium-term demand for life products remains solidly anchored with a need for both life protection and retirement incomes as populations age.

Figure 16

(LHS) Global L&H market by risk and savings products' premiums (USD billon) and growth (%, right); (RHS) share of savings, risk premiums (%)





The profit outlook for life insurers is positive.

Recent financial systems instabilities weighed on life insurers in the US and UK in particular.

Life sector profitability outlook

The 2023 profitability outlook for the life insurance sector is positive, even if overcast by short-term financial system instability, as reflected in sectoral stock price index ratios (see Figure 17). In 2022, the relative valuations of US life insurers improved, following the US 10-year Treasury yield pattern, the expectation being rising reinvestment yields from maturing bonds. In Europe and the UK, relative valuations started to increase as the interest rate hiking cycle started in earnest in the second half of 2022. Asia's performance remained flat in 2022, reflecting residual COVID-related pay-outs.

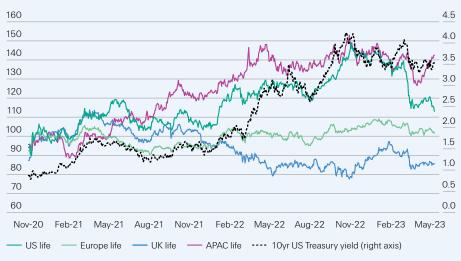
The banking crisis in March 2023 accentuated credit and liquidity risks in financial markets, particularly related to commercial real estate. This weighed on the valuations of life insurers' in the US and the UK in particular, as they have large exposure to corporate credit, loans and illiquid assets.⁴⁰ The prospect of reinvestment yields close to peak given the interest rate hiking cycle may soon come to an end, and a very hard non-life market further have weighed on the relative valuations of life insurers in the US. The prospect of a yield-curve-control exit in Japan would terminate multi-years of negative interest rates, prop up reinvestment yields and reset life insurers valuation in advanced Asia-Pacific.

³⁹ We estimate that Advanced APAC should grow by an above-average 2.6%, as Hong Kong is capturing renewed demand from Chinese consumers.

⁴⁰ Life insurers' exposure to real estate and mortgages in the US stands close to 14% (8% in Europe).

Figure 17

Life insurance sector stock price index performance relative to main stock indices: December 2020 = 100 (LHS); US 10-year Treasury yield, (%, RHS)



Note: indices: US = Dow Jones US Life Insurance Index, Europe = STOXX Europe Life Insurance Index, UK = FTSE 350 Life Insurance Index, APAC = BI APAC Life Insurance Valuation Peers. Each regional indices is divided by the corresponding stock market index to obtain the relative valuation. UST10 corresponds to the market yield on U.S. 10-year treasury securities maturities. Source: Bloomberg, Fred St. Louis Fed, Swiss Re Institute estimates

Major life markets: improved operating profitability in 2022/2341

Our life profitability model estimates that the average return on operating revenues for primary life insurers in eight major life markets covered improved to 6% in 2022, and that it will rise to 8.5% in 2023. Investment income improved to above pre-pandemic levels last year. This contributes to higher returns on investment (ROI), which rose by 20 basis points (bp) to 3.1% in 2022. We estimate that the aggregate ROI in said markets will rise to 3.2% in 2023 due to higher yields on fixed-income investments and reinvestments (see Figure 18).



Source: Swiss Re Institute

⁴¹ Based on the life profitability model developed by the Swiss Re Institute to forecast operating investment profitability trends. The eight major life insurance markets covered (US, Canada, UK, Germany, Italy, France, Japan, and Australia) are referred to as "major life markets" in this report. Life insurance premiums written in these eight markets represents close to three-fifths of global life premiums and around three-fourths of life premiums in advanced markets.



Life insurance operating and investment results,

Figure 18

G8 markets (USD billion)

We estimate that operating revenues in

Four factors underpinning profitability trends.

Life insurers are resilient to financial market

instabilities

Four factors should be considered in the context of global life sector profitability:

- Continuing improvement in investment income as fixed-income portfolios gradually roll into higher yields in all major markets. However, peak reinvestment yields are contingent on interest rate trajectories, and thus recession risks.
- Normalising COVID-19 claims: diminishing pandemic-related claims will likely support operating income growth.
- Attractive pension de-risking deals and annuities: de-risking affordability improved in the US and the UK as pension schemes have high funding levels.⁴² Higher interest rates and larger spreads also benefit crediting rates for new fixed annuities, while larger spreads on in-force books improve margins.
- Accounting impact: implementation of IFRS17 since 2023 is likely to reset key profitability metrics, with the Contractual Service Margin (CSM) becoming a forward-looking indicator of future operating profit.⁴³ Joint adoption with IFRS 9, the accounting standard governing the asset side of the balance sheet, provides an optimal tool for asset-liability valuations alignments. Over time, reported earnings volatility should stabilise under the new standards and become more transparent.

Financial stability risks contained, so far

The volatility triggered by rapid interest rate hikes has exposed systemic financial stability risks, with potential ramifications for the life insurance industry. So far effects have been limited given sound capitalisations, solid liquidity positions and punctual regulatory interventions, reinforcing the role of life insurers (long-term asset holders) as volatility stabilisers rather than multipliers. Yet, three potential risks on the radar are:

1. Credit risks: credit quality deterioration is a tail risk for the industry. Market concerns have mounted on asset exposures to commercial real estate (CRE) and residential mortgages. In the US, insurers face less immediate pressure given a larger weight towards higher-quality CRE mortgages and securities.⁴⁴ Total life sector exposure to real estate and mortgages in the US stands close to 14%, against 8% in Europe (Figure 19) where the share of subordinated bonds is only 1%. Insurers could thus withstand sizeable mark-downs or write-offs in CRE, mortgage and subordinated bonds. Yet, the risk of broad-based credit downgrades would weigh on solvency requirements and increase unrealised losses.⁴⁵ We see adverse credit developments as still relatively contained in our baseline economic outlook.

- ⁴² Global demand for pension risk transfer (PRT) deals is growing as rising interest rates and widening credit spreads reduce pension deficits and allow more funds to consider de-risking.
- ⁴³ For instance, L&G estimated an initial reduction in operating profit due to the deferral of new business profits and assumption reviews in the range of 20–25%, at IFRS17 implementation. Source: *An introduction to IFRS17*, L&G, November 2022. Likewise, restated 2022 earnings under the new standard for a selection of European composite insurers shows a mixed impact ranging from –24.3% to +54.7%, notably due to the new accounting treatments of reserves and reinsurance profit. Source: *Opening the Lid on Insurers New Accounting Standards*,, Bloomberg Intelligence, June 2023.
- ⁴⁴ Economic Insights: US commercial real estate expecting prolonged challenges, Swiss Re Institute, 17 April 2021.
- ⁴⁵ Silicon Valley Bank Collapse Highlights Critical Lessons for the Insurance Industry, AM Best, March 2023.

Figure 19 Asset exposure of euro area life insurers by category, fourth quarter 2022 Non-CRE corporate bonds and equity, cash and others Government bonds Commercial real estate Mortgages Subordinated bonds Source: EIOPA 2. Liquidity risks: Liquidity positions remain solid. Insurers face lower risks of runs on assets and limited industry interlinkages than compared to banks, as assets are generally held to maturity. Yet, the life sector's exposure to illiquid and riskier assets is a dangerous legacy of the low-interest rate environment.⁴⁶ Credit downgrades on securities or real estate market downturns could trigger new capital charges and potential loss positions for insurers exposed to these asset classes.⁴⁷ Whether these loss positions materialise depends on an insurer's liquidity position and lapse experience. 3. Lapse risks: surrenders have started to increase in some markets but overall, lapse risks remain contained and have not reached levels that would require sales of bonds and the realisation of capital losses to meet redemptions.⁴⁸ Regulatory frameworks allowing for supervisory interventions, insurance products differentiation and transfer of risks through reinsurance solutions are risk mitigators here. In the US, annuity withdrawal rates are trending slightly higher in 2023 but are also In North America, lapses are in line with reflected into new sales.⁴⁹ According to the earning calls of some US life insurers, pricing expectations.

In Europe, there are disincentives to prevent lapses

In the US, annuity withdrawal rates are trending slightly higher in 2023 but are also reflected into new sales.⁴⁹ According to the earning calls of some US life insurers, surrender rates are ticking up marginally but are in line with long-term actuarial assumptions. Built-in surrender charges combined to market-value adjustments provisions for a majority of the life portfolio provide structural protection against early withdrawals. Further, life insurers tend to gradually back annuity contracts close to termination with shorter duration assets, a natural hedge under stable credit quality conditions. So far, annuity surrenders activity in the US is seen as stable and predictable.

In Europe, life insurers' capitalisation and liquidity profiles remain solid. Regulatory frameworks allow for interventions by insurance supervisors to prevent policy lapses in our main coverage markets. Disincentives to lapses also exist in the form of withdrawal penalties or limits, tax advantages (France, Germany) and maturity bonuses. Crediting rates in Germany are flexible and competitive to other saving products available to consumers. This helped to keep the lapse ratio at 2.6% in 2022 (historically low).⁵⁰ However, lapse risks are more elevated in markets offering attractive investment alternatives (France) or where the need for short-term liquidity increased due to inflation (Italy). In the UK, where unit-linked products are more prominent, lapse risks are lower.⁵¹

⁴⁷ Consequences of France downgrade to AA- by Fitch, Barclays Credit Research, May 2023.

⁴⁸ In Europe, lapses have been trending upwards in France and Italy. The average surrenders to premium ratio reached respectively 58% at end-2022 and 85% in the first quarter of 2023. This compares to historical averages of close to 50%. In the US, lapse rates on fixed rate deferred annuities peaked to 9.5% in the fourth quarter of 2022 against a 5-year average of 8.1%. Source: FFA (France), IVASS (Italy), LIMRA (US), Swiss Re Institute estimates.

- ⁴⁹ US Life Insurers, Autonomous Research, 11 April 2023.
- ⁵⁰ S&P Global, 16 May 2023, op. cit.
- ⁵¹ What investors want to know: European life insurers managing liquidity and surrender risks, FitchRatings, May 2023.

⁴⁶ Rising interest rates are a double-edged sword for German life insurers", S&P Global, 16 May 2023.

Italy is the weak regional spot.

North American's insurers profitability set to benefit from declining COVID-19 claims and rising annuity business.

Reserves releases, pension de-risking deals and investment income to benefit life insurers in western Europe.

Japan's life insurance profitability to turn positive as COVID-19 pay-outs decrease.

In Italy, lapse risks started to crystallize in early 2023, with the surrenders to premium income ratio rising to 85% in March 2023, up from 53% a year earlier.⁵² Capitalisation concerns with respect to one life insurer mounted and triggered asset outflows at this company in January-February. This jeopardised liquidity positions and prompted the national regulator to temporarily suspend policyholder redemptions under private insurance law to safeguard the stability of the financial system. The higher need for short-term liquidity in an inflationary environment, and the availability of profitable alternatives to insurance-based investments for consumers, amplified the crisis.⁵³

Life profitability by region

We estimate that operating results in **North America** will improve in 2023 on the back of higher spread margins, declining COVID-19 claims and strong annuity premiums growth offsetting subdued risk premiums. In the US, supplement accident and health claims remain favourable on low utilization, although contingent on labour market dynamics. Legacy liabilities in long-term care, universal life and variable annuities comprise a tail risk that could weigh on profitability in the medium term. The prospect of a hike cycle reversal and economic slowdown in 2024 would lower demand for annuities and operating profitability.⁵⁴

Life profitability in **Western Europe** improved in all markets in 2022 except Italy. A continued shift towards saving-linked contracts (France, Germany) underpinned operating income growth. In the UK, improved pricing conditions and strong pension funds demand supported growth of pension de-risking deals. In Germany, the higher reference rate and phasing out of guaranteed contracts decreased the *Zinzusatzreserve* (ZZR) funding requirement, a positive that should also allow more crediting rates flexibility. A similar mechanism exists in France. A higher surrenders rate in Italy weighed on profitability. Lapse risks are a downside profitability risk for French and Italian insurers.

Japan's life insurance industry continued to experience negative operating profitability in 2022, mainly due to COVID-19 related payouts for "deemed hospitalization". Profitability should turn positive in 2023, due to changing (more restrictive) market practices for pandemic-related payouts and new underwriting, reserve releases and rising investment income. A Bank of Japan exit from yield curve control would prop-up domestic bond holding, spillover into global yields and edge up investment profitability for global life insurers. In **Australia**, the profitability of multi-year loss-making individual disability income insurance turned positive in 2022, attributed to movements in bond yields, repricing and releases of COVID-19 reserves throughout the year.

- 53 Ibid.
- ⁵⁴ Investment profitability remains positive for 2024. Life insurers' exposure to the housing market remains low at 14% of assets under management (21% for commercial real estate) and well-diversified across property types and geographies. See Swiss Re Institute, 17 April 2023, op. cit.

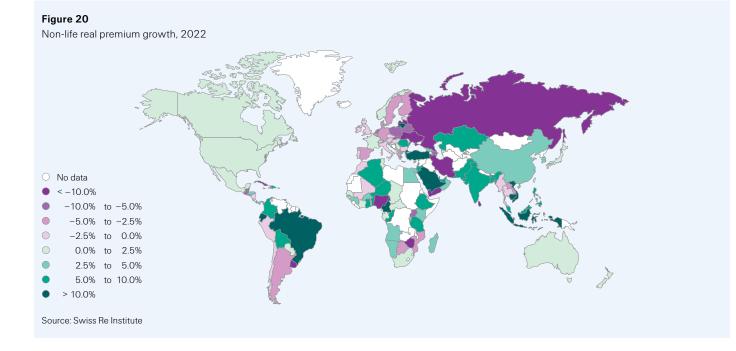
⁵² Financial Stability Report, Banca d'Italia Eurosistema, April 2023.

Appendix I: premium developments by region

Non-life

In **advanced economies**, real premium growth was flat in 2022. With inflation easing but still high in 2023, and insurance pricing moving upwards, we estimate a modest improvement to 0.8% growth this year, with nominal growth strong at around 4.7%. We see similar premium growth performance (0.7–0.8%) in the **advanced EMEA** (17% of global non-life premiums) and **North America** (60%) regions this year. We estimate an uptick to 1.4% growth in **advanced Asia** (7% of global premiums), partly caused by the reopening of China, and price hardening in that market.

