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Allianz Research

Anchor in turbulent times

Allianz Global Insurance Report 2023

Executive Summary

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- **Total global insurance premium income amounted to almost EUR5.6trn in 2022.** Life remains the largest segment (EUR2.6trn), ahead of p&c (EUR1.8trn) and health (EUR1.1trn). Last year, the premium pool grew by EUR259bn or +4.9% – against the backdrop of a global inflation rate of 8.6%.

- **However, the three segments fared very differently:** While property and casualty (p&c) clocked robust growth of +8.7%, health expanded by a more modest +4.9%, and life insurance market growth was a dismal +2.4%: squeezed real household incomes took a toll on private savings.

- **The rise in p&c premiums was driven by all regions around the globe.** However, with EUR77.5bn (+9.9%), more than half of the global increase in 2022 came from North America alone; with premium income of EUR860bn, the region remains by far the largest market worldwide. Asia, too, saw healthy growth of +8.4% last year (+EUR31bn). With total premium income of nearly EUR403bn, the region overtook Europe for the first time (+4.0% or EUR15bn to EUR397bn).

- **Life insurance markets suffered last year, particularly in Western Europe:** Premium income declined by almost -3% in 2022 (-EUR21bn to EUR740bn). Growth was disappointing in Asia, too, recording a modest increase of +3.6% (+EUR33bn to EUR952bn). As in p&c, North America was the main growth driver in 2022, adding EUR61bn in new premiums (+7.8% to EUR840bn). America's dominance is even more pronounced in health, where the US market accounts for around two-thirds of all premium income worldwide.

- **North America – i.e., the US, which accounts for 94% of the region's premium pool – dominated the global insurance market not only in 2022, but over the last decade:** More than half of the increase in global premium income in p&c and health was generated there. In life, the share is still slightly below one-third, while Asia commands the biggest slice of the cake. As a result, the region's global market share rose from an already impressive 39.6% in 2012 to a whopping 43.9% in 2022. This is in sharp contrast to Western Europe, which lost more than 6pps to reach 23.8%. The other clear "loser" is Japan (-3.7pps to 5.5%), while China was able to almost double its global share to 11.4%; the rest of Asia stood at 10.1%.

- **In economic terms, navigating an inflationary environment will be the biggest challenge in the coming years.** Five structural drivers will determine inflation (the "Five Ds"): demographics, deglobalization, decarbonization, digitalization

and debt. Overall, the five Ds might significantly lift annual inflation by up to 1pp.

- **Despite higher inflation – or perhaps precisely because of it – premiums are set to increase by +5.2% p.a. over the next decade, adding EUR4,190bn to the global premium pool.** In 2033, premium income will reach EUR4.3trn in life, EUR3.1trn in p&c and EUR2.3trn in health.

- **With EUR1,726bn, most of the increase will be in the life segment. However, annual growth (+4.7%) over the next decade is likely to lag well behind general economic growth (+5.2%).** Insurance penetration will thus fall by 0.3pps to 2.8%. Asia will remain the growth engine for the global life business, with annual growth (ex. Japan) expected to rise to +7.5%. The region should account for half of absolute premium growth (EUR866bn), more than North America (EUR377bn) and Europe (EUR276bn) combined.

- **In the p&c segment, additional premiums will amount to EUR1,282bn by 2033.** This represents an annual growth rate of +5.0%, roughly in line with the previous decade (+5.1%) and general economic growth (+5.2%); insurance penetration will therefore decrease only slightly by 1pp (to 2.0%). As in the life segment, Asia (ex. Japan) is the clear growth champion among the major regions, with an annual rate of +8.1%. In absolute terms, however, the importance of the region is lower than in the life segment: "only" around 35% of the expected premium growth (EUR448bn) is attributable to Asia, against EUR357bn in North America and EUR168bn in Europe.

- **In view of the major technological upheavals and new and rising risks, this forecast – which suggests continuity – may come as a surprise.** However, this applies only to the surface of premium growth. The underlying changes are dramatic.

- **Technology will change how insurers operate.** Ecosystems, for instance, will play a decisive role in customer access, offering not only individual products but comprehensive "solutions" for customer needs, be it for mobility, living, travel, wealth or health. Artificial intelligence opens unimagined possibilities in data analytics and could revolutionize the entire value chain from underwriting to claims handling.

- **Preserving its social relevance – and with it its billion-dollar premium pool – the industry is facing a fundamental change in its business model:** The value proposition of insurers will evolve, from pure financial compensation to risk management and holistic service offerings to prevent and mitigate risks. This follows an inescapable logic: To close the huge protection gaps – in NatCat, cyber, health or pension – mobilizing more premiums might not be enough; avoiding risks in the first place will become more and more important.

- **However, this transformation will play out over a long time. In the meantime, insurance can prove their worth in turbulent times of high inflation and low growth.** The insurance industry cannot undo inflation, but it can smooth out the impact, acting as a kind of buffer. Its resilience in terms of liquidity and credit makes it a bellwether for the investments needed to finance the green transition. Insurance is an essential shock absorber as it flattens the curve of the economic cycle.

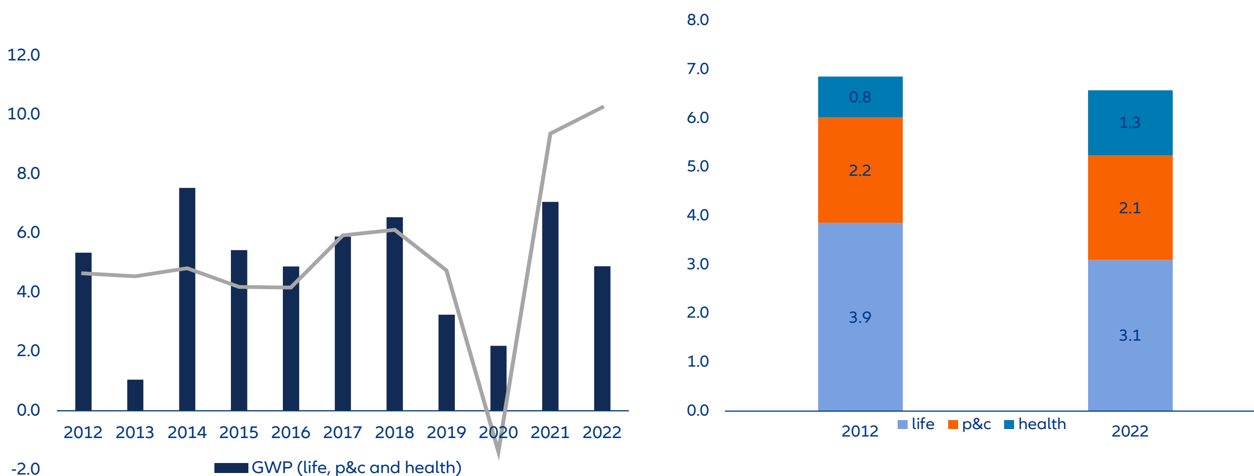
Looking back: strong growth

The global insurance industry proved to be resilient in 2022: Insurers worldwide collected more than EUR5.6trn in life, p&c and health insurance premiums, more than ever before. The increase over the previous year amounts to an estimated +4.9%, in line with the average growth rate of the past decade (CAGR[1] 2012-2022: +5.0%).

However, the robust development must be seen against the backdrop of rapidly rising inflation: In the last year alone, the global inflation rate is likely to have doubled from 4.3% to 8.6%. In real terms, therefore, the picture is becoming much gloomier. Moreover, the growth momentum has slowed down considerably compared to the previous year (+7.1% in 2021) due to the weak development in the life sector. The upshot: For a second year in a row, premium growth trailed behind overall economic growth and insurance penetration (premiums as a percentage of GDP) continued to fall, from 7.1% in 2020 to 6.9% in 2021 and 6.6% in 2022. However, the decline of insurance penetration is not just the consequence of sky-high inflation. It must be seen as a longer-term trend – albeit with huge differences between the segments. While health insurance increased in relevance over the last decade (albeit from a low level) and p&c managed to narrowly defend its turf (not surprisingly as many p&c insurance products are mandatory), life insurance dropped dramatically: first ultra-low interest rates and now squeezed real incomes have taken a toll on private savings (see Figure 1).

[1] Compound Annual Growth Rate.

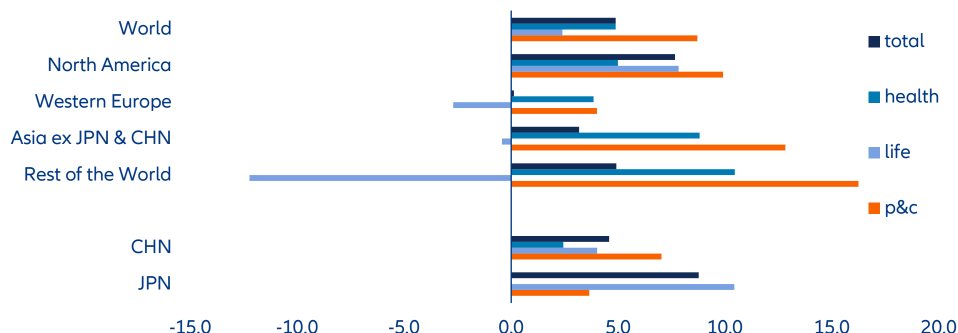
Figure 1: Losing relevance
Global gross written premiums* and nominal GDP growth* (y/y, in %) and global gross written premiums* as % of GDP by segments



*The conversion into EUR is based on 2022 exchange rates.
Sources: National financial supervisory authorities, insurance associations and statistical offices, Axco, Refinitiv Datastream, Allianz Research.

Figure 2 depicts the growth dynamic in 2022 by region and line of business. The global market growth in 2022 was primarily fed by the sharp rise in p&c premium income: With an increase of +8.7%, premiums for p&c insurance products written worldwide outpaced health and life insurance market growth (+4.9% and +2.4%, respectively) by a wide margin. And in contrast to both these sectors – where growth significantly slowed down from +9.3% and +6.5%, respectively, in 2021 – the pace of p&c premium growth even accelerated compared to the previous year (+6.4% in 2021).

Figure 2: Life is a drag
Gross written premium growth*, 2022 by region in %



*The conversion into EUR is based on 2022 exchange rates. Japan: Health is part of life (third sector products).
Sources: National financial supervisory authorities, insurance associations and statistical offices, Axco, Refinitiv Datastream, Allianz Research.

