

sigma

**Resilience Index 2020:
global resilience put to the pandemic test**

Executive summary

Macroeconomic resilience

- Global macroeconomic resilience was stable in 2019, but the world economy was less resilient going into the COVID-19 crisis than it was before the global financial crisis (GFC) of 2008–09, Swiss Re Institute's annual Macroeconomic Resilience Index shows.
- We forecast a drop of about 20% in global resilience as a result of the pandemic, as stimulus packages deplete economies' fiscal and monetary headroom.
- Post pandemic, we expect the global economy to be almost 30% less resilient than in 2007, before the GFC.
- Among the major economies, resilience in the UK, Japan and the US will be hardest hit. China's resilience score is relatively unchanged.
- Switzerland, Finland and Canada remain the world's three most resilient economies.

Insurance resilience

- We expect COVID-19 to widen health and mortality protection gaps globally as households grapple with lower incomes, higher healthcare costs and greater excess mortality.
- The global insurance protection gap for health, mortality and natural catastrophe risks combined increased marginally to a new high of USD 1.24 trillion in 2019, according to the latest annual Swiss Re Institute insurance resilience indices.
- Global mortality resilience declined most in 2019, driven by Asia-Pacific; health resilience was stable despite some deterioration in emerging markets.
- Global natural catastrophe resilience was lowest of the three risk areas.

Macroeconomic resilience – focus on replenishing depleted reserves

The COVID-19 crisis will lead to a profound shift in economic resilience. Massive stimulus packages have cushioned the blow to the global economy, but at the expense of global resilience, which we estimate will fall by a fifth in 2020 from 2019 levels. Resilience in China will be stable, but there will be dramatic falls in other countries, with some seeing their resilience drop by more than half. Post-COVID-19, we expect the global economy to be almost 30% less resilient than before the global financial crisis, making replenishing fiscal and monetary buffers the key priority.

SRI Macroeconomic Resilience Index (E-RI)