Real premiums in **emerging markets** grew by 2.8% in 2022. In **emerging EMEA**, the war in Ukraine was the main driver of a 0.9% contraction in premium volumes. For the emerging economies overall, we estimate 4.5% premium growth in real terms this year, though that is also below the 2012–2021 annual average of 7.1%. The step up from 2022 is seen as primarily driven by the reopening of **China's** economy, with non-life premiums to grow by an estimated 6.8%. Premiums in **emerging Asia** (excluding China) is forecast to expand by 6.6% in real terms. That is a marginal change from 6% growth in 2022, and is close to the 2012–2021 average (6.3%). Elsewhere, growth in emerging EMEA will be largely flat in 2023. In **Latin America**, growth will slow to an estimated 0.9% from 4.3% in 2022. This is because still high levels of inflation make personal insurance less affordable, and interventionist policies in socialist-leaning countries are limiting rate increases for personal lines like motor insurance.



Life

In **advanced markets**, life premiums contracted 4.4% in real terms in 2022 and we estimate an improvement to essentially flat growth in 2023. High inflation and declining purchasing power created a cost-of-living crisis across advanced economies last year, which eroded nominal life premium growth. Premiums in **Europe** declined most (down 7.3% in real terms). In **Asia**, further negative wealth effects on account property market weakness (eg, through housing prices declines in South Korea and Australia), shrinking saving business (Australia) and already high penetration rates (Japan), in addition to inflation weighed on life market growth (real premiums down 6.0%). Record annuity sales in **North America**, aided by higher interest rates and positive US regulatory developments in recent year supported a 1% uptick in growth.⁵⁵

Life premiums in **emerging markets** grew below trend at 1.4% in 2022. Subdued income growth in **China** due to prolonged pandemic lockdowns undermined consumers' confidence in their financial position and also demand for new life policies. At the same time, competition from the health segment and the residual impact of a declining insurance agent workforce weighed on protection business, which grew 0.5% in 2022, well below historical trend. With premiums growing by 3.7% in real terms, **emerging Asia** (excluding China) was the fastest growing region last year. The main driver was an 8.2% expansion of India's life market, where premium volumes rose to USD 100 billion. Premiums declined in **emerging EMEA** on the back of elevated inflation and the impact of the war in Ukraine. The Latin America region market grew 0.7% in 2022, below long-term trend.

We expect life insurance premiums in **North America** to decline by 0.2% in real terms in 2023, due to the impact of still-elevated inflation on our nominal growth forecast of 3.8%, and high base effect. Last year's record fixed individual annuity sales and strong group annuity sales should continue in 2023. Economic slowdown could weigh on demand for annuities and the outlook for 2024.

In **Western Europe**, real life premiums are estimated to contract by 0.8% in 2023. But nominal wages growth, bulk annuity transfers in the UK and the ongoing shift towards saving-linked policies should positively impact saving and pension business in 2023–24. Nevertheless, lapses are a risk to watch. There have already been some lapses in Italy and France.

Life premiums in **Advanced Asia-Pacific** should grow by an estimated 0.2% in real terms in 2023. The border reopening with China underpins our 7.3% real growth forecast for life premiums in Hong Kong this year. The attractive returns and currency hedging feature of the USD-denominated policies offered by insurers in Japan is generating interest, and we estimate that associated sales will grow by close to 1% in 2023.

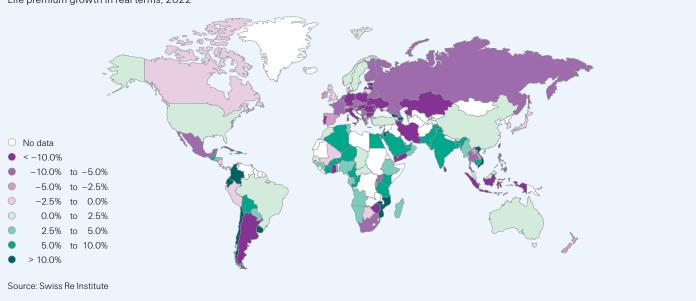
In **China**, we see 3.8% real growth in premiums in 2023 and 4.7% in 2024. The ending of COVID-19 restrictions should improve consumer sentiment and disposable incomes. Saving products are seen growing by an estimated 4.1%. However, we expect subdued sales of "pure" critical illness (CI) products this year due to competition from medical expenses covers, and the residual impact of the agent workforce decline in recent years.

Rising penetration rates, regulatory tailwinds and new distribution platforms should support life premium growth in **other emerging markets (excl. China)**. We expect 3.8% real growth in 2023 and 4.7% in 2024, above the long-term trend (3.8%). India will lead. In Latin America, we estimate that premiums will grow by 3.3% in real terms this year. The outlook for emerging Europe and central Asia remains negative (premiums down an estimated 6.4% this year), but less so than in 2022 when the impact of the war in Ukraine was more acute. We estimate 1.9% growth in premiums in the Middle East and Africa in 2023.

⁵⁵ The US Department of Labor's new fiduciary rules came into effect in 2021, and the 2019 SECURE Act opened the door to annuities in 401(k)s and other retirement plans.

Figure 21

Life premium growth in real terms, 2022



Appendix II

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

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

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

Country classifications generally follow IMF conventions.

Data sources

Definition of premium income

Methodology and data

This *sigma* study is based on the direct premium volumes of insurance companies, regardless of whether they are privately or state owned, for example, Premiums paid to state social 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.

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.

Using the average exchange rate for the financial year, premium volumes are converted into US dollars to facilitate comparisons between markets and regions.⁵⁶ 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.

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.⁵⁷

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.

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.
- 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.
- 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).
- ⁵⁶ 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.
- ⁵⁷ The only exceptions are the Czech Republic, Estonia, Latvia, Lithuania, Slovenia and Slovakia.

Health insurance is allocated to non-life business.	Life and non-life business areas in this <i>sigma</i> 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 <i>sigma</i> editorial team would like to thank the supervisory authorities, associations and companies that helped with data compilation.

Statistical appendix

- + provisional
- estimated
- ** estimated USD value assuming constant insurance penetration.
- 1 Excluding cross-border business
- 2 Insurance penetration (premiums as a percentage of GDP) and density (premiums per capita) include cross-border business
- 3 US and Canada, Advanced EMEA, Advanced-Asia Pacific
- 4 Latin America and Caribbean, Emerging Europe and Central Asia, Emerging Middle East, Africa, Emerging Asia
- 5 34 member countries
- 6 The US, Canada, the UK, Germany, France, Italy, Japan
- 7 The US, Canada, Mexico
- 8 Singapore, Malaysia, Thailand, Indonesia, the Philippines, Vietnam. The four remaining member countries Brunei, Cambodia, Laos and Myanmar are not included.
- 9 Life insurance: premiums are supplemented by estimated premiums for group pension business, which has not been included in the statistics for some regions since 2001. Non-life insurance includes state funds.
- 10 Life insurance: net premiums
- 11 Non-life insurance: gross premiums, including reinsurance premiums
- 12 Financial year 1 April 2021 31 March 2022
- 13 Financial year 21 March 2021 20 March 2022
- 14 Financial year 1 July 2020 30 June 2021
- 15 Inflation-adjusted premium growth rates in local currency, see Tables II, IV and VI

Table I

Premium volume by region and organisation in 2022

	Premium vo (in millions c		Change (in % inflation-adjus		Share of world market (in %)	Premiums ¹ in % of GDP	Premiums ¹ per capita (in USD)
Tetel business	2022	2021	2022	2021	2022	2022	2022
Total business America	2022 3 300 729	2021 3040925	2022	2021 3.6	2022 48.7	2022 9.9	2022
US and Canada	3130779	2891090	0.6	3.4	46.2	11.3	8415
Latin America and Caribbean	169950	149835	2.7	6.1	2.5	3.0	258
Europe, Middle East and Africa (EMEA)	1 756 531	1906282	-4.8	6.6	25.9	5.1	570
Advanced EMEA	1561721	1710937	-5.1	7.0	23.0	7.4	3 308
Emerging Europe and Central Asia	81 394	83939	-6.6	2.6	1.2	1.4	165
Middle East and Africa	113416	111 406	0.3	3.8	1.7	1.7	58
Emerging Middle East	43250	38114	5.7	-0.1	0.6	1.2	80
Africa Asia-Pacific	70166 1724974	73 292 1 817 487	-2.6 - 0.1	6.1 0.2	1.0 25.4	2.4 5.0	50 403
Advanced Asia-Pacific	804378	904799	-3.2	0.2	11.9	5.0 8.6	3096
Emerging Asia	920596	912688	3.0	0.4	13.6	3.6	229
China	697806	696128	2.6	-1.7	10.3	3.9	489
Emerging Asia, excl China	222790	216560	4.3	5.8	3.3	3.0	86
World (2)	6782235	6764694	-1.1	3.4	100.0	6.8	853
Advanced markets (3)	5496878	5506825	-1.8	3.9	81.0	9.5	5035
Emerging markets (4)	1 285 357	1 257 869	2.1	1.2	19.0	3.0	187
Emerging Markets excl China	587 551	561741	1.5	5.0	8.7	2.3	103
OECD (5)	5374361	5352335	-1.3	4.2	79.2	8.9	4001
G7 (6)	4494654	4419586	-1.1	4.1	66.3	10.2	5717
Eurozone	997795	1128199	-7.4	6.2	14.7	6.6	2713
	1 1 3 0 5 4 0	1269871	-6.8	6.9	16.7	6.4	2377
NAFTA (7)	3164667	2922851	0.5	3.4	46.7	10.9	6329
Life business							
America	817570	751865	1.0	4.3	29.1	2.5	794
US and Canada	743 646	685282	1.0	4.4	26.4	2.7	1999
Latin America and Caribbean	73 924	66583	0.7	4.1	2.6	1.3	112
Europe, Middle East and Africa (EMEA)	962 652	1075328	-7.1	9.8	34.2	2.9	323
Advanced EMEA	888473	997214	-7.3	10.1	31.6	4.3	1957
Emerging Europe and Central Asia	20327	21278	-10.1	1.2	0.7	0.3	41
Middle East and Africa	53851	56836	-3.6	6.8	1.9	0.8	28
Emerging Middle East	6948	6443	1.0	6.3	0.2	0.2	13
Africa Asia-Pacific	46 903 1032 811	50393 1113073	-4.2 -2.0	6.9 -0.1	1.7 36.7	1.6 3.0	33 242
Advanced Asia-Pacific	508356	591 231	-6.0	-0.2	18.1	5.4	1 964
Emerging Asia	524455	521841	2.5	-0.1	18.6	2.1	131
China	364359	365456	2.0	-2.6	13.0	2.0	255
Emerging Asia, excl China	160096	156386	3.7	6.1	5.7	2.2	62
World (2)	2813032	2940266	-3.1	4.4	100.0	2.8	354
Advanced markets (3)	2140475	2273728	-4.4	5.4	76.1	3.7	1973
Emerging markets (4)	672557	666538	1.4	0.9	23.9	1.6	98
Emerging Markets excl China	308 199	301 082	0.7	5.4	11.0	1.2	54
OECD (5)	2 009 883	2113931	-3.4	6.1	71.4	3.4	1 504
G7 (6)	1 608 058	1674589	-3.1	5.9	57.2	3.7	2066
Eurozone	513246	610488	-11.8	10.3	18.2	3.5	1 408
EU NAETA (7)	598238	701788	-10.4	11.3	21.3	3.4	1269
NAFTA (7)	758791	700076	0.8	4.3	27.0	2.6	1518
Non-life business							
America	2483160	2289060	0.6	3.3	62.6	7.5	2413
US and Canada	2 387 133	2 205 807	0.4	3.2	60.1	8.6	6416
Latin America and Caribbean	96026	83252	4.3	7.7	2.4	1.7	146
Europe, Middle East and Africa (EMEA)	793880	830954	-1.8	2.8	20.0	2.2	247
Advanced EMEA	673248	713723	-2.0	2.9	17.0	3.0	1 351
Emerging Europe and Central Asia	61067	62 66 1	-5.4	3.1	1.5	1.0	124
Middle East and Africa	59565	54571	4.4	1.1	1.5	0.9	30
Emerging Middle East	36302	31671	6.7	-1.3	0.9	1.0	67
Africa Asia-Pacific	23263	22 899	1.2 2.9	4.5 0.8	0.6	0.8	16
Advanced Asia-Pacific	692163 296022	704 414 313 567	2.9 1.9	1.5	17.4 7.5	2.0 3.1	161 1 133
Emerging Asia	396141	390847	3.6	0.2	10.0	1.6	98
China	333448	330672	3.2	-0.7	8.4	1.9	234
Emerging Asia, excl China	62694	60174	6.0	4.8	1.6	0.8	23-
World (2)	3969203	3824428	0.5	2.7	100.0	4.0	499
Advanced markets (3)	3 3 5 6 4 0 3	3233098	0.0	2.9	84.6	5.8	3061
Emerging markets (4)	612800	591331	2.8	1.6	15.4	1.4	89
Emerging Markets excl China	279352	260658	2.4	4.5	7.0	1.1	49
OECD (5)	3364478	3238404	0.1	2.9	84.8	5.6	2497
G7 (6)	2886596	2744997	0.1	3.1	72.7	6.5	3652
Eurozone	484549	517712	-2.2	1.7	12.2	3.2	1 305
EU	532302	568083	-2.3	1.9	13.4	3.0	1108
NAFTA (7)	2 4 0 5 8 7 6	2222775	0.4	3.2	60.6	8.3	4812