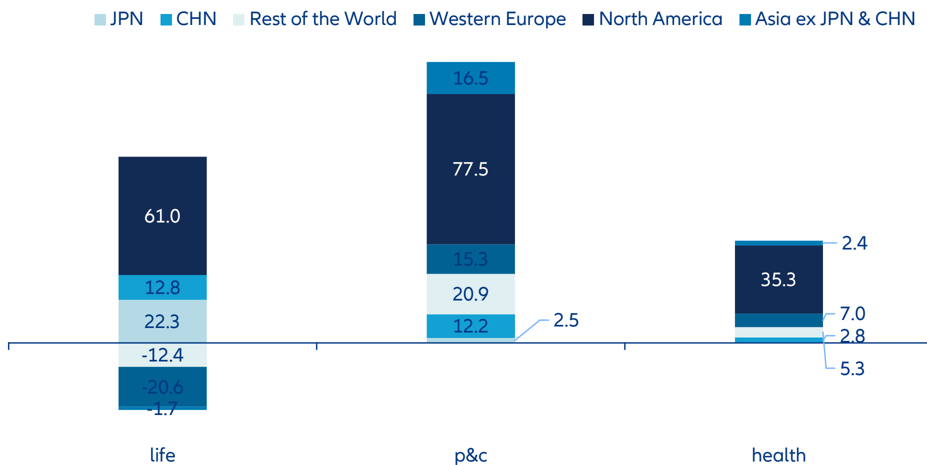
The surge in p&c business last year was driven by all regions around the globe. At the top of the list is North America or, more precisely, the US alone: With almost EUR77.5bn, more than half of the worldwide increase in p&c premiums came from there (see Figure 3). In 2022, the US p&c market stood at an estimated EUR802bn, corresponding to a year-over-year growth of nearly +10% (CAGR 2012-2022: +5.4%) and a global market share of nearly 45%. The US might no longer be the undisputed global hegemon but in the p&c business it still rules the world.

According to our projections, insurers in Western Europe wrote +4.0% more p&c business in the region than in the previous year, the highest annual increase since 2017. In absolute terms, the increase amounted to EUR15.3bn – only a fraction of the growth seen in the US. In sync with the global development, the pace of premium growth did not only accelerate – albeit slightly – compared to the previous year (+3.9% in 2021) but was also well above the average annual growth during the past decade (CAGR 2012-2022: +2.5%). While premium growth in the continent's largest market, Germany (+4.0%), was in line with the regional average, the development in smaller markets such as Austria (+6.7%), Greece (+6.5%) and Portugal (+6.4%), for example, was clearly above. Western Europe accounted for around 22% of global premium volume at the end of 2022 (EUR397bn).

Asia's p&c insurance market growth increased significantly from only +1.6% in 2021 to +8.4% last year, surpassing the long-term average (CAGR 2012-2022: +6.7%). The main driver of the return to "normal" Asian growth rates was the recovery of the Chinese market, which added EUR12.2bn in premiums, almost as much as Western Europe. Another EUR16.5bn in additional premiums was written in the rest of Asia (without Japan), underlining the importance of the region for the global insurance industry (see Figure 3).

In 2022, Asian p&c premium income amounted to the equivalent of nearly EUR403bn, corresponding to a global market share of just under 22%. Thus, for the first time, the entire region wrote more premiums in p&c than Western Europe. However, the Asian insurance market is anything but a homogeneous mass. The growth rates are inversely proportionate to the maturity of the individual markets:

Figure 3: US hegemony
Absolute premium growth*, 2022 by region in EURbn



*The conversion into EUR is based on 2022 exchange rates. Japan: Health is part of life (third sector products).
Sources: National financial supervisory authorities, insurance associations and statistical offices, Axco, Refinitiv Datastream, Allianz Research.

the more mature a market in terms of the insurance penetration rate and density[2] , the lower the growth rates tend to be. In the wealthier markets such as Hong Kong (1.4%), Japan (+3.7%) and Singapore (+3.9%), growth in 2022 was in the low single digits. The most dynamic group of countries, on the other hand, achieved double-digit premium growth across the board: For example, according to our projections, the increases ranged from just under +12% in Malaysia and more than +16% in Indonesia and Sri Lanka to +24% in the Philippines. In terms of volume, the Asian insurance market is still dominated by the two heavyweights China and Japan, which, taken together, account for almost two-thirds of regional p&c premium income. China already overtook Japan in 2010. Last year, when its p&c premium income grew by +7%, China's market was almost three times as big as Japan's. Taking these two countries out of the equation, market growth for the region was +12.8% last year, well above the long-term average of +6.9% over the past decade.

All other insurance markets (rest of the world, global market share of 8.3%) recorded growth of around +16% in the p&c segment (CAGR 2012-2022: +7.5%), driven by strong (largely inflation-related) increases in Eastern Europe (around +35%) and Latin America (more than +23%). These two regions account for just under 24% and a good 36%, respectively, of this group of countries' market volume.

In the health segment[3] , the dominance of the US is even more pronounced. Not only was the bulk of new premiums in 2022 written in the US but overall, too, the US market accounted for around two-thirds of all premium income worldwide. In many other markets, private health insurance is still a niche segment, albeit a very dynamic one: Global premium growth reached double-digits over the last decade (CAGR +10.1%). In the last three years, Covid-19 fueled demand for additional health protection, not least in the US, where premium income increased by more than +40% (or EUR211bn) in that time span.
Life insurance markets suffered last year, particularly in Western Europe. On the old continent, business with life insurance products shrank by almost -3% year-on-year in 2022 (EUR20.6bn). Therefore, its share in global premium income decreased by 1.3pps to 28%. Based on our projections, the region's life premium income came to almost EUR740bn at the end of last year, with around half of that being underwritten in the two largest markets, the UK and France, alone. Within the region, however, the development was anything but homogeneous. Markets with high shares of single-premium or unit-linked products experienced hefty declines in premiums. While the life insurance market in the UK, for instance, is estimated to have grown by almost +5%, premium income in France contracted by close to -3%. Germany also reported a decline of -7% after a minus of 0.4% in the previous year. In the southern part of the continent, Italy (-11%) and Portugal (-22%) recorded sharp declines, while Spain and Greece showed increases of +4.2% and +2.4%, respectively. Overall, premium growth in 2022 was well below the – already relatively weak – regional long-term average (CAGR 2012-2022: +1.8%).

Besides Western Europe, life insurance market developments disappointed in large parts of Asia. At +3.6%, regional premium growth was way below the long-term average (CAGR 2012-2022: +4.5%), but at least somewhat better than the global average (+1.9%). As in Western Europe, no uniform pattern was discernible at the country level: On the one hand, both saturated markets such as Hong Kong (-5.5%)and Taiwan (-26%) and countries with a strong need to catch up, such as Indonesia (-7.8%), the Philippines (-0.5%) and Thailand (-2.3%), saw negative growth. On the other hand, both China and Japan, accounting for around 60% of regional premium income, showed positive growth. However, at around +10%, life premiums in Japan grew more than twice as fast as those in the Middle Kingdom. The main driver were so-called "third sector" products, which are health policies sold by life insurers that benefited from elevated demand for health protection in the aftermath of Covid-19. At the end of last year, the region's life insurance market stood at an estimated EUR937bn, corresponding to a global market share of 36%. Excluding the two largest markets, the region posted a slight decline of -0.4% last year (CAGR 2012-2022: +5.6%).

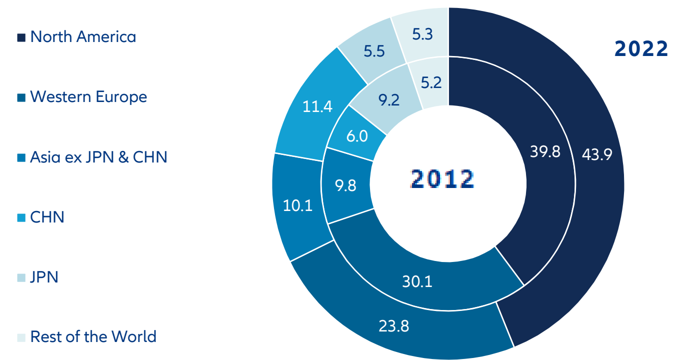
[2] Gross written premiums as percentage of GDP and per capita, respectively.

[3] In general, data visibility of health insurance premiums is still rather low. Often, health premiums are included in other segments as health coverage is seen as part of other products and not separately reported; in Japan, for instance, health is treated as "third sector products" within life.

Just like in the p&c business, the lion's share of global life premium income was still written in the US last year: The country's global market share accounted for just under 30% – 1.7pps more than in 2021. In net terms, it generated all of the increase in last year's global premium. At the end of 2022, the US life insurance market stood at an estimated EUR777bn, corresponding to a year-over-year growth of around +8% (CAGR 2012-2022: +2.9%).

All other insurance markets (rest of the world, global market share of 3.4%) suffered a decline of around -12% in the life segment (CAGR 2012-2022: +1.6%) caused by the sharp slump of premium income in South Africa (-54%) which used to be responsible for almost one-third of premium income in those countries. On the other hand, Latin America recorded a strong increase (nearly +12%), accounting for 43% of this group of countries' market volume.

Figure 4: Mind the gap (between the US and the rest)
Total gross written premiums*, 2012 and 2022 by region in %

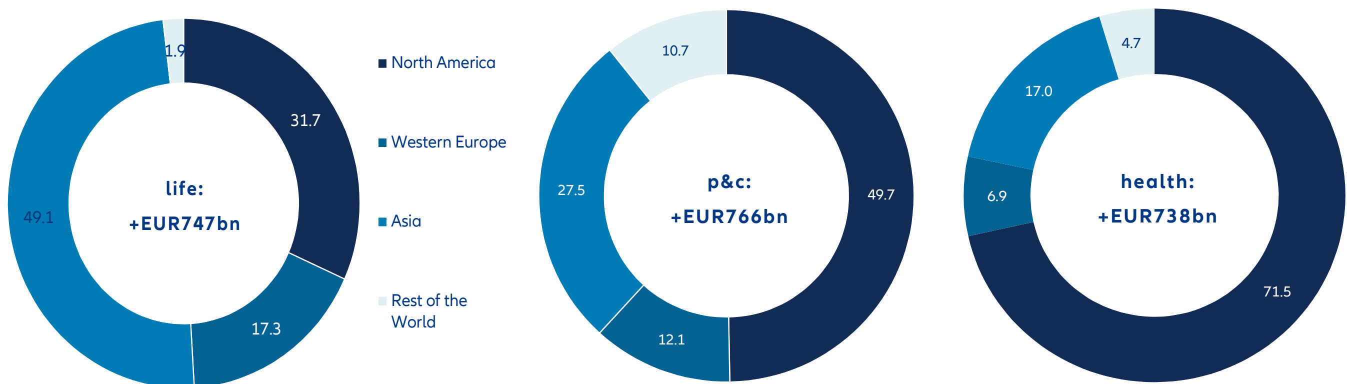


*The conversion into EUR is based on 2022 exchange rates.
Sources: National financial supervisory authorities, insurance associations and statistical offices, Axco, Refinitiv Datastream, Allianz Research.

