

SKYFALL

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EXECUTIVE SUMMARY



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- The global insurance industry entered 2020 in good shape: In 2019, premiums increased by +4.4%, the strongest growth since 2015. The increase was driven by the life segment, where growth sharply increased over 2018 to +4.4% as China overcame its temporary, regulatory-induced setback and mature markets finally came to grips with low interest rates. P&C clocked the same rate of growth (+4.3%), down from +5.4% in 2018. Global premium income totaled EUR3,906bn in 2019 (life: EUR2,399bn, P&C: EUR1,507bn).
- Then, Covid-19 hit the world economy like a meteorite. The sudden stop of economic activity around the globe will batter insurance demand, too: Global premium income is expected to shrink by -3.8% in 2020 (life: -4.4%, P&C: -2.9%), three times the pace witnessed during the Global Financial Crisis. Compared to the pre-Covid-19 growth trend, the pandemic will shave around EUR358bn from the global premium pool (life: EUR249bn, P&C: EUR109bn).
- In line with our U-shaped scenario for the world economy, premium growth will rebound in 2021 to +5.6% and total premium income should return to the pre-crisis level. The losses against the trend, however, may never be recouped: although long-term growth until 2030 may reach +4.4% (life: 4.4%, P&C: 4.5%), this will be slightly below previous projections.
- Covid-19 is seen as a game-changer but in insurance it may rather reinforce existing trends, namely digitalization and the pivot to Asia, which will emerge faster and stronger from Covid-19. With growth of +8.1% p.a. until 2030, Asia (ex Japan) is expected to grow almost twice as fast as the global market. It will add a massive EUR1,277bn to the global premium pool, twice as much as North America and four times as much as Western Europe. Asia's rising middle class will increasingly play the role of the consumer of last resort with huge pent-up demand, reflecting weak social security systems and protection gaps in natural catastrophes, health, retirement and mortality. As a consequence, the region's share (without Japan) of the global premium pool will rise from 24.2% (2019) to 35.3% (2030).
- Another trend that may "benefit" from Covid-19 is ESG. If the corona crisis taught the
 world anything, it is the need for more resilience. Increasingly, ESG will be seen not only
 as an indispensable tool to screen long-term risks to improve investment returns but
 also as an insurance business-enabler. As more and more companies implement ESG
 strategies, the demand for accompanying products and services is set to rise rapidly. A
 new era of "impact underwriting" emerges.

LOOKING BACK:

LICENSE TO INSURE

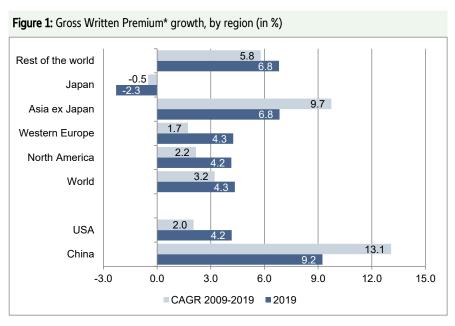
Golden year: 2019, the year before Corona

The Covid-19 pandemic has had an unprecedented effect on the global economy and the insurance industry. Nonetheless, looking back at last year, we had a normal year of growth in global insurance income. In 2019, gross written premiums for property-casualty (P&C) and life (without health) came to EUR3,906bn or 5.4% of global GDP. The year-on-year growth after adjusting for foreign exchange effects was a remarkable +4.4%, mainly due to a recovery in growth in China (+9.2%) and the U.S. (+4.2%). Both lines of business grew in sync in 2019, clocking

growth of +4.3% for P&C and +4.4% in life. Growth dynamics, however, were different: P&C slowed down from +5.4% in 2018, reflecting the soft patch of the world economy in the second half of the year, whereas life increased from +2.8% as China overcame its temporary regulatory-induced setback in 2018 (when the market shrank by -3.4%) and mature markets in North America and Europe finally came to grips with low interest rates. The share of life premiums in the total market is around 61%.

In 2019, the global per capita expenditure on life premiums was EUR648;

for P&C the figure was EUR250 and for life EUR398. When looking at the density (premium income per capita), this statistic varies widely from market to market, ranging from EUR6 in Nigeria to EUR7,915 in Hong Kong (which owes its crown partially to the fact of being an off-shore market for rich Chinese). Insurance density is a good indicator for the maturity of the market. Additionally, insurance penetration (gross written premiums as a percentage of GDP) in 2019 shows the same story: Hong Kong as the largest spender, with about 17.8% of output and Nigeria with 0.3% of GDP.



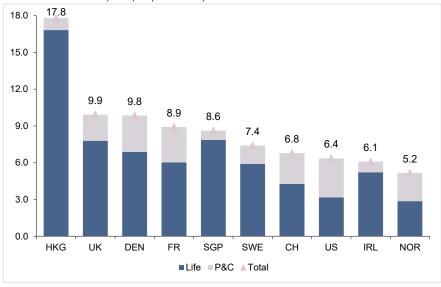
^{*}The conversion into EUR is based on 2019 exchange rates.

Sources: National financial supervisory authorities, insurance associations and statistical offices,

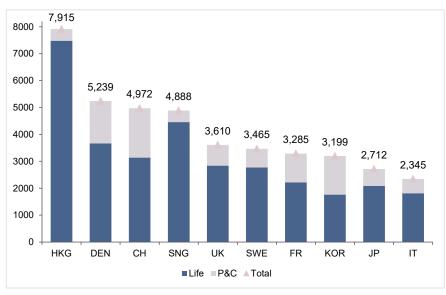
Thomson Reuters, Allianz Research

Figure 2 Top ten insurance markets by density and penetration

Gross Written Premiums per capita (in 2019 EUR)



Gross Written Premiums in % of GDP



*The conversion into EUR is based on 2019 exchange rates.

Sources: National financial supervisory authorities, insurance associations and statistical offices, Thomson Reuters. Allianz Research

For your eyes only – a lost decade of growth

The Global Financial Crisis (GFC) had a significant impact on the insurance industry, not only through the direct exposure in financial markets, but also in the change of growth trends across developed markets. In the decade preceding the crisis, the insurance market as a whole (P&C, +4.5%; and life without health, +5.2%) grew more or less in line with GDP (+4.9%). However, the trend in gross written premium growth never recovered from the blow:

World GDP (+4.7%) outpaced insurance premium growth (+3.2%) by a wide margin. The result of this growth disparity was an ever-widening coverage gap: Despite increasing global risks due to climate change, demographic changes, business interruption, cyberattacks or geopolitical shifts, companies and individuals worldwide spent a smaller proportion of their income in coverage products, whether for natural catastrophes, cyber risks, healthcare or retirement savings. This is partly due to lackluster and non-inclusive growth and partly due to risk attitudes.

Over the last decade, P&C was the main growth driver (+4.2%). Generally, we can observe a more stable demand for P&C insurance as it moves in line with economic activity and financial stability. Thus, the relatively stable growth environment of the last couple of years supported demand for P&C insurance.

Figure 3: Nominal global Gross Written Premium and GDP growth* (y/y, in %)



*Based on 2019 exchange rates.

Sources: National financial supervisory authorities, insurance associations and statistical offices, Thomson Reuters, Allianz Research

On the other hand, the persistent low-yield environment has continued to drag down the demand for life insurance products in the market; in most cases it has deterred savers from engaging in long-term maturing assets. As a consequence, life premiums have grown by a meagre +2.7% annually over the last ten years; life demand was particularly weak in mature markets such as Western Europe (+1.8%) and North America (+1.1%). However, the longer extreme low interest rates persisted, the more savers and insurers adjusted to the "new normal": Insurers have changed their investment behavior – more alternative assets that earn illiquidity premiums - and product

design – flexible guarantees that allow for higher returns. And savers have realized that demographic change doesn't stop and that their retirement goals can best be achieved with long-term investments. Consequently, the life business rebounded in 2019, almost doubling the previous year's growth rate (2019:+4.4%; 2018: +2.8%).

Thus, 2019 can serve as a reminder that behavioral patterns are not set in stone. The Covid-19 pandemic might further accelerate behavioral changes. Risk awareness has certainly risen. A generation of supersavers might be in the making: Millennials have now lived through two significant economic

events that might reshape their attitudes towards saving and spending – the longer the situation drags on, the more these changes will be anchored.

