Swiss Re
Corporate Solutions

Innovating Together

Innovative Risk Solutions

Explore how we can innovate together

"The collection of case studies in this publication is just a snapshot of how we are advancing corporate insurance and helping customers build resilience beyond traditional insurance solutions. I hope you enjoy the read and it inspires you on the types of solutions we can build together, to respond to your specific risk challenges and needs."

Andreas Berger

CEO Swiss Re Corporate Solutions

Let's advance corporate insurance together.

Bringing innovative solutions to our clients and helping them improve resilience has always been a focus of Corporate Solutions and our Innovative Risk Solutions team. As you will see in this publication and the different case studies, that passion still burns as bright as ever.

Today our corporate clients are addressing increasingly complex risk management needs. They need a partner that approaches risk holistically and can combine expertise with intelligent technology and data-driven analytics to deliver relevant solutions and services.

As your risk partner, Swiss Re Corporate Solutions delivers customer experience rooted in the collective focus of the entire Swiss Re Group. Our "One Swiss Re" approach offers access to additional capabilities, risk insights, and capacity. Whether you're looking for risk transfer or need to explore options beyond that (data-driven capabilities, supply chain transparency and other joint value-add solutions), our combined strength allows you to leverage everything Swiss Re Group has to offer.

I hope you enjoy reading the publication and can see how the solutions can be used to help manage the risk exposures that you're facing today and into the future.

Bringing innovative solutions to our clients and helping them improve resilience

Approaching risk holistically and combining expertise with intelligent technology and data-driven analytics

One Swiss Re: delivering a customer experience rooted in the collective focus of the entire Swiss Re Group

Loredana Mazzoleni Neglén

Head Global Customer and Distribution and Innovative Risk Solutions

Value proposition

01 We approach complex risk creatively and see it as an opportunity to tailor **insurance, reinsurance or non-traditional risk transfer solutions to fit your risk journey.**

02 **We tailor some of our solutions to your specific needs and develop others for broader markets** that can be used either on a stand-alone basis or as part of an established insurance strategy. Our global reach and local risk expertise respond to your risk transfer challenges.

03 **Innovation is in our name and we have the track record to back it up.** Contact us to discuss your risk challenge.

2020 Innovation Risk Solutions Awards

Virtual Captive
Captive Innovation of the Year Award
European Captive Review Awards

QUAKE
(Re)Insurance Transaction of the Year Insurance Insider Honours

POP STORM
Insurtech Initiative of the Year Award
Business Insurance US Insurance Awards

Parametric Earthquake Cover
New Insurance Product of the Year
HK Insurance Asia Awards

Innovative Risk Solutions Snapshot

Hard Market Solutions

Other Innovative Solutions

Team

Parametric Earthquake – QUAKE

Benefits

Breadth of coverage: Trigger of the cover is the event itself, which means the funds paid by the policy can be used for a wide range of costs, essentially anything that is an economic loss or cost to the insured due to the event.

Transparency: The policy has pre-agreed payouts and no loss investigation and adjudication required. This allows insureds to have a much clearer expectation of what the policy would pay out and is far simpler to explain to stakeholders of the insured.

Customization: features to meet specific business needs.

Background

A big issue for risk managers is the amount of time it takes to complete the insurance renewal process. This process can take two to three months – and additional time to review the data and attract markets to the risk. Even then, Swiss Re Corporate Solutions, like many insurers, typically only receives less than 50% of the data we need to price the risk and exposure – meaning we must price for the unknown. For many industries, where assets are bought and sold frequently, these timescales are unmanageable and unpractical. That is until now.

The first application of this dynamic solution was for a Hong Kong Based Private Equity Company with large investments in Japanese Real Estate. Previously they purchased stand-alone traditional PD/BI earthquake policies from multiple carriers for each property on an individual basis. With the high frequency of buying and selling buildings, the customer needed to go through the cumbersome administrative process to purchase and cancel policies, which often led to a delay in their transaction as they need to factor in cost of insurance as part of the acquisition cost.

Our Innovative Risk Solution

Using an innovative parametric insurance solution, linked to the Shindo Scale at Japanese Meteorological Agency (JMA) weather stations, we have simplified this process and enabled our customer to buy earthquake cover seamlessly.

The solution allows earthquake capacity purchase at JMA stations which are closest to investments. The premium is pre-determined and provided on a per million dollar of capacity basis, which allows for transparent pricing for earthquake cover. Instead of a long renewal cycle, the customer only needs to determine how much cover (capacity) they require. Conversely if they sell a building, they can reduce earthquake capacity and will receive a pre-determined pro-rata premium reimbursement.