Overall, insurers wrote EUR259bn more in premiums in 2022 than in the previous year (life: +EUR61bn; p&c: +EUR145bn, health: +EUR53bn). As discussed, North America explains most of the increase. But the US has played an outsized role in global insurance markets over the last decade, too. In this period, the US insurance market raised its global market share from an already impressive 39.6% to a whopping 43.9%. This is in sharp contrast to Western Europe, which lost more than 6pps to reach 23.8%. The other clear "loser" is Japan, while China was able to almost double its global share to 11.4%. However, the US dominance is unlikely to end soon (see Figure 4).

Looking at the three segments, the dominance of the US is clear in p&c and particularly in health: In both segments, the US market accounted for roughly half and three-quarters, respectively, of the increase in global premium income over the last decade. In life, however, the share is less than one-third. In this segment, Asia commands by far the biggest slice of the cake. Western Europe, on the other hand, is losing significance in all three segments; it not only trails behind the US but also Asia (see Figure 5).

Figure 5: The old continent trails behind
Share of absolute premium growth* by region, 2012 - 2022 in %



*The conversion into EUR is based on 2022 exchange rates.
Sources: National financial supervisory authorities, insurance associations and statistical offices, Axco, Refinitiv Datastream, Allianz Research.

Decomposition of growth

Over the past two decades, premium income for non-life insurance products from private customer business in the Eurozone is estimated to have grown by nearly +70% to just under EUR172bn. In absolute terms, the four largest markets in the region accounted for four-fifths of this increase: France (+EUR23.4bn), Germany (+EUR18.2bn), Spain (+EUR10.1bn) and Italy (+EUR4.6bn). The French p&c insurance market also tops the list in terms of relative growth, which more than doubled during this period. Premium growth in Spain was also above-average at almost +95%, while Germany (just under +55%) and Italy (nearly +26%) were well below the regional average.

However, these values "only" reflect the nominal development. Against the background of galloping inflation, what proportion of market growth has been down to inflation over the past 21 years? For our analysis, we use the inflation rate for expenses for insurance policies[4] recorded by Eurostat as part of the harmonized consumer price index.

On average over the long term, insurance inflation in the Eurozone lagged slightly behind the general inflation rate (1.6% vs 2.0%) (see Figure 6). The differences in some years were considerable, ranging from +2.3pps in 2010 to a whopping -7.6pps last year – a clear sign that the industry is lagging in passing the inflation shock to its customers. Without taking 2022 into account, the two rates ran in sync with each other (1.7% on average). Contrary to general perception, however, the industry does not seem to be driving inflation. On the one hand, the intensity of competition has limited insurers' ability to raise prices; on the other hand, productivity increases – not least thanks to the many opportunities offered by digitalization – have probably reduced the cost pressure on the industry.

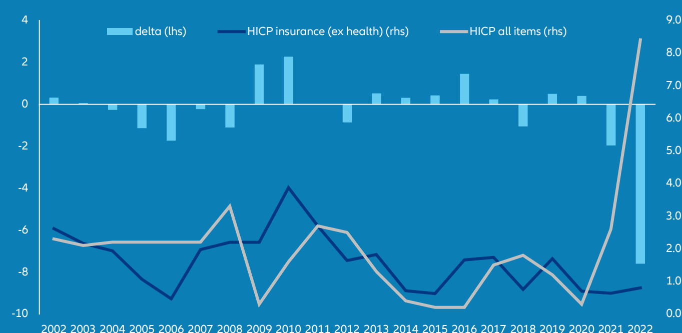
At the country level, no uniform pattern emerges. Unlike in Italy and Germany, where insurance inflation was (slightly) below the overall consumer price index, namely -0.1pp and even 1pp, respectively, it was higher in Spain[5] (+0.6pp) and France (+0.2pp). Over the period considered, the annual insurance inflation rates add up to around 38% in Italy, a good 40% in France and more than 59% in Spain. Germany, with around 19%, pushes the regional average down to nearly 34%.

Due to the below-average development in the insurance market, average insurance inflation in Italy was even almost 13pps higher than premium growth itself. In other words, the Italian retail p&c market has shrunk over the last two decades in real terms. The Spanish insurance market, on the other hand, recorded above-average growth rates, but here it was the noticeably higher inflation that led to nearly two-thirds of the market growth being attributable to price increases alone. In France, which had by far the highest market growth in a country comparison, 37% of the premium increase was fed by price increases. Although the insurance market in Germany grew at a below-average rate in the regional comparison, the inflation rate, which was also below average, meant that "only" 35% of the market growth was driven by inflation. That means that the real growth of the German market (+35.6%) was even higher – albeit only marginally – than that of Spain (+35.2%) and the Eurozone average (+35.0%) since the end of 2001 (see Figure 7). For the Eurozone, this means that nearly half of the (nominal) premium growth over the past two decades was driven by insurance inflation alone: just under EUR36bn of the additional premiums written from 2002 to 2022 were due to volume growth and almost EUR35bn to price growth.

[4] As we consider the non-life insurance market without health insurance products in this analysis, we have adjusted the reported inflation rate accordingly.

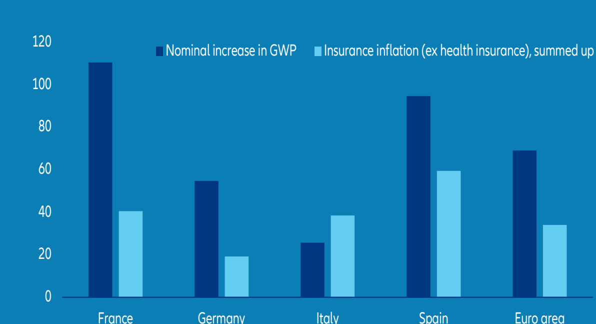
[5] For Spain, there is no data available on insurance inflation connected with the dwelling in the year 2022; according to Eurostat, countries are not obliged to compile HICP indices for items which have a very low weight (less than 1 per 1000), in which case these corresponding sub-items are transmitted with a weight of zero.

Figure 6: Not in the driving seat
HICP insurance (ex health) vs HICP all items, annual rate of change, 2002-2022

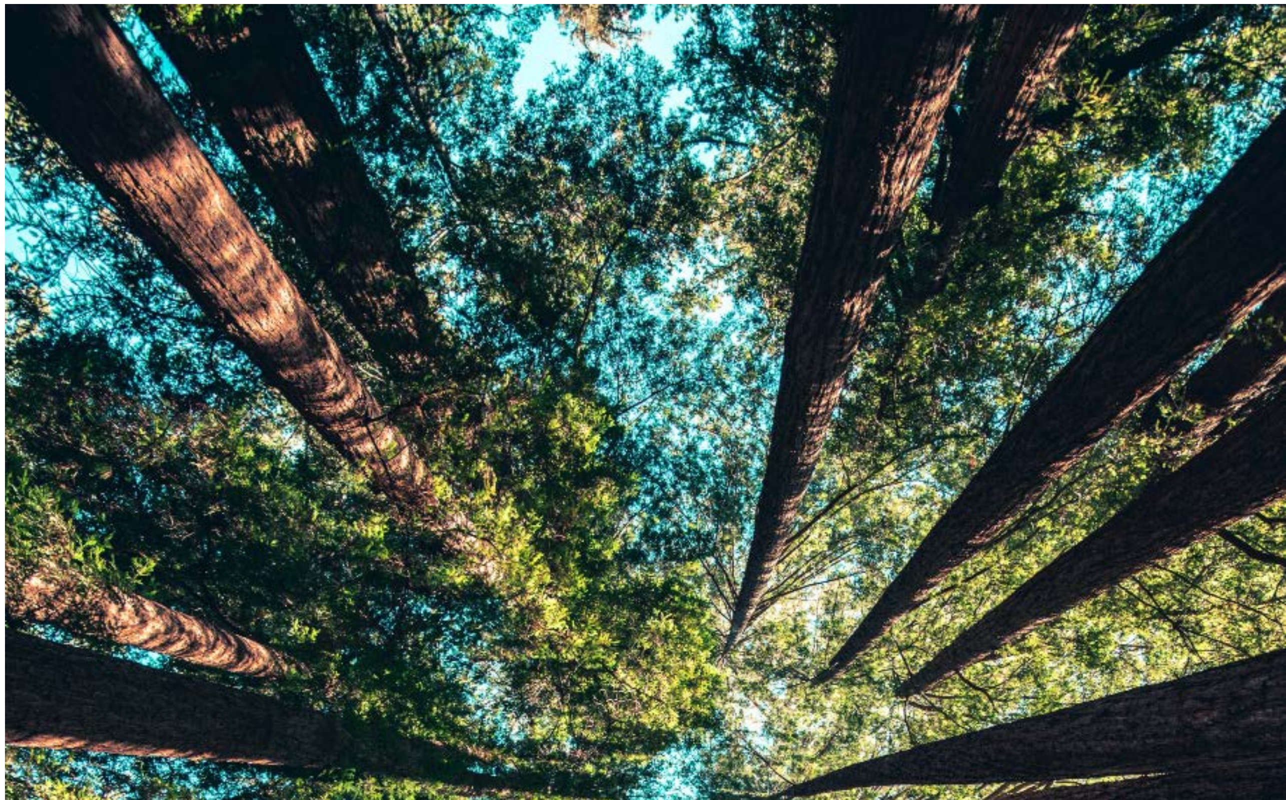


Sources: Eurostat, Allianz Research

Figure 7: Not all is real
Nominal P&C market (private customer business) growth vs insurance inflation, 2002-2022



Sources: Eurostat, Allianz Research



After the inflation shock

Digesting higher rates: The economic environment

Even if the rather gloomy forecasts seem to speak a different language, the theme of the economic outlook for the next few years is normalization. After the extreme swings of recent years, caused by the Covid-19 pandemic and the war in Ukraine, the global economy should return to calmer waters. Calm is to be understood quite literally: growth will be rather low. This is hardly surprising in view of the many structural upheavals facing companies, households and the state. Adjusting to the new economic environment is taking its toll.