In the past decade, the regional distribution of insurance markets has changed considerably echoing the rise of some Emerging Markets, first and foremost China. Its world market share more than doubled during this decade. In contrast, the share of mature markets such as North America, Western Europe and Japan declined by about 12pp over the course of ten years. Western Europe, North America and Asia (ex Japan) account for around 85% of global insurance premiums.

Figure 4: Total Gross Written Premiums, by region (based on 2019 EUR, in %) **4** 2019 5% 34% ■ North America 36% ■ Western Europe 5% 2009 Asia ex Japan & China 9% China Japan rest of the world 12% 33% 27%

^{*}The conversion into EUR is based on 2019 exchange rates.

Sources: National financial supervisory authorities, insurance associations and statistical offices,

Thomson Reuters, Allianz Research

Advanced economies

The aftermath of the GFC left developed markets with stagnant GDP growth, persistently low interest rates and austerity measures impacting social investment and public health systems. The upshot: household income was more or less stagnant. But as household expenditure is the largest GDP expenditure component in the Euro area (54% of GDP), if this fails to grow, the economy and insurance expenditures follow suit.

Therefore, life insurance penetration in the region has dramatically declined, from 5.6% back in 2007, just before the GFC, to 4.6% in 2019. (Penetration in P&C remained more or less the same: 2.2% vs 2.4% before the crisis). Against the backdrop of the demographic change, which leaves no doubt about the necessity of private provision, this sharp decline is disturbing. Low interest rates go a long way to explain the subdued demand.

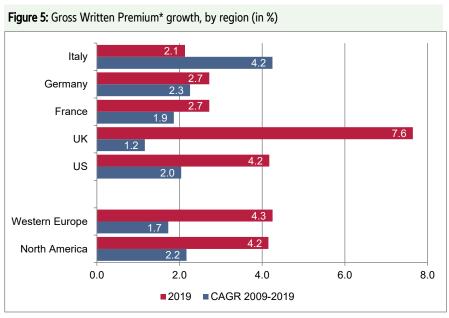
Still, life insurance in Western Europe holds the largest market share in the

region (68% of the total premium income or EUR722bn). This line of business plays an important role in social security systems across Western Europe. Nonetheless, there is an important heterogeneity in terms of insurance penetration in Western Europe: it varies from a high of 7.8% in the UK and 6.9% in Denmark to lows of 1.0% in Greece and 1.4% in Austria. Moreover, bancassurance strategies and legislative changes often drive life insurance revenues. The Italian life market is the embodiment of this phenomenon: over the last decade, growth rates varied from +48.7% to -18.0%. Another mature market that experienced a similar level of volatility was Sweden, where growth rates changed between +18.5% to -11.9%.

The Western European life insurance market had a good year in terms of growth in 2019 (+5.1%), way above the average growth p.a. of the last decade (+ 1.8%). German life insurance grew by a whopping +8.6% while the other European giants (i.e. Italy +2.7% and France +3.2%) exhibited more modest growth.

The P&C market in Western Europe stagnated after the GFC and in 2019 grew by +2.5%, only slightly faster than the annual average since the GFC (+1.6%). The German market grew by +3.1%, the British market clocked growth of +2.3% and the French a meager +1.7%; growth in Italy was even more subdued (+0.4%).

Regarding insurance density (premiums per capita, life and P&C combined) and penetration (premiums as a percentage of GDP, life and P&C combined), however, Germany lags behind the others. In 2019, insurance density stood at EUR2,031 in Germany (against a regional average of EUR2,520) and penetration at 5.0% (against 6.8%). In neighboring France, for example, people and companies spend EUR3,285 per year on insurance and penetration is almost twice as high as in Germany (8.9%). The European economic giant has yet to reach the coverage of its regional peers.



*Based on 2019 exchange rates.

Sources: National financial supervisory authorities, insurance associations and statistical offices,

Thomson Reuters, Allianz Research

The U.S., the largest insurance market worldwide (34% global market share), closed last year in a favorable state: overall insurance premium income rose by +4.2%. Although the performance varied in both lines of business (life: +5.1%; P&C: +3.3%), the total premium income rose by EUR49bn.

For another year, the U.S. cemented its status as the leading insurance market in the world: At EUR1225bn, the U.S is the largest single market, followed by China, which stands behind EUR455bn. The market share of the U.S. in P&C is a whopping 41%. The market share in life insurance is a bit over a quarter of global premium income (25%) This reflects one of the peculiarities of the U.S. market: As far as the spending structure goes, the distribution of expenditures between P&C and life is quite balanced, fluctuating at around 50% each. In most mature markets, life insurance products are clearly dominating.

Reflecting the dismal growth over the last decade (and a growing population), life insurance density in the U.S. (total premiums per capita) has more or less stagnated since the last crisis, from EUR1,806 in 2008 to EUR1,848 in 2019. In P&C, at the height of the GFC, the premiums per capita were at EUR1,426; as of last year they were EUR1,873. As far as insurance penetration goes, the overall premium as a percentage of GDP has consistently declined over the last decade, from 7.5% in 2008 to 6.4% in 2019. This development was mostly driven by falling penetration in the life segment.

In Canada, overall insurance expenditures per capita were EUR2,424 last year. Gross written premiums grew by +3.9% in 2019 (P&C: +3.8%; lfe: +3.5%). Over the past decade, the annual postcrisis growth in Canada has been +4.1% (CAGR life: +3.5%; P&C:+4.9). The Canadian market represents roughly 6.9% of the region's premium income at EUR91bn.

The bottom line: The GFC had a longlasting effect on the insurance market in North America and Europe as the environment it had to operate in changed considerably: low productivity growth, pervasively low interest rates and stricter regulation. Recovery was slow to come, but every crisis brings opportunities: resilience, digitalization and customer centricity became the core values of the industry. Notwithstanding the curveball that the Covid-19 pandemic has thrown in insurers' way, the strategies the industry is having to implement to finally complete its digitalization process and evolve to fit the new normal will pave the way for a rebound and recovery that will not come tomorrow, but soon enough.

Emerging Markets

Total premiums in Asia (ex Japan) came to EUR947bn in 2019, of which 48% were written in China. Ten years ago, the size of the Chinese market represented only 40% of the Japanese one in terms of premiums. Today, it is by far the largest in the region, around one third bigger than that of Japan, which it surpassed in 2017. In comparison, India, the other potential heavyweight in the region, saw total premium income amount to EUR79bn in 2019, roughly a sixth of the size of the Chinese market. This gap has increased over time: In 2009, the Indian market was one-fourth the size of the Chinese one. The Chinese market is still the dragon market: fast development, a growing middle class, but still relatively low insurance density. The pent-up demand for insurance products will be an asset for insurers trying to tap into the market. Coupled with technological progress - it is also the clear frontrunner in the application of AI and data analytics - China is the market to watch.

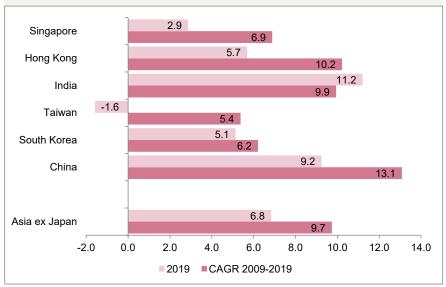
In Asia, there is clearly no homogeneity in the evolution of insurance markets. Countries like Laos, with deficient financial infrastructure, barely reach an insurance income of 0.4% of their GDP, while neighboring markets such as China and Hong Kong have an insurance penetration of 3.7% and 17.8%, respectively. The density gap is equally wide: premiums per capita per annum span from a meager EUR9 in Laos and EUR58 in India to EUR4,888 in Singapore to a whopping EUR7,915 in Hong Kong (although this figure is distorted

as Hong Kong is an off-shore insurance market for mainland China). This gap is set to aggravate in the short-term as the lockdowns due to Covid-19 were managed differently throughout Asia. Insurance market growth in Asia was strong in 2019: Excluding Japan, premiums rose by +6.8%, the market recovering from the meager growth of 2018 (+2.7%). Life premium income in Asia (ex Japan) - accounting for 70% of the total regional premium pool - grew by +6.5% in 2019, after a mere +0.2% in 2018 due to the slump in the Chinese market. P&C premiums, on the other hand, grew by +7.5%, slightly down from +9.0% in 2018.