Table II

Total premium volume in local currency in 2022

			(i	Premium volume in millions of local cur		Change (nomin		Change (inflation-ad	
	Country	Currency	2022	2021	2020	2022	2021	2022	202
	United States (9)	USD	2959808	2724798	2522322	8.6	8.0	0.6	3
S and Canada	Canada (10) Total	CAD	222559	208477	186752	6.8	11.6	0.0 0.6	8
	Brazil	BRL	391675	339491	298605	15.4	13.7	5.5	5
	Mexico	MXN	681651	644337	595153	5.8	8.3	-2.0	2
	Argentina	ARS	1672288	1035019	700542	61.6	47.7	-6.3	-0
	Chile	CLP	10061580	8624662	8051552	16.7	7.1	4.5	2
	Colombia	COP	42 911 830	35344000	30489760	21.4	15.9	10.2	12
	Peru Ecuador	PEN USD	18746 2465 *	17695 1996	14021 2149	5.9 23.5	26.2 -7.1	-1.8 19.4	21 -7
	Dominican Republic	DOP	98652 *	86021	72241	14.7	19.1	5.4	10
	Panama	PAB	1 702	1611	1511	5.6	6.6	2.7	4
	Trinidad and Tobago	TTD	11011 *	9370	9388	17.5	-0.2	11.1	-2
	Costa Rica	CRC	993091 *	900 209	841870	10.3	6.9	1.9	E
	Guatemala	GTQ UYU	11596 60345	11460 69684	11368 61448	1.2	0.8 13.4	-5.3 -20.6	-3 E
	Uruguay Cayman Islands	KYD	1193 *	1063	968	12.2	9.8	-20.6	2
	Bahamas	BSD	1117 *	982 *	850	13.8	15.6	7.7	1:
	Jamaica	JMD	161692 *	144885	122342	11.6	18.4	1.1	11
	El Salvador	USD	849 *	826	722	2.8	14.5	-4.1	1(
	Tetel							0.7	
tin America and Caribbean	Total United Kingdom	GBP	293398 *	271545 *	244079 *	8.0	11.3	3.7 -0.9	-1- {
	France	EUR	293 398 247 997 *	247 325	209425	0.3	18.1	-4.7	16
	Germany	EUR	229372 *	230 205	227 462	-0.4	1.2	-6.8	-
	Italy	EUR	152041 +	162177	151682	-6.2	6.9	-13.4	
	Netherlands	EUR	79619 +		77097	1.9	1.3	-7.3	-
	Spain	EUR	64775	61803	58889	4.8	4.9	-3.3	
	Switzerland Sweden	CHF SEK	53549 + 550033 *	52946 509838	53577 402219	1.1	-1.2 26.8	-1.6 -0.4	2
	Denmark	DKK	305720 *	285325	261068	7.9	20.8	-0.4	2
	Luxembourg	EUR	38335 *	41 386	32368	-7.4	27.9	-14.4	2
	Belgium	EUR	34369	33576	32032	2.4	4.8	-6.6	
	Finland	EUR	26586 *	26084	22923	1.9	13.8	-4.9	1
	Ireland	EUR	26229 *	25169	22381	4.2	12.5	-3.3	
	Norway	NOK	241033 *	224737	189791	7.3	18.4	1.4	1
	Israel Austria	ILS EUR	73741 * 19409 +	66397 · 18647	64791 18042	4.1	2.5 3.4	6.4 -4.1	
	Portugal	EUR	12057	13350	9951	-9.7	3.4	-4.1	3
	Liechtenstein	CHF	5831 *		5464	5.3	1.3	2.4	
	Greece	EUR	4974 *	4771	4339	4.3	10.0	-4.9	
	Malta	EUR	4163 *	4013	3679	3.7	9.1	-2.3	
	Cyprus	EUR	1038 *	956	917	8.6	4.2	0.5	
vanced EMEA	Total	740	750004 *	705.075 *	005 000	2.0	10.5	6.6	-
	South Africa Russia	ZAR RUB	750334 * 1324850	735275 * 1592353	665233 1537467	2.0	10.5 3.6	-4.5 -26.9	-
	Poland	PLN	69026 *	65887	60488	4.8	8.9	-8.4	
	Saudi Arabia	SAR	53356 *	42030	38779	26.9	8.4	23.9	
	United Arab Emirates (11)	AED	48679 *	43552	42497	11.8	2.5	6.6	
	Turkey	TRY	218293	96607	75735	126.0	27.6	31.1	
	Czech Republic	CZK	199485	179158	167465	11.3	7.0	-3.3	
	Morocco	MAD	53199 *	49816	45340	6.8 20.8	9.9	0.1	-
	Iran (13) Hungary	IRR HUF	1261741000 * 1416433 *	1044146000 * 1318980	820289000 1193892	7.4	27.3 10.5	-18.7 -6.3	-
	Romania	RON	17171 *	14241	11 496	20.6	23.9	6.0	1
	Egypt (14)	EGP	52507 *	46042	38721	14.0	18.9	5.1	1
	Slovenia	EUR	2799 +	2 6 0 9	2570	7.3	1.5	-1.4	-
	Pakistan	PKR	557605 *	433000 *	347 600	28.8	24.6	7.4	
	Kenya	KES	306362 +		233136	13.3	16.0	5.2	
	Lebanon	LBP	3087678 *		2357090	20.0	9.2	-55.8	-8
	Slovakia Bulgaria	EUR BGN	1872 3562 *	1 806 3 200	2 173 2 835	3.6	-16.9 12.9	-8.1 -3.5	-'
	Croatia	HRK	12676	11717	10475	8.2	11.9	-2.4	
	Kazakhstan	KZT	811488	744836	514141	8.9	44.9	-5.3	3
	Qatar	QAR	6415 *	5845 *	5619 *	9.8	4.0	4.5	
	Kuwait	KWD	520 *	464 *	437 *	12.0	6.3	7.7	
	Nigeria	NGN	719166 *	631416 *	514588 *	13.9	22.7	-4.2	
	Oman Ukraine	OMR UAH	517 * 39616	480 49703	466 45175	7.7	3.0 10.0	4.7 -33.7	
	Algeria	DZD	171781 *	49703 145447	138 825	-20.3	4.8	-33.7 7.7	-
	Serbia	RSD	134037	119409	109 917	12.3	8.6	0.2	
	Tunisia	TND	3122	2834	2 5 5 6	10.2	10.9	1.7	
	Namibia	NAD	16182	14687	12966	10.2	13.3	3.9	
	Jordan	JOD	706 +		625	11.3	1.5	6.8	
	Ivory Coast Babrain	XOF BHD	508313 * 300 *	463000 * 276	413 700 277	9.8 8.9	11.9 -0.3	4.3 5.0	
	Bahrain	впр	300 *	270	277	8.9	-0.3	0.0	
erging EMEA	Total							4.8	-
	Japan (12)	JPY	45799100 *	44720900	44056510	2.4	1.5	-0.8	
	South Korea (12)	KRW	239341300 +	225186100	220582300	6.3	2.1	0.9	-
	Taiwan	TWD	2577565 +		3352076	-18.9	-5.2	-21.2	-
	Australia	AUD	103584	96289	90942	7.6	5.9	0.9	
	Hong Kong Singapore	HKD	538464 + 64775 *	566032 60745	565710 50645	-4.9	0.1 19.9	-6.6	-
	Singapore New Zealand (14)	SGD NZD	64775 * 14287 *	60745 13427	12481	6.6 6.4	7.6	0.5 -0.7	
		INCO	17207	13427	12401	0.4	7.0	0.7	
anced Asia-Pacific	Total							0.9	-
	PR China	CNY	4695718	4490017	4525733	4.6	-0.8	2.6	-
	India (12)	INR	10530900 *	9166160	8308134	14.9	10.3	7.7	
	Thailand	THB	884501 *		852428	0.9	2.8	-4.9	
	Malaysia (12)	MYR	89526	83412	76803	7.3	8.6	3.5	
	Indonesia Vietnam	IDR VND	280 254 500 * 263 882 900 *	280264400 218357000	255694400 187446200	20.8	9.6 16.5	-4.0 17.2	
	Philippines	PHP	420471 *		333120	3.3	22.1	-2.3	
	Macao	MOP	37031 *	35886	28882	3.2	24.3	2.1	1
	Bangladesh	BDT	193494 *		148263 *	14.3	14.2	6.1	
	Sri Lanka	LKR	210883 *	191574 +	194683	10.1	-1.6	2.9	-
erging Asia	Total							3.0	

Table III

Total premium volume in USD in 2022

	Ranki	ng			m volume local currency)		ange 5) 2022	Share of world market 2022 (in
	2022	2021	Country	2022	2021	nominal (in USD)	inflation-adjusted ¹⁵	•
	1	1	United States (9)	2959808 **	2724798 ** 166292 **	8.6	0.6	4
S and Canada	8	9	Canada (10) Total	170972 ** 3130779	166 292 ** 2891 090	2.8 8.3	0.0 0.6	4
	13	16	Brazil	75876	62.878	20.7	5.5	
	24	24	Mexico	33888	31761	6.7	-2.0	
	38	40	Argentina	12811	10882	17.7	-6.3	
	40 42	37 43	Chile Colombia	11523 10082	11 362 9 440	1.4	4.5 10.2	
	49	50	Peru	4887	4 5 5 9	7.2	-1.8	
	59	60	Ecuador	2465 *	1 9 9 6	23.5	19.4	
	64	72	Dominican Republic	1789 *	1 503	19.0	5.4	
	68 71	67 75	Panama Trinidad and Tobago	1 702 1 630 *	1611 1386	5.6	2.7 11.1	
	72	74	Costa Rica	1543 *	1 458	5.8	1.9	
	73	73	Guatemala	1 4 9 7	1 482	1.0	-5.3	
	74	69	Uruguay	1466	1 600	-8.4	-20.6	
	75 80	76 83	Cayman Islands Bahamas	1 431 * 1 117 *	1275 982 *	12.2	3.9 7.7	
	82	84	Jamaica	1048 *	956	9.6	1.1	
	86	87	El Salvador	849 *	826	2.8	-4.1	
			Other countries	4346	3878			
tin America and Caribbean	3	4	Total United Kingdom	169950 363009 *	149835 373613 *	13.4 -2.8	2.7 -0.9	
	5	5	France	261254 *	292 649	-10.7	-0.9	
	6	6	Germany	241633 *	272390	-11.3	-6.8	
	9	8	Italy	160168 +	191896	-16.5	-13.4	
	12	12	Netherlands	83875 +	92418	-9.2	-7.3	
	16 17	13 18	Spain Switzerland	68237 56082 +	73129 57938	-6.7	-3.3 -1.6	
	17	18	Sweden	54363 *	59411	-3.2	-0.4	
	21	21	Denmark	43204 *	45 383	-4.8	-0.5	
	22	20	Luxembourg	40369 *	48949	-17.5	-14.4	
	23	23	Belgium	36206 **	39729 **	-8.9	-6.6	
	25 26	25 26	Finland Ireland	28007 * 27632 *	30864 29781	-9.3	-4.9 -3.3	
	26	26	Norway	25060 *	29 / 81	-7.2	-3.3	
	29	31	Israel	21962 *	20561	6.8	6.4	
	30	29	Austria	20447 +	22064	-7.3	-4.1	
	39	35	Portugal	12702	15797	-19.6	-16.2	
	46 47	46 47	Liechtenstein Greece	6106 ** 5240 *	6057 * 5645	0.8	2.4 -4.9	
	51	49	Malta	4383 *	4747	-7.7	-2.3	
	81	79	Cyprus	1 0 9 3 *	1131	-3.3	0.5	
			Other countries	689	633			
vanced EMEA	20	19	Total South Africa	1561721 45831 *	1710937 49748 *	-8.7 -7.9	-5.1 -4.5	2
	32	30	Russia	19345.4	21619.3	-10.5	-4.5	
	34	34	Poland	15487 *	17063	-9.2	-8.4	
	35	38	Saudi Arabia	14228 *	11 208	26.9	23.9	
	36 37	36	United Arab Emirates (11)	13255 *	11859	11.8	6.6	
	44	39 44	Turkey Czech Republic	13172 8541	10895 8264	3.3	31.1 -3.3	
	48	48	Morocco	5236 *	5542	-5.5	0.1	
	52	51	Iran (13)	4257 *	4524 *	-5.9	-18.7	
	53	53	Hungary	3802 *	4351	-12.6	-6.3	
	54 55	54 56	Romania Egypt (14)	3662 * 3182 *	3 423 2 925	7.0	6.0 5.1	
	56	55	Slovenia	2948 +	3086	-4.5	-1.4	
	57	57	Pakistan	2721 *	2657 *	2.4	7.4	
	58		Kenya	2599 +	2467	5.4	5.2	
	61	66	Lebanon	2048 *	1707	20.0	-55.8	
	62	59	Slovakia	1972 1915 *	2137	-7.7	-8.1 -3.5	
	63 65	62 63	Bulgaria Croatia	1771	1 935 1 843	-1.0 -3.9	-3.5	
	66	65	Kazakhstan	1763	1749	0.8	-5.3	
	67	68	Qatar	1762 *	1606 *	9.8	4.5	
	69	71	Kuwait	1698 *	1539 *	10.3	7.7	
	70 76	70 77	Nigeria Oman	1 685 * 1 344 *	1542 * 1248	9.3	-4.2 4.7	
	70	64	Ukraine	1 2 2 5 **	1 822	-32.8	-33.7	
	78	80	Algeria	1210 *	1077	12.3	7.7	
	79	78	Serbia	1 200 **	1201	-0.1	0.2	
	83 84	81	Tunisia	1006 **	1014	-0.8	1.7	
	84 85	85 82	Jordan Namibia	994 + 988 **	893 994 **	9.4	11.3 3.9	
	87	86	Ivory Coast	815 *	835 *	-2.4	4.3	
	88	88	Bahrain	799 *	734	8.9	5.0	
			Other countries	12365	11839	•		
erging EMEA	4	3	Total Japan (12)	194810 337812 *	195 345 397 948	-0.3 -15.1	-2.7 -0.8	
	7	7	South Korea (12)	182846 +	193008	-15.1	-0.8	
	11	11	Taiwan	86475 +	113424	-23.8	-21.2	
	14	15	Australia	71805	72294	-0.7	0.9	
	15	14	Hong Kong	68767 +	72825	-5.6	-6.6	
	19 43	22 42	Singapore New Zealand (14)	46984 * 9067 *	45215 9497	3.9	0.5 -0.7	
	43	42	Other countries	623	588	-4.0	-0.7	
anced Asia-Pacific			Total	804378	904799	-11.1	-3.2	
	2	2	PR China	697806 **	696128	0.2	2.6	
	10	10	India (12)	131041 *	123016	6.5	7.7	
	27	27	Thailand	25227 *	27415	-8.0	-4.9	
	31 33	32 33	Malaysia (12) Indonesia	20115 18870 *	19977 19610	0.7	3.5 -4.0	
	41	41	Vietnam	11286 *	9526	18.5	17.2	
	45	45	Philippines	7718 *	8261	-6.6	-2.3	
	50	52	Macao	4591 *	4 4 8 3	2.4	2.1	
	60	61	Bangladesh	2061 *	1990 *	3.6	6.1	
			Other countries Total	1 879 920 596	2 283 912 688	0.9	3.0	
erging Asia								