Perhaps most obvious are the geopolitical upheavals, as manifested in the growing rivalry between the US and China. However, terms like de-globalization and de-coupling are rather “battle cries” that unnecessarily dramatize the situation. In reality, at least for the next few years, China will remain a central player in the global economy – both as a producer of numerous intermediate goods and as a consumer of Western (luxury) goods. Without question, a reconfiguration of global supply chains is on the agenda, additionally driven by the imperatives of green transformation and national security interests. But even if the much-vaunted "nearshoring" is likely to lead to some (highly subsidized) investment in industrialized countries, a less connected world is at the same time a poorer one. Productivity gains due to the international division of labor were a driver for growth and prosperity around the globe over the last decades, not least in developing and emerging countries. Thus, less future growth in the world's most populous regions will ultimately have a knock-on effect on industrialized countries, too.

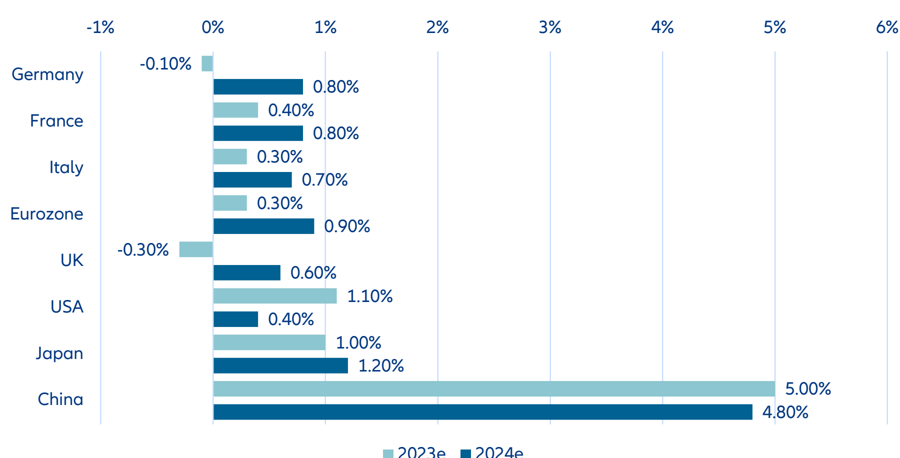
In the short to medium term, however, the strongest impact on growth is likely to come from the turnaround in interest rates, possibly including dramatic dislocations in the financial markets. The recent bank turmoil provides a foretaste of this. After years of zero interest rates and limitless liquidity, numerous unsustainable, highly leveraged business models have emerged in the

markets, the risks of which are only now coming to light as borrowing costs rise. The Silicon Valley Bank case was not the first and won't be the last in a series of "accidents" that attest to the difficulty of financial markets in adapting to the new interest-rate paradigm. So far, the banking system as a whole has proven robust, thanks in part to much tighter regulation since the last major financial crisis. However, it would be negligent to rely on this entirely. Instead, the weaknesses in the regulatory architecture that have become apparent need to be addressed swiftly. This also applies to the Eurozone: Without a common deposit insurance scheme, the banking union will remain incomplete; the lack of capital requirements for government bonds also poses a risk – both gaps should be closed quickly.

But even if a major financial crisis does not occur, the fractures that have become visible are already having an impact on the behavior of financial market participants, first and foremost banks. All indicators – from "hard" credit data to "soft" survey results – point to a significant slowdown in the flow of credit, if not a credit crunch (at least in some segments of the market). This will be felt even by the states which, after the spending excesses of recent years – dictated by circumstances – will have to switch back to a responsible fiscal policy; there is no way around a sustained consolidation of public finances.
It goes without saying that this combination of de-risking, expenditure-reduction and cost-cutting will dampen growth in the near future. But as paradoxical as it may sound, in a certain sense there is also something good in this development: It might help central banks in their fight against inflation. Until the recent banking turmoil, there was a justified concern that, with an economy that was quite unimpressed by the turnaround, interest rates would have to rise much more sharply in order to achieve the desired dampening of demand. This fear should now be off the table. The decline in lending gives central banks more room to maneuver; they can now act in a more cautious and wait-and-see manner, i.e. take more time to analyze the effects of their policies on the real economy. However, this is not synonymous with an end to the interest-rate turnaround. Rather, given the persistence of inflation – especially core inflation excluding energy and food – further rate hikes are still likely. The battle against inflation has not been won yet. However, this also means that real household incomes will remain under pressure for some time to come, with the corresponding consequences for private consumption. At least in 2023, poison (inflation) and antidote (interest rates) will still be weighing simultaneously on economic development.

The growth figures for this and next year are therefore extremely low. For Germany, economic output is expected to stagnate at best. But growth rates in the other economic regions are also modest; this is true even for China, at least compared with previous rates (see Figure 8). But there is also a ray of hope: Contrary to previous recessions, the rise in unemployment is likely to be very small. Of course, this is primarily due to demographic developments, which have already led to glaring labor shortages in many areas. But it is also due to the changed reaction function of companies: Instead of responding to a decline in demand with layoffs, they are "hoarding" labor, i.e. adjusting the number of hours worked rather than the number of employees.

Figure 8: Calm after the surge
Real economic growth in %



Source: Allianz Research.

Structurally higher inflation: The changing global risk landscape

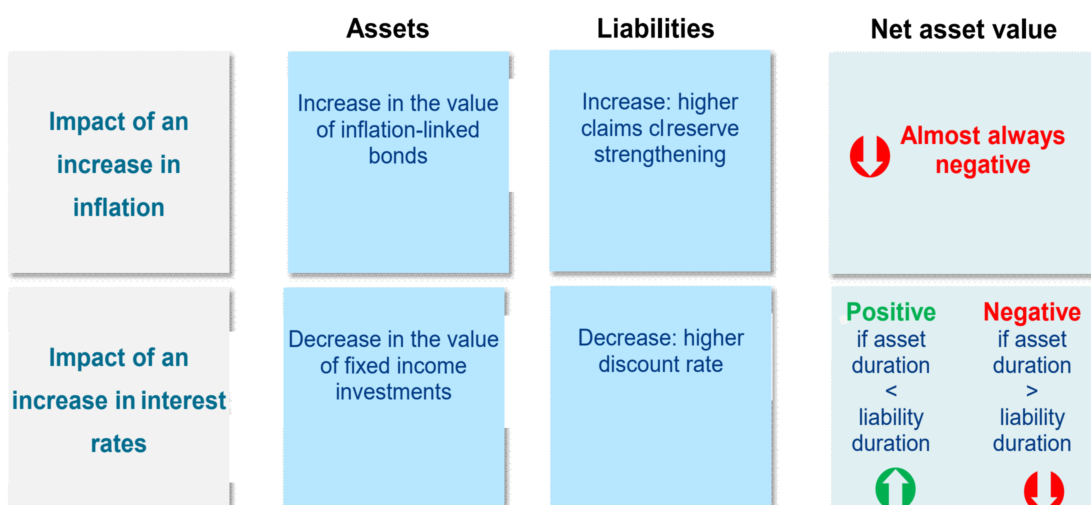
The surge in inflation posed problems for insurers as the unexpected rise in prices caused claims payments to rise much more sharply than calculated, pushing the combined ratio above 100 in some segments. As a result, painful additional reserving became necessary. And although the life business is directly less impacted – after all, benefits are generally fixed in nominal terms – the second-round effects are about to hurt: The decline in real incomes forces households to reduce their saving efforts, reducing the demand for savings products. To add insult to injury, the return of inflation goes hand-in-hand with an equally sharp rise in interest rates, putting the asset side of the balance sheet under pressure: many assets decrease significantly in value. Figure 9 depicts the combined impact of rising prices and interest rates on insurers' balance sheets.

Although insurers have some levers at their disposal to mitigate the impact of inflation – pricing, product design, indexation, asset allocation and reinsurance solutions – navigating an inflationary environment remains a challenge. If the impacts on the economy and markets are considered, slowing growth, declining real incomes and investment cutbacks are weighing on new business, while price corrections and market turbulence are making investment more difficult.

Thus, the big question (not only for insurers) is what happens next with prices. While the peak in inflation is certainly behind us, there are many reasons to believe that a return to the pre-pandemic and pre-war times of low inflation is not on the cards. The phase of "divine coincidence," when monetary policy could generously support the economy and markets without regard to inflation risks, is irretrievably over. For a while, the pandemic-related distortions in prices could still be regarded as temporary slips. With the onset of the Ukraine war, this narrative has collapsed.

In the coming years, five structural drivers will determine inflation, namely the "Five Ds": demographics, deglobalization, decarbonization, digitalization and debt. Taken together, these trends have an inflationary effect. For the first three Ds, this is obvious: a declining labor force increases wage pressures, while the reorganization of global value chains increases input costs and rising CO_2 prices increase energy costs, at least in the transition phase when there is not yet enough energy available from renewables. But digitization is also likely to have a rather price-driving effect in the future, the keywords being the increasing market power of Big Tech and data-based price discrimination. Finally, rising debt is a creeping poison that can create an "inflation bias" among those in charge:

Figure 9: Stylized balance sheet impact (P&C insurer)



Source: Allianz Research

Figure 10: The five Ds
Structural inflation impact of long-term trends

Drivers	Positive inflation impact (unadjusted)		Potential mitigating actions		Potential aggravating developments		Effective inflation impact
	strength[1]	why?	feasibility[2]	how?	likelihood[2]	what?	
Demographics	high	declining workforce and wage pressure	medium	increasing activity rates, re-/up-skilling, automatization	low	inefficient labor market policies, insufficient labor reallocation	**high**
Decarbonization	medium	rising fossil fuel prices	high	accelerating green transition (public investment, R&D)	medium	incomplete green transition due to energy security concerns	**low**
Deglobalization	medium	increasing input costs and less contestable product/labor markets	low	reviving multi-lateralism	high	increasing fragmentaton and de-coupling of large emerging market countries	**medium**
Debt	medium	higher leverage creates inflation bias	medium	debt consolidation	medium	undermining central banks' independence	**medium**
Digitalization	low	pricing of data and price discrimination	medium	effective regulation of the digital economy	medium	persistent digital / tech monopolies, fragmented regulation	**low**

1 high: over 0.5pp p.a., medium: 0.2pp p.a., low: below 0.2pp p.a.
2 high: over 75%, medium: 50% to 75%, low: below 50%
Source: Allianz Research.

Monetary policy decisions fall under the spell of debt sustainability.

However, the inflation impact of these factors can change and is significantly influenced by economic development and policy choices affecting the supply side. The decline in the labor force, for example, can be mitigated by countermeasures to increase activity rates (e.g. more older workers and more women in full-time employment). The inflation impact of de-globalization – or more precisely, decoupling from China – depends heavily on the geopolitical circumstances.

The demand side also cannot be ignored. Decarbonization is one case in point. The higher the carbon price, the faster energy systems transition away from fossil fuels – and the lower the inflation impact of energy consumption. The same applies to demographics: older people generally consume less and differently, which may have a disinflationary effect. Finally, investments in innovation and automation (e.g. AI) could carry higher productivity gains, which dampen inflation.

