



XL Insurance
Reinsurance

Government De-Risking



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Introductory Remarks

For decades our industry has grappled with finding sustainable solutions to close the gap between economic and insured losses.

However, it seems we've hardly made a dent. According to a 2018 Lloyd's report on the subject, the underinsurance gap was USD 162.5 billion in 2018, which is only a 3% reduction during the past six years. Emerging economies account for 96% of the total global insurance protection gap, with two of the world's most populated countries, China and India, having the largest gap in dollar terms – USD 76.4 billion and USD 27 billion, respectively, followed by Indonesia with USD 14.6 billion.

The private re/insurance market can provide the necessary cover to help close the protection gap. Risk continues to increase in frequency, severity and complexity, often having the most impact on the most vulnerable. However, these groups are often those who have no access to or the means to buy insurance. Governments are uniquely positioned to assume and cede these risks, to protect and help rebuild the livelihoods of families impacted by disaster.

Equally, governments can enhance their social and economic stability while reducing their fiscal risks through the use of effective insurance programs for their public assets which not only provide protection for when disaster strikes, but also drive risk mitigation and general risk management practices.

It's clear that there's much work to be done to close the protection gap. As we expand our Payer to Partner strategy at AXA XL and the broader AXA Group, we are committed to help do just that.

AXA Chairman Denis Duverne, who also chairs the Insurance Development Forum, addressed the protection gap topic at the annual Global Insurance Forum in Singapore earlier this summer. During his speech he emphasized that the insurance industry and the public sector need to accelerate collaboration into action. He said: "We need to drive concrete significant measures to extend the use of insurance and related risk reduction capabilities to help build greater resilience to climate risk and natural catastrophes in countries where it is needed most." I couldn't agree more and that's why we are working diligently with industry peers, governments, regulators, researchers and stakeholders to come up with specific solutions.

AXA XL recently met with brokers, representatives of various US Government agencies, and the World Bank in Washington D.C to discuss how we can become a stronger strategic partner to governments from around the world.

AXA's global reach, capabilities and scale give us the ability and responsibility to invest resources in understanding climate change, developing new insurance markets and helping ensure those touched by disaster are put back into the same or ideally a better position than they were before the loss – what we call Build Back Better.

This publication builds on our [AXA XL Guide to Government Pools](https://cutt.ly/swlMqsW) (https://cutt.ly/swlMqsW) issued in September 2018. However risk is presented to us, we have the capability to assume it. This brochure details the innovative work our experts and underwriters are doing, be it in mature or emerging markets; indemnity, parametric, cat bond, insurance or reinsurance.

We trust that you will find the content useful and invite you to reach out to any of the contacts listed should you wish for additional information or to continue the dialog around this important issue that gets to the heart of the role of insurance in society.

We look forward to hearing from you.
Sincerely,

Greg Hendrick
CEO, AXA XL

Risk Transfer

Traditional Reinsurance

AXA XL is a lead market for indemnity-based reinsurance, providing protection against natural catastrophic perils across the world. Using a combination of commercially available models and internally developed pricing tools, our underwriting experts offer all forms of reinsurance on an annual or multiyear basis.

Providing significant capacity to local authorities

Since the inception of the California Earthquake Authority (CEA) in 1996, following the Northridge earthquake, AXA XL has, and continues to, provided significant capacity to this not-for-profit, publicly managed, privately funded entity. With capacity provided by AXA XL and other reinsurance partners on their syndicated reinsurance placement, CEA has grown to become one of the largest providers of residential earthquake insurance in the world.

Helping FEMA manage flood capacity

In 2017, AXA XL was one of 25 reinsurers who helped to lay “the cornerstone for a multi-year strategy to diversify the tools FEMA uses to manage the financial consequences of major flood risk” (www.fema.gov). AXA XL played a key role in providing meaningful capacity to FEMA at the inception of this historic placement for the US Government to mitigate their flood exposure and has been a continuous participant on this program at each renewal. FEMA realized the relevance and importance of reinsurance in its first year with a full recovery from its reinsurers after Hurricane Harvey in 2017 and has proven to regulators and other governmental entities its value proposition with the resulting expansion of coverage each year since inception.