Table IV

Life insurance premium volume in local currency in 2022

				Premium volume (in millions of local currency)					Change (inflation-ac	
	Country	Currency	2022		2021	2020	2022	2021	2022	2021
	United States (9) Canada (10)	USD CAD	672006 93255	+ +	615363 87657	567 532 75 537	9.2 6.4	8.4 16.0	1.1 -0.4	3.6 12.2
US and Canada	Total	CAD	93200		87057	75557	0.4	10.0	1.0	4.4
	Brazil	BRL	204983		184797	166053	10.9	11.3	1.5	2.8
	Mexico	MXN	304647		300119	274240	1.5	9.4	-5.9	3.5
	Chile	CLP	5173413		4201211	4165158	23.1	0.9	10.3	-3.5
	Colombia	COP	13182180		10760150	9266495	22.5	16.1	11.2	12.2
	Peru	PEN	9741		9217	6654	5.7	38.5	-2.0	33.2
	Argentina	ARS UYU	171660 39372		134224 32680	90933 28099	27.9 20.5	47.6 16.3	-25.8 10.4	-0.5 7.9
	Uruguay Trinidad and Tobago	TTD	5029	*	4280	4529	17.5	-5.5	10.4	-7.4
	Ecuador	USD	676	*	503	480	34.5	4.7	30.0	4.6
	Jamaica	JMD	65563	*	58748	41780	11.6	40.6	1.1	32.8
	Panama	PAB	419		410	398	2.1	3.0	-0.7	1.3
	Guatemala	GTQ	2664		2355	2122	13.2	10.9	5.9	6.4
	El Salvador	USD	337	*	328	260	2.8	26.2	-4.1	22.0
	Dominican Republic	DOP	14953	*	13039	10625	14.7	22.7	5.4	13.4
	Costa Rica	CRC	163068	*	147816	125 503	10.3	17.8	1.9	15.8
	Bahamas Cauman Jalanda	BSD	253 93	*	222 * 83	193 76	13.8 12.2	15.6 8.8	7.7 3.9	12.3
	Cayman Islands	KYD	93		03	70	12.2	0.0	3.9	0.0
atin America and Caribbean	Total								0.7	4.1
atili America and Caribbean	United Kingdom	GBP	200637	*	184410 *	165432 *	8.8	11.5	-0.2	8.
	France	EUR	149203	*	153697	120475	-2.9	27.6	-7.7	25.8
	Italy	EUR		+	122703	113312	-10.3	8.3	-17.1	6.3
	Germany	EUR	94132	*	100048	102 433	-5.9	-2.3	-12.0	-5.
	Sweden	SEK	446350	*	409645	306 817	9.0	33.5	0.5	30.
	Denmark	DKK	231050	*	213882	193546	8.0	10.5	0.3	8.
	Spain	EUR	27162		26121	24 328	4.0	7.4	-4.1	4.
	Luxembourg	EUR		+	28166	20949	-18.2	34.4	-24.4	29.
	Switzerland	CHF	22971	+	23084	24 601	-0.5	-6.2	-3.2	-6.
	Finland Ireland	EUR EUR	21641 17739	*	21 294 17 150	18325 14656	1.6 3.4	16.2 17.0	-5.1 -4.1	13. 14.
		EUR	16242	*	16393	15760	-0.9	4.0	-4.1	14.
	Belgium Norway	NOK	141460		132 685	104 058	-0.9	27.5	-9.6	23.
	Netherlands	EUR		+	11862	12 195	-6.8	-2.7	-15.3	-5.
	Israel	ILS	37 601	*	33785	32 956	11.3	2.5	6.6	1.0
	Portugal	EUR	6020		7728	4585	-22.1	68.5	-27.8	66.4
	Austria	EUR	5372	+	5431	5399	-1.1	0.6	-8.9	-2.
	Greece	EUR	2429	*	2372	2085	2.4	13.8	-6.6	12.4
	Liechtenstein	CHF		**	1 900 *	2281	5.3	-16.7	2.4	-17.
	Malta	EUR	812	+	809	731	0.4	10.7	-5.4	9.
	Cyprus	EUR	505		443	410	13.9	8.1	5.3	5.7
	Traci								7.0	10.4
Advanced EMEA	Total South Africa	ZAR	603511	*	598412 *	542140	0.9	10.4	-7.3 -5.6	10.1 5.6
	Russia	RUB	464 882		441515	430517	5.3	2.6	-7.4	-3.9
	Poland	PLN	14022		15028	14117	-6.7	6.5	-18.4	1.3
	United Arab Emirates (11)	AED	10128	*	8970	7988	12.9	12.3	7.7	12.4
	Morocco	MAD	24611	*	22942	20395	7.3	12.5	0.6	10.9
	Czech Republic	CZK	53721		51141	51326	5.0	-0.4	-8.7	-4.
	Pakistan	PKR	374742	*	291000 *	225000	28.8	29.3	7.4	18.
	Turkey	TRY	30164		17331	14291	74.1	21.3	1.0	1.4
	Egypt (14)	EGP	27572	*	23976	18476	15.0	29.8	6.0	24.2
	Hungary	HUF KES	599605	-	595232	525101	0.7	13.4 21.2	-12.1	7. 14.:
	Kenya	EUR	140845 770	++	123687 740	102078 749	4.0	-1.2	5.8 -4.4	-3.
	Slovenia Nigeria	NGN	330951	*	265619 *	231876 *	24.6	14.6	4.8	-2.0
	Namibia	NAD	12111		10945	9480	10.7	15.5	4.3	11.
	Iran (13)	IRR	219152500	*	175322000 *	125230000	25.0	40.0	-15.9	-0.
	Slovakia	EUR	685		658	753	4.1	-12.6	-7.7	-15.
	Kazakhstan	KZT	278803		315018	175211	-11.5	79.8	-23.0	66.
	Romania	RON	2399	*	2405	2037	-0.2	18.1	-12.3	12.4
	Saudi Arabia	SAR	1874	*	1 707	1 264	9.7	35.1	7.1	31.
	Lebanon	LBP	629611	*	524676	623 520	20.0	-15.9	-55.8	-67.
	Croatia	HRK	2846		2897	2 6 4 7	-1.8	9.4	-11.3	6.
	Ivory Coast	XOF	232914	-	205300 *	181 800	13.5	12.9	7.8	8.
	Tunisia Bulgaria	TND BGN	810 483		722 493	624 337	12.2	15.7 46.0	3.6 -14.9	9. 41.
	Serbia	RSD	26429		25298	24377	4.5	3.8	-14.9	-0.
	Kuwait	KWD	51	*	46 *	43 *	12.0	6.3	7.7	2.
	Jordan	JOD	128	+	110	98	16.6	12.3	11.3	10.
	Oman	OMR	62	*	57	54	7.7	6.6	4.7	5.
	Bahrain	BHD	58	*	53	62	8.9	-15.1	5.0	-14.
	Ukraine	UAH	4854		5882	5017	-17.5	17.2	-31.3	7.
	Algeria	DZD	16137		13478	12761	19.7	5.6	9.2	-0.
	Qatar	QAR	180		164 *	158 *	9.8	4.0	4.5	1.
	Total								E 4	F
merging EMEA	Total Japan (12)	JPY	33065870	*	32606450	31903840	1.4	2.2	-5.4 -1.7	5. 2.
	South Korea (12)	KRW		+	110218000	111099300	4.5	-0.8	-1.7	2. -3.
	Taiwan	TWD		+	2495772	2696786	-25.1	-7.5	-27.2	-9.
	Hong Kong	HKD	470745		499742	501647	-5.8	-0.4	-7.5	-1.
	Singapore	SGD	48674		46 54 3	37286	4.6	24.8	-1.5	22.
	Australia	AUD	22868		21 398	21194	6.9	1.0	0.3	-1.
	New Zealand (14)	NZD	3015	*	2910	2719	3.6	7.0	-3.3	3.
dvanced Asia-Pacific	Total								0.6	-4.
	PR China	CNY	2 451 863		2357185	2398193	4.0	-1.7	2.0	-2.
	India (12)	INR	7 996 369	•	6926142	6287311	15.5	10.2	8.2	4.
	Malaysia (12)	MYR	65455	*	61914	56094	5.7	10.4	1.9	7.
	Thailand Indonesia	THB IDR	484906 174515600		496009 192041100	492660 174354800	-2.2	0.7	-7.8 -12.8	-0
	Vietnam	VND	193078600	*	159222000	174354800 130769000	21.3	21.8	-12.8 17.6	8. 19.
	Philippines	PHP	292 968		297 012	235 291	-1.4	21.8	-6.8	19. 21.
		MOP	33908	*	33025	/h /h	27	25.8	1.6	
	Macao	MOP BDT	33908 150567	*	33025 132182 *	26261 116263 *	2.7 13.9	25.8 13.7	1.6 5.8	25. 7.
				*	33025 132182 *	116263 *		25.8 13.7	1.6 5.8	25.
Emerging Asia	Macao			*	33025 132182 *					

Table V

Life premium volume in USD in 2022

	Rank	ting			um volume ions of USD)		ange 5) 2022	Share of total business 2022 (in %)	Share of world market 2022 (in
	2022	2021	Country	2022	2021	nominal (in USD)	inflation-adjusted ¹⁵		
	1	1	United States (9)	672006 +		** 9.2	1.1	22.7	2
IS and Canada	10	11	Canada (10) Total	71639 + 743646	← 69920 685282	** 2.5 8.5	-0.4 1.0	41.9 23.8	2
	14	16	Brazil	39709	34227	16.0	1.5	52.3	Ľ
	25	28	Mexico	15146	14794	2.4	-5.9	44.7	
	35	37	Chile	5925	5535	7.0	10.3	51.4	
	40 43	40 44	Colombia Peru	3097 2539	2874 2375	7.8	11.2 -2.0	30.7 52.0	
	53	53	Argentina	1315	1411	-6.8	-25.8	10.3	
	55	59	Uruguay	956	750	27.5	10.4	65.2	
	59	63	Trinidad and Tobago	745 *	633	17.6	11.1	45.7	
	63	66	Ecuador	676 *	503	34.5	30.0	27.4	
	68 69	70 69	Jamaica Panama	425 * 419	388 410	9.6	1.1 -0.7	40.5	
	73	74	Guatemala	344	304	12.9	-0.7	24.0	
	74	73	El Salvador	337 *	328	2.8	-4.1	39.7	
	75	79	Dominican Republic	271 *	220	19.0	5.4	15.2	
	78	78	Costa Rica	253 *	239	5.8	1.9	16.4	
	79 87	80 87	Bahamas Cayman Islands	253 * 112 *	222	* 13.8 12.2	7.7	22.7 7.8	
	0/	0/	Other countries	1 4 0 1	1262	12.2	3.9	32.3	
tin America an	d Caribb	ean	Total	73924	66 5 8 3	11.0	0.7	43.5	
	3	4	United Kingdom	248240 *	253726	* -2.2	-0.2	68.4	
	5	5	France	157179 *	181862	-13.6	-7.7	60.2	
	6	6	Italy	115938 +		-20.1	-17.1	72.4	
	8 13	7 13	Germany Sweden	99164 * 44116 *	118382 47735	-16.2	-12.0 0.5	41.0	
	13	13	Denmark	32652 *	47700	-7.0	0.5	75.6	
	18	19	Spain	28613	30 908	-7.4	-4.1	41.9	
	19	18	Luxembourg	24260 +	+ 33313	-27.2	-24.4	60.1	
	20	20	Switzerland	24057 +		-4.8	-3.2	42.9	
	21	21	Finland	22798 *	25196	-9.5	-5.1	81.4	
	22 23	22 23	Ireland Belgium	18687 * 17110 *	20292	-7.9	-4.1 -9.6	67.6 47.3	
	23	23	Norway	14708 *	15442	-11.8	-9.6	58.7	
	30	29	Netherlands	11649 +		-17.0	-15.3	13.9	
	31	31	Israel	11198 *	10462	7.0	6.6	51.0	
	34	32	Portugal	6342	9145	-30.7	-27.8	49.9	
	36	34	Austria	5659 H 2558 *		-11.9	-8.9	27.7	
	42 46	41 46	Greece Liechtenstein	2000	2806 2079	* 0.8	-6.6 2.4	48.8	
	56	55	Malta	855 +		-10.6	-5.4	19.5	
	65	65	Cyprus	532 *	525	1.4	5.3	48.6	
			Other countries	62	57			9.0	
vanced EMEA	45		Total	888473	997214	-10.9	-7.3	56.9	3
	15 33	14 36	South Africa Russia	36863 * 6788	40488 5994	* -9.0 13.2	-5.6 -7.4	80.4 35.1	
	39	39	Poland	3146	3892	-19.2	-18.4	20.3	
	41	43	United Arab Emirates (11)	2758 *	2442	12.9	7.7	20.8	
	44	42	Morocco	2422 *	2552	-5.1	0.6	46.3	
	45	45	Czech Republic	2300	2359	-2.5	-8.7	26.9	
	48	50	Pakistan	1829 *	1786	* 2.4	7.4	67.2	
	49 50	49 52	Turkey Egypt (14)	1820 1671 *	1 955 1 523	-6.9 9.7	1.0 6.0	13.8 52.5	
	51	48	Hungary	1609 *	1964	-18.0	-12.1	42.3	
	54	54	Kenya	1195 +		5.9	5.8	46.0	
	57	56	Slovenia	811 +		-7.3	-4.4	27.5	
	58	62	Nigeria	775 *	649 * 741	* 19.5	4.8	46.0	
	60 61	60 59	Namibia Iran (13)	740 * 739 *	* 741 760	** -0.1 * -2.6	4.3 -15.9	74.8	
	62	57	Slovakia	739	700	-2.0	-7.7	36.6	
	64	61	Kazakhstan	606	740	-18.1	-23.0	34.4	
	66	64	Romania	512 *	578	-11.5	-12.3	14.0	
	67	68	Saudi Arabia	500 *		9.7	7.1	3.5	
	70	72	Lebanon	418 *		20.0	-55.8	20.4	
	71 72	67 71	Croatia Ivory Coast	398 373 *	456 370	* -12.8	-11.3 7.8	22.4 45.8	
	76	76	Tunisia	261 *		1.1	3.6	26.0	
	77	75	Bulgaria	260 *	298	-12.8	-14.9	13.6	
	80	77	Serbia	237 *	* 255	-7.0	-6.7	19.7	
	81	82	Jordan	180 +		5.2	11.3	16.6	
	82	83	Kuwait	167 *	151	* 10.3	7.7	9.8	
	83 84	84 85	Oman Bahrain	161 * 153 *	149 141	7.7	4.7 5.0	11.9 19.2	
	84	85	Ukraine		216	-30.4	-31.3	12.3	
	86	86	Algeria	114	100	13.9	9.2	9.4	
	88	88	Qatar	49 *	45	* 9.8	4.5	2.8	
			Other countries	3469	3514			28.1	
erging EMEA	4	3	Total	74178 243892 *	78114 290148	-5.0 -15.9	-5.4	38.1 72.2	
	4	3	Japan (12) South Korea (12)	243892 * 88026 +		-15.9	-1.7 -0.7	48.1	
	11	10	Taiwan	62714 +		-29.6	-27.2	72.5	
	12	12	Hong Kong	60119 +		-6.5	-7.5	87.4	
	16	15	Singapore	35305 *	34643	1.9	-1.5	75.1	
	24	24	Australia	15852	16066	-1.3	0.3	22.1	
	47	47	New Zealand (14)	1913 *	2058	-7.0	-3.3	21.1	
/anced Asia-I	Pacific		Other countries Total	534 508356	492 591 231	-14.0	-6.0	85.7 63.2	
anceu Asia-i	Pacific 2	2	PR China	364359	365456	-14.0	-6.0 2.0	52.2	
	7	9	India (12)	99503 *	92953	7.0	8.2	75.9	
	27	27	Malaysia (12)	14707	14828	-0.8	1.9	73.1	
	28	25	Thailand	13830 *	15511	-10.8	-7.8	54.8	
	29	30	Indonesia	11751 *	13437	-12.6	-12.8	62.3	
	32	33	Vietnam	8258 *	6946	18.9	17.6	73.2	
	37 38	35 38	Philippines Macao	5378 * 4204 *	6030 4125	-10.8	-6.8 1.6	69.7 91.6	
		38 51	Bangladesh	4 204 *	1554	* 3.2	5.8	77.8	
	h?			1004	1004	0.2	0.0		1
	52		Other countries	862	1 0 0 0			45.9	