It is no surprise that the largest growth came from the countries with the less developed insurance markets where there is still room for improvement. Overall, the best performers in 2019 were Indonesia and Laos, which had y-o-y growth of +15.4% and +14.8%, respectively. Vietnam and India also clocked double-digit growth in 2019. At the other end of the spectrum sit the developed markets of the region such as Singapore (+2.9%) and Taiwan (-1.6%). The Asian story post-crisis was different from that in the West, one of fast-growth and market development: The average annual growth rate for the region stands at +9.7%.

Talking about Latin America as a single market would be as reckless as assuming economic convergence in the Euro area. However, there are numerous characteristics that bind countries together. In 2019, there was a wave of anti-government protests from Rio Grande to Fire Land, many of which ended in violence. This social unrest was due to extreme inequality and a lack of social protection. The region has been riddled by economic and public policy uncertainty for a few years now. As a response to the lack of social security, the private market for protection promises a solution to the institutional shortcomings. In 2019, the countries in our scope¹ saw an increase in the total insurance market of EUR7.5bn or +10.4% y-o-y. This is the largest increase since 2015, but on par with the CAGR of the past decade of +10.3%.

Figure 6: Gross Written Premium* growth, by region (in %)



*The conversion into EUR is based on 2019 exchange rates.

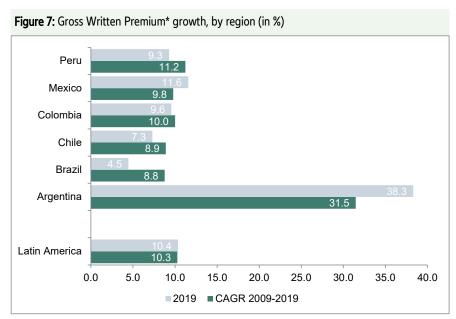
Sources: National financial supervisory authorities, insurance associations and statistical offices,

Thomson Reuters, Allianz Research

The development of the region in terms of GWP per capita has been astounding in the last ten years. In 2009, the insurance density was barely EUR67 on average in the region. As of 2019, it almost increased threefold to reach EUR164 per capita. In terms of insurance per GDP, ten years ago the region had 1.7% of premiums as a percentage of GDP. Last year, the penetration ratio was 2.1%. The three largest markets in Latin America are Brazil (EUR25.5bn), (EUR22.5bn) Mexico and Chile (EUR11.5bn).

One of the core issues and vulnerabilities in Latin America is informal labor. Nearly 140 million Latin Americans – about 55% of the working population – toil in the so-called "informal" economy. Around 241 million have no access to social protection, according to the World Economic Forum. It is a growth market where most of the premium expenditure (around 58%) goes into P&C products. There is room for improvement for the pension systems in the region; life insurance and retirement products are high in demand in countries like Mexico and Chile.

Emerging Europe² tells a similar story as there has been consistent growth in premium volume in the past decade: The overall regional market grew +8.6% in 2019 and the overall CAGR was +5.1% in the decade following the GFC. Both lines of business saw different development throughout the decade: While the life business grew only +2.8% annually – reflecting the renationalization of private pensions in some countries – P&C products experienced a rally of +6.3% annually.



*The conversion into EUR is based on 2019 exchange rates.

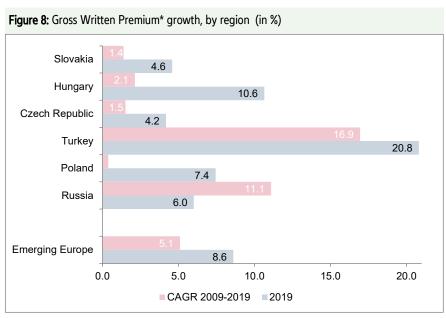
Sources: National financial supervisory authorities, insurance associations and statistical offices, Thomson Reuters. Allianz Research

In terms of gross written premium volume, the largest players in the region (EUR20.7bn), Russia Poland (EUR14.1bn), Turkey (EUR9.2bn) and the Czech Republic (EUR6.4bn). However, when looking at the market development indicators we find that Russia is nowhere near the top. In the life market, the highest density is in Slovakia (EUR225 per capita), the Czech Republic (EUR212 per capita) and Poland (EUR103 per capita), while bigger markets like Russia (EUR51 per capita) and Turkey (EUR18 per capita) lag behind. In terms of life penetration, the more developed countries have seen their ratios fall slightly for the past decade.

The countries where we find the highest ratio of premiums as a percentage of GDP are Slovakia (1.3%), Hungary (1.1%), the Czech Republic (1.0%) and Poland (0.8%).

In Emerging Europe, there is much higher expenditure on P&C products (EUR44.5bn) than in life insurance products (EUR19.4bn). We observe higher levels of market maturity in P&C in the region. Density is the highest in the Czech Republic (EUR388 per capita), Poland (EUR269 per capita), and Croatia and Slovakia (both with EUR222 per capita). In terms of penetration, the ratios are similarly higher in

Bulgaria, the Czech Republic and Poland, all with 1.9% of GDP, and Croatia with a ratio of 1.7%. As the region entered 2020, it was well-positioned to grow in line with GDP. However, Covid-19 spread to every corner of the planet and will impact the development of the Emerging Markets for the foreseeable future.



^{*}The conversion into EUR is based on 2019 exchange rates.

Sources: National financial supervisory authorities, insurance associations and statistical offices,

Thomson Reuters, Allianz Research

CORONOMICS:

TOMORROW NEVER DIES

Like a meteorite: The economic environment

The Covid-19 outbreak will send the global economy into a sharp recession in 2020. Since January, the impact of the outbreak has unfolded from a China-centered supply shock, which sent shockwaves across global trade and disrupted supply chains, to an unraveling of financial markets as investors realized the unavoidability of a recession, to a violent demand shock hurting consumption and investment as governments put the world on an unprecedented pause to flatten the contagion curve.

In fact, full-fledged lockdowns for more than half of the global population and GDP hit the world like a meteorite, pushing the global economy into its worst recession since WWII: we expect growth of -4.7% in 2020, more than twice as bad as the 2009 GFC. The trough in activity is now expected to stand between -10% and -20% g/g in Q2 depending on the strictness of lockdowns across countries. This follows an already sharp recession in Q1 (from -2.5% to -8% q/q).

Global trade losses could total USD3.5tn in 2020. We expect two guarters of recession in trade in goods and services (Q1 and Q2), which will bring the annual volume contraction to -15% in 2020. In value terms, plummeting commodity prices and a stronger USD will weigh on prices. We expect global trade in value to fall by -20%. However, a smooth return to the status quo ante is not on the cards: Increasing protec-

tionism will be a key feature of the life after Covid-19 and may jeopardize the recovery. A desire for industrial autonomy (not least in Europe and the U.S.) and hidden subsidies for re-shifting production back home signal a potential trend of the shortening of supply chains, more investment protection and thus a costly rebound.

Despite unprecedented support, insolvencies are set to increase in 2020. Looking at historical sensitivity to the economic cycle and government interventions to support corporates (tax deferrals, state loans and guarantees) and avoid top insolvencies and their domino effects, we expect global insolvencies to increase by +20% in 2020. This fourth consecutive year of rising insolvencies would result from a +25%

Table 1: Global GDP grow	th forecasts
	2017

	2017	2018	2019	2020	2021
World GDP growth	3.3	3.1	2.5	-4.7	4.8
United States	2.4	2.9	2.3	-5.3	3.7
Latin America Brazil	1.0 1.3	1.0 1.3	0.1 1.1	-6.8 -7.0	3.1 3.0
United Kingdom	1.8	1.3	1.4	-13.3	5.0
Eurozone members	2.7	1.9	1.3	-9.0	6.0
Germany	2.8	1.5	0.6	-7.0	4.5
France	2.4	1.8	1.5	-10.8	7.4
Italy	1.7	0.7	0.3	-11.2	6.6
Spain	2.9	2.4	2.0	-11.0	7.0
Russia	1.8	2.5	1.3	-5.2	3.0
Turkey	7.5	2.8	0.9	-4.7	4.2
Asia-Pacific	5.2	4.7	4.2	-1.3	5.9
China	6.9	6.7	6.1	1.5	7.6
Japan	2.2	0.3	0.7	-5.7	2.2
India	7.0	6.1	4.7	-3.6	7.5
Middle East	1.4	0.9	0.3	-6.3	2.2
Saudi Arabia	-0.7	2.4	0.3	-4.0	2.0
Africa	3.1	2.7	1.9	-3.1	4.0
South Africa	1.4	0.8	0.3	-7.8	5.4

^{*} Weights in global GDP at market price, 2019

NB: fiscal year for India Source: Allianz Research.

increase in the U.S., a +15% rise in China and a +19% surge in Europe.