Unlike traditional earthquake PD/BI product, the new parametric solution provides:

- Access to capacity and consistent coverage prices.
- Better informed decision-making about risk financing strategies.
- Broad cover as the solution is based on an index reading, rather than actual damage to assets.
- A predefined payout sum triggered when the JMA registers an earthquake of 5.5 or above on the Shindo scale.
- And a quick and easy claims payout within 30 days.

This approach enables customers to speed up the process of buying new assets as the insurance spend is pre-determined, no longer waiting for an underwriter to price up and ask for submissions. In addition, the policy allows all the earthquake insurance coverage for all the customer's assets to be in one policy rather than having numerous policies for all their buildings.

FAQ

What is Parametric insurance?

Parametric insurance is based on a pre-agreed event occurring and a pre-agreed payout. It relies on a measurement of an event or index – such as temperature, wind speed, or precipitation – and unlike traditional indemnity insurance, it is independent from a customer's underlying asset. As such it does not necessarily require physical damage to the underlying asset and allows for a quick formulaic payout once pre-defined parameters are met or exceeded.

Traditional insurance versus parametric/index-based covers – what's the difference?

Traditional insurance coverage is based on deductibles, sublimits and precise policy terms and conditions. Claims are paid when losses exceed the retention held by the insured, and settlement can take months or years.

Parametric insurance is index-based, meaning coverage is triggered if predefined event parameters are met or exceeded. There is no claims adjustment process to determine the value of the loss. The parametric trigger is set in a manner that if it is triggered, it is highly likely the insured would sustain actual loss.

What is the difference between intensity and magnitude triggers for earthquake parametric?

The magnitude is a quantitative measure of the size of the earthquake at its source. The Moment Magnitude Scale measures the amount of seismic energy released by an earthquake, as measured with a seismometer. Depending on the depth of the earthquake and the local soil types, same magnitude earthquakes can have a very different impact locally.

The effect of an earthquake on the Earth's surface is called the intensity. One intensity measure is the Spectral Acceleration (expressed in % of Earth's acceleration g). This is the type of intensity measure Swiss Re Corporate Solutions QUAKE product uses.

A certain magnitude of an earthquake produces different intensities in affected areas.

Parametric Windstorm – STORM

Benefits

Speed of Payment: Our parametric STORM solution pays based on the occurrence and local intensity of an event. As such claims can be settled much faster than traditional natural catastrophe insurance. Generally, STORM claims are paid within 30 days.

Breadth of coverage: Trigger of the cover is the event itself, which means the funds paid by the policy can be used for a wide range of costs, essentially anything that is an economic loss or cost to the insured due to the event.

Transparency: The policy has pre-agreed payouts for pre-agreed windspeeds. This allows insureds to have a much clearer expectation of what the policy would pay out and is far simpler to explain to stakeholders of the insured.

Background

One of the large telecommunication services providers with operations in Latin America and the Caribbean faced substantial losses caused by damage, particularly to their T&D Network in 2017, during Hurricanes Irma and Maria. Although they were insured in the traditional markets, the claims process had complications and a significant element of their loss was not reimbursed by insurance. It also took a long time to be settled and caused much frustration to the company. Swiss Re Corporate Solutions proactively approached their incumbent broker and introduced them to our bespoke STORM solution and crafted a parametric windstorm insurance for the customer.

Our Innovative Risk Solution

Due to the losses sustained in 2017, out of which large amounts were not indemnified, and the difficult claims experience, the customer reviewed various alternatives to replace the traditional property windstorm cover. Our parametric STORM solution provided a meaningful limit on an Excess of Loss basis and suited the customer best to cover their windstorm exposure and consider a meaningful retention to them across more than 50 locations in the Caribbean. The solution considers the actual windspeeds reported at pre-defined locations and provides a quick payout once the wind speed levels are reached. The quick payout helps the company to cope with emergency expenses and allows them to resume operations as fast as possible. Our back-testing and respective as-if-payouts for Hurricane Irma and Maria provided them with comfort that the solution would have indemnified them in line with their actual losses sustained.

Further, the solution was offered as reinsurance to their captive and we provided a bespoke solution to cover their local operation in certain territories where their local fronting company faced regulatory challenges to issue local policies.

How else can this be applied?