Therefore, the actual or adjusted inflation impact might be considerably different from the initial impulse. Over the long term, we see the highest inflation pressure coming from demographics, deglobalization and debt as these trends are the hardest to mitigate – and might even deteriorate further. Overall, the five Ds might significantly lift annual inflation (by up to 1pp). Figure 10 summarizes the impact of these inflation drivers, including possible mitigating as well as aggravating effects.

What does this mean for policymakers? Central bankers will struggle to meet their inflation targets, set at 2% in most advanced economies. Balancing inflation and growth concerns will become a permanent challenge. Ultimately, the question will arise as to the appropriateness of this target in times of structurally higher inflation rates. Therefore, more than monetary policy, general economic policy will be called upon in the future to jump-start growth: productivity rather than liquidity support. This includes an active labor-market and innovation policy as well as the accelerated implementation of the energy turnaround and a consistent competition policy for digital markets. In addition, despite the changed geopolitical constellation, obvious policy mistakes must be avoided: Protectionism, subsidy races and migration hurdles will only exacerbate potential inflationary pressures. The same applies to "blank check fiscal policy," which has become increasingly widespread since Covid-19 and the energy crisis; a return to targeted measures is essential.

The consequences for insurers are less clear. However, managing the asset and liability side of their balance sheets is set to become much more challenging against a highly volatile economic environment, driven by frequent policy changes and interventions. And that is before other, essential risks – geopolitical confrontation, climate change and new disruptive technologies – are taken into account. In the last chapter, we will take a closer look at the new (old?) role insurers can play in such an environment.

Looking ahead: Dramatic change below the surface

EUR4,190bn – this is the huge amount of premium growth expected over the next 10 years, most of it in the life segment (EUR1,726bn) (see Figure 11). Does this mean that the life business is on the verge of a renaissance? Unfortunately not. Even if the absolute figures seem to speak a different language, the associated growth figures are anything but impressive. While we expect annual growth to accelerate to +4.7% over the next decade (2012 - 2022: +3.1%), this still lags well behind general economic growth, which is expected to be +5.2% per year in nominal terms. Insurance penetration will thus fall by 0.3pps to 2.8%. This is rather disappointing, given the large protection gaps that need to be closed. In pensions alone, the Global Association of Insurance Associations (GFIA) estimates an annual gap of around EUR900bn.

Where does our cautious assessment come from? First, we must overcome short-term headwinds. The abrupt turnaround in interest rates – as welcome as higher rates are for the industry – creates its own problems. On the one hand, this concerns the value losses of many assets, but on the other hand it also affects demand, especially for products close to the capital markets, such as unit-linked policies, which are suffering from the turbulence in the stock markets. In addition, there is increasing competition from banks seeking to acquire new customer funds with higher interest rates (even if only for a short teaser period). This could lead to an increase in the lapse rate and premium exemptions. Combined with weak new business, which is also suffering from the cost-of-living crisis forcing many households to reduce their savings, this poses new challenges for life insurers' liquidity management.

In the medium to long term, however, higher interest rates are positive for the life business: The industry's offerings are becoming more attractive as a result, especially for customers with a long-term focus. This is also the main reason why we assume higher growth in our forecast than in the past. The main reason is that after a lost decade, Europe

and Japan should return to "normal" growth rates of +2.9% and +2.2%, respectively.

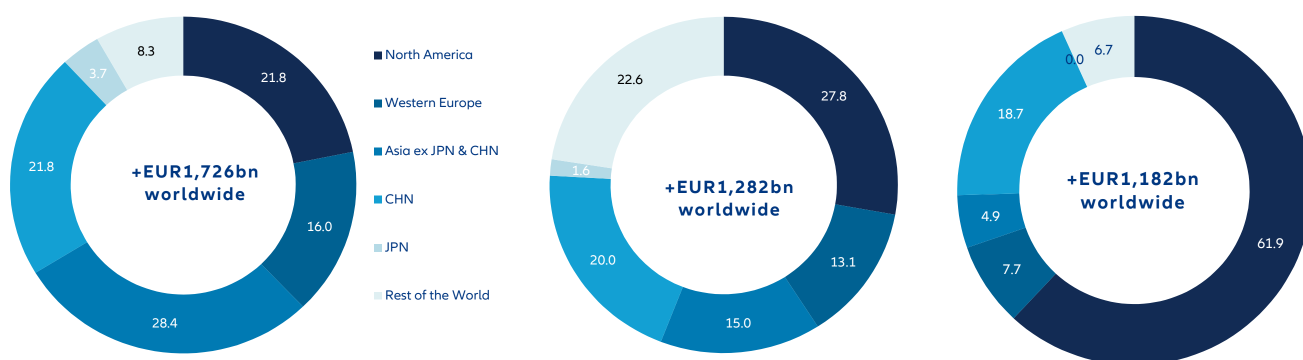
A word on Asia: The region will remain the growth engine for the global life business, with annual growth (Asia excluding Japan) expected to rise to +7.5%. The region should account for almost exactly half of absolute premium growth (EUR866bn), more than North America (EUR377bn) and Europe (EUR276bn) combined. However, it is worth noting that it is no longer China that will be driving growth; rather, at an expected +7.1% p.a., the Chinese market will grow at a slightly below-average rate; this also represents a significant slowdown compared to the past decade (+9.9%). The reasons lie primarily in a general weakening of Chinese economic growth; increasing internal and external headwinds are taking their toll. Nevertheless, at the end of the forecast period, China's life market will be the second largest in the world, with EUR706bn in premiums; still a fair way behind the US (EUR1,117bn), but also well ahead of India, the new number three (EUR330bn).

While these figures suggest an unspectacular development all in all, dramatic changes will take place beneath this calm surface: all elements of the value chain and thus the entire business model will have to adapt to the new challenges. This applies first and foremost to the technological revolution, which is likely to radically change the customer interface; in the life segment, too, ecosystems – for example, around the topic of wealth – will play an important role in the future. But there will be more mundane challenges, too, such as increasing regulatory pressure, new accounting standards (IFRS 17), volatile financial markets and the battle for (young and increasingly old) talent. At the same time, it must not lose sight of what is essential: its social relevance. Demographic change poses major problems for all societies, rich and less rich alike; public pension systems will reach their limits. Without additional, private and capital-funded protection, there is a threat of new social fissures. To avoid this is the central task of the life insurance industry.

In the p&c segment, additional premiums will amount to EUR1,282bn by 2033. This represents an annual growth rate of +5.0%, roughly in line with the previous decade (+5.1%) and general economic growth (+5.2%); insurance penetration will therefore decrease only slightly by 1pp (to 2.0%). As in the life segment, Asia (ex. Japan) is the clear growth champion among the major regions: premium income is expected to grow at +8.1% p.a. China is expected to grow by +8.2%, in line with the regional average; this is also a significant slowdown compared to the previous ten years (+9.8%). In absolute terms, however, the importance of the region is lower than in the life segment: "only" around 35% of the expected premium growth (EUR448bn) is attributable to Asia; North America (EUR357bn) and Europe (EUR168bn) are – at least collectively – still stronger. There are, however, no differences from life in the ranking of the largest markets: the US (EUR1132bn) dominates by a wide margin, ahead of China (EUR442n).

In view of the major technological upheavals and new risks, this forecast, which suggests continuity, may come as a surprise. However, as in the life segment, this applies only to the surface of premium growth. The underlying changes are dramatic. This applies not least to the motor business, which in many markets still accounts for around two-thirds of retail premiums. The upcoming mobility revolution will change this. It is not so much the switch from combustion engines to electric ones that is of decisive importance, but

Figure 11: Billion-euro boost
Share of additional gross written premiums* by 2033, by region in %



*The conversion into EUR is based on 2022 exchange rates.
Sources: National financial supervisory authorities, insurance associations and statistical offices, Axco, Refinitiv Datastream, Allianz Research.

the increase in new mobility services such as car-sharing and the triumphant advance of autonomous driving. However, the impact on claims and thus also on premiums is difficult to assess by ex-ante: frequency is likely to decline, but severity is unlikely to do so. What is certain, however, is that the business model in the motor sector will change, with a significant shift from retail to commercial, from B2C to B2B.

In addition, as in the life segment, technological changes will play a decisive role. In the p&c segment, they are likely to have an even greater impact on the business model. Ecosystems are likely to become even more important here; successful insurers will not only offer individual products, but comprehensive "solutions" for customer needs, whether for mobility, living or travel. In addition, there are the unimagined possibilities of AI in data analytics, which are likely to revolutionize the entire value chain from underwriting to claims handling.

Above all, however, there is the further increase in risks in the context of the climate crisis as well as new technologies. Extreme weather events will increase in the coming years, and with them NatCat claims from floods and droughts, forest fires and storms. At the same time, climate-mitigation efforts will intensify, first and foremost with the decarbonization of energy supply. This requires major investments from both the private and public sectors and creates a high need for risk protection as new risks emerge. But other new technologies will give birth to new risks, too, for instance risks related to data protection and the use of AI.

It therefore requires little imagination to expect a further increase in protection gaps – which already exceed EUR1,000bn in cyber and NatCat. Many of these risks will test the limits of insurability. In many cases, closer cooperation with governments will become unavoidable. Otherwise, risks may remain insurable in a narrow sense but unaffordable for most customers. This problem also points to the crucial difference from the life segment. There, too, the protection gap is large in view of the rapid aging of society and inadequate social security systems. But it can be closed – with great effort – in the "traditional" way: by mobilizing savings, i.e., with additional premium income. The industry is challenged to advance this through innovative and inclusive concepts (shoulder-to-shoulder with the state). Regarding NatCat and cyber risks, such an approach seems less promising. This is where we need to take a different approach: prevention, i.e. avoiding risks. The frequency and severity of (fatal) floods or cyber-attacks can be reduced with appropriate protective measures (the aging of society, on the other hand, can no longer be stopped). In the p&c segment, the industry is therefore facing a fundamental change in its business model: the value proposition of insurers will change, from pure financial compensation to risk management and holistic service offerings to prevent and mitigate risks. In this way, its social relevance will be preserved – and with it its billion-dollar premium pool.