Up to one quarter of the jobs under partial unemployment are at risk of being lost jobs. In the Eurozone, where more than 70 million people are likely to benefit from partial unemployment schemes, the very gradual reopening of economies will mean fixed costs would need to be reduced by companies, notably those in sectors where deconfinement is very slow (hotels and accommodation, travel, retail). Consequently, many on partial unemployment could become unemployed by year-end, pushing the Eurozone unemployment rate up by +2pp to 9.5% in 2020. The U.S. job market, on the other hand, is highly flexible. After skyrocketing jobless claims in April, we estimate the unemployment rate to reach 9.4% on average in 2020.

Substantial excitement about exiting from the Covid-19 lockdowns is overrated. Although major economies have started reopening, de-confinement is set to proceed in a gradual manner, which can be divided in four different stages: from full lockdown to gradual national reopening, to gradual international reopening and finally a full restart. What is important to understand is that managing the reproduction rate of the virus effectively (R0) will mean most economies will function at 70% to 90% of their potential for two-three quarters, with transport, travel, retail and hospitality on Covid-19 mode for longer. As a result, activity in the manufacturing and construction sectors may pick up faster than in services. Lessons learned from China show us that one month after the number of domestic Covid-19 infections dropped close to zero, production activities are still registering at 80%-85% of their usual precrisis levels, while consumer spending on durable goods remains at c.65% of normal levels. Globally, a return to business as usual is not on the table before mid-2021 (+4.8% GDP growth in 2021) and will be dependent on a vaccine being in place.

Against this backdrop of a more gradual recovery, markets seem rather to be pricing in a quick V-shaped recovery. The main reason for this cognitive gap might be the unshakable belief in overactivist central banks. But given the risks involved – in particular the likelihood of a second outbreak in autumn or winter – we still believe that the ground lost since February will not be

fully recouped by year-end. As a result, U.S. equity markets could post a 10-20% yearly performance for 2020 and gradually start recovering to previous levels within 2021. Similarly, we expect European equity markets to follow the exact same path but with a strongly negative performance for 2020.

On the other hand, U.S. long-term bond vields are expected to finish 2020 at around 1.0%. Global long-term sovereign markets have calmed down after several weeks of erratic behavior. The mix of bad and good news both from a pandemic and fiscal and monetary perspective has led markets to a perpetual hunt for their anchor or fundamental forward-looking value, which they seem to have now found. Beyond 2020, we expect long-term U.S. yields to converge to pre Covid-19 fair-value levels (1.4%) by the end of 2021. Similarly, 10y Bund yields are expected to remain trading around -0.5%. Mirroring the U.S., we expect long-term German yields to converge towards -0.3% by the end of 2021.



A view to a crater: Covid-19 and insurance demand

The slowdown in economic activity and the slump in equity markets will certainly weigh on top-line growth in the insurance industry. On the other hand, insurers might benefit from greater risk awareness. That was, at least, the experience of SARS: In its aftermath, demand for health and care insurance in Asia grew by double digits. But SARS also showed that this boost is rather short-lived; moreover, even if the willingness to buy more insurance cover exists, it might not be matched by the ability to do so. For 2020, without doubt, the negative effects will prevail (with only a few exceptions like health or life protection).

In the longer run, the industry will come under increasing pressure – from clients, policymakers and regulators – to come up with more comprehensive and simpler solutions. This might even compromise their ability to price risk properly. Hence, a hardening market because of the crisis cannot be taken for granted.

In the P&C business, the link between economic activity and insurance demand is particularly close. Therefore, we expect all lines of businesses to see lower premium income in 2020 as new business is set to decrease markedly. Even in lines where appetite for risk cover might increase – in cyber, for example, given the increase in cyberattacks – the sheer lack of money (or the need to build internal capital buffers for highly uncertain times) might deter many prospective clients from increasing insurance cover.

All in all, global P&C premiums are set to decline by -2.9% in 2020, shaving off around EUR44bn from the 2019 global insurance premium pool. Although the coronavirus spared no region, mature markets (with their strict lockdowns) will be the hardest hit, with premium income falling by around -5% and -4.5% in North America and Western Europe, respectively. Most Emerging Markets, on the other hand, will manage to increase their premium pools, albeit by very low rates. Compared with our pre-Covid-19 base case (assuming an in-

crease in premiums of +4.4% in 2020), lost premiums amount to EUR109bn at the global level.

The life market has become much more volatile in recent times as single premiums play an increasing role. Doubledigit swings in both directions - even for mature markets like France and Italy are not uncommon. Moreover, besides economic activity (employment and wage growth, for example) other factors, too, influence demand: legislation such as tax incentives, strategy such as product design and distribution (bancassurance), and last but not least capital markets - the performance of many "modern" life products is closely related to capital market movements. Unit-linked products, for example, will be battered: Not only new business will come to an abrupt halt, but large outflows can also be expected.

In times of crisis, however, households become more risk-averse and may shy away from consuming or investing, building up precautionary savings instead. In 2009, for example, savings in the EU28 jumped by EUR100bn. With Covid-19, this behavior might be even more pronounced as lockdowns made consumption in many areas - from eating out to travelling - literally impossible. Private consumption is set to drop like a stone, by an estimated -35% on average during the lockdowns. Although household income, too, is set to decline (because of rising unemployment), the blow is widely mitigated by government programs ("Kurzarbeit"). Total household income may thus decline by "only" -8% to -16%. The upshot: Saving rates could increase by around +6pp above pre-crisis levels in 2020; this means about EUR400bn, or 3% of GDP in the EU28. This is by no means a European phenomenon. Even in the normally spendthrift U.S., the personal savings rate hit a historic 33% in April 2020.

Where will these additional savings end up? In calmer times, capital markets (investment funds) and modern insurance products may benefit, as recent experience in, say, Germany has shown. In turbulent times, however, households may shy away from investing their mon-

ey and simply keep it in their bank accounts or stash it away under the mattress. It might be only in future years that the insurance industry may benefit from this cash hoarding.

Overall, global life premiums are set to decline by -4.4% in 2020, shaving off around EUR106bn from the 2019 global insurance premium pool. Similarly to the situation in the P&C segment, markets in Europe and North America will suffer the most. However, in life, even Asia (ex Japan) might not be able to avoid a premium recession, as premiums are set to decline by -2.0%. Compared with our pre-Covid-19 base case (assuming an healthy increase in premiums of 6.2% in 2020), lost premiums amount to EUR249bn.

Table 2: Impact of Covid-19 on GWP by different lines of businesses

Line of business	Trigger	Expected impact (2020)
Life unit linked	Equity market slumps lead to sudden stop in new business, large outflows	strongly negative
Life traditional	Low yields deter savers; partially offset by flight to safety?	slightly negative
Life protection	Higher risk awareness (memento mori)	slightly positive
Health	Higher risk awareness	slightly positive
Motor	New business collapsed due to lockdowns and reduced frequencies will weigh on pricing (rebates); partially offset by catch-up effects in H2	negative
Fire and property	Slowdown in investments and housing starts	negative
Business interruption	Rising demand for pandemic risks – but reputational issues	slightly negative
Travel	Travel collapsed during lockdowns and will only gradually recover	strongly negative
Credit	Declining trade and higher risk pro- files; (partially) offset by govern- ment programs	negative
Cyber	Higher risk awareness but compa- nies' ability to buy risk cover nega- tively affected by recession	slightly negative
Liability, D&O	Higher risk awareness but compa- nies' ability to buy risk cover nega- tively affected by recession	slightly negative

Source: Allianz Research



Corona topping Katrina: Covid-19 inspired losses

The direct loss impact of Covid-19 differs from one line of business to another. Some lines might even temporarily benefit as the lockdowns lowered activity (e.g. traffic). But the relief on the motor side might be short-lived and offset on the premium side by rebates and cash-backs.

So overall, the effect of Covid-19 will be clearly negative. Visibility on claims, however, is still low for three reasons: First, there is no precedent for such a sudden stop of economic activity on a global scale; the monetary and fiscal countermeasures are also unprecedented. Hence, how businesses and people react is hardly predictable. Second, a wave of litigation can be expected as some companies (and their lawyers) will try to find ways to get around exclusions for communicable diseases – in some jurisdictions with support by policymakers – and also to find fault in how companies have handled the pandemic (e.g. hotels, airlines or essential sectors). Third, in some lines (e.g. travel, business closure for restaurants) insurance will show goodwill (or may be coerced to do so...) and make (partial) payments.