Typically, Transmission and Distribution (T&D) lines are underinsured in traditional placements and Business Interruption losses are a key concern for these customers whenever a threatening storm is formed nearby. This solution can be easily replicated for other customers who own, lease or operate this type of assets which are also typically spread over a large territory. Swiss Re Corporate Solutions STORM can be structured for any other uninsured or underinsured assets including natural assets such as reefs and beaches and archaeological sites.

FAQ

What's the difference between traditional and parametric insurance?

Traditional property insurance pays based on actual damage sustained, subject to exclusions, sub-limits, and requires a physical damage trigger for payment. STORM pays based on the local wind speeds due to a hurricane with no physical damage trigger. This means that the proceeds from the STORM policy can be used for any costs to the insured, even if the insured only suffered indirect economic cost and no physical damage at all.

Is the claims process different?

The claims process is fast and simple. Once the data is collected from the event, Swiss Re Corporate Solutions can provide a payout in the pre-agreed, contractual amount. There are no claims adjusters and no on-site inspections. The insured is then allowed up to one year to confirm they used the funds for costs or losses related to the event.

What is the risk that the trigger index does not perfectly correlate with the underlying risk exposure?

The risk that an insured's loss does not perfectly align with the parametric payout is known as "basis risk." STORM reduces the basis risk compared with earlier generations of parametric hurricane covers as it uses calculations of local wind speeds. Note, traditional indemnity insurance policies also contain basis risk through exclusions, deductibles, sub-limits, and the requirement of physical damage to recover business interruption and extra expenses.

What is the maximum capacity that you can deploy per deal?

When working with Swiss Re you're accessing the expertise and scale of a global insurance, reinsurance, and capital markets company. We regularly develop solutions for customers with limits ranging from USD 1m to USD 40m. We can also scale limits up to and in excess of USD 100m by using our reinsurance and capital markets capabilities.

How do I decide on the structure that suits my company best?

Parametric policies such as STORM are powerful tools to help an organization manage hurricane risk. They are highly customizable, and our team of experts work with customers and brokers to find the right structure and triggers for their particular needs and concerns.

How much time do you need from the start of discussions until signing?

Since the concept is new to most customers and many brokers, education is the key component of STORM and getting out well ahead of a renewal increases the chance of success.

Structured Multi-Year Multi-Line (MYML) Captive Protection

Benefits

Certainty in a volatile environment: Providing price stability with guaranteed capacity over longer term; no link to loss ratios or performance.

Incentive rationale: Superior risk management generates upside potential via profit sharing features.

Transformation of existing programs: familiarity with underlying scope of cover and policies; no additional budget requirement.

Background

As part of a tender process, a global goods manufacturer invited the entire Swiss insurance market to a presentation on the company's major lines of business. Swiss Re Corporate Solutions had no historical involvement on any of the primary layers but we received the green light from both the customer and the broker for a proposal for a MYML cover.

Our Innovative Risk Solution

Swiss Re Corporate Solutions designed a MYML cover combining eight different programs. Key to our success was our capacity and industry know-how.

How else can this be applied?

Customers who are motivated to combine various lines of businesses into a non-cancellable multi-year structure should consider such a solution. Swiss Re Corporate Solutions can deploy considerable capacity on a three-to-five-year basis depending on risk quality, the accumulation of our exposures in the specific geography, and the price adequacy for a multi-year commitment.

FAQ

What is a typical term (period of insurance) of MYML transaction?

On average, between 3 and 5 years.

Are such deals always written for 100%?

100% is our preference. However, a final answer depends on the exact structure and layer. Occasionally, we may include (lead and rarely follow) a friendly industry peer.

What is the maximum capacity you're able to deploy per deal?

That number depends on the risk exposures (lines of business) to become part of an MYML transaction, but we can go up to USD 100m to 150m per transaction for our share.

Can you combine short-tail lines of business (e.g. Property) with long-tail business (e.g. General Liability or Product Liability)? Does that make sense?

Yes, we combine such risk exposures in almost any MYML transaction because experience shows that actual loss patterns are not completely different. However, a final answer depends on the risk profile of the risk exposures to be combined.

How much time does it take from the start of discussions until signing?

On average, about 4 to 6 months for simpler transactions, and up to 12 to 18 months for more complex inquiries. The exact timeline depends on customer motivation, customer preparedness (risk transfer objectives, availability of loss data, internal compliance readiness), captive involvement, fronting needs, funding requirements, and the overall complexity and size of the MYML transaction.

Structured Multi-Year (MY)

Benefits

Access to capacity:
The structure's primary goal is to give the insured access to sufficient capacity at stable costs.