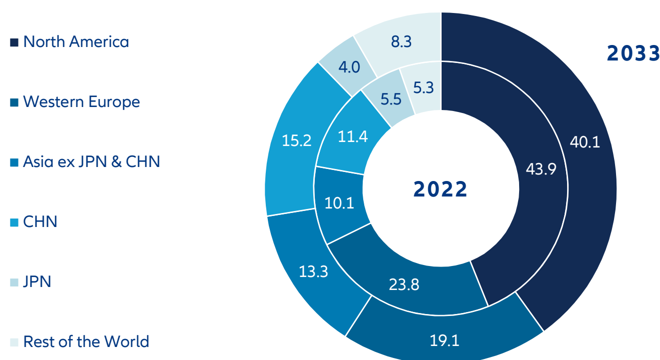
In the health segment, additional premium income will amount to around EUR1,182bn over the next 10 years. Globally, the industry is expected to grow by +6.7%, well above the other segments, reflecting the backlog demand in many markets. Although other regions – notably Asia – might grow more dynamically in coming years, around 60% of new premiums will still be earned in the US, which will also remain by far the biggest health insurance market, with an expected EUR1,439bn in premium income in 2033, followed by China (EUR338bn).

As in the other two segments, far-reaching technology-driven changes are expected in the health segment in the coming years, too. Indeed, this is where the idea of ecosystems is most advanced (at least in China): Leading providers are not limiting themselves to medical bill payments but are orchestrating all customer needs around health. The topic of risk management and prevention is also already writ large. Many insurers already offer incentives for healthier lifestyles – for example, with the help of fitness trackers and discounts.

However, the biggest change – and challenge – comes from advances in medicine itself. Over the next few years, more individualized treatments will become more prevalent. Questions of cost and access will thus be raised anew; the dystopia of two-tier medicine cannot be dismissed. Inequality could become even more pronounced along the "health" fault line; corresponding developments have already become apparent during the Covid-19 pandemic and the different ways in which individual population groups were affected. The industry is challenged here – perhaps even more than in the segments of life and p&c – to live up to its social role: It can only retain relevance if it places itself at the service of inclusivity and broad access to medical progress.

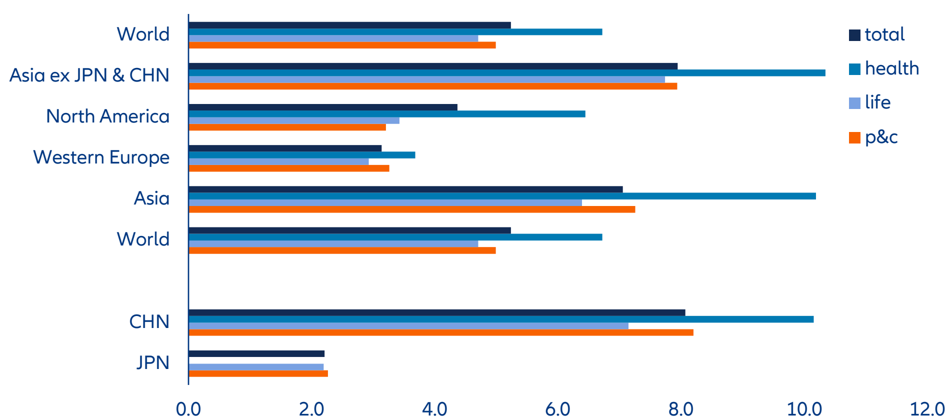
These developments in the individual segments are resulting in shifts in the global insurance map. North America will remain the largest health insurance market by a wide margin, but its lead will narrow as its global market share is expected to decline by almost 4pps. On the other hand, the rise of Asia (ex. Japan) is set to continue: China and the rest of Asia are likely to gain almost 7pps in global market share, at the expense of Japan and Western Europe (see Figure 12). Figure 13 summarizes the expected developments for individual segments and regions over the next 10 years.

Figure 12: The US remains on top
Total gross written premiums*, 2022 and 2033 by region in %



*The conversion into EUR is based on 2022 exchange rates.
Sources: National financial supervisory authorities, insurance associations and statistical offices, Axco, Refinitiv Datastream, Allianz Research.

Figure 13: A healthy world
Gross written premium* growth, CAGR 2023 -2033 by region in %



*Note: The conversion into EUR is based on 2022 exchange rates.
Sources: National financial supervisory authorities, insurance associations and statistical offices, Axco, Refinitiv Datastream, Allianz Research.

Insurance’s role as an anchor in turbulent times

The last couple of years had their fair share of macroeconomic shocks, from the Global Financial Crisis (GFC) and the euro crisis to the recent double whammy of Covid-19 and the Ukraine war. And the coming years are likely to be equally challenging, given rising geopolitical as well as social rifts. How will the insurance sector cope? Analyzing how the industry weathered the past crises can offer some clues.

Although these shocks were very different in nature, we identify one common element: the relative resilience of the insurance sector. At first glance, this is quite surprising as the sector is exposed on both sides of its balance sheet. Real economic shocks hurt premiums and claims while financial shocks can wreak havoc on investment portfolios. In fact, the insurance industry is still challenged by ongoing claims inflation that is eroding profitability in the p&c business, and by falling demand in new business triggered by real income losses. But when looking at its main gauge of financial soundness, the solvency capital requirement (SCR) ratio, a picture of remarkable stability emerges since the pandemic: the median SCR ratio never fell below 200%. This stability justifies a deeper look at the reasons: How does a growth shock and a spike in inflation and interest rates impact the insurance sector? And what does this mean for the role the industry has to play in the future?

Although these shocks were very different in nature, one common element can be observed: The relative resilience of the insurance sector.

In general, p&c insurance demand[7] reflects the development stage of an economy, indicating a positive correlation between economic and p&c insurance market development[8]. However, analyzing the impact of nominal GDP growth on p&c premium development[8] leads to rather surprising results: When taking into account the whole time period from 2000 to 2019, our model shows no correlation at all between GDP growth and insurance-market development. However, the results look different when running the regression model for each of the two decades separately. In the first decade, which was marked by the terrorist attacks of September 11 and the bursting of the tech bubble, GDP growth explained only 23% of insurance-premium development, albeit with a time lag of one year and a negative sign. While p&c insurance premium growth peaked at more than +10%, the world economy tumbled in the aftermath of these events. Thus, in the time span from 2000 to 2005, the two variables were almost perfectly negatively correlated, with an R^2 of 95%. In the second half of the first decade, when the global economy started to recover, the developments of the global p&c market and GDP growth were more in line and also positively correlated, with R^2 amounting to 80%. For the second decade, the regression results were markedly higher: R^2 was 61% for the whole time period. The correlation was strongest in the second half of the decade: In the sub-period between 2015 and 2019, nominal GDP growth explains more than 90% of premium growth.

There is a strong correlation between economic growth and premium income – but only in "normal" or good times. When the going gets tough, premium growth decouples from the general economic development.

How do we interpret these results? Indeed, there is a strong correlation between economic growth and premium income – but only in "normal" or good times. When the going gets tough, premium growth decouples from the general economic development. It's not hard to understand why: The bulk of insurance (at least in p&c) is mandatory, be it motor or property; there are only a few non-essential insurance policies which can be cut when households or corporates are trying to reduce expenses.

While it is true that they buy less cars and build fewer homes in a recession – i.e. new business suffers – the impact on overall premium income is muted and delayed. That is why insurance is to a great extent immunized against liquidity problems, even in a severe downturn, and remains resilient. This has important ramifications for its investment behavior: With no liquidity drain, there is no need for fire sales; money can be continuously deployed into new investments. Therefore, in the aftermath of the Lehman shock, or when the eurozone faced near implosion as banks teetered on the brink of default and cross-border financial flows ran dry, the insurance sector maintained its role as an anchor investor.

Inflation has a negative impact on insurance profitability, mainly through the claims channel: inflation leads to higher claims costs, wiping out underwriting profitability as the combined ratio might exceed 100, meaning that earned premiums are lower than incurred losses and expenses. Other channels of inflation impact are more ambiguous, given the fact that interest rates usually rise with inflation. Thus, how investment income and the balance sheet react depends on other factors as well. Investment income, for instance, could be positively influenced by rising interest rates if higher returns on new investments overcompensate for possible impairments on past investments triggered by rising rates. If interest rates and yield levels stay elevated even after the initial inflation shock, investment earnings will benefit over the coming years. The impact on the balance sheet hinges not only on how interest rates and spreads react to inflation, but mainly on the maturity (mis)match between assets and liabilities. On the asset side, the investment portfolio is about to lose value, not least because the bulk of investments of the typical insurer still consists mainly of fixed-income products. But on the liability side, too, rising rates trigger a loss in value as future liabilities are discounted with a higher discount rate. How these developments play out in terms of net asset value is determined by the difference in maturities of assets and liabilities as the reaction of bond prices to interest-rate changes differs by maturity: the longer the maturity, the stronger the reaction (convexity). For life insurers, for example, which hold the bulk of the industry's assets and normally have longer-dated liabilities than assets, an interest shock plays out favorably: the value of liabilities, discounted by the higher interest rate, decreases more than the value of assets. Finally, inflation impacts expenses, and most of the time negatively, if rising wages are not matched by rising productivity.

[7] We exclude the life business from the analysis as it is strongly influenced by the design of the public pension system and taxation regimes.

[8] With a single linear regression model, using the sum of p&c premium income and nominal GDP of more than 60 markets as proxy for the global p&c insurance market and economic development. See Drivers of growth: Property & Casualty insurance (allianz.com)

But although the unexpected and sharp rise in prices in 2022 caught the industry on the wrong foot (since hardly anyone had expected the Russian invasion of Ukraine), the decisive point is something else. Inflation is no stranger to the insurance industry; adjusting premiums to claims costs is at the core of the business model, it is the insurance DNA. In many segments, inflation has been causing headaches for years. Take, for instance, medical inflation: healthcare costs regularly rise faster than the general price level for a "good" reason: medical progress not only leads to better and more individualized treatment methods, but usually also to more costly ones. Even though innovations are by their very nature difficult to forecast reliably, the industry has been good at dealing with this kind of inflation in the past. The industry also dealt with so-called "social inflation", which is usually used to describe the phenomenon that compensation payments of all kinds have been set much more generously in recent years (especially in the US); this affects a number of insurance lines, e.g. motor third party vehicle liability or directors and officers liability. Especially in the latter, this can lead to premiums having to be (sharply) increased and limits reduced.

Inflation is no stranger to the insurance industry, adjusting premiums to claims costs is at the core of the business model, it's the insurance DNA.

However, the current situation where prices are rising across the board, is also a new challenge for the insurance industry (at least for most insurance managers, who know the inflationary 1970s only by hearsay). This means that premium planning becomes much more challenging, often lagging price rises. One man's loss, another man's gain? For insurance customers, the fact that they have been able to buy expensive insurance cover relatively cheaply – compared with the skyrocketing prices of car and home repairs – is a positive development. The value of their insurance coverage has increased. Of course, insurers will try to restore their profitability in subsequent years; premium increases are inevitable because in the long run only a profitable insurance business can also offer lasting and reliable risk protection. But from the customer's point of view, one advantage remains: because inflation came as such a surprise, the adjustments will be made later. Given the scale of the cost-of-living crisis, it is even quite likely that insurers will proceed with a sense of proportion and spread adjustments over several years, not least out of self-interest: excessive price increases could lead to sensitive volume losses if customers, households and companies alike can no longer cope.