Generally, Covid-19 cannot be compared with a property-related catastrophe such as a hurricane or earthquake, which strikes once and where losses and estimates are available within days. Losses from Covid-19 will evolve over a much longer time horizon. True, there are also immediate losses from coverages directly triggered by the pandemic such as health, travel and event cancellation. But the bigger driver of losses may be litigation (coverage interpretation, finding fault) and credit-exposure (bankruptcies). Thus, it is not surprising that estimates of losses differ widely. Lloyd's of London, for example, estimates that global underwriting losses will amount to USD107bn in 2020 alone³.

To add insult to injury, Covid-19 does not only impact the liability side of the insurance business but the asset side as well. Falling interest rates, widening spreads and deteriorating stock markets weigh on investment income as well as on the balance sheet of insurers. A surge in downgrades and corporate defaults will make impairments necessary. Given the volatility of markets and the huge fiscal rescue and stimulus packages, the final losses for insurers are almost impossible to predict. Again, Lloyd's of London tries to give a ballpark figure: global losses in investment portfolios might total USD96bn (2020)⁴.

Pandemic insurance: The case for a European solution

A pandemic is essentially uninsurable. By definition, it hits all households and businesses at the same time. There is no diversification over space or time. Covid-19 is a case in point: how could an economic crisis which is likely to shave off USD9 trillion from this year's global output be insured privately? That's why the insurance industry, aware of the possibly devastating impact of a pandemic, excluded communicable diseases from most of its standard policies.

The story, however, should not end here. Societies – with only a few exceptions in East Asia – were woefully ill-prepared for the advent of Covid-19. It is now becoming increasingly clear that in the years since the SARS epidemic nothing has been done to establish effective pandemic risk protection. This time, lessons should be learnt. First and foremost, societies must boost their economic resilience. Insurance can and should play a role here.

Ex-ante risk protection schemes, be it against pandemics, natural catastrophes or terrorism are instrumental in ensuring that all participants retain skin in the game and thus have a strong self-interest in taking preventive and preparatory measures. There is a long list of measures businesses should take to strengthen their resilience against outbreaks: from stronger balance sheets and more robust, diversified supply chains to broader succession planning; from infrastructure to enable remote working and regular health checks of employees to new standards of hygiene. True, these measures come with additional costs, while the next pandemic might only happen in years or decades. Therefore, it is of utmost importance to have the right incentives in place by harnessing the market dynamics of private insurance: pandemic insurance with riskadjusted prices would go a long way to promote risk-mitigation strategies and nudge businesses to lower their risks. Another advantage would be that private insurers could provide the

necessary infrastructure, processes and knowhow to check the claims (to detect fraud) and make pay-outs fast and efficient.

Fortunately, successful examples of private-public-partnerships in closing risk coverage gaps exists. In the U.S., TRIA (the Terrorism Risk Insurance Act) was passed in the wake of 9/11 to kickstart a private insurance market for terrorism. Previously the demand for terrorism coverage had been extremely limited and insurers would generally neither charge for nor exclude it. After the September 11 attacks resulted in a \$40 billion insured loss, reinsurers quickly pulled out of terrorism coverage, leaving primary insurers with no other choice than to stop offering it. This left businesses, with a newfound appetite for terrorism coverage, exposed and vulnerable to future attacks..

In response, the Terrorism Risk Insurance Act was signed into law by President George W. Bush in November of 2002.

The TRIA program provides a government backstop. Participating insurers are encouraged to price coverage accurately through insurer deductibles (\$200 million as of 2020). The program's annual cap amounts to \$100 billion, after which no further payments will be made and insurers, having met their deductibles, are relieved of any excess liability.

So far, TRIA has proven successful at raising what is now basically a self-sufficient and profitable market in terrorism insurance. Under protection of the backstop, insurers were emboldened to underwrite terrorism policies while the insurer deductibles ensured adequate research and sustainable pricing models were encouraged.

Another template would be Flood Re in the UK. Insurance companies do not like to underwrite flood coverage because of the high level of adverse selection. Flood Re is a reinsurance scheme where insurance companies and the UK government work together in order to offer coverage the market would otherwise be hesitant to provide while simultaneously keeping premiums low. Insurers contribute a combined £180 million a year to Flood Re and in turn can pass claims on for a fixed sum. For the client, it is like

entering into any other insurance contract. The client buys insurance from an insurance provider, pays the premiums and, in the event of a claim, gets paid out by the insurer. The insurer is then later reimbursed by Flood Re.

Flood Re has been very successful in increasing the availability of flood insurance. While only 9% of households that had made previous flood claims were able to attain quotes from two or more insurers before the inception of Flood Re, afterwards that number rocketed to 100%. This matters as Flood Re has the clear vision to reduce risk of future floods by incentivizing preventative measures.

Both examples are suitable to be adjusted to pandemic insurance. There is, however, a strong reason to opt for a re-insurance solution: the European dimension. If Covid-19 has taught us anything, it is that no country will be spared by a pandemic. So it is better to set-up a joint solution in the first place, avoiding haggling over European solidarity afterwards.

The newly created re-insurance vehicle – let's call it "Pandemus" – could be established as Societas Europaea (SE), responsible for all EU members and funded by all European (re)insurers and member states. To be credible, however, Pandemus would need a public guarantee – up to a certain limit, because even the EU cannot indemnify all businesses for all losses caused by a

pandemic. This guarantee could be backed by the EU budget, similarly to the arrangement of the Macron-Merkel plan for the Covid-19 recovery fund.

Many questions remain open. How much capital would such a re-insurance vehicle need? How much should insurers be charged for passing pandemic risk to Pandemus? How big does the public guarantee need to be? Should capital markets play a role via cat-bonds? How should pay-outs be managed? The last question seems particularly thorny, given the highly varying degree of pandemic impact and loss profiles. Parametric solutions might be an option i.e. linking the trigger for pay-outs, for example, to the number of cases or deaths per millions of inhabitants in a certain region - provided these statistics are reliable and harmonized. The volume of pay-outs, on the other hand, could be predetermined lump sums, staggered by business size. Measuring losses on a more granular level might render the scheme unduly complicated.

Given these difficulties, it is understandable that pandemic risk insurance schemes are discussed first and foremost at the national level; that way, they might be easier (and faster) to implement. But the danger remains that Europe will end up with a hotchpotch of solutions that cannot be easily integrated and may only deepen differences in the reaction to future pandemics.

Covid-19 and social security

While the impact of Covid-19 on private insurance is quite dramatic, social security systems have not been spared either. Public pension schemes are a case in point.

In most countries, the regular pension adjustment depends on the development of the average wage level. With unemployment and short-time work increasing during the crisis, the average wage level in 2020 is probably going to be lower than last year's. Thus, in the best case, pensions are not going to increase in the next year. In countries where there is no indexation, this will leave retirees with real purchasing power losses. Future retirees might also be affected by this sudden drop of the average wage level, in case their future pension is linked to the relation of their own income to the average income level. Thus, if no corrective measures are applied, in the U.S. "a middle-income worker born in 1960 could have his annual Social Security benefits in retirement reduced by around 13%, with losses over the retirement period in excess of \$70,000" due to this effect, for example⁵.

The pandemic also affects the tax and contribution payers. In order to meet the pension obligations, in the short-term, higher tax subsidies will be necessary to cover the declines in contribution income of the national social security agencies due to higher unemployment rates and short-time work. However, if labor markets do not recover in the short- to mid-term, increasing contribution rates will be inevitable.

MONEY? PENNY?

OUTLOOK FOR THE COMING DECADE

The changes that the Covid-19 pandemic has brought on to the insurance industry is nothing short of gamechanging. There were immediate issues that insurers had to tackle when the pandemic spread to every corner of the world. The multifaceted role of employers, claim payers, asset managers and business meant that insurers had to prioritize, rebalance and move on. As employers, the most important measure was to make sure that remote work was made available for every employee. As claim payers, new risks emerged, and refining underwriting practices became of the utmost importance. The asset manager role is still tricky as this is the most direct channel in which Covid-19 will potentially affect insurers. The irrationality of the capital markets makes it even more challenging for insurers. The only thing that can be taken for granted is that yields will stay very low (or even negative in some locations) for the foreseeable future.