Reduce volatility:
The multi-year, multi-period approach helps to enhance predictability of the claims profile.

Budget certainty:
A fixed cost of risk for the most volatile part of the program provides budget certainty

Background

Our customer in Asia is a leading electronics corporation with a global manufacturing footprint. Given their corporate structure with multiple local entities, they have a global property insurance program but with a relatively low local business unit deductible relative to the group's combined financial strength. This meant that it is not unexpected to see smaller but frequent insurance losses. However, this gives rise to volatility in underwriting results for insurers leading to sharply increasing premium rates in the recent years.

Our Innovative Risk Solution

Based on the historical claims profile, we developed a multi-year structured primary layer with a multi-period risk financing component. The goal of the structure is primarily to reduce the volatility of underwriting results for the program that will now attach in excess of our primary, so that the insured can access sufficient capacity at stable costs. Secondly, whilst there is volatility on an annual basis, the claims profile is more predictable over a multi-year period. This improved predictability means the customer has more confidence to determine how much risk they want to pre-finance over a 3-5-year term, whilst transferring the risk of claims exceeding the risk finance portion. The result is a fixed cost of risk for the most volatile part of their program, providing budget certainty and committed risk capacity over the period.

How else can this be applied?

Whilst such solutions are most common for customers with captives, this is not a limiting factor. Such structured solutions are efficient tools to manage the inherent volatility arising from higher claims activity in the lower layers of large portfolios of assets or risk exposures. The multi-year risk-financing approach can also be used to indirectly build a claims reserve for difficult-to-insure risks, spreading the cost over time than incurring a one-off significant negative impact to a company's bottom line.

FAQ

Are such deals always written for 100%?

Depending on the complexity of a deal, we prefer to underwrite a significant share of the deal to secure smooth policy management and claims handling experience. In situations with following carriers, Swiss Re Corporate Solutions would participate as a policy leader.

What is the maximum capacity that you can deploy per deal?

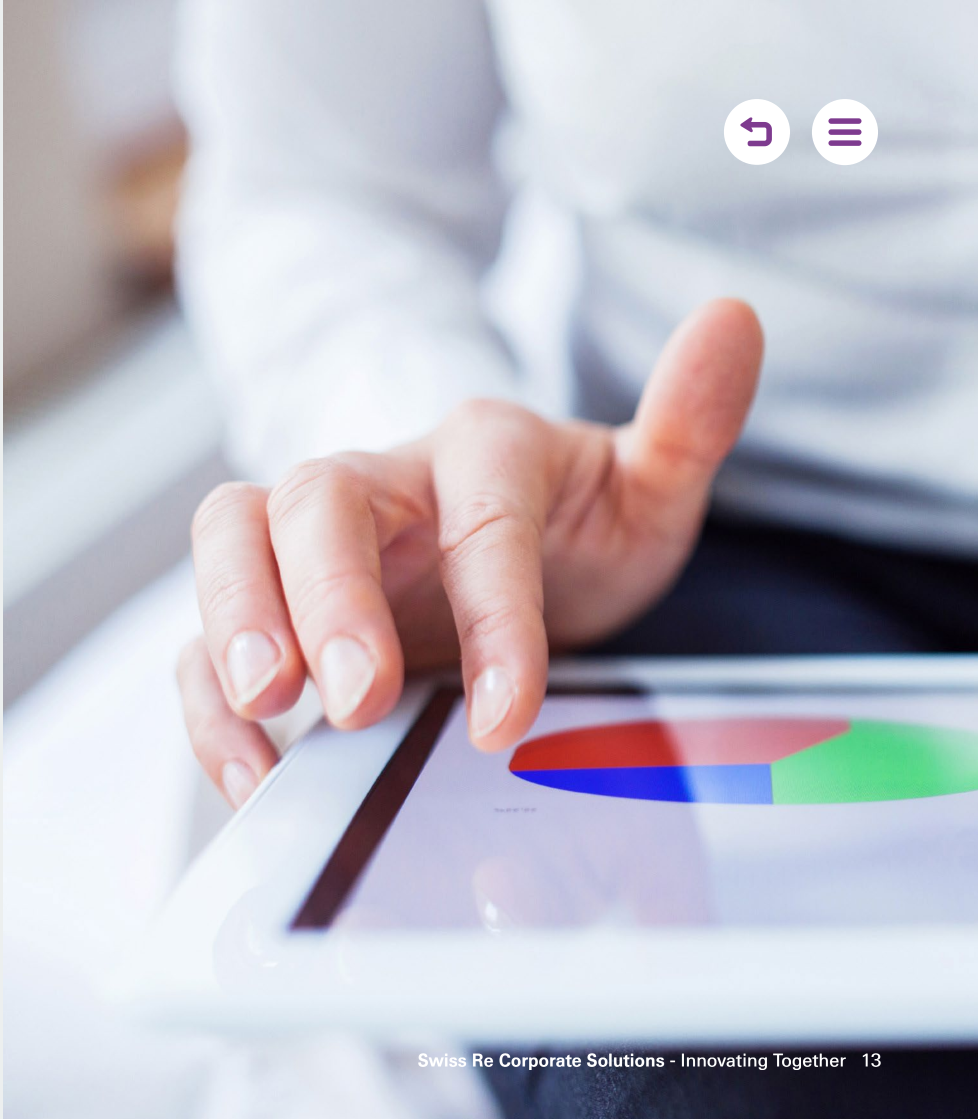
Our maximum capacity depends on risk quality. The capacity required depends on the program structure and the requirement of the customer.