Scores and rankings

Country	2019 ranking	2019 resilience index	Fiscal space	Monetary policy space	Low-carbon economy	Insurance penetration	Financial market development	Human capital	Economic complexity	Labour market efficiency	Banking industry backdrop	2020 resilience index (tentative)	2020 ranking	2018 ranking
Switzerland	1	0.84 =	1.00 =	0.08 ▼	1.00 =	0.70 =	1.00 =	0.83 ▼	1.00 =	1.00 =	0.92 =	0.80 ▼	1	1
Canada	2	0.81 ▼	0.99 =	0.17 ▼	0.44 ▲	0.62 ▲	1.00 ▲	0.93 =	0.45 ▲	0.88 ▼	0.95 ▼	0.70 ▼	2	2
Finland	3	0.80 =	0.99 =	0.08 ▼	0.66 ▼	0.91 ▲	0.88 ▼	1.00 =	0.83 =	0.73 ▲	1.00 =	0.67 ▼	3	3
US	4	0.80 ▲	0.96 ▲	0.17 ▼	0.40 ▲	1.00 =	1.00 =	0.82 ▲	0.85 ▼	1.00 =	0.79 ▲	0.58 ▼	5	4
Norway	5	0.76 =	0.99 =	0.16 =	1.00 =	0.29 ▲	0.73 ▲	0.73 =	0.37 ▼	0.81 =	0.89 =	0.65 ▼	6	5
UK	6	0.74 ▼	0.93 ▼	0.12 ▼	0.75 ▼	0.92 ▼	1.00 =	0.77 =	0.79 ▼	0.88 ▼	0.61 ▼	0.41 ▼	14	7
Netherlands	7	0.75 ▲	1.00 =	0.08 ▼	0.47 ▼	0.80 ▼	0.73 =	0.88 =	0.58 ▼	0.87 =	0.82 ▲	0.75 =	4	9
Sweden	8	0.71 ▼	0.98 ▼	0.08 ▼	1.00 =	0.57 ▲	0.79 =	0.84 ▲	0.90 ▼	0.64 ▼	0.65 ▼	0.68 ▼	8	6
Denmark	9	0.72 ▼	0.99 =	0.08 ▼	1.00 =	0.97 ▲	0.33 ▼	0.88 ▲	0.53 ▼	1.00 =	0.74 ▼	0.69 ▼	7	8
Germany	10	0.71 ▼	1.00 =	0.08 ▼	0.72 ▲	0.47 ▲	0.75 ▲	0.86 =	1.00 =	0.78 ▼	0.53 =	0.69 ▼	9	12
Australia	11	0.71 =	0.95 ▲	0.12 ▼	0.27 ▲	0.31 ▼	0.85 ▼	0.83 =	0.00 =	0.63 ▲	0.96 ▼	0.66 ▼	10	13
Japan	12	0.69 ▼	0.82 ▼	0.08 ▼	0.41 ▼	0.77 ▲	0.90 ▼	1.00 =	1.00 =	0.73 ▲	0.74 ▼	0.40 ▼	17	11
New Zealand	13	0.66 ▼	0.90 ▼	0.14 ▼	0.80 ▼	0.33 =	0.08 ▼	0.77 ▼	0.07 =	0.95 ▼	0.90 ▼	0.55 ▼	15	10
Austria	14	0.69 ▲	0.99 =	0.08 ▼	0.92 ▼	0.25 =	0.40 ▲	0.84 =	0.84 =	0.55 =	0.82 ▲	0.64 ▼	11	16
Chile	15	0.66 =	1.00 =	0.37 ▼	0.77 ▲	0.28 =	0.00 =	0.36 ▲	0.00 =	0.37 ▼	1.00 =	0.65 =	13	14
France	16	0.66 ▼	0.97 =	0.08 ▼	0.83 ▼	0.80 =	0.63 ▼	0.68 ▼	0.75 =	0.37 ▲	0.69 ▼	0.48 ▼	16	15
South Korea	17	0.67 ▲	0.96 =	0.15 ▼	0.11 ▼	0.98 ▲	0.79 ▼	1.00 =	1.00 =	0.37 ▲	0.56 ▲	0.66 =	12	17
Ireland	18	0.64 ▲	1.00 ▲	0.08 ▼	0.88 ▼	0.60 =	0.48 =	0.94 =	0.69 ▼	0.92 ▼	0.22 ▲	0.49 ▼	18	19
Belgium	19	0.57 ▼	0.93 ▼	0.08 ▼	0.60 ▲	0.43 =	0.27 ▼	0.79 =	0.40 =	0.41 ▼	0.56 =	0.36 ▼	21	21
Brazil	20	0.52 ▼	0.75 ▼	0.19 ▼	0.91 ▼	0.21 ▲	0.46 ▲	0.00 =	0.20 ▼	0.00 =	0.82 ▲	0.24 ▼	30	20
China	21	0.54 =	1.00 =	0.30 ▼	0.14 ▲	0.24 ▲	0.52 =	0.28 =	0.38 =	0.22 =	0.24 =	0.54 =	19	22
South Africa	22	0.49 ▼	0.50 ▼	0.65 ▲	0.00 =	1.00 =	0.31 ▲	0.00 =	0.00 =	0.29 =	0.76 ▲	0.32 ▼	26	18
Spain	23	0.57 ▲	0.83 ▲	0.08 ▼	0.84 ▲	0.33 ▼	0.96 ▼	0.75 =	0.39 =	0.30 ▲	0.49 ▲	0.28 ▼	24	24
Turkey	24	0.52 ▲	0.89 ▲	0.61 ▲	0.69 ▲	0.00 =	0.33 ▼	0.30 ▼	0.17 ▲	0.00 =	0.30 =	0.15 ▼	28	23
India	25	0.48 ▼	0.99 =	0.28 ▼	0.50 ▲	0.18 ▲	0.19 ▲	0.00 =	0.17 =	0.00 ▼	0.30 =	0.47 =	22	25
Russia	26	0.48 ▲	1.00 =	0.43 ▲	0.07 ▲	0.00 =	0.00 =	0.94 ▲	0.21 ▲	0.30 ▲	0.00 =	0.38 ▼	25	27
Mexico	27	0.45 ▲	0.59 ▲	0.48 ▲	0.50 ▼	0.02 ▲	0.00 =	0.08 =	0.52 ▼	0.08 ▲	0.75 ▲	0.49 ▲	20	26
Portugal	28	0.45 ▲	0.86 ▲	0.08 ▼	0.74 ▼	0.40 ▼	0.44 ▼	0.79 ▲	0.11 ▲	0.39 ▼	0.00 =	0.14 ▼	27	28
Hungary	29	0.39 ▼	0.46 ▼	0.27 ▼	0.67 ▲	0.02 =	0.00 =	0.76 ▲	0.76 ▼	0.20 ▲	0.60 ▲	0.43 ▲	23	29
Italy	30	0.25 ▼	0.17 ▼	0.08 ▼	0.88 ▲	0.70 =	0.79 ▼	0.75 =	0.66 =	0.11 ▼	0.10 ▲	0.19 ▼	29	30
Greece	31	0.05 =	0.00 =	0.08 ▼	0.46 ▼	0.00 =	0.17 ▼	0.42 =	0.02 =	0.00 =	0.00 =	0.04 =	31	31
World		0.62 =	0.92 =	0.22 ▼	0.42 ▲	0.50 =	0.62 =	0.54 =	0.55 =	0.46 ▼	0.50 ▲	0.50 ▼		
Advanced		0.71 =	0.90 ▲	0.12 ▼	0.53 ▲	0.80 =	0.88 =	0.84 =	0.79 =	0.77 =	0.69 ▲	0.54 ▼		
Emerging		0.52 =	0.94 =	0.33 ▲	0.31 ▲	0.19 ▲	0.36 ▲	0.25 =	0.30 =	0.15 ▼	0.31 ▲	0.47 ▼		