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Parametrics

Parametric insurance has become an important tool for the public sector to transfer climate and catastrophe risk because of the speed of payout (up to just days after disaster strikes) and the transparency it offers. AXA Climate has become a global leader in parametric insurance, centralizing AXA's climate and disaster expertise to create tailor-made coverages for governments, municipalities, non-profit organizations, multilateral development banks as well as smallholder farmers and disaster-impacted individuals. AXA Climate carefully adjusts coverage to meet the needs of public sector institutions, including federal and state governments, municipalities, state utilities, development banks and asset managers investing in public infrastructure. Coverage for a full range of weather and disaster risks are offered based on high quality satellite and/or weather station data including:

- **Natural Catastrophe parametric insurance** which offers tropical cyclone, wildfire, hail and winterstorm protection.
- **Weather parametric insurance** which offer drought, excess rainfall, yield as well as solar radiation, rainfall, and wind protection.

Parametric drought insurance scheme set up for Senegalese farmers

AXA Climate won a tender to create a new insurance scheme backed by the West African Development Bank and the Senegalese government to protect vulnerable cotton and maize farmers against drought risk. The insurance coverage is based on satellite evapotranspiration data and triggered payouts to 40,000 farmers struck by drought in 2017/18.

Parametric natural catastrophe risk pools in Africa, Caribbean and the Pacific Islands

AXA Climate is a lead reinsurer and technical advisor for the three sovereign risk pools that parametrically insure African governments against emergency costs due to drought; Caribbean and Central American as well as Pacific Island governments against reconstruction and emergency and other costs due to cyclone and earthquake risk. These risk pools have to date made rapid payouts (within 14 days of the catastrophe) totaling USD 180mn to 19 countries.

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CAT Bonds

Wholly owned by AXA XL, asset manager New Ocean Capital Management provides multiple fund offerings to match investor capital with reinsurance risk. New Ocean Capital Management operates a specific fund, the New Ocean ILS Fund, that invests exclusively in catastrophe bonds with a broad range of characteristics including type (public and private issuance), trigger (Indemnity, Index, Parametric, etc.) and structure (Aggregate and Occurrence). Since 2014, New Ocean Capital Management has supported numerous catastrophe bonds (FloodSmart, IBRD, MultiCat Mexico, etc.) covering natural peril exposures in both developed and developing countries.

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Risk Exposures

Emerging Markets

Governments in both mature and developing countries looking to protect their fiscal balance sheet and increase their resilience can obtain many benefits from shifting the burden of risk from the public purse to the private sector through the use of re/insurance for their public assets, low-income housing and other assets which benefit their citizens, especially the most vulnerable sections of the population.

The Emerging Markets team engages with governments across Africa, Asia, Eastern Europe, the Middle East and Latin America and pulls together resources from across AXA XL and the wider AXA Group to respond to their re/insurance needs.

Private Public Partnerships: Working in a public private partnership (PPP) project set-up, AXA XL's Emerging Markets team drives projects to evaluate the feasibility and design efficient risk transfer mechanisms for governments. We work together with other re/insurance partners in the Insurance Development Forum (IDF) and the Lloyd's Disaster Risk Facility, alongside regional banks, multilaterals such as The World Bank, our own in house re/insurance experts, and most importantly with local in-country partners. As industry lead at the Centre for Disaster Protection and members of the Sovereign and Humanitarian Solutions workgroup of the IDF, we help drive the public-private collaboration necessary to open insurance markets in emerging markets to support development and increase resilience.

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Risk Exposures

Political Risk & Credit Insurance

Political unrest and credit risk headlines are in the news every day, adding to businesses' global risk management concerns. AXA XL's highly experienced underwriting and analytical team helps businesses manage the complex and ever-changing risks of a global marketplace. We design special risk mitigation solutions to support the work of multilateral agencies, export credit agencies, and development finance institutions, including:

Political Risk Insurance is available on a stand-alone basis to protect fixed / mobile assets, equity holdings, shareholder loans, dividends, and lender's political risks, such as:

- Confiscation / expropriation / nationalization / deprivation
- Forced abandonment / divestiture
- Currency inconvertibility / exchange transfer
- Political violence / war / terrorism
- Contract frustration (in respect of public sector buyers/ obligors), including non-payment, license cancellation, import / export embargo, unfair / fair calling of advance payment / performance guarantees

Credit or non-payment insurance is available for private sector buyers/obligors on single-risk, trade-related and non-trade related transactions such as capex/general corporate loans, mobile asset-backed financing (e.g., aircraft, shipping, etc.), pre-export, export, import, project, and bank-to-bank financing (documentary trade). AXA XL supports a wide range of business sectors involved in cross-border & domestic trade lending, infrastructure / energy / mining projects and foreign direct investments in both developed and emerging markets across a variety of industries.