Table VI

Non-life insurance premium volume in local currency in 2022

			(Premium volun in millions of local cl		Change (nomin		Change (i inflation-ad	
	Country	Currency	2022	2021	2020	2022	2021	2022	20
	United States (9)	USD	2287801	2109435	1954790	8.5	7.9	0.4	
IS and Canada	Canada (10) Total	CAD	129304	120820	111215	7.0	8.6	0.2 0.4	:
	Brazil	BRL	186693	154694	132552	20.7	16.7	10.4	
	Mexico	MXN	377004	344217	320913	9.5	7.3	1.5	
	Argentina	ARS	1 500 628	900795	609610	66.6	47.8	-3.4	-
	Colombia	COP	29729650	24583850	21 223 260	20.9	15.8	9.8	
	Chile	CLP	4888165	4423451	3886394	10.5	13.8	-1.0	
	Peru	PEN	9005	8478	7367	6.2	15.1	-1.5	
	Ecuador Dominican Republic	USD DOP	1 789 * 83 698 *	1 493 72 982	1 669 61 616	19.8 14.7	-10.5 18.4	15.8 5.4	-
	Cayman Islands	KYD	1 100 *	980	892	12.2	9.9	3.9	
	Costa Rica	CRC	830024 *	752393	716367	10.3	5.0	1.9	
	Panama	PAB	1 2 8 3	1 2 0 1	1113	6.8	7.9	3.9	
	Guatemala	GTQ	8932	9106	9245	-1.9	-1.5	-8.2	
	Trinidad and Tobago	TTD	5982 *	5091	4859	17.5	4.8	11.1	
	Bahamas	BSD	864 * 96129 *	759	* 657 80562	13.8 11.6	15.6 6.9	7.7	
	Jamaica El Salvador	JMD USD	512 *	* 86137 * 498	462	2.8	7.9	1.1 -4.1	
	Uruguay	UYU	20973	37 004	33349	-43.3	11.0	-48.1	
tin America and Caribbean	Total							4.3	
	Germany	EUR	135240 *	130157	125029	3.9	4.1	-2.8	
	United Kingdom	GBP	92761 *	87135	78647	6.5	10.8	-2.4	
	France	EUR	98794 *	00020	88951	5.5	5.3	0.3	
	Netherlands	EUR	68561 +		64902 38370	3.5	2.1	-5.9 -1.7	
	Italy Spain	EUR	41985 + 37613	+ 39474 35682	38370 34561	6.4 5.4	2.9 3.2	-1.7	
	Switzerland	CHF	3/613		28976	2.4	3.2	-2.7	
	Belgium	EUR	18127	17 183	16272	5.5	5.6	-3.7	
	Luxembourg	EUR	15297 *		11419	15.7	15.8	7.0	
	Austria	EUR	14037 +	+ 13216	12643	6.2	4.5	-2.2	
	Israel	ILS	36140 *	32613	31835	10.8	2.4	6.2	
	Denmark	DKK	74670 *	71443	67522	4.5	5.8	-3.0	
	Norway	NOK	99574	92052	85733	8.2	7.4	2.3	
	Sweden	SEK	103683	100193	95402	3.5	5.0	-4.5	
	Ireland	EUR	8 4 9 1 * 6 0 3 8	8019 5622	7 724 5 366	5.9 7.4	3.8 4.8	-1.8 -0.4	
	Portugal Finland	EUR	4946	4790	4 5 9 8	3.2	4.8	-0.4	
	Liechtenstein	CHF		* 3635	* 3183	5.3	14.2	2.4	
	Malta	EUR	3351 *	3204	2948	4.6	8.7	-1.5	
	Greece	EUR	2546 *	2399	2 2 5 4	6.1	6.4	-3.2	
	Cyprus	EUR	533 *	512	507	4.1	1.1	-3.7	
	T-4-1							2.0	
dvanced EMEA	Total Saudi Arabia	SAR	51483 *	40323	37515	27.7	7.5	-2.0 24.6	
	Russia	RUB	859968	1150838	1 106 950	-25.3	4.0	-34.3	
	Poland	PLN	55003 *	50858	46372	8.2	9.7	-5.4	
	Turkey	TRY	188128	79276	61444	137.3	29.0	37.7	
	United Arab Emirates (11)	AED	38551 *	34582	34 509	11.5	0.2	6.3	
	South Africa	ZAR	146823 *	100000	123093	7.3	11.2	0.4	
	Czech Republic Iran (13)	CZK IRR	145764 1042588000 *	128017 868823700	116139 * 695059000	13.9 20.0	10.2 25.0	-1.1 -19.3	-
	Romania	RON	14772 +		9459	24.8	25.0	9.7	_
	Morocco	MAD	28588 *	26874	24945	6.4	7.7	-0.3	
	Hungary	HUF	816828 *	723748	668790	12.9	8.2	-1.5	
	Slovenia	EUR	2029 +	+ 1869	1 820	8.5	2.7	-0.3	
	Qatar	QAR	6235 *	5681	* 5462	9.8	4.0	4.5	
	Bulgaria	BGN	3079 *	2707	2497	13.7	8.4	-1.4	
	Lebanon	LBP	2458067 *	2048389	1733570	20.0	18.2	-55.8	-
	Kuwait	KWD	469 *	419	* 394 *	12.0	6.3	7.7	
	Egypt (14)	EGP	24935 * 165518 +	22067 + 146781	20245 131058	13.0	9.0 12.0	4.1 4.7	
	Kenya Croatia	KES HRK	9830	8820	7828	12.8 11.5	12.0	0.6	
	Slovakia	EUR	1 1 8 7	1148	1 420	3.4	-19.2	-8.3	-
	Oman	OMR	455 *	423	412	7.7	2.5	4.7	
	Kazakhstan	KZT	532685	429818	338930	23.9	26.8	7.8	
	Algeria	DZD	155644 *	131969	126064	17.9	4.7	7.5	
	Ukraine	UAH	34762	43821	40158	-20.7	9.1	-34.0	
	Serbia	RSD	107608	94111	85 540	14.3	10.0	2.1	
	Nigeria	NGN	388215 *	365797		6.1	29.4	-10.7	
	Pakistan	PKR	182864 *	142000	* 122 600	28.8	15.8	7.4	
	Jordan Tunisia	JOD TND	578 + 2311 *	+ 524 2112	527 1 932	10.2 9.4	-0.5 9.3	5.8 1.0	
	Bahrain	BHD	2311 - 243 *	2112	214	9.4	9.3 4.0	5.0	
	Ivory Coast	XOF	243	223	* 231 900	6.9	11.1	1.5	
	Namibia	NAD	4071	3741	3 486	8.8	7.3	2.6	
	Tetel							~ ~	
nerging EMEA	Total South Korea (12)	KRW	124117500 +	+ 114968100	109483000	8.0	5.0	-0.9 2.5	
	Japan (12)	JPY	12733230 *	12114450	12 152 670	5.1	-0.3	2.5	
	Australia	AUD	80716	74891	69749	7.8	7.4	1.5	
	Taiwan	TWD	708242 +		655 290	3.7	4.2	0.8	
	Singapore	SGD	16100 *	14203	13360	13.4	6.3	6.8	
	Hong Kong	HKD	67719 +	+ 66290	64062	2.2	3.5	0.3	
	New Zealand (14)	NZD	11272 *	10517	9762	7.2	7.7	0.0	
	Total							1.9	
lvanced Asia_Pacific	PR China	CNY	2 2 4 3 8 5 5	2132832	2 1 2 7 5 4 0	5.2	0.2	3.2	_
Ivanced Asia-Pacific		INR	2 534 529 *	2132832	2020823	13.1	10.2	6.0	
Ivanced Asia–Pacific				380632	359769	5.0	5.8	-1.0	
dvanced Asia-Pacific	India (12)		399696 *		81 339 540	19.9	8.5	15.0	
dvanced Asia-Pacific		THB IDR	399595 * 105738900 *	88223310	01339340	13.3	0.0	15.0	
dvanced Asia-Pacific	India (12) Thailand Indonesia Malaysia (12)	THB IDR MYR	105738900 * 24070	21499	20709	12.0	3.8	8.0	
dvanced Asia-Pacific	India (12) Thailand Indonesia Malaysia (12) Vietnam	THB IDR MYR VND	105738900 * 24070 70804340 *	21 499 59 135 000	20 709 56 677 200	12.0 19.7	3.8 4.3	8.0 16.1	
dvanced Asia-Pacific	India (12) Thailand Indonesia Malaysia (12) Vietnam Philippines	THB IDR MYR VND PHP	105738900 * 24070 70804340 * 127503 *	21 499 59 135 000 109 854	20 709 56 677 200 97 828	12.0 19.7 16.1	3.8 4.3 12.3	8.0 16.1 9.7	
dvanced Asia-Pacific	India (12) Thailand Indonesia Malaysia (12) Vietnam Philippines Bangladesh	THB IDR MYR VND PHP BDT	105738900 * 24070 70804340 * 127503 * 42927 *	21 499 59 135 000 109 854 37 104	20709 56677200 97828 * 32000 *	12.0 19.7 16.1 15.7	3.8 4.3 12.3 15.9	8.0 16.1 9.7 7.4	
dvanced Asia–Pacific	India (12) Thailand Indonesia Malaysia (12) Vietnam Philippines	THB IDR MYR VND PHP	105738900 * 24070 70804340 * 127503 *	21 499 59 135 000 109 854	20 709 56 677 200 97 828	12.0 19.7 16.1	3.8 4.3 12.3	8.0 16.1 9.7	
dvanced Asia-Pacific	India (12) Thailand Indonesia Malaysia (12) Vietnam Philippines Bangladesh	THB IDR MYR VND PHP BDT	105738900 * 24070 70804340 * 127503 * 42927 *	21 499 59 135 000 109 854 37 104	20709 56677200 97828 * 32000 *	12.0 19.7 16.1 15.7	3.8 4.3 12.3 15.9	8.0 16.1 9.7 7.4	

Table VII

Non-life premium volume in USD in 2022

	Rank	ting			ium volume lions of USD)		nange 6) 2022	Share of total business 2022 (in %)	Share of world market 2022 (in
	2022	2021	Country	2022	2021	nominal (in USD)	inflation-adjusted ¹⁵		
	1	1	United States (9)	2287801	** 2109435	** 8.5	0.4	77.3	5
S and Canada	6	8	Canada (10)	99332 2387133	** 96372	** 3.1 8.2	0.2 0.4	58.1 76.2	6
S and Canada	13	15	Total Brazil	36166	2205807 28651	26.2	10.4	47.7	0
	18	18	Mexico	18743	16967	10.5	1.5	55.3	
	25	31	Argentina	11496	9471	21.4	-3.4	89.7	
	38	38	Colombia	6985	6566	6.4	9.8	69.3	
	41 51	41 54	Chile Peru	5598 2348	5827 2184	-3.9	-1.0 -1.5	48.6	
	55	58	Ecuador	1789	* 1493	19.8	15.8	72.6	
	60	65	Dominican Republic	1518	* 1275	19.0	5.4	84.8	
	64	69	Cayman Islands	1 3 2 0	* 1176	12.2	3.9	92.2	
	65	66	Costa Rica	1290	* 1218	5.8	1.9	83.6	
	66 70	67 68	Panama Guatemala	1 283 1 153	1 201 1 1 7 7	6.8	3.9 -8.2	75.4	
	76	79	Trinidad and Tobago	886	* 753	17.6	-0.2	54.3	
	77	77	Bahamas	864	* 759	* 13.8	7.7	77.3	
	81	83	Jamaica	623	* 568	9.6	1.1	59.5	
	83	84	El Salvador	512	* 498	2.8	-4.1	60.3	
	84	76	Uruguay Other countries	509 2944	850 2616	-40.0	-48.1	34.8 67.8	
tin America an	nd Caribb	ean	Total	96 0 26	83252	15.3	4.3	56.5	
	3	3	Germany	142469	* 154009	-7.5	-2.8	59.0	
	4	4	United Kingdom	114769	* 119887	-4.3	-2.4	31.6	
	5	5	France	104075	* 110787	-6.1	0.3	39.8	
	9	9	Netherlands		+ 78382	-7.9	-5.9	86.1	
	11 12	11 12	Italy Spain	44229 39624	+ 46708 42221	-5.3	-1.7 -2.7	27.6 58.1	
	14	13	Switzerland	32024		-0.2	-2.7	57.1	
	17	17	Belgium	19096	** 20331	** -6.1	-3.7	52.7	
	19	20	Luxembourg	16108	* 15636	3.0	7.0	39.9	
	20	19	Austria		+ 15638	-5.4	-2.2	72.3	
	28 29	29 25	Israel Denmark	10763	* 10099 * 11363	6.6	6.2 -3.0	49.0	
	31	25	Denmark Norway	10552 10353	10713	-7.1	-3.0 2.3	41.3	
	32	24	Sweden	10248	11675	-12.2	-4.5	18.9	
	34	30	Ireland	8945	* 9489	-5.7	-1.8	32.4	
	39	37	Portugal	6360	6652	-4.4	-0.4	50.1	
	43	42	Finland	5210	5668	-8.1	-3.6	18.6	
	44 45	44 45	Liechtenstein Malta	4010 3528	** 3978 * 3790	* 0.8	2.4 -1.5	65.7 80.5	
	50	49	Greece	2682	* 2839	-0.9	-3.2	51.2	
	82	81	Cyprus	561	* 606	-7.4	-3.7	51.4	
			Other countries	627	575			91.0	
vanced EMEA			Total	673248	713723	-5.7	-2.0	43.1	1
	21 22	26 21	Saudi Arabia Russia	13729 12557	* 10753 15625	27.7	24.6 -34.3	96.5 64.9	
	23	22	Poland	12341	* 13171	-6.3	-5.4	79.7	
	27	34	Turkey	11352	8941	27.0	37.7	86.2	
	30	32	United Arab Emirates (11)	10497	* 9416	11.5	6.3	79.2	
	33	33	South Africa	8968	* 9260	-3.2	0.4	19.6	
	40	40 46	Czech Republic Iran (13)	6241 3518	5905 * 3764	* -6.5	-1.1 -19.3	73.1 82.6	
	40	40	Romania		+ 2845	10.7	-19.3	86.0	
	49	47	Morocco	2814	* 2990	-5.9	-0.3	53.7	
	53	51	Hungary	2192	* 2387	-8.2	-1.5	57.7	
	54	53	Slovenia		+ 2210	-3.3	-0.3	72.5	
	56 57	57 55	Qatar Bulgaria	1713	* 1561	* 9.8	4.5 -1.4	97.2 86.4	
	57	62	Bulgaria Lebanon	1655 1631	* 1637 * 1359	20.0	-55.8	79.6	
	59	60	Kuwait	1531	* 1388	* 10.3	7.7	90.2	
	61	59	Egypt (14)	1511	* 1402	7.8	4.1	47.5	
	62	64	Kenya	1 404		4.9	4.7	54.0	
	63	61	Croatia	1373	1387	-1.0	0.6	77.6	
	67 68	63	Slovakia Oman	1 250 1 183	1 358 * 1 099	-8.0	-8.3 4.7	63.4 88.1	
	68	70 71	Oman Kazakhstan	1183	1099	14.7	4.7	65.6	
	71	72	Algeria	1 0 9 6	* 977	12.2	7.5	90.6	
	72	56	Ukraine	1075	** 1606	-33.1	-34.0	87.7	
	73	73	Serbia		** 947	1.8	2.1	80.3	
	74	74	Nigeria		* 893 * 871	+ 1.8 * 2.4	-10.7	54.0	
	75 78	75 80	Pakistan Jordan	892 814	* 8/1 + 738	* 2.4	7.4 5.8	32.8 83.4	
	79	78	Tunisia	745	* 756	-1.5	1.0	74.0	
	80	82	Bahrain	645	* 593	8.9	5.0	80.8	
	86	85	Ivory Coast		* 465	* -5.0	1.5	54.2	
	88	88	Namibia Other equatrice		** 253	** -1.8	2.6	25.2	
erging EMEA			Other countries Total	8896 120632	8325 117231	2.9	-0.9	71.9 61.9	
Signig LIVIEA	7	7	South Korea (12)		+ 98539	-3.8	2.5	51.9	
	8	6	Japan (12)	93920	* 107800	-12.9	1.9	27.8	
	10	10	Australia	55952	56228	-0.5	1.1	77.9	
	16	16	Taiwan	23761		-2.5	0.8	27.5	
	24 35	28 35	Singapore Hong Kong	11678 8648	* 10572 + 8529	10.5	6.8 0.3	24.9	
	35	35	Hong Kong New Zealand (14)	7 1 5 3	+ 8629 * 7439	-3.8	0.3	78.9	
	50	50	Other countries	89	96	5.0	0.0	14.3	
anced Asia-P			Total	296 0 22	313567	-5.6	1.9	36.8	
	2	2	PR China	333448	** 330672	0.8	3.2	47.8	
	15	14	India (12)	31538	* 30062	4.9	6.0	24.1	
	26	23	Thailand		* 11903	-4.3	-1.0	45.2	
	37 42	39 43	Indonesia Malaysia (12)	7 1 2 0 5 4 0 8	* 6173 5149	15.3 5.0	15.0 8.0	37.7 26.9	
	42	43	Vietnam	3028	* 2580	17.4	16.1	26.8	
	52	52	Philippines	2340	* 2230	4.9	9.7	30.3	
	85	86	Bangladesh	457	* 436	* 4.9	7.4	22.2	
		07	Macao	387	* 357	8.3	8.0	8.4	
	87	87				0.0			
erging Asia	87	87	Other countries Total	1017 396141	1 283 390 847	1.4	3.6	54.1 43.0	