Note: The tentative 2020 scores and rankings aim to capture the impact of the fiscal and monetary stimulus in response to COVID-19 on economic resilience by using actual monetary data as of August 2020 and forecast fiscal data for 2020, while all other components are kept at their 2019 levels.

The table shows the unweighted scores of all components as of 2019 (or 2018 when 2019 data is unavailable at the date of publication). Ranks are determined by taking a three-year average of the overall E-RI score so as to minimise the impact from data revisions year-on-year. This differs from last year's release, where the rankings were based on the annual levels of the resilience index, and can mean that index scores do not necessarily run in chronological order in the above table.

Symbols represent the direction of change from 2018 to 2019 (or the latest available data point relative to the prior year), and from 2019 to 2020 for the tentative 2020 figures. Overall resilience scores are determined by weighting the scores according to the weights outlined in last year's *sigma* 5/2019 – Indexing resilience: a primer for insurance markets and economies. The primer work on the E-RE was a collaboration between Swiss Re Institute (SRI) and the London School of Economics (LSE). For more visualisations of the E-RI, visit the *sigma explorer*.

Source: Swiss Re Institute

Macroeconomic resilience – focus on replenishing depleted reserves

Global economic resilience was weaker in 2019 than prior to the last major downturn in 2007.

Global resilience will be almost a fifth lower in 2020. Policy actions to cushion the impact of COVID-19 are vital for recovery....

...but will dramatically shift individual economies' resilience.

Targeted investments in infrastructure and structural reforms are needed to replenish resilience.

We will refine our methodology further in our next resilience update in 2021.

The global economy went into the COVID-19-induced recession with less capacity to absorb shocks than prior to the global financial crisis (GFC) of 2008–09, the last major economic downturn. About 80% of countries in our annual SRI Macroeconomic Resilience Index posted lower scores for 2019 than for 2007, and 45% significantly lower.¹ Globally, resilience in 2019 was stable compared to 2018.