What will the world look like after Covid-19? Some trends have already become apparent. Globalization will change: global rivalries may increase – first and foremost between the U.S. and

China – and states may wish to reduce their foreign reliance on "strategic" goods (from drugs to batteries) while companies may want to shorten their supply chains – resilience trumps efficiency. For insurance, these developments are ambivalent. On the one hand, many business lines (e.g. marine, transport, credit) thrived in the past on globalization, on the other hand, a new focus on resilience, on-shoring projects and more infrastructure investments creates new business opportunities.

More challenging might be another trend: the relation between business and the state is set to change, with a more assertive and interventionist role of the latter. This will also have repercussions for insurance, not least in regulation. So far, the regulatory framework for insurance worked quite well during the crisis. As a consequence, insurance regulators have been far less accommodating than their peers in banking who, for example, lowered capital requirements (to make credit readily available). In insurance, regulatory relief came mainly in the form of reduced operational burdens, such as data collection and consultations. But that does

not mean that the industry is off the hook. Covid-19 will lead to a new regulatory and supervisory sentiment, with a renewed focus on systemic risk – resulting in more stress testing and reporting – and market conduct – leading to a more consumer-friendly regulation, as a reaction to recent disputes about clauses and claims regulation as well as premium refunds and discounts. There is the undeniable risk that new regulations in that field might even compromise the industry's ability for policy exclusions and pricing.

The upshot: The years after the pandemic will be as challenging as the years after the GFC. This is reflected in our long-term forecasts. With growth of +4.4% p.a. until 2030, global insurance markets will very likely trail behind economic activity for another decade. This pace, however, is a good 1pp faster than in the previous decade as the industry has become battle-tested and some silver linings are also visible. But before discussing them, let's turn to the outlook for the different regions and markets.



You only live twice – advanced economies navigating the crisis

The U.S. will continue to be the uncontended market leader for the next decade. Our long-term prospects look a little brighter than the current situation. Insurance markets should recover over the long-run. We expect the life market in the U.S. to reach EUR855bn by 2030, increasing its volume by EUR247bn in the next decade with a CAGR of +3.1%. We estimate a slight deterioration of the life insurance penetration from 3.2% in 2019 to 3.0% in 2030. Despite suffering a deeper downturn in the P&C lines in the U.S., we expect the market to grow by EUR313bn over the next ten years with a CAGR of +3.3% to reach an estimated EUR930bn in 2030. Thus, the penetration in P&C will have slightly improved from 3.2% in 2019 to 3.3% in 2030.

There will be increased demand in some lines of commercial and personal business due to the Covid-19 pandemic. We will observe an increased demand in professional liability, especially in the cyber security and medical malpractice products. Political risk is another product that is expected to rise in the specialty lines as uncertainty continues in developing countries and across the

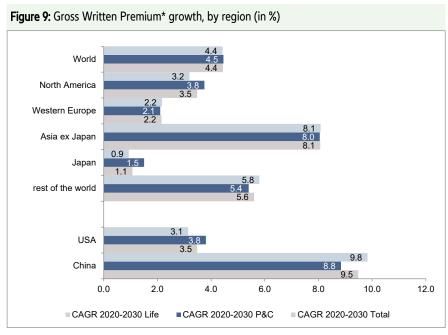
globe. Underwriting excellence is of the utmost importance to maintain loss ratios stable as increasing demand and increasing risk exert opposite forces.

The emerging risks arising in the next years to look out for are: social inflation, disruptive tech, pricing and product line profit, legislative and regulatory changes and the persistently low interest rates. Along with these we can also list emerging risks concerning the environment: climate-related disasters, food safety and food security.

In Western Europe we foresee negative growth in 2020 for both lines of business at -4.5% for P&C and -4.8% for life insurance. We expect, however, to observe a recovery of sorts in 2021 at +3.4% for P&C and +3.0% for life insurance. Over the next decade, we will observe positive CAGRs for both lines of business at +2.2% for life insurance and +2.1% for P&C. We foresee Germany to overtake France as the biggest player in the region for P&C in 2030 at EUR91bn and EUR90bn, respectively. In the realm of life insurance, France will continue to be the European market leader in terms of premium volume at EUR185bn (2019: EUR145bn), followed by Germany at EUR118bn in 2030 (2019: EUR96bn).

Life insurance expenditure in Europe was EUR1,712 per capita in 2019. We find heterogeneity in the region as the expenditure is much higher in Ireland (EUR3,697), Denmark (EUR3,663), and Switzerland (EUR3,136) while in Austria it is EUR630 and in Greece EUR189. We expect the density to change only marginally in the next decade as the largest players will be in the Scandi-navian and Anglo markets to drive the regional density to EUR2,146 (Denmark: EUR4,695; Sweden: EUR4,406; and Ireland: EUR4,382).

In terms of gross written premium as a percentage of GDP, the regional average is 4.6%. We expect the insurance penetration to slightly worsen over the next ten years to 4.4%. The big players are the UK at 7.8%, Denmark with 6.9% and France at 6.0%. We also find some regional differences as penetration is lower in Greece (1.0%), and the Netherlands (1.6%). We expect the penetration to deteriorate in the UK to 6.9% as well as in Switzerland, where we expect it to go from 4.3% in 2019 to 3.5% in 2030.



*Based on 2019 exchange rates.

Sources: National financial supervisory authorities, insurance associations and statistical offices, Thomson Reuters, Allianz Research

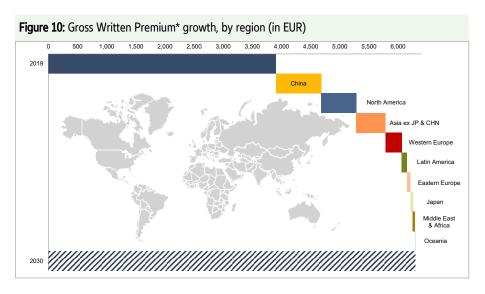
Insurance and tech-shaken not stirred

For the better part of the last decade, the insurance industry had been trying to play catch up with technology. However, just as Covid-19 spread across the globe, insurers were forced to adopt digital measures that would have under normal circumstances taken years to implement. While there are several reasons why insurance has been deemed a laggard – mainly the dependence on legacy systems – the current situation and incumbent technological innovations will push the insurance industry to speed up the adoption of new tech across their ecosystems.

The undisputable quick win in technological adoption for insurers is client communications. The pandemic bolstered the popularity of online platforms and remote interaction where the applications range from advertisement to real-time quoting. Big data can help to target potential customers, while chatbots can be used to improve customer satisfaction by redirecting them to the relevant department they wish to contact. Text and image recognition and extended reality can help eliminate human interaction and promote automation and the elimination of human error when filing a claim. Another scalable technology is voice and speech recognition, which can be used for authentication purposes or data mining.

Through the increase in communication channels, insurers can profit from the data access and create new analytical tools for pricing and underwriting. One of the most popular applications is machine learning, which is currently used for customer service, fraud detection and increased operational efficiency. There are no bad risks just bad pricing and algorithms are used to support classification risks and to calculate more accurate predictive pricing models that ultimately drive lower loss ratios. Machine learning-powered tools can also be used to create insights from massive volumes of health data to deliver lower costs, a higher quality of customer care, and fraud detection. Other scalable technologies that will help drive this change are 5G networks and the Internet of Things (IoT) to help share and monitor data. Another prominent field where new technology can play out is policy management claims handling. Here we can expect an increase of the use of smart contracts, blockchain and distributive ledger technologies, automation and predictive analysis. The process will change from policy inception to first notice of loss to algorithms that detonate digital payments.

Lastly, the increased use of analytics, automation and risk management will help the industry transform into a more customercentric business. It will become increasingly important to create strategic alliances and partnerships to move away from technology late adopters into innovators. The surge of innovation labs and transition from legacy systems into new ways of working will become the new normal for insurance. Business strategies coming out of the crisis will make the sector look fundamentally different. With the pandemic we can expect a reshuffling of priorities in technology spending in insurance. Not only at the product level or at individual components of the value chain, but across the entire value chain. Building in-house and developing digital capabilities with alliances and partnerships are going to be the way forward. While this crisis has brought many challenges, it also provided opportunities to come out of it stronger, more efficient and digitally enabled.



^{*}The conversion into EUR is based on 2019 exchange rates.