Table VIII

Insurance density: premiums {}^1 per capita in USD in 2022

	Dentei	Country 1	Total business	Life business	Non-life business
	Ranking 3	Country United States (9)	8885 **	2017 +	6868 **
	14	Canada (10)	4392 **	1840 +	2552 **
and Canada		Total	8415	1 999	6416
	1	Cayman Islands	20834 *	1627 *	19207 *
	22	Bahamas	2725 *	617 *	2108 *
	34	Trinidad and Tobago	1065 *	486 *	578 *
	39	Chile	582	299	283
	44	Uruguay	428	279	149
	49	Panama	386	95	291
	52	Jamaica	371 *	150 *	220 *
	55	Brazil	352	184	168
	56	Costa Rica	298 *	49 *	249 *
	57	Argentina	281	29	252
	60	Mexico	265	118	146
	61	Colombia	194	60	135
	64 66	Dominican Republic Peru	159 * 144	24 * 75	135 * 69
	68		137 *	75 38 *	99 *
	69	Ecuador El Salvador	137	53 *	81 *
	75	El Salvador Guatemala	84	19	65
	75	Guatemaia	04	15	03
in America and Caribbean		Total	258	112	146
	5	Denmark	7 320 *	5532 *	1788 *
	7	Switzerland	6'364 +	2730 +	3634 +
	8	Ireland (1)	5'438 *	3678 *	1760 *
	9	Sweden	5 4 3 8 5 1 8 0 *	4203 *	976
	10	Finland	5036 *	4 203	937
	11	United Kingdom (1)	4781 *	3669 *	1111 *
	12	Luxembourg (1)	4762 *	2392 +	2 3 7 0 *
	13	Netherlands	4731 +	657 +	4074 +
	15	Norway (1)	4178 *	2691 *	1487
	17	France (1)	3578 *	2239 *	1 3 3 9
	19	Germany (1)	2881 *	1182 *	1699 *
	21	Belgium (1)	2756 **	1449 *	1 307 **
	21	Italy (1)	2756 +	1966 +	750 +
	23	Israel	2430 *	1 2 3 9 *	1191 *
	26	Austria	2430	626 +	1636 +
	28	Spain	1433	601	832
	31	Malta	1433	781 +	469 *
	32	Cyprus	1197 *	582 *	615 *
	32	Portugal	1126	577	549
	41	Greece	502 *	245 *	257 *
	88	Liechtenstein	na. **	na. **	na. **
anced EMEA		Total	3 3 0 8	1957	1 351
	29	United Arab Emirates (11)	1′404 *	292 *	1112 *
	30	Slovenia	1'396 +	384 +	1012 +
	35	Czech Republic	791	213	578
	36	South Africa	764 *	614 *	149 *
	37	Qatar	614 *	17 *	597 *
	40	Bahrain	525 *	101 *	424 *
	43	Croatia	456	102	353
	45	Poland	409 *	83	326 *
	46	Saudi Arabia	407 *	14 *	393 *
	47	Kuwait	398 *	39 *	359 *
	48	Hungary	391 *	166 *	226 *
	50	Namibia	385 **	288 **	97 **
	51	Lebanon	373 *	76 *	297 *
	54	Slovakia	359	132	228
	58	Bulgaria	281 *	38 *	242 *
	59	Oman	272 *	33 *	240 *
	62	Romania	192 *	27 *	166 +
	63	Serbia	177 **	35 **	142 **
	65	Turkey	154	21	133
	67	Morocco	140 *	65 *	75 *
	70	Russia	134	47	87
	73	Kazakhstan	91	31	60
	74	Jordan	87 +	14 +	72 +
	76	Tunisia	81 **	21 **	60 *
	79	Kenya	48 +	22 +	26 +
	80	Iran (13)	48 *	8 *	40 *
	81	Ukraine	30 **	4 **	26 **
	82	Ivory Coast	29 *	13 *	16 *
	83	Egypt (14)	29 *	15 *	14 *
	84	Algeria	27 *	3	24 *
	86	Pakistan	12 *	8 * 4 *	4 *
	87	Nigeria	8 *	4 *	4 *
erging EMEA		Total	80	30	49
	2	Hong Kong	9159 +	8007 +	1 1 52 +
	4	Singapore (1)	7563 *	6074 *	1 4 8 9 *
	16	Taiwan	3662 +	2656 +	1006 +
	18	South Korea (12)	3541 +	1705 +	1836 +
	20	Australia	2 758	609	2149
	24	Japan (12)	2690 *	1942 *	748 *
	27	New Zealand	1768 *	373 *	1 3 9 5 *
		Total	3 0 9 6	1964	1 1 3 3
anced Asia-Pacific				6048 *	557 *
vanced Asia-Pacific	6	Macao	6 6 0 5 *		
vanced Asia-Pacific	6 38	Macao Malaysia (12)	6605 * 592	432	159
ranced Asia-Pacific	38	Malaysia (12)	592	432	
ranced Asia-Pacific		Malaysia (12) PR China	592 489 **		234 **
anced Asia-Pacific	38 42	Malaysia (12) PR China Thailand	592	432 255	234 ** 134 *
anced Asia-Pacific	38 42 53 71	Malaysia (12) PR China Thailand Vietnam	592 489 ** 369 *	432 255 235 *	234 ** 134 * 30 *
anced Asia-Pacific	38 42 53 71 72	Malaysia (12) PR China Thailand Vietnam India (12)	592 489 ** 369 * 95 *	432 255 235 • 66 • 70 •	234 ** 134 *
anced Asia-Pacific	38 42 53 71	Malaysia (12) PR China Thailand Vietnam	592 489 ** 369 * 95 * 92 *	432 255 235 * 66 *	234 ** 134 * 30 * 22 *
anced Asia-Pacific	38 42 53 71 72 77	Malaysia (12) PR China Thailand Vietnam India (12) Indonesia	592 489 ** 369 * 95 * 92 * 68 *	432 255 235 • 66 • 70 • 43 •	234 ** 134 * 30 * 22 * 26 *
anced Asia-Pacific	38 42 53 71 72 77 78	Malaysia (12) PR China Thailand Vietnam India (12) Indonesia Philippines	592 489 ** 369 * 95 * 92 * 68 * 67 *	$\begin{array}{c} 432 \\ 255 \\ 235 \\ 66 \\ \cdot \\ 70 \\ 43 \\ 46 \end{array}$	234 ** 134 * 30 * 22 * 26 * 20 *