We expect the policy responses to COVID-19 to lower global economic resilience in 2020 by almost 20% from 2019. The global index value drops to 0.50 by our estimate, from 0.62 in 2019. In relative terms, this fall is similar to that seen at the time of the GFC, but far more rapid: during the GFC, the same scale of decline took three years to materialise. We expect China's resilience to be largely unchanged in 2020. Its economy has needed less stimulus than many others after the government implemented strict and rapid virus containment measures that were then lifted earlier than elsewhere. In contrast, the size of the fiscal and monetary packages announced in the US and Europe exceed all bailouts of the past 50 years combined.² While these have offset some of the output losses, lockdowns in most countries continue to suppress economic activity. This counter-effect from containment measures makes it harder to predict the effect of stimulus measures on future GDP growth.

The pandemic will affect countries' economic resilience levels differently depending on their initial capacity to absorb shocks and government policy choices. Preliminary data suggest that fiscal responses to the pandemic will be the key differentiator, as monetary policy buffers have been largely exhausted in most advanced economies. Of the countries in the top half of the 2019 resilience rankings, the UK, Japan and the US will see their fiscal buffers depleted most. In relative terms, the hardest-hit countries on account of reduced policy space will be Brazil (down 10 places in our tentative 2020 rankings), the UK (–8), and Japan (–5). Steep declines in resilience in some countries means others move up the rankings, although absolute levels of resilience have not necessarily improved. These include Mexico (up 7 places), Hungary (+6), South Korea (+5), Germany (+3) and Austria (+3).

Replenishing resilience for the future

Improving long-term growth prospects and replenishing economic resilience need to be top policy priorities for societies. The global economy no longer has the luxury of relying on monetary and fiscal levers alone. Alternatives should include structural reforms that strengthen resilience, such as targeted investments into sustainable infrastructure, the digital economy and the transition to a low-carbon economy. Governments should also work to limit rises in inequality, foster human capital, deepen the liquidity and dynamism of financial markets, and improve the efficiency of labour markets.

Determining the drivers of country and global shock-absorption capacity is a continually-evolving exercise. Accordingly, we will review the methodology of the resilience index as part of our next update in 2021. This will include a further refinement of the weights associated with each component of the index and the introduction of additional data series to incorporate broader societal resilience indicators.

¹ For the 45%, resilience scores were at least 10 percentage points lower than in 2007. This is up from the 30% of last year's update following a deterioration over 2019 in the UK's, Sweden's and Germany's resilience levels.

² *The biggest bailouts in history*, Deutsche Bank Research, April 2020.

Insurance resilience – COVID-19 to widen an already-record global protection gap

The global insurance protection gap for health, mortality and natural catastrophe risks combined increased slightly to a new record high at USD 1.24 trillion in 2019, with health and mortality exposures accounting for more than 80% of the total. We expect the COVID-19 crisis to put health resilience in the spotlight in 2020. The impact of the pandemic on individual countries will vary depending on the quality of health infrastructure and success of government containment policies. Emerging markets will likely be more vulnerable in the near term given their typically lower health resilience.

SRI Insurance Resilience Indices (I-RIs)