Sources: National financial supervisory authorities, insurance associations and statistical offices,



From China with growth – emerging market growth driven by China

Despite the fact that China saw one of the weakest first quarters in insurance market growth within the last 20 years this spring due to the Covid-19 lockdown – a fall of -0.7% and thus a far cry from the compound average growth rate of +17.7% since the turn of the century - it is set to remain one of the growth engines of the region. Already being the largest insurance market by premium income in Asia, we expect China to increase its market share in emerging Asia (ex Japan) further, from 48% today to 55% in 2030. The main driver will be pent-up demand. The sheer size of the Chinese market distracts from the fact that when it comes to insurance density and penetration, China still ranks midfield in Asia like Malaysia and Thailand.

In 2019, every Chinese person spent on average EUR317 for life and P&C insurance coverage and total premium income amounted to 3.7% of GDP. On the one hand, this is still markedly less than in the mature markets of the region, such as Singapore, where premium income corresponded to 8.6% of GDP, or Taiwan and Hong Kong, where the share is almost 18%. But on the other hand, it is already much higher than in

the Emerging Markets of the region, such as Indonesia, the Philippines, Laos or Sri Lanka, where total premium income is still below 2.0%. As a consequence, China is no longer going to be the frontrunner in the region with respect to expected growth over the next decade: With a compound average growth rate of +9.5% it will surely remain in the upper half of the analyzed countries, but will be outpaced by countries with higher backlog demand, like Indonesia, the Philippines, Sri Lanka and Vietnam, where we expect doubledigit growth rates over the next ten years. The same holds true for India, where the reform efforts of the government might help in transforming the Indian insurance market from a promise to a success story.

Asia is set to remain the continent of two paces with respect to market growth: There are the Emerging Economies with double-digit insurance premium growth and the tiger countries Hong Kong, Singapore, Taiwan and South Korea, where the insurance markets are more mature and compound average growth is expect to range between +3.9% in Taiwan and +5.5% in Hong Kong over the next ten years – which is only half the rate of expansion of the previous decade, reflecting the

political uncertainty which may put its role as off-shore financial center in jeopardy. For the whole region, excluding Japan, we expect an average compound growth rate of +8.1%.

In most countries, market growth will be mainly driven by life insurance and savings products. This reflects the fact that there is one overarching topic in the region: demographic change. Most countries will face the challenge of a rapidly aging population within the next decades, putting existing social security systems under pressure and increasing the need to build up sustainable and adequate ones in those countries, where today's pension systems are best described as rudimentary. At the same time, long-term insurance providers have to adjust their portfolios and products to the capital market environment to ensure longterm stability, while managing the implementation of new technologies. Successfully managing this challenge will be crucial to provide the aging population in the region with the tools to buildup sufficient additional occupational and private pension provision for a more carefree retirement – at least with respect to retirement income.

We estimate that the largest insurance markets in Latin America will continue to be Brazil, Mexico and Chile. In Brazil and Mexico, the Covid-19 pandemic has hit especially hard. Before the actual pandemic started in Latin America these countries experienced severe commodity volatility. The region is generally commodity dependent and the fluctuations in oil prices, as well as supply-chain interruptions and subdued trade, had an enormous impact on economic stability. Nonetheless, the greatest challenge during the Covid-19 pandemic will be informal labor and the insufficient social protection as around 70% of the population face the trade-off of income for survival and health.

In 2019, the Latin American life insurance market stood at EUR33bn, up 10.6% from 2018. The need for private provision is significant in the region. The Latin American insurance market entered the Covid-19 pandemic in generally good shape. Overall, we expect the impact of the pandemic to tamp down the growth in the region until 2021. We expect a growth of +6.5% - mainly driven by inflation - and a deeper setback in 2021 at -0.5%. However, over the course of the decade, we estimate that the region will experience a CAGR of +7.4%, lower than the 10 year CAGR of +10.5% following the financial crisis. We expect the region's penetration to deepen slightly from last year's 0.9% to 1.0% in 2030. There is room for improvement in the realm of insurance density, the per capita annual expenditure in life insurance premiums in the region was only EUR68 in 2019; though we estimate that by 2030 the density will be EUR139, this still falls short of the ideal coverage.

Non-life insurance is the largest line of business in the region (EUR46bn): as of 2019 it accounted for 58% of the total insurance market. In the coming decade we expect the life insurance and P&C distribution to remain the same and P&C will represent 57% of the total premiums in 2030 (EUR96bn). We expect a CAGR of +6.8% in the next decade, after dropping by 7pp by to +3.5% in 2020 and recovering by +6.2% in 2021. Over the next 10 years, we expect the per capita expenditures to increase almost double from EUR94 in 2019 to EUR183 in 2030. Innovation in the product portfolio and government partnerships will be crucial for resilient and inclusive growth after Covid-19.

Thanks to early lockdown measures, Emerging Europe has suffered less from the Covid-19 pandemic than their Western neighbors. Reponses from Slovenia and the Czech Republic were used by some western neighbors as "best practices". Nevertheless, the pandemic put the real economy in lockdown and our growth estimates are subdued for the region for 2020 as we expect the total insurance market in emerging Europe to be stagnant. However, we expect a

swift recovery and a CAGR of +6.1% from 2020 to 2030. We expect the total insurance premium income volume to increase by EUR58bn to reach EUR122bn in 2030.

Life insurance in emerging Europe in 2019 was set to recover from a few years of stagnation as we entered 2020. We expect the region's life insurance income to decrease by -1.0% in 2020 and to swiftly recover to a CAGR of +6.2% (2020 - 2030). We expect insurance density to increase almost 40% to EUR97 in 2030 as some of the markets like the Czech Republic and Slovakia mature. Over the course of the next decade, we expect insurance penetration to remain stable at 0.5% in the region.

We expect a similar development in non-life insurance penetration with a slight decrease from 1.2% to 1.1%. We expect the region's P&C insurance income to grow only very slightly (+0.4%) in 2020 due to Covid-19, but then to bounce back to a CAGR of +6.0% (2020 - 2030). Non-life insurance represents around 69% of emerging Europe's premium income. We expect the line of business distribution to remain the same over the course of the next decade. In terms of expenditure per capita, we estimate that it will almost double from last year's EUR115 to EUR220, driven by Turkey and Poland.



2030 7% 6% 6% 9% 30% ■ North America 34% ■ Western Europe 2019 12% 20% ■ Asia ex Japan & China China Japan 12% rest of the world 27% 16% 21%

Figure 11: Total Gross Written Premiums, by region (based on 2019 EUR, in %)

Sources: National financial supervisory authorities, insurance associations and statistical offices, Thomson Reuters, Allianz Research

Emerging customers: Quantum of solace

A significant percentage of the population in Emerging Markets find themselves in a paradoxical position: they have modest levels of revenue and yet high levels of economic vulnerability. This is an ailment in the low-income segment of the population, meaning they are economically active but have no access to social protection and/or financial services. Nonetheless, they are on the path of integrating into the middle class of Emerging Markets with income well above the poverty line. Emerging customers' incomes may range anywhere between USD2-20 PPP per day. However, this special market segment is not defined merely by their earnings but by what their special characteristics: a qualified labor force that thrive to make each generation better than the one before.

Emerging customers make complex economic decisions every day; they are brilliant economists maximizing their very scarce resources and will – in a decade or two – be drivers of global consumption - the next generations' middle class. Nonetheless, they lack social protection: one big financial shock such as a fire, a drought or even a death might set them back into poverty. Emerging customers are micro-entrepreneurs, artisans, farmers, informal workers, etc. The nature of their risks is the same as the population from mature markets: climate change and economic externalities. They need P&C insurance for crops and fires, health insurance for major medical expenses, life insurance in case of the death of the head of the households and savings products because they also face future uncertainties. Nevertheless, the products emerging customers demand are substantially different. To avoid adverse selection, insurance companies could partner up with other institutions/companies operating in Emerging Markets that pool people for reasons unrelated to insurance. For instance, a good market for flood protection might be an agro-products distributor. Another good example of a distribution channel is telecom: Emerging Markets alone contribute to 59% of global smartphone shipments. Even excluding China, Emerging Markets contribute to 32% of the global smartphone market.

Covid-19 uncovered a tragic truth: informal workers face the decision of choosing between health and money. Insurance companies should aim at distributing products that cover loss of revenue and/or profits. However, it must be offered with an integral approach: not only using digital channels for payments and distribution, but also for financial literacy. Not deploying these programs successfully might increase informal and insecure low-income jobs that alleviate temporary financial needs but might ultimately result in increased poverty.