Table IX

Insurance penetration: premiums ^ in % of GDP in 2022

	Barrhi	Country	Total business	Life business	Non-life business
	Ranking 4	Country United States (9)	11.6 **	2.6 +	9.0 **
	17	Canada (10)	8.0 **	3.3 +	4.6 **
and Canada		Total	11.3	2.7	8.6
	1	Cayman Islands	23.2 *	1.8 *	21.4 *
	13	Bahamas	8.8 *	2.0 *	6.8 *
	21	Jamaica	6.7 *	2.7 *	4.0 *
	25	Trinidad and Tobago	5.3 *	2.4 *	2.9 *
	36	Brazil	4.0	2.1	1.9
	41	Chile	3.8	2.0	1.9
	45	Colombia	2.9	0.9	2.0
	47	El Salvador	2.6 *	1.0 *	1.6 *
	50	Mexico	2.4	1.1	1.3
	54	Costa Rica	2.2 *	0.4 * 0.5	1.9 * 1.7
	55 58	Panama Ecuador	2.2	0.5	1.7
	58 60	Uruguay	2.1	1.3	0.7
	62	Argentina	2.0	0.2	1.8
	63	Peru	2.0	1.0	1.0
	68	Dominican Republic	1.6 *	0.2 *	1.3 *
	69	Guatemala	1.6	0.2	1.2
	00	Guatemala	1.0	0.1	1.2
n America and Caribbean		Total	3.0	1.3	1.7
	8	Denmark	10.9 *	8.3 *	2.7 *
	9	United Kingdom (1)	10.5 *	8.1 *	2.4 *
	10	Finland	10.0 *	8.1 *	1.9
	11	Sweden	9.3 *	7.5 *	1.9
	14	France (1)	8.7 *	5.5 *	3.3 *
	14	Netherlands	8.5 +	1.2 +	7.3 +
	18	Italy (1)	8.0 +	5.8 +	2.2 +
	20	Switzerland	6.9 +	3.0 +	4.0 +
	20	Germany (1)	5.9 *	2.4 *	3.5 *
	23	Belgium (1)	5.5 **	2.9 *	2.6 **
	26	Ireland (1)	5.2 *	3.5 *	1.7 *
	28	Spain	4.9	2.0	2.8
	30	Portugal	4.5	2.4	2.3
	30	Austria	4.0 4.3 +	1.2 +	3.1 +
	33	Israel	4.2 *	2.1 *	2.1 *
	35	Norway (1)	4.2	2.6 *	1.4
	39	Malta	3.9 *	2.0 +	1.4
	40	Cyprus	3.8 *	1.9 *	2.0 *
	42	Luxembourg (1)	3.8 *	1.9 +	1.9 *
	49	Greece	2.4 *	1.2 *	1.2 *
	88	Liechtenstein	na. **	na. **	na. **
anced EMEA		Total	7.4	4.3	3.0
	6	South Africa	11.3 *	9.1 *	2.2 *
	19	Namibia	7.8 **	5.9 **	2.0 **
	29	Slovenia	4.7 +	1.3 +	3.4 +
	37	Morocco	3.9 *	1.8 *	2.1 *
	44	Czech Republic	2.9	0.8	2.1
	46	United Arab Emirates (11)	2.6 *	0.5 *	2.1 *
	48	Croatia	2.6	0.6	2.0
	52	Kenya	2.3 +	1.1 +	1.2 +
	53	Poland	2.2 *	0.5	1.8 *
	56	Tunisia	2.2 **	0.6 **	1.6 *
	57	Bulgaria	2.2 *	0.3 *	1.9 *
	59	Hungary	2.1 *	0.9 *	1.2 *
	61	Jordan	2.1 +	0.3 +	1.7 +
	65	Serbia	1.9 **	0.4 **	1.5 **
	66	Bahrain	1.7 *	0.3 *	1.4 *
	67	Slovakia	1.7	0.6	1.1
	70	Turkey	1.5	0.2	1.3
	72	Saudi Arabia	1.3 * 1.2 *	0.0 * 0.2 *	1.2 *
	73	Romania		0.2 *	1.1 +
	74	Iran (13)	1.2 *	0.2 *	1.0 *
	75	Ivory Coast	1.2 *	0.5 *	0.6 *
	76	Oman	12 *	0.1 *	1.0 *
	77	Kuwait	1.0 *	0.1 *	0.9 *
	78	Russia	0.9	0.3	0.6
	79	Pakistan	0.8 *	0.6 *	0.3 *
	80	Kazakhstan	0.8	0.3	0.5
	81	Ukraine	0.8 **	0.1 **	0.7 **
	82	Qatar	0.7 *	0.0 *	0.7 *
	83	Algeria	0.6 *	0.1	0.6 *
	84	Egypt (14)	0.6 * 0.4 *	0.3 *	0.3 *
	86	Lebanon	0.4 *	0.1 *	0.3 *
	87	Nigeria	0.4 *	0.2 *	0.2 *
		Total	1.5	0.6	1.0
		Total	1.5 19.0 +	0.6 16.7 +	1.0 2.4 +
rging EMEA	0		19.0 +		2.4 + 3.1 +
erging EMEA	3	Hong Kong		0.0	.1 +
erging EMEA	5	Taiwan	11.4 +	8.2 +	
erging EMEA	5 7	Taiwan South Korea (12)	11.4 +	5.4 +	5.8 +
rging EMEA	5 7 12	Taiwan South Korea (12) Singapore (1)	11.4 + 11.1 + 9.2 *	5.4 + 7.4 *	5.8 + 1.8 *
rging EMEA	5 7 12 16	Taiwan South Korea (12) Singapore (1) Japan (12)	11.4 + 11.1 + 9.2 * 8.2 *	5.4 + 7.4 * 5.9 *	5.8 + 1.8 * 2.3 *
rging EMEA	5 7 12 16 32	Taiwan South Korea (12) Singapore (1) Japan (12) Australia	11.4 + 11.1 + 9.2 * 8.2 * 4.2	5.4 + 7.4 * 5.9 * 0.9	5.8 + 1.8 * 2.3 * 3.3
rging EMEA	5 7 12 16	Taiwan South Korea (12) Singapore (1) Japan (12)	11.4 + 11.1 + 9.2 * 8.2 *	5.4 + 7.4 * 5.9 *	5.8 + 1.8 * 2.3 *
	5 7 12 16 32	Taiwan South Korea (12) Singapore (1) Japan (12) Australia New Zealand	11.4 + 11.1 + 9.2 • 8.2 • 4.2 3.8 •	5.4 + 7.4 • 5.9 • 0.9 0.8 •	5.8 + 1.8 * 2.3 * 3.3 3.0 *
	5 7 12 16 32 43	Taiwan South Korea (12) Singapore (1) Japan (12) Australia New Zealand Total	11.4 + 11.1 + 9.2 • 8.2 • 4.2 3.8 • 8.6	5.4 + 7.4 • 5.9 • 0.9 • 0.8 • 5.4	5.8 + 1.8 • 2.3 • 3.3 3.0 • 3.1
	5 7 12 16 32 43	Taiwan South Korea (12) Singapore (1) Japan (12) Australia New Zealand Total Macao	11.4 + 11.1 + 9.2 • 8.2 • 4.2 3.8 • 8.6 20.9 •	5.4 + 7.4 • 5.9 • 0.9 0.8 • 5.4 19.1 •	5.8 + 1.8 * 2.3 * 3.3 3.0 * 3.1 1.8 *
	5 7 12 16 32 43 2 2 24	Taiwan South Korea (12) Singapore (1) Japan (12) Australia New Zealand Total Macao Thalland	11.4 + 11.1 + 9.2 • 8.2 • 4.2 3.8 • 8.6 20.9 • 5.3 •	5.4 + 7.4 * 5.9 * 0.9 0.8 * 5.4 19.1 * 3.4 *	5.8 + 1.8 * 2.3 * 3.3 3.0 * 3.1 1.8 * 1.9 *
	5 7 12 16 32 43 2 24 27	Taiwan South Korea (12) Singapore (1) Japan (12) Australia New Zealand Total Macao Thailand Malaysia (12)	11.4 + 11.1 + 9.2 • 8.2 • 4.2 3.8 • 8.6 20.9 • 5.3 • 5.0	5.4 + 7.4 • 5.9 • 0.9 0.8 • 5.4 19.1 • 3.4 • 3.7	5.8 + 1.8 * 2.3 * 3.3 3.0 * 3.1 1.8 * 1.9 * 1.3
	5 7 12 16 32 43 43 	Taiwan South Korea (12) Singapore (1) Japan (12) Australia New Zealand Total Macao Thailand Malaysia (12) India (12)	11.4 + 11.1 + 9.2 • 8.2 • 4.2 · 3.8 • 8.6 20.9 • 5.3 • 5.0 · 4.0 •	5.4 + 7.4 • 5.9 • 0.9 0.8 • 5.4 19.1 • 3.4 • 3.7 3.0 •	5.8 + 1.8 * 2.3 * 3.3 - 3.0 * 3.1 1.8 * 1.9 * 1.3 1.0 *
	5 7 12 16 32 43 	Taiwan South Korea (12) Singapore (1) Japan (12) Australia New Zealand Total Macao Thailand Malaysia (12) India (12) PR China	11.4 + 11.1 + 9.2 • 8.2 • 4.2 - 3.8 • 8.6 - 20.9 • 5.3 • 5.0 - 4.0 • 3.9 ••	5.4 + 7.4 • 5.9 • 0.9 0.8 • 5.4 19.1 • 3.4 • 3.7 3.0 • 2.0	5.8 + 1.8 * 2.3 * 3.3 3.0 * 3.1 1.8 * 1.9 * 1.3 1.0 * 1.9 **
	5 7 12 16 32 43 2 2 4 3 2 4 27 34 38 51	Taiwan South Korea (12) Singapore (1) Japan (12) Australia New Zealand Total Macao Thailand Malaysia (12) India (12) PR China Vietnam	11.4 + 11.1 + 9.2 * 8.2 * 4.2 3.8 * 8.6 20.9 * 5.3 * 5.0 4.0 * 3.9 ** 2.3 *	5.4 + 7.4 • 5.9 • 0.9 0.8 • 5.4 19.1 • 3.4 • 3.7 3.0 • 2.0 1.6 •	5.8 + 1.8 · 2.3 · 3.3 · 3.0 · 3.1 1.8 · 1.9 · 1.3 · 1.0 · 1.9 ·· 1.3 · 0.7 ·
erging EMEA	5 7 12 16 32 43 2 24 24 27 34 38 51 64	Taiwan South Korea (12) Singapore (1) Japan (12) Australia New Zealand Total Macao Thailand Malaysia (12) India (12) PR China Vietnam Philippines	11.4 + 11.1 + 9.2 • 8.2 • 4.2 3.8 • 8.6 20.9 • 5.3 • 5.0 4.0 • 3.9 •• 2.3 • 1.9 •	$\begin{array}{c} 5.4 \\ + \\ 7.4 \\ 5.9 \\ 0.9 \\ 0.8 \\ \end{array}$ $\begin{array}{c} \\ \hline \\ 19.1 \\ 3.4 \\ 3.7 \\ 3.0 \\ 2.0 \\ 1.6 \\ 1.3 \\ \end{array}$	5.8 + 1.8 * 2.3 * 3.3 3 3.0 * 3.1 1.8 * 1.9 * 1.3 1.0 * 1.9 ** 0.7 * 0.6 *
	5 7 12 16 32 43 2 2 43 22 24 27 34 38 51 64 71	Taiwan South Korea (12) Singapore (1) Japan (12) Australia New Zealand Total Macao Thailand Malaysia (12) India (12) PR China Vietnam Philippines Indonesia	11.4 + 11.1 + 9.2 • 8.2 • 4.2 - 3.8 • 8.6 - 20.9 • 5.3 • 5.0 - 4.0 • 3.9 •• 2.3 • 1.9 • 1.4 •	$\begin{array}{cccccccc} 5.4 & + \\ 7.4 & \cdot \\ 5.9 & \cdot \\ 0.9 \\ 0.8 & \cdot \\ \hline \\ \hline \\ 19.1 & \cdot \\ 3.4 & \cdot \\ 3.7 \\ 3.0 & \cdot \\ 2.0 \\ 1.6 & \cdot \\ 1.3 & \cdot \\ 0.9 & \cdot \\ \end{array}$	5.8 + 1.8 * 2.3 - 3.3 - 3.0 * 3.1 1.8 * 1.9 * 1.3 - 1.0 * 1.9 * 0.7 * 0.6 * 0.5 *
	5 7 12 16 32 43 2 24 24 27 34 38 51 64	Taiwan South Korea (12) Singapore (1) Japan (12) Australia New Zealand Total Macao Thailand Malaysia (12) India (12) PR China Vietnam Philippines	11.4 + 11.1 + 9.2 • 8.2 • 4.2 3.8 • 8.6 20.9 • 5.3 • 5.0 4.0 • 3.9 •• 2.3 • 1.9 •	$\begin{array}{c} 5.4 \\ + \\ 7.4 \\ 5.9 \\ 0.9 \\ 0.8 \\ \end{array}$ $\begin{array}{c} \\ \hline \\ 19.1 \\ 3.4 \\ 3.7 \\ 3.0 \\ 2.0 \\ 1.6 \\ 1.3 \\ \end{array}$	5.8 + 1.8 * 2.3 * 3.3 - 3.0 * 3.1 1.8 * 1.9 * 1.3 - 1.0 * 1.9 ** 0.7 * 0.6 *
	5 7 12 16 32 43 2 2 43 22 24 27 34 38 51 64 71	Taiwan South Korea (12) Singapore (1) Japan (12) Australia New Zealand Total Macao Thailand Malaysia (12) India (12) PR China Vietnam Philippines Indonesia	11.4 + 11.1 + 9.2 • 8.2 • 4.2 - 3.8 • 8.6 - 20.9 • 5.3 • 5.0 - 4.0 • 3.9 •• 2.3 • 1.9 • 1.4 •	$\begin{array}{cccccccc} 5.4 & + \\ 7.4 & \cdot \\ 5.9 & \cdot \\ 0.9 \\ 0.8 & \cdot \\ \hline \\ \hline \\ 19.1 & \cdot \\ 3.4 & \cdot \\ 3.7 \\ 3.0 & \cdot \\ 2.0 \\ 1.6 & \cdot \\ 1.3 & \cdot \\ 0.9 & \cdot \\ \end{array}$	5.8 + 1.8 * 2.3 - 3.3 - 3.0 * 3.1 1.8 * 1.9 * 1.3 - 1.0 * 1.9 * 0.7 * 0.6 * 0.5 *