Scores and protection gaps

	SRI Insurance Resilience Indices (I-RIs) (in %)			Protection gaps (in USD billion)		
	2008	2018	2019	2008	2018	2019*
SRI Composite Insurance Resilience Index	55.6	54.0	53.7 ▼	799	1201	1243 ▲
SRI Health Resilience Index	94.2	93.5	93.4 ▼	354	559	588 ▲
North America	96.1	97.3	97.4 ▲	103	107	107 =
Latin America	85.2	88.9	88.6 ▼	47	52	56 ▲
Advanced Europe	97.9	96.9	96.8 ▼	38	56	58 ▲
Emerging Europe	85.3	82.8	82.3 ▼	53	79	85 ▲
Advanced Asia-Pacific	97.4	95.8	95.7 ▼	17	39	42 ▲
Emerging Asia-Pacific	67.8	76.0	75.9 ▼	97	226	240 ▲
SRI Mortality Resilience Index	47.2	44.4	43.6 ▼	290	420	427 ▲
North America	59.8	57.3	57.3 =	48	59	61 ▲
Latin America	33.6	40.9	43.6 ▲	31	33	31 ▼
Advanced Europe	52.3	53.8	53.6 ▼	72	79	73 ▼
Emerging Europe	49.5	37.4	35.4 ▼	51	70	73 ▲
Advanced Asia-Pacific	53.3	67.5	66.9 ▼	29	24	24 =
Emerging Asia-Pacific	15.4	23.8	22.6 ▼	59	155	165 ▲
SRI Natural Catastrophe Resilience Index	25.4	24.2	24.1 ▼	155	222	227 ▲
North America	39.2	40.4	39.8 ▼	36	55	59 ▲
Latin America	23.4	7.5	6.4 ▼	15	22	22 =
Advanced Europe	34.7	42.5	42.8 ▲	22	19	18 ▼
Emerging Europe	9.2	8.9	8.8 ▼	29	33	34 ▲
Advanced Asia-Pacific	20.9	22.5	23.0 ▲	36	43	44 ▲
Emerging Asia-Pacific	4.9	3.7	3.5 ▼	17	49	51 ▲

Note: I-RIs are based on research into protection gaps and measure the relation between protection needed and available. The value ranges from 0–100%. The greater the value, the greater the protection relative to the needs and the higher the resilience. Some historical values have been changed due to data revision or revised estimates. For Latin America, the scope of countries has expanded. Protection gaps are measured in premium equivalent terms.

*Upward arrows in this column only are red to denote negative movement, namely widening of protection gaps. Please see *sigma* 5/2019 – Indexing resilience: a primer for insurance markets and economies, for the methodology. Source: Swiss Re Institute

Health and mortality risks accounted for over 80% of the USD 1.24 trillion global protection gap in 2019.

The health protection gap was USD 588 billion in 2019, of which 65% came from emerging markets.

The global insurance protection gap remains elevated

The combined world protection gap for catastrophic health, mortality and natural catastrophe risks continues to test record highs, rising marginally to a new high of USD 1.24 trillion in 2019. Health risk contributed most (47.3%) to the total gap, followed by mortality (34.4%) and natural catastrophe (18.3%). More than 60% of the global gap originated from emerging markets, particularly emerging Asia-Pacific. The annual SRI Global Composite Insurance Resilience Index (I-RI), which aggregates the three resilience sub-indices, was stable at around 54% in 2019 but with large regional differences: the most resilient region, North America, had an I-RI of 64.8%, and the least resilient, emerging Asia-Pacific, one of just 34%. We expect resilience worldwide to decline in 2020 as households grapple with lower incomes, greater healthcare costs and the consequences of higher excess mortality, due to the COVID-19 pandemic.

Health resilience: stable in 2019, but set to weaken due to COVID-19

Our global SRI Health Resilience Index was stable at around 93% in 2019, although the health resilience of emerging markets experienced marginal deterioration. The

Insurance resilience – COVID-19 to widen an already-record global protection gap

global health protection gap widened by more than 5% to USD 588 billion, of which 65% came from emerging markets, and 41% from the emerging Asia-Pacific region alone. The COVID-19 pandemic is putting a spotlight on health resilience, which we expect to be negatively impacted this year. The impact on individual countries will vary greatly depending on existing health infrastructure capacity and government containment policy choices.

Countries with weaker health infrastructure and higher out-of-pocket health spending are vulnerable to emergency health crises.