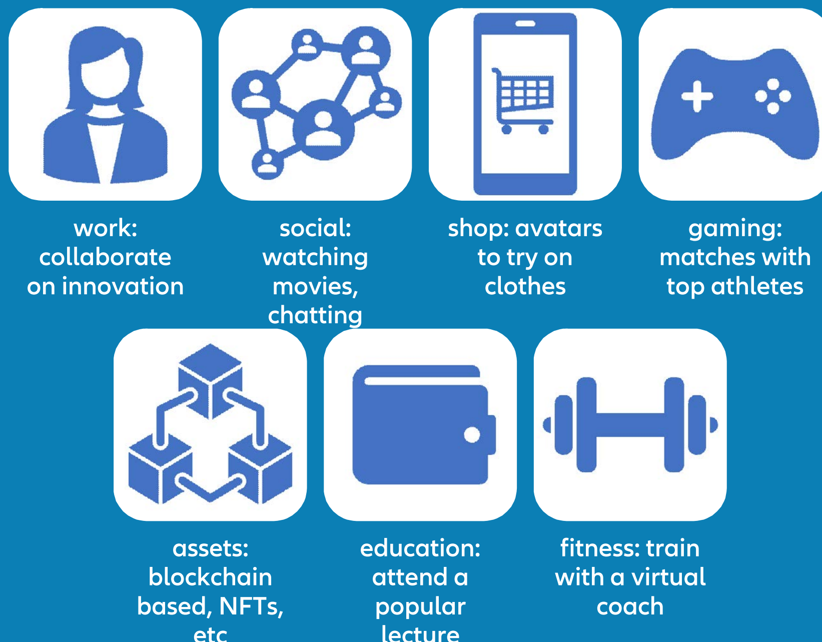
Thus, the salient feature of insurance proves its worth in turbulent times of high inflation and low growth. Financial burdens can not only be shared but also smoothed out over time. The insurance industry cannot undo inflation for its customers; but it can act as a kind of buffer, creating valuable time for adjustment. And its resilience in terms of liquidity and credit makes it a bellwether for the investments needed to finance the green transition. Insurance is an essential shock absorber, not only when a house burns or the earth quakes but also in uncertain times as it flattens the curve of the economic cycle, for households and corporates alike.

The insurance industry cannot undo inflation for its customers; but it can act as a kind of buffer, creating valuable time for adjustment.

Reimagining insurance in the metaverse

The metaverse is a term that is commonly used to describe a virtual, three-dimensional ecosystem, a combination of virtual reality (VR), augmented reality (AR), extended reality (XR) and non-fungible tokens (NFTs) that can be accessed either through a browser, mobile device or headset. The phygital (mix of physical and digital environments) can elevate the remote work experience or enhance education and social interactions (see Figure 14). The metaverse can be a game changer for three categories within the insurance industry: marketing and distribution, new ways of working and insurance core activities.

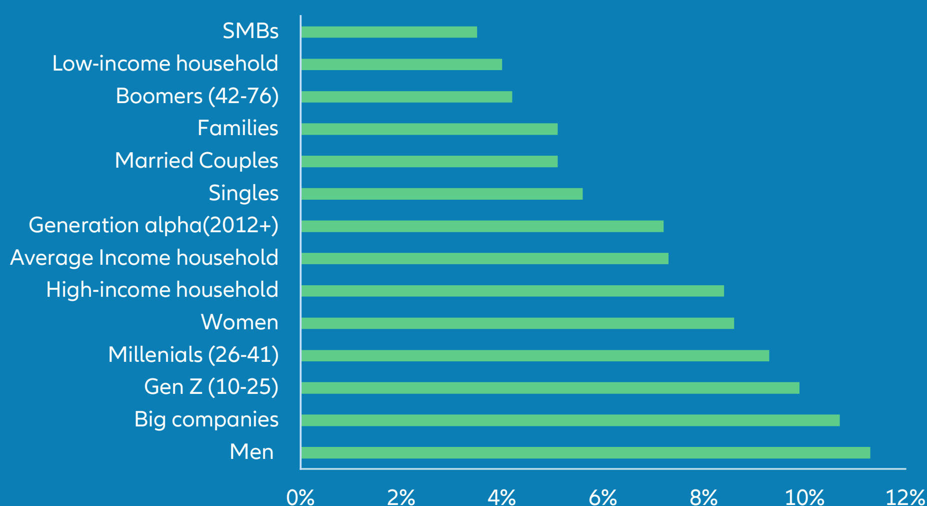
Figure 14: Examples of current functionalities in the metaverse



Sources: KPMG, Allianz Research.

While interest in the metaverse exploded in 2022, 82% of the tech experts surveyed by Sortlist reported that the metaverse would boom in the next five to 10 years. Not only can insurers create a personal relationship with younger audiences, but they can also create immersive experiences to educate them on risk management and financial literacy, which could improve customer retention and referrals with improved brand awareness, increased engagement, trust and loyalty. As virtual worlds become more mainstream, a diverse range of users, including younger generations who are digital natives and more comfortable with technology than previous generations, can establish a personal relationship with insurers, which would increase engagement. This can help insurers expand their reach beyond their traditional customer base and establish themselves as innovators and leaders in the industry – while also setting a precedent as an attractive employer (see Figure 15).

Figure 15: Target audience for a metaverse investment



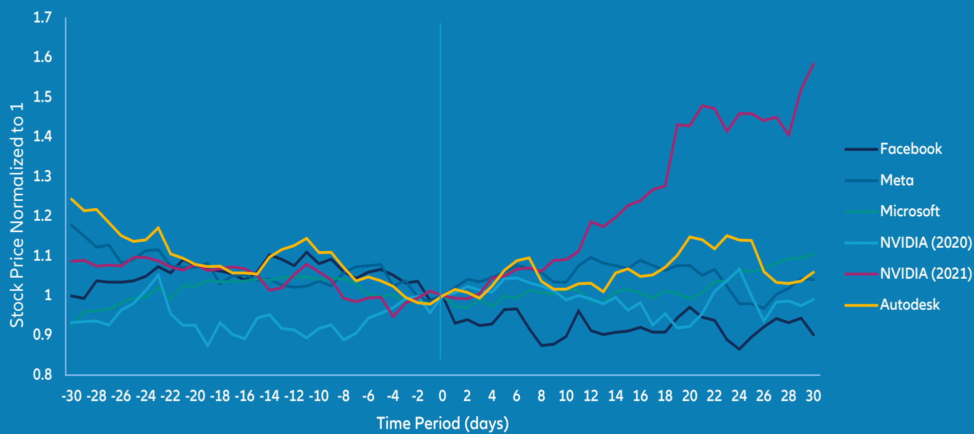
Sources: Metaverse for business. Sortlist.

The metaverse could also help create a virtual office that supports remote and distributed workforces. Not only can it help connect and collaborate with teams across geographic boundaries, but it can help create virtual space that can increase training and upskilling capabilities. As loss adjusters' training needs a high level of expertise and specialized knowledge in areas such as risk management, insurance regulation and claims handling, the metaverse can help upskilling workers by creating immersive and interactive training programs that can help loss adjusters acquire and develop these skills both in office and remotely in a safe and controlled setting. With data analytics and machine-learning algorithms, insurers can identify knowledge gaps and create personalized training programs to address them.

The insurance industry has already experienced the virtues of smart contracts but investing in metaverse capabilities could help improve other insurance core activity outcomes. With smart contracts on the platform, it could enable customers to get help from a chat bot or a customer-service expert and understand the agreements they are signing. Using blockchain technology can create a tamper-proof record of transactions that is accessible to all parties involved, creating a more transparent and accountable insurance value chain that reduces the risk of fraud and improves trust between insurers and their customers. Two other critical aspects of insurance that could be improved are claims processing and underwriting. By using virtual reality and augmented reality technologies, insurance companies can create digital replicas of physical objects, such as damaged property, and use these replicas to assess claims more accurately. For instance, a loss adjuster could use a virtual reality headset to inspect a damaged property remotely and assess the extent of the damage more accurately. This can help insurers expedite the claims-processing process and improve the accuracy of claims assessments. Similarly, underwriters can use virtual reality to assess risks more accurately and price policies more competitively to attract more customers. New product development is also a new frontier that can be explored by insurance companies. As the metaverse provides a platform to test and develop new products pre-launch, it can help customers visualize the offerings via simulations.

According to McKinsey, the metaverse might have the potential to generate up to EUR5trn in value by 2030. The tech sector is at the forefront of metaverse investment, accruing 17%, followed by education (12%) and finance (11%). While metaverse announcements have had mixed results for companies' stock prices (see Figure 16), the technology behind it could undoubtedly bring improved outcomes for insurance companies.