As much needed as insurance products are, it is a hard market to enter. In order to thrive, insurance companies must offer added value for emerging customers, the products must be accessible, and they should be distributed and designed dignifying their aspirational status: emerging customers are not charity work, they are untapped business potential. Parametric insurance might be a possible solution for emerging customer confidence in insurance, but improvements must be made in the design of products and underwriting practices to decrease the protection gap. Fortunately, big players in the market have realized that tending to the emerging customers' risk protection needs not only fosters inclusive growth, but it also makes business sense. It extends social protection and it fosters socio-economic growth, which in turn creates more business opportunities and brand loyalty for generations to come.

NO TIME TO DIE:

ESG AS THE NEXT BUSINESS FRONTIER IN INSURANCE

(Environmental, Social and Governance) does not only affect the asset side of insurers' balance sheets but increasingly the liability side as well. As ESG methodologies and frameworks develop and start to get incorporated in risk evaluation, the once nonfinancial and intangible perception of ESG is more and more evolving to a financial and tangible factor for the decisions of customers, suppliers, employees, regulators, analysts, and other stakeholders. While ESG metrics are already established within insurers' investment decisions, they still demand much more attention in 'impact underwriting' insurance solutions. ESG factors to be considered in impact underwriting include the attitude and behavior: (1) on environmental issues such as resource depletion, climate change, waste and pollution, (2) regarding people, workers and local communities, including health and safety issues and (3) referring to corporate policies and governance, including tax strategy, corruption, structure and remuneration.

That means that all potentially ESG-critical business transactions have to be screened and ESG risks or reputational impacts have to be assessed. Furthermore, underwriters need to be trained for engaging in an ESG risk dialogue with clients with the aim of finding solutions that improve the understanding of the risk on both sides and result in adequate risk mitigation and management.

The growing role of ESG factors in risk assessments is also starting to feature in insurers' regulatory regimes. The quantification of ESG impacts to insurance companies has been demanded by the European Union's EIOPA

(European Insurance and Occupational Pensions Authority) and Prudential Regulation Authority (PRA) in the UK and need to be included and reported within the regular Solvency II stresstesting exercises. To stay competitive in the market, insurance players must not only adapt to current and future regulations, but also satisfy investors' increasing demand for sustainable products.

At the same time, however, ESG offers also new market opportunities. Part of the increasing demand results from companies changing their reporting practices to better reflect their commitment to ESG factors, aiming at measuring their resilience to long-term, financially relevant risks. This involves different product lines of insurance, including employers' liability, D&O, product liability, and public liability and, related to these risks, the increasing demand for mitigating factors that can cause significant reputational harm. Information travels quickly due to social media and negative publicity related to environmental, social or governance aspects is an increasing threat to companies.

Specific trends and developments will undoubtedly result in increasing demand for specific insurance products and services. Examples include the transition to a low-carbon economy with its massive infrastructure investment needs, greater environmental protection and social inclusion. Table 3 lays out criteria and definitions for sustainability in the context of 'impact underwriting' in insurance. The scope of the definitions covers environmental and social criteria and spans from mitigation over adaptions to resilience.

If these criteria for sustainable insurance products are applied to the three ESG risk components of:

- physical risk: e.g. tangible losses from natural catastrophes, disruption of supply chains or rising morbidity and mortality
- transition risk: e.g. disruptions of business models by changing demand preferences, technologies or regulation
- liability risk: e.g. claims of third parties who have suffered loss and damage from an ESG hazard
- a long list of potential business opportunities emerges. Table 4 lists some of the examples.

The upshot: ESG does not only help insurers to better understand their long-term risks but also opens new business models and opportunities. Embracing ESG goes far beyond burnishing the "green reputation" – it goes straight to the bottom line.

Table 3: Criteria for sustainable insurance solutions

Tuble 5. Citteria for Sustainable insurance solutions				
Focus on	Environmental criteria	Social criteria		
reducing the risk of possible, future occurrence of hazard event (mitigation)	Support the development of a technology/market focusing on the environment and/or climate change (e.g. renewable energy, environmental goods and services, green infrastructure) and further activities in the mitigation of climate change (e.g. encouraging or rewarding environmentally responsible behavior that improves energy efficiency or avoids pollution).	Raises awareness through various activities (e.g. cause-related marketing or support schemes) to prevent and mitigate social challenges in relation to socially disadvantaged groups.		
reducing the inventory of elements that may be affected by hazard event (adaptation)	Reduce the client's exposure to financial (risk reduction) and/or regulatory risks (e.g. CO2 regulations, environmental pollution liability). Protection from environmental risks and adaptation to climate change impacts through managing clients' risks (e.g. weather risks) and/or fostering risk awareness and/or providing incentives for reducing risk exposure.	Fosters socially responsible behavior by offering specifically tailored solutions for socially disadvantaged groups (for e.g. reducing the risk of underserved groups by providing otherwise unavailable access to financial services). A discount on such policies would partly apply.		
reducing the impact to exposed elements when they suffer hazard event (resilience)	Conservation of at least one of the following: natural resources, biodiversity, environment. Activities and structural changes that reduce the impact of extreme events or accelerate the recovery from those.	Enable and/or support those that tackle social challenges and issues faced by socially disadvantaged groups. These include products that 'help the helper' (for e.g. travel insurance for charity workers, insurance solutions tailored for social value-adding products/services that would otherwise not be insured).		

Source: Allianz Research

Table 3: Criteria for sustainable insurance solutions

ESG-insurance solution opportunities		1	Insurance opportunities for		
Field of sustainable action	Solutions	physical risks	transition risks	liability risks	
	Demand for insuring renewable energy installations against physical risks	•			
	Long-term performance guarantees	•			
	Development risks (e.g. wind approval risk after won auction,				
	geothermal drill failure risk,) Operational risks (e.g. wind operation risk like noise pollution or				
Renewable energy	geothermal operation risks like earthquakes or ground water			١.	
investments	pollution,)				
	Decommissioning risks	•		•	
	Marine insurance Technical advisory solutions.	:		•	
	Service solutions for risk assessment, quality assurance and				
	certification of renewable energy plants	•	•	•	
	Digitization: autonomous processes, block chain & DLT		•		
	Exposure to cascading and ripple effects in case of physical damages				
2) Smart & interconnected	Exposure to cascading and ripple effects in case of non-physical ICT	 			
renewable energy	infrastructure		•	•	
infrastructure & sector	High impact threats (e.g. cyber and terrorist attacks)				
coupling					
	Electrification		•		
	Data protection & cyber-ethics		•	•	
	Sector coupling of vehicle batteries in energy infrastructure	 	•		
3) Alternative mobility	Mobility sharing	•	•	•	
concepts	Small electric vehicles	•	•		
	Autonomous driving (logistic & passenger)	•	•		
4) Renovation & refurbishment of real	Delay risks	•			
estate & retrofitting of industry	Improper implementation risk (e.g. mold,)			•	
5) Green insurance	Natural Habitat insurance: Forest, Coral Reef	•			
products &green claims	Lower premiums for hybrid or electric cars, eco-efficient buildings, certified appliances/machinery, companies with environmental		_		
management	management systems		•		
	· · · · · · · · · · · · · · · · · · ·				
	Repair instead of replacement, use of environmentally-friendly and/or recycled materials		•		
	Upgrade to eco-labelled appliances/machinery, rebuilding to green				
	standards		•		
	ESG scoring services		•	•	
	Physical Impact on value chains/trade Public private partnerships and alternative risk transfer (cat bonds,	•			
6) Climate change induced increase in extreme weather	catastrophe pools) for tipping point events and systemic risks events	•	•		
	Business interruptions	•	•		
	Inevitable policy response (regulation response to crisis or crisis		•		
	prevention) Market impacts (demand & supply) on value chain and trade risks				
	Market impacts (demand & supply) on value chain and trade risks Hedging, export guarantees and other guarantees		•		
	Agriculture insurance (e.g. for livestock, crops, fishery, forestry,)	•		_	
	2				
	Microinsurance and index based insurance (e.g. for poor farmers and				
	extended issues like food security)	•			
7)Insurance for emerging	extended issues like food security) Provision of inclusive and accessible insurance products to: low-	•			
7)Insurance for emerging customers and regions	extended issues like food security) Provision of inclusive and accessible insurance products to: low-income customer and customer with disabilities, elderly customers	•	•		
	extended issues like food security) Provision of inclusive and accessible insurance products to: low-	•	•		

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