Emerging markets face a twofold challenge on healthcare: the need to scale up health infrastructure to provide treatment, as evidenced by differences in the capacity of intensive care units across countries, and the need to protect households from incurring catastrophic health costs.³ In countries where out-of-pocket expenditure on healthcare is high, households tend to be more exposed to emergency health crises. In low-income countries, out-of-pocket expenditure typically represents more than 40% of all household healthcare spending, compared with only 24% in advanced markets, and leaves households vulnerable to financial stress.⁴ Affordable health insurance can play a central role in enhancing protection and reducing this financial risk.

Mortality resilience declined slightly in 2019 due mainly to a widening protection gap in Asia-Pacific.

Mortality resilience weaker: COVID-19 reinforces relevance of cover

Global mortality resilience declined in 2019, driven largely by a widening mortality protection gap in Asia-Pacific. In emerging Asia, China's protection gap expanded by 12%, primarily due to rapidly growing household debt.⁵ In advanced Asia-Pacific, the gap increased mainly as a result of a drop in household financial assets and reductions in the sum-insured value of life insurance in Korea and Taiwan. Yet in Latin America, mortality resilience has improved, thanks largely to greater life insurance coverage. For example, in Brazil life premiums grew by 13% compared with 2018.

The global mortality protection gap widened by 1.7% to USD 427 billion.

The global mortality protection gap widened by 1.7% to USD 427 billion globally in 2019. This translates into a global SRI Mortality Resilience Index of 43.6%, meaning that less than 44% of the funds needed to maintain household living standards in the event of the death of the primary breadwinner are "protected" by assets such as life insurance, social security survivor benefits or household savings. Compared to 2008, this is a nearly four percentage point decline. The COVID-19 experience has reinforced the relevance of mortality protection for households. Consumer surveys undertaken by Swiss Re since the outbreak confirm rising risk awareness and higher interest in buying insurance.⁶

Natural catastrophe resilience remains low with 76% of global exposures unprotected.

Natural catastrophe resilience is the weakest across all regions

Global natural catastrophe resilience is the lowest of the three index risk areas in 2019. The global SRI Natural Catastrophe Resilience Index score stayed at around 24%.⁷ In emerging Asia-Pacific, the score was just 3.5%, meaning over 96% of the natural catastrophe losses were unprotected. The global natural disaster protection gap widened marginally to USD 227 billion in 2019.

Climate change is expected to weigh heavily on societal resilience.

The natural catastrophe index scores for advanced Europe and advanced Asia-Pacific improved slightly in 2019, but were lower for all other regions. This is primarily due to a higher frequency of floods relative to other peril events last year. Flood risk is typically less insured. We expect rising losses from floods and other "secondary peril" events in both the near- and longer-terms. Climate change and its impact on catastrophe losses, particularly from secondary perils, as well as the way societies mitigate and adapt towards this evolving risk, are likely to add another layer of complexity and uncertainty to the development of societal resilience to disaster risk.

³ Catastrophic health spending is defined by the WHO as out-of-pocket payment of 10% to 25% of total household consumption or income.

⁴ *Global Spending on Health: A World in Transition*, WHO, 2019.

⁵ Household debt growth accelerated to double-digit for all major emerging Asian markets including China, India, Indonesia, Malaysia, Thailand, Vietnam, Philippines.

⁶ *Swiss Re COVID-19 Consumer Survey: Financial anxiety, demand for insurance products accelerates across APAC*, Swiss Re, 28 April 2020.

⁷ Based on model exposure of three key perils (storms, earthquakes and floods).

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Swiss Re Institute
Swiss Re Management Ltd
Mythenquai 50/60
P.O. Box
8022 Zurich
Switzerland

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

Authors

Irina Fan
Dr Thomas Holzheu
Patrick Saner
Fiona Gillespie

***sigma* editor**

Alison Browning

Managing editor

Dr Jerome Jean Haegeli
Swiss Re Group Chief Economist

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

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Swiss Re Management Ltd.
Swiss Re Institute
Mythenquai 50/60
P.O. Box
8022 Zurich
Switzerland

Telephone + 41 43 285 2551
swissre.com/institute