Figure 16: Stock market prices of companies investing in metaverse after announcements related to the metaverse



Sources: Refinitiv, Allianz Research

Appendix

Appendix A

Insurance markets 2022 KPIs

	Total premium income (in EUR bn)			Penetration (as % of GDP)			Density (per capita, in EUR)		
	p&c	life	health	p&c	life	health	p&c	life	health
Argentina	10.2	1.5	0.0	2.3	0.4	0.0	225	34	0.5
Australia	35.4	14.5	17.1	2.4	1.0	1.2	1,353	555	653
Austria	11.4	5.4	2.7	2.5	1.2	0.6	1,280	601	297
Bahrain	0.4	0.1	0.2	1.1	0.3	0.5	282	68	124
Belgium	11.0	15.8	2.0	2.0	2.8	0.4	945	1,356	173
Brazil	21.5	8.7	11.6	1.3	0.5	0.7	100	40	54
Bulgaria	1.3	0.2	0.1	1.6	0.3	0.1	187	36	15
Canada	58.5	63.2	22.8	3.2	3.4	1.2	1,522	1,644	593
Chile	5.0	6.5	0.9	1.8	2.3	0.3	257	329	47
China	185.8	330.5	116.6	1.2	2.1	0.7	130	232	82
Colombia	3.9	3.4	0.6	1.5	1.3	0.2	76	66	11
Croatia	0.2	0.1	0.1	0.2	0.1	0.2	40	12	26
Czech Republic	5.8	1.9	0.5	2.0	0.7	0.2	552	186	48
Denmark	9.6	26.0	0.9	2.7	7.2	0.3	1,635	4,428	156
Egypt	0.8	1.5	0.2	0.3	0.5	0.1	7	13	2
Finland	4.4	4.6	0.6	1.6	1.7	0.2	791	834	105
France	78.3	144.4	40.4	3.0	5.5	1.5	1,211	2,234	624
Germany	80.6	91.2	46.8	2.1	2.4	1.2	967	1,094	561
Greece	2.4	2.4	0.4	1.2	1.2	0.2	232	234	36
Hong Kong	3.8	59.0	1.8	1.1	17.2	0.5	513	7,877	242
Hungary	2.0	1.5	0.1	1.3	1.0	0.0	203	151	6
India	19.2	88.1	10.1	0.6	2.9	0.3	14	62	7
Indonesia	5.4	10.2	0.9	0.5	0.9	0.1	20	37	3
Ireland	4.1	14.7	2.9	0.8	2.9	0.6	810	2,934	572
Italy	38.1	99.0	3.6	1.9	5.0	0.2	645	1,676	61
Japan	71.9	235.7	[1]	1.8	5.9	[1]	580	1,902	[1]
Kazakhstan	0.9	0.6	0.1	0.5	0.3	0.1	45	29	6
Kenya	0.9	1.1	0.4	0.8	1.0	0.4	16	20	8
Laos	0.1	0.0	n.a.	0.5	0.0	n.a.	8	1	n.a.
Lebanon	0.9	0.3	0.3	0.2	0.1	0.1	171	48	52
Malaysia	4.1	9.4	0.2	1.1	2.6	0.1	120	277	6
Mexico	11.9	15.8	5.6	0.9	1.2	0.4	93	124	44
Morocco	2.2	2.3	0.4	1.8	1.9	0.4	58	62	12
Netherlands	13.7	7.7	54.7	1.4	0.8	5.6	780	440	3,116
Nigeria	0.8	0.7	n.a.	0.2	0.1	n.a.	4	3	n.a.
New Zealand	4.8	1.5	n.a.	2.1	0.7	n.a.	924	291	n.a.
Norway	10.7	13.0	0.2	2.6	3.2	0.1	1,968	2,394	45
Pakistan	0.5	1.6	n.a.	0.2	0.5	n.a.	2	7	n.a.
Peru	1.9	2.2	0.4	0.8	1.0	0.2	55	65	11
Philippines	1.9	5.2	n.a.	0.5	1.3	n.a.	17	45	n.a.
Poland	11.0	2.9	0.7	1.7	0.4	0.1	277	73	17
Portugal	4.9	6.0	1.9	2.1	2.5	0.8	475	586	183
Romania	2.9	0.5	0.1	1.1	0.2	0.0	150	25	7
Saudi Arabia	4.7	0.6	7.9	0.6	0.1	0.9	129	15	217
Singapore	2.9	35.5	0.5	0.7	8.5	0.1	493	5,947	91
Slovakia	1.1	0.8	0.0	1.0	0.7	0.0	191	140	5
South Africa	4.9	15.9	n.a.	1.4	4.4	n.a.	82	265	n.a.
South Korea	89.1	99.9	n.a.	5.4	6.0	n.a.	1,720	1,929	n.a.
Spain	29.7	24.5	10.5	2.2	1.8	0.8	624	516	221
Sri Lanka	0.3	0.3	0.0	0.4	0.5	0.1	12	16	2
Sweden	7.7	29.7	n.a.	1.5	5.7	n.a.	726	2,819	n.a.
Switzerland	18.8	25.1	12.3	2.4	3.2	1.6	2,151	2,870	1,411
Taiwan	8.6	56.3	12.9	1.3	8.2	1.9	362	2,356	542
Thailand	7.7	13.2	3.1	1.6	2.8	0.7	107	184	44
Turkey	8.7	1.5	1.2	1.5	0.3	0.2	102	18	14
United Arab Emirates	3.5	2.3	5.4	0.8	0.6	1.3	367	249	573
United Kingdom	71.8	229.9	7.7	2.5	8.1	0.3	1,063	3,405	114
United States	801.6	777.2	718.4	3.3	3.2	3.0	2,370	2,297	2,124
Vietnam	2.0	7.4	n.a.	0.5	2.0	n.a.	20	75	n.a.

[1] Health is part of life (third sector products).

Appendix B

Insurance markets
Long-term development

	CAGR 2012-2022 (in %)			CAGR 2023-2033 (in %)			Total premium income 2033 (in EUR bn)[1]		
	p&c	life	health	p&c	life	health	p&c	life	health
Argentina	41.2	36.6	44.3	28.0	31.2	42.8	155.1	30.5	1.3
Australia	5.7	-6.1	4.8	4.5	2.9	3.3	57.3	19.8	24.3
Austria	3.4	-2.3	4.1	1.9	2.1	4.0	14.1	6.8	4.1
Bahrain	2.2	-2.4	7.0	3.8	3.5	6.0	0.6	0.1	0.3
Belgium	2.1	-1.4	4.0	2.6	1.6	5.4	14.5	18.7	3.6
Brazil	8.9	12.4	12.8	8.2	11.6	8.3	51.4	29.0	27.9
Bulgaria	5.6	6.8	49.7	2.0	1.6	10.2	1.6	0.3	0.3
Canada	6.5	5.4	4.0	3.5	4.3	3.9	85.2	100.5	34.6
Chile	8.8	7.3	15.4	7.7	5.8	10.9	11.3	12.0	2.8
China	9.8	9.9	25.8	8.2	7.1	10.2	442.1	706.1	337.9
Colombia	8.5	10.0	11.5	4.7	7.5	9.3	6.5	7.6	1.5
Croatia	3.1	1.4	10.8	2.7	3.0	9.1	0.2	0.1	0.3
Czech Republic	4.9	-3.8	13.4	2.1	3.5	6.3	7.3	2.8	1.0
Denmark	2.0	6.3	14.1	2.8	3.0	8.8	13.1	36.1	2.3
Egypt	13.4	19.8	24.3	9.9	9.2	18.2	2.2	3.9	1.3
Finland	3.1	2.0	9.4	2.5	2.4	10.7	5.8	6.0	1.8
France	3.1	1.4	2.0	3.7	3.0	2.2	117.2	200.0	51.0
Germany	3.1	0.9	2.8	3.1	2.3	3.1	112.6	117.6	65.5
Greece	-1.4	1.3	15.0	2.7	2.6	11.4	3.2	3.2	1.2
Hong Kong	5.1	8.6	6.9	5.4	4.9	5.7	6.8	99.7	3.4
Hungary	7.4	2.8	13.2	3.7	3.0	8.4	3.0	2.1	0.1
India	12.5	9.5	18.7	13.2	12.7	15.8	75.3	329.5	50.7
Indonesia	10.7	6.4	10.4	8.0	9.1	12.3	12.6	26.8	3.3
Ireland	3.4	5.4	7.7	3.0	3.2	8.1	5.6	20.9	6.8
Italy	0.5	2.7	4.6	2.9	3.0	6.4	51.9	136.6	7.1
Japan	2.3	-0.8	[2]	2.3	2.2	[2]	92.0	299.3	[2]
Kazakhstan	9.8	22.3	14.3	9.4	13.0	14.1	2.4	2.2	0.5
Kenya	7.5	14.6	18.3	8.9	11.9	8.8	2.2	3.7	1.1
Laos	13.5	28.7	n.a.	12.8	23.1	n.a.	0.2	0.1	n.a.
Lebanon	5.8	-2.3	1.4	6.9	5.1	7.2	2.0	0.5	0.6
Malaysia	3.4	5.2	1.3	6.9	6.3	7.4	8.5	18.3	0.4
Mexico	6.5	9.2	10.9	8.2	8.7	10.0	28.3	39.7	15.9
Morocco	5.4	11.7	6.1	6.5	7.9	7.8	4.3	5.4	1.0
Netherlands	-0.3	-8.3	2.8	3.1	1.7	3.6	19.2	9.3	80.9
Nigeria	7.9	17.4	n.a.	12.5	17.7	n.a.	2.9	4.1	n.a.
New Zealand	6.3	3.7	n.a.	3.7	3.6	n.a.	7.2	2.2	n.a.
Norway	5.5	6.0	6.7	3.0	2.7	5.9	14.8	17.5	0.5
Pakistan	10.2	16.9	n.a.	11.6	16.9	n.a.	1.7	8.7	n.a.
Peru	7.3	10.0	10.7	9.8	7.6	7.6	5.3	5.0	0.8
Philippines	7.7	12.7	n.a.	10.0	11.4	n.a.	5.5	17.1	n.a.
Poland	5.7	-6.1	19.9	3.4	3.7	9.2	16.0	4.4	1.8
Portugal	2.9	-2.0	7.8	3.1	3.3	8.6	6.8	8.6	4.7
Romania	8.3	3.1	26.0	3.1	3.4	16.6	4.1	0.7	0.7
Saudi Arabia	8.2	8.6	11.3	6.3	5.9	12.2	9.2	1.0	27.9
Singapore	2.5	11.6	12.4	3.5	5.2	9.6	4.3	62.0	1.5
Slovakia	1.2	-2.9	25.8	3.7	4.0	14.0	1.6	1.2	0.1
South Africa	1.1	-0.4	n.a.	8.8	9.7	n.a.	12.4	44.0	n.a.
South Korea	6.6	3.9	n.a.	6.8	4.7	n.a.	183.4	166.0	n.a.
Spain	1.5	-1.5	4.4	2.8	2.3	6.0	40.3	31.6	20.0
Sri Lanka	7.5	13.0	11.9	10.8	14.2	13.2	0.8	1.5	0.2
Sweden	3.8	4.2	n.a.	2.3	4.4	n.a.	9.9	47.6	n.a.
Switzerland	1.3	-1.9	2.5	2.7	1.3	4.2	25.3	28.9	19.4
Taiwan	4.5	-0.2	4.9	5.5	4.2	4.4	15.6	88.1	20.7
Thailand	5.5	3.8	10.8	5.5	6.9	8.1	13.9	27.4	7.4
Turkey	27.1	24.8	26.0	14.0	12.2	17.1	36.8	5.5	6.9
United Arab Emirates	0.0	6.3	12.8	3.8	5.1	8.0	5.2	4.0	12.6
United Kingdom	3.1	3.2	2.9	4.0	3.2	2.8	110.7	326.2	10.5
United States	5.4	2.9	12.4	3.2	3.3	6.5	1,131.7	1,116.7	1,438.9
Vietnam	10.2	25.0	n.a.	14.4	14.1	n.a.	8.8	31.7	n.a.

[1] 2022 exchange rates.

[2] Health is part of life (third sector products).

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