Table X

Macroeconomic indicators in 2022

			Population (millions)	Gross o USDbn	domestic prod Real change		Inflation rate	(in %)	Exchange	rate local curre	ncy per USD
Rank	cing	Country	2022	2022	2022	2021	2022	2021	2022	2021	Change (in %
	1	United States	333	25463	2.1	6.1	8.0	4.7	1.0	1.0	0.0
	9	Canada	39	2140	3.4	5.2	6.8	3.4	1.3	1.3	3.8
US and Canada	11	Total Brazil	372	27 602 1 921	2.2	6.0	9.3	8.3	5.2	5.4	-4.4
	14	Mexico	216 128	1416	3.0 3.1	5.5 5.5	9.3 7.9	8.3 5.7	20.1	20.3	-4.4
	23	Argentina (17)	46	633	5.2	10.5	72.4	48.4	130.5	95.1	37.
	44	Colombia	52	344	7.5	11.0	10.2	3.5	4256.2	3744.2	13.
	46	Chile	20	301	2.6	12.2	11.6	4.5	873.2	759.1	15.0
	51	Peru	34	244	2.7	13.4	7.9	4.0	3.8	3.9	-1.1
	62	Ecuador	18	115	2.9	4.2	3.5	0.1	1.0	1.0	0.0
	64	Dominican Republic	11	114	4.9	12.3	8.8	8.2	55.1	57.2	-3.0
	66	Guatemala	18	95	4.1	8.0	6.9	4.3	7.7	7.7	0.1
	69	Panama	4	77	10.8	15.8	2.9	1.6	1.0	1.0	0.0
	70	Uruguay	3	71	4.9	5.3	9.1	7.7	41.2	43.6	-5.
	72	Costa Rica	5	69	4.3	7.8	8.3	1.7	643.7	617.6	4.1
	79	El Salvador	6	32	2.6	11.2	7.2	3.5	1.0	1.0	0.0
	80	Trinidad and Tobago	2	31	9.4	-1.0	5.8	2.1	6.8	6.8	-0.
	84	Jamaica	3	16	4.0	4.6	10.3	5.9	154.3	151.5	1.
	85	Bahamas	0	13	8.1	13.7	5.6	2.9	1.0	1.0	0.0
	88	Cayman Islands	0	6	2.8	1.7	8.0	4.7	0.8	0.8	0.0
atin America and Caribb		Tetal	657	5700	3.8	7.1					
atin America and Caribb	4	Total Germany	84	4070	1.9	2.8	6.9	3.0	0.9	0.8	12.
	6	United Kingdom	68	3082	4.2	8.5	9.1	2.6	0.8	0.7	11.
	7	France	68	2781	2.6	7.2	5.2	1.6	0.9	0.8	12.
	10	Italy	59	2012	3.9	7.2	8.2	1.9	0.9	0.8	12.
	15	Spain	48	1 3 9 8	5.5	6.1	8.4	3.1	0.9	0.8	12.
	18	Netherlands	18	991	4.5	5.0	10.0	2.7	0.9	0.8	12.
	20	Switzerland	9	807	2.2	4.3	2.8	0.6	1.0	0.9	4.
	24	Sweden	10	585	2.7	5.3	8.4	2.2	10.1	8.6	17.
	25	Belgium	12	579	3.3	6.5	9.6	2.4	0.9	0.8	12
	26	Norway	5	576	3.2	4.1	5.8	3.5	9.6	8.6	11.
	27	Ireland	5	529	12.2	13.5	7.8	2.4	0.9	0.8	12
	29	Israel	9	522	6.4	8.7	4.4	1.5	3.4	3.2	4.
	33	Austria	9	471	5.1	5.0	8.5	2.8	0.9	0.8	12.
	41	Denmark	6	395	3.8	4.9	7.7	1.9	7.1	6.3	12.
	49	Finland	6	281	2.1	3.1	7.1	2.2	0.9	0.8	12.
	50	Portugal	10	252	6.8	5.9	7.8	1.3	0.9	0.8	12.
	55	Greece	10	218	6.1	8.4	9.6	1.2	0.9	0.8	12.
	68	Luxembourg	1	82	1.6	5.1	8.2	3.5	0.9	0.8	12.
	81	Cyprus	1	28	5.6	6.6	8.1	2.3	0.9	0.8	12.
	83	Malta	1	18	6.9	11.7	6.1	0.7	0.9	0.8	12.
	87	Liechtenstein	0	7	2.5	3.5	2.8	0.6	1.0	0.9	4.9
		T / 1	400	40740	0.7						
Advanced EMEA	8	Total Russia	438	19716 2 240	3.7 -1.9	6.0 5.6	13.8	6.7	68.5	73.7	-7.0
	17	Saudi Arabia	35	1'108	8.7	3.9	2.5	3.1	3.8	3.8	-7.0
	19	Turkey	85	906	5.8	11.8	72.3	19.6	16.6	8.9	86.9
	22	Poland	38	690	5.4	6.9	14.4	5.1	4.5	3.9	15.
	28	Egypt	111	524	4.2	7.1	8.5	4.5	16.5	15.7	4.8
	30	United Arab Emirates	9	502	7.9	3.9	4.8	-0.1	3.7	3.7	0.0
	32	Nigeria	219	473	3.3	3.7	18.8	16.9	426.8	409.4	4.
	34	Lebanon	5	467	-2.7	-7.0	171.2	154.8	1507.5	1507.5	0.
	38	South Africa	60	405	2.1	5.5	6.9	4.6	16.4	14.8	10.
	43	Iran	89	358	2.5	4.7	48.7	40.2	296364.4	230818.8	28.
	45	Pakistan	236	327	6.2	6.5	19.9	9.5	204.9	162.9	25.
	47	Romania	19	300	4.2	6.0	13.8	5.0	4.7	4.2	12.
	48	Czech Republic	11	291	2.5	3.6	15.1	3.8	23.4	21.7	7.
	53	Qatar	3	237	4.8	1.6	5.0	2.3	3.6	3.6	0.
	54	Kazakhstan	19	226	2.7	4.0	15.0	8.0	460.2	425.9	8.
	56	Algeria	45	192	2.9	3.5	9.7	6.6	142.0	135.1	5.
	57	Hungary	10	179	4.6	7.5	14.6	5.1	372.6	303.1	22
	58	Kuwait	4	174	7.0	2.5	4.0	3.4	0.3	0.3	1.
	59	Ukraine	41	161	-29.1	3.4	20.2	9.4	32.3	27.3	18
	60	Morocco	37	134	1.1	7.9	6.7	1.4	10.2	9.0	13
	61	Slovakia	5	116	1.7	5.0	12.8	3.1	0.9	0.8	12
	63 65	Oman Kenya	54	115 113	4.3 4.9	3.1 7.7	2.8 7.7	1.5 6.1	0.4 117.9	0.4 109.6	0.
	67	Kenya Bulgaria	54	89	4.9 3.8	7.7	15.3	6.1 3.3	117.9	109.6	12
	71	Croatia	4	69	6.4	13.1	10.8	3.3 2.6	7.2	6.4	12
	73	Ivory Coast	28	69	6.8	7.4	5.3	4.1	623.8	554.6	12
	74	Serbia	7	64	2.3	7.4	12.0	4.1	111.7	99.4	12
	74	Slovenia	2	62	2.3 5.7	8.3	8.8	4.1	0.9	0.8	12
	76	Jordan	11	62 47	5.7	8.3 2.2	4.2	1.9	0.9	0.8	0
	77	Tunisia	12	47	2.5	4.4	8.3	5.7	3.1	2.8	11.
	78	Bahrain	2	40	4.2	2.7	3.6	-0.6	0.4	0.4	0.
	86	Namibia	3	13	4.6	3.5	6.1	3.6	16.4	14.8	10.
			9	10		5.0	0.1	5.0	.0.4		10.
		Total	2448	12671	2.9	5.6					
merging EMEA	0	Japan	126	4105	1.0	2.3	3.2	0.1	135.6	112.4	20.
merging EMEA	3			1699	3.7	5.3	6.6	2.8	1.4	1.3	8.
merging EMEA	12	Australia	26	1644	2.6	4.2	5.3	3.1	1 309.0	1166.7	12
merging EMEA		South Korea	52		2.5	6.5	2.9	2.0	29.8	28.0	6.
merging EMEA	12			762	2.0	0.0					
merging EMEA	12 13	South Korea	52 24 6		3.7	9.1	6.1	2.3	1.4	1.3	2.
merging EMEA	12 13 21	South Korea Taiwan	52 24	762	3.7 -3.5			2.3 1.6	1.4 7.8	1.3 7.8	
merging EMEA	12 13 21 35	South Korea Taiwan Singapore	52 24 6	762 467	3.7	9.1	6.1				0
	12 13 21 35 42	South Korea Taiwan Singapore Hong Kong	52 24 6 8 5	762 467 361 241	3.7 -3.5 2.2	9.1 6.5 6.4	6.1 1.9	1.6	7.8	7.8	0.
	12 13 21 35 42 52	South Korea Taiwan Singapore Hong Kong New Zealand Total	52 24 6 8 5 259	762 467 361 241 9316	3.7 -3.5 2.2 1.8	9.1 6.5 6.4 3.8	6.1 1.9 7.2	1.6 3.9	7.8 1.6	7.8 1.4	0. 11.
	12 13 21 35 42 52 2	South Korea Taiwan Singapore Hong Kong New Zealand Total PR China	52 24 6 8 5 259 1427	762 467 361 241 9316 17984	3.7 -3.5 2.2 1.8 3.0	9.1 6.5 6.4 3.8 9.1	6.1 1.9 7.2 2.0	1.6 3.9 0.9	7.8 1.6 6.7	7.8 1.4 6.4	0 11 4
	12 13 21 35 42 52 2 2 5	South Korea Taiwan Singapore Hong Kong New Zealand Total PR China India	52 24 6 8 5 259 1427 1422	762 467 361 241 9316 17984 3298	3.7 -3.5 2.2 1.8 3.0 7.2	9.1 6.5 6.4 3.8 9.1 9.1	6.1 1.9 7.2 2.0 6.7	1.6 3.9	7.8 1.6 6.7 80.4	7.8 1.4 6.4 74.5	0 11 4 7
	12 13 21 35 42 52 2 5 5 16	South Korea Taiwan Singapore Hong Kong New Zealand Total PR China India Indonesia	52 24 6 8 5 259 1427 1422 276	762 467 361 241 9316 17984 3298 1319	3.7 -3.5 2.2 1.8 3.0 7.2 5.3	9.1 6.5 6.4 3.8 9.1 9.1 3.7	6.1 1.9 7.2 2.0 6.7 4.2	1.6 3.9 0.9 5.5 1.6	7.8 1.6 6.7 80.4 14851.5	7.8 1.4 6.4 74.5 14291.7	0 11 4 7 3
	12 13 21 35 42 52 2 5 16 31	South Korea Taiwan Singapore Hong Kong New Zealand Total PR China India Indonesia Thailand	52 24 6 8 5 259 1427 1422 276 72	762 467 361 241 9316 17984 3298 1319 495	3.7 -3.5 2.2 1.8 3.0 7.2 5.3 2.6	9.1 6.5 6.4 9.1 9.1 3.7 1.7	6.1 1.9 7.2 2.0 6.7 4.2 6.1	1.6 3.9 0.9 5.5 1.6 1.2	7.8 1.6 6.7 80.4 14851.5 35.1	7.8 1.4 6.4 74.5 14291.7 32.0	0 11 4 7 3 9
	12 13 21 35 42 52 2 5 16 31 36	South Korea Taiwan Singapore Hong Kong New Zealand Total PR China India Indonesia Thailand Bangladesh	52 24 6 8 5 259 1427 1422 276 72 72 171	762 467 361 241 9316 17984 3298 1319 495 423	3.7 -3.5 2.2 1.8 3.0 7.2 5.3 2.6 7.1	9.1 6.5 6.4 9.1 9.1 3.7 1.7 6.9	6.1 1.9 7.2 2.0 6.7 4.2 6.1 7.7	1.6 3.9 0.9 5.5 1.6 1.2 5.5	7.8 1.6 6.7 80.4 14851.5 35.1 93.9	7.8 1.4 6.4 74.5 14291.7 32.0 85.1	0 11. 4 7 3 9 10
	12 13 21 35 42 52 2 5 16 31 36 37	South Korea Taiwan Singapore Hong Kong New Zealand Total PR China India India India Indonesia Thailand Bangladesh Vietnam	52 24 6 8 5 259 1427 1422 276 72 276 72 171 98	762 467 361 241 9316 17984 3298 1319 495 423 407	3.7 -3.5 2.2 1.8 3.0 7.2 5.3 2.6 7.1 8.0	9.1 6.5 6.4 9.1 9.1 9.1 3.7 1.7 6.9 2.6	6.1 1.9 7.2 2.0 6.7 4.2 6.1 7.7 3.2	1.6 3.9 0.9 5.5 1.6 1.2 5.5 1.8	7.8 1.6 6.7 80.4 14851.5 35.1 93.9 23380.5	7.8 1.4 6.4 74.5 14291.7 32.0 85.1 22921.8	0. 11. 4. 7. 3. 9 10. 2.
Emerging EMEA	12 13 21 35 42 52 2 5 16 31 36 37 39	South Korea Taiwan Singapore Hong Kong New Zealand Total PR China India Indonesia Thailand Bangladesh Vietnam Philippines	52 24 6 8 5 259 1427 1422 276 72 171 98 116	762 467 361 241 9316 17984 3298 1319 495 423 407 404	3.7 -3.5 2.2 1.8 3.0 7.2 5.3 2.6 7.1 8.0 7.6	9.1 6.5 6.4 3.8 9.1 9.1 9.1 3.7 1.7 6.9 2.6 5.8	6.1 1.9 7.2 2.0 6.7 4.2 6.1 7.7 3.2 5.8	1.6 3.9 0.9 5.5 1.6 1.2 5.5 1.8 3.9	7.8 1.6 6.7 80.4 14851.5 35.1 93.9 23380.5 54.5	7.8 1.4 74.5 14291.7 32.0 85.1 22921.8 49.3	2. 0. 11. 4. 7. 3. 9. 10. 2. 10.
	12 13 21 35 42 52 2 5 16 31 36 37 39 40	South Korea Taiwan Singapore Hong Kong New Zealand Total PR China India Indonesia Thailand Bangladesh Vietnam Philippines Malaysia	52 24 6 8 5 259 259 1427 1422 276 72 171 98 116 34	762 467 361 241 9316 17984 3298 1319 495 423 407 404	3.7 -3.5 2.2 1.8 3.0 7.2 5.3 2.6 7.1 8.0 7.6 8.7	9.1 6.5 6.4 3.8 9.1 9.1 9.1 3.7 1.7 6.9 2.6 5.8 3.8	6.1 1.9 7.2 2.0 6.7 4.2 6.1 7.7 3.2 5.8 3.7	1.6 3.9 0.9 5.5 1.6 1.2 5.5 1.8 3.9 2.9	7.8 1.6 6.7 80.4 14851.5 35.1 93.9 23380.5 54.5 4.5	7.8 1.4 74.5 14291.7 32.0 85.1 22921.8 49.3 4.2	0. 11. 4. 7. 3. 9. 10. 2. 10. 2. 10. 6.
	12 13 21 35 42 52 2 5 16 31 36 37 39	South Korea Taiwan Singapore Hong Kong New Zealand Total PR China India Indonesia Thailand Bangladesh Vietnam Philippines	52 24 6 8 5 259 1427 1422 276 72 171 98 116	762 467 361 241 9316 17984 3298 1319 495 423 407 404	3.7 -3.5 2.2 1.8 3.0 7.2 5.3 2.6 7.1 8.0 7.6	9.1 6.5 6.4 3.8 9.1 9.1 9.1 3.7 1.7 6.9 2.6 5.8	6.1 1.9 7.2 2.0 6.7 4.2 6.1 7.7 3.2 5.8	1.6 3.9 0.9 5.5 1.6 1.2 5.5 1.8 3.9	7.8 1.6 6.7 80.4 14851.5 35.1 93.9 23380.5 54.5	7.8 1.4 74.5 14291.7 32.0 85.1 22921.8 49.3	0. 11. 4. 7. 3. 9. 10. 2. 2.
	12 13 21 35 42 52 2 5 16 31 36 37 39 40	South Korea Taiwan Singapore Hong Kong New Zealand Total PR China India Indonesia Thailand Bangladesh Vietnam Philippines Malaysia	52 24 6 8 5 259 259 1427 1422 276 72 171 98 116 34	762 467 361 241 9316 17984 3298 1319 495 423 407 404	3.7 -3.5 2.2 1.8 3.0 7.2 5.3 2.6 7.1 8.0 7.6 8.7	9.1 6.5 6.4 3.8 9.1 9.1 9.1 3.7 1.7 6.9 2.6 5.8 3.8	6.1 1.9 7.2 2.0 6.7 4.2 6.1 7.7 3.2 5.8 3.7	1.6 3.9 0.9 5.5 1.6 1.2 5.5 1.8 3.9 2.9	7.8 1.6 6.7 80.4 14851.5 35.1 93.9 23380.5 54.5 4.5	7.8 1.4 74.5 14291.7 32.0 85.1 22921.8 49.3 4.2	0, 11. 4. 7. 3. 9. 10. 2. 10. 2. 0. 6.

Published by:

Swiss Re Management Ltd Swiss Re Institute P.O. Box 8022 Zurich Switzerland

Telephone Email +41 43 285 2551 institute@swissre.com

Authors

Fernando Casanova Aizpun Loic Lanci Roman Lechner Arnaud Vanolli Li Xing

The authors would like to thank James Finucane, Xin Dai, John Zhu, Thomas Holzheu, Ayush Uchil, Mahesh H Puttaiah for their contributions to this report.

sigma editor Paul Ronke

Managing editor Dr Jerome Jean Haegeli Swiss Re Group Chief Economist

Explore and visualise *sigma* data on natural catastrophes and the world insurance markets at www.sigma-explorer.com

The editorial deadline for this study was 13 June 2023.

sigma is available in English (original language) and Chinese.

sigma is available on Swiss Re's website: www.swissre.com/sigma

The internet version may contain slightly updated information.

Graphic design and production: Corporate Real Estate & Logistics / Media Production, Zurich Printing: Multicolor Print AG, Baar

© 2023 Swiss Re All rights reserved.

The entire content of this *sigma* edition is subject to copyright with all rights reserved. The information may be used for private or internal purposes, provided that any copyright or other proprietary notices are not removed. Electronic reuse of the data published in *sigma* is prohibited.

Reproduction in whole or in part or use for any public purpose is permitted only with the prior written approval of Swiss Re and if the source reference *"sigma 3/2021"* is indicated. Courtesy copies are appreciated.

Although all the information used in this study was taken from reliable sources, Swiss Re does not accept any responsibility for the accuracy or comprehensiveness of the information given or forward looking statements made. The information provided and forward-looking statements made are for informational purposes only and in no way constitute or should be taken to reflect Swiss Re's position, in particular in relation to any ongoing or future dispute. In no event shall Swiss Re be liable for any loss or damage arising in connection with the use of this information and readers are cautioned not to place undue reliance on forward-looking statements. Swiss Re undertakes no obligation to publicly revise or update any forward-looking statements, whether as a result of new information, future events or otherwise. Swiss Re Management Ltd. Swiss Re Institute Mythenquai 50/60 P.O. Box 8022 Zurich Switzerland

Telephone +41 43 285 3095 swissre.com/institute