Landmark transaction between US EXIM and AXA XL

AXA XL led the first-ever public-private partnership for the Export-Import Bank of the United States (EXIM). The partnership resulted in \$1 billion credit loss coverage for a portfolio of large commercial aircraft financing transactions, reducing US taxpayer risk. It has the distinction of being the largest public-private risk-sharing arrangement for a US government credit agency and was the maximum allowable coverage permitted under EXIM's Congressional charter

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Government Sponsored Entity (GSE) Mortgage Reinsurance

AXA XL supports reinsurance placements issued by Government Sponsored Entities, such as Freddie Mac & Fannie Mae that are designed to transfer US housing related credit risk from US tax payers to private capital. The reinsurance transactions are part of the GSE's broader Credit Risk Transfer (CRT) program, that was incepted in 2013 and also encompasses a capital market bond program. AXA XL supported the first syndicated reinsurance transaction in 2014 and in 2019 partnered with Alliance Bernstein to leverage third party capital.

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Crop

AXA XL offer a full range of Multi-Peril Crop Insurance (MPCI) and FCIC-backed plans, including Yield Protection, Revenue Protection and Whole Farm Revenue Protection. AXA XL also offers a broad portfolio of Named Peril, private crop insurance policies available as a supplement to MPCI policies. Named Peril policies generally cover a single peril like hail, freeze, or rain depending on the commodity.

AXA XL provides over \$2 billion of agricultural loss coverage in public-private partnership with the US Federal government.

Before crop insurance assumed its central role in the U.S. farm safety net, the cost of natural disasters that harm America's farmers historically fell directly on the laps of taxpayers. Today, farmers pay for part of their own safety net, and the risk of crop loss is distributed and shared among private companies and the Federal government.

Under the US Federal Crop Insurance Program's unique public-private partnership, AXA XL is authorized by the United States Department of Agriculture Risk Management Agency (USDA RMA) to write multi-peril crop insurance policies. The service delivery side of the program — writing and reinsuring the policies, marketing, adjusting and processing claims, training and record-keeping, etc. — is handled by AXA XL. The program is overseen and regulated by the Risk Management Agency (RMA) which sets the rates and determines which crops can be insured in different parts of the country.

By combining the regulatory authority and financial support of the US federal government with the efficiencies of the private sector, the crop insurance program has succeeded in meeting and even surpassing the goals set forth by Congress for broad participation, diversity and inclusion. By using the private sector, risk is shared among the private companies as well as the government.

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Crisis Management

AXA XL's global Crisis Management and Special Risks team is a market leader providing specialist insurance products and integrated consulting services that assist business, governments and people to manage complex and challenging risks.

Security Risks

AXA XL's Security Risks team have one objective – keeping people and businesses safe, whatever the risks they face and wherever they are in the world. AXA XL's wide range of assistance, crisis management and insurance options are designed to ensure people can work and travel abroad with confidence. Policies are backed by expert crisis response services from our partner S-RM, or other key trusted partners, offering advice to help avoid a crisis – and practical help to get people through difficult or life-threatening situations when they happen. Available insurance coverage includes kidnap and ransom, emergency security and disaster evacuation, international crisis response, Corporate Crisis Prevention and Response (CPR), marine piracy kidnap and ransom, security risk protection and protection against workplace violence and stalking threat.

War, Terrorism and Political Violence (WTPV)

Political violence perils are dynamic in nature, the causes are sometimes unclear, but the impact is significant. The risk is evolving, with a diverse range of groups, both foreign and home-grown, capable of launching terrorist attacks. AXA XL's experienced War, Terrorism & Political Violence underwriters, with over 125 years combined underwriting experience, are experts in managing such risks and can advise on a variety of (re)insurance protection including terrorism and sabotage, malicious damage,

riots, strikes and civil commotion, war, coup d'état, insurrection, rebellion and revolution, and chemical, biological, radiological and nuclear terrorism (CBRN) attacks. WTPV insurance coverage offers protection for:

- Physical damage to property worldwide
- Business interruption and extra expenses following
- Property damage
- Public liability and employers' liability
- Event cancellation
- Contingent cover and wrap cover around existing country pools/mutuals

WTPV Reinsurance products available include:

- Proportional treaty
- Excess of loss treaty
- CBRN reinsurance
- Terrorism Risk Insurance Act (TRIA) retention buyouts
- Workers' compensation
- Captive reinsurance

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OUR RATINGS

AXA XL's core operating insurance and reinsurance companies have one or more of the following financial strength ratings: AM Best A+, S&P AA-, Fitch AA-, Moody's A1. For more ratings detail, visit www.axaxl.com

MEANINGFUL CAPACITY

AXA XL offers significant capacity in risk transfer and risk management solutions to businesses and public entities worldwide. Capacity varies by risk.

Executive Sponsor:



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