What is the structure that would suit my company best?

Key consideration is the loss history of covered lines of business and level of pre- or post-loss risk financing, which then influences the level of per occurrence risk and aggregate limits required.

How much time do you need to consider from the start of discussions until signing?

We would typically require at least 3 months' time to cater for a thorough risk analysis and structuring, legal and accounting assessment, deal presentation to required customer stakeholders and finally policy signing and binding.



Virtual Captive

Benefits

Become immune to the insurance cycle: By retaining more risk, reduce your dependency on the insurance market.

Share underwriting profits: By retaining risk normally transferred to the insurance market, the insured benefits when losses are less than expected via a Low Claims Bonus (this margin would normally go to the insurance market).

Leverage the benefits of a traditional captive without any of the hassle

Background

Customer background

Our customer is one of the largest financial services networks in the APAC region. In exchange for a membership fee, the network supports its members with ongoing education programs and support services so they can combine the capabilities the network offers with their own local experience and knowledge to provide professional services and advice to their customers.

Operating in a highly competitive environment, the network has a large and diverse membership base of > 300 members generating > USD1B in sales for the APAC Region (2021). Members differ greatly in terms of both size and individual needs.

Customer challenge

Property and Casualty premiums in Australia are set for a strong rebound, underpinned by a continued hardening of commercial rates. Commercial rates in Australia, the largest advanced market in Asia along with Japan, rose more than 30% in the third quarter of 2020, outpacing the global increase of 20%. (Swiss Re Institute Sigma Rebuilding better: global economic and insurance market outlook 2021/22).

All members within the network are required to buy professional indemnity (PI) cover, to protect against errors and omissions in advising their customers. With a hardening market, getting pricing and capacity for individual members is an increasing challenge. By pooling the risk together, the network can solicit better terms from the insurance market than individual members and then pass these savings onto members who choose to buy into the network's structured PI program.

The network believed the open market was pricing their risk too high and decided to take the option to self-insure part of their risk.

Our Innovative Risk Solution

A Virtual Captive was used to emulate the mechanics of a traditional captive, allowing the network to optimize its self-insured retentions, without the cost and complexities.

Risk Finance: The insured pre-funds the self-financing component at the start of the policy period. Swiss Re Corporate Solutions administrates the claims payments to individual members using the pre-funded amount and returns any surplus at the end of the policy period via a low claims bonus.

Risk Transfer: Our Stop Loss Risk Transfer Solution activates once the pre-fund amount is exhausted to pay claims within the primary (up to the pre-defined aggregate limit) so that the rest of the insurance placement doesn't drop down. The self-retention component makes the premiums more cost efficient.

Claims payment: A long standing relationship built on trust allows for delegated authority to the insured to settle claims up to a capped amount. This results in efficient claims handling experience for its members.

How else can this be applied?

This solution isn't just for associations and cluster groups looking to pool small individual risks together but for any insured looking to set up a captive or to retain more risk.

FAQ

How does it work?

- A Virtual Captive is a multi-year insurance agreement that emulates the mechanics of a traditional captive.
- The risk financing happens over time, as is with a full captive.
- Premium contribution to the Virtual Captive implicitly finances a larger part of the risk over time.
- If losses are less than original premium, a premium return, sometimes referred to as a "low claims bonus" becomes due at the end of the period. If losses exceed original premium, a loss experience surcharge, sometimes referred to as an "additional premium" may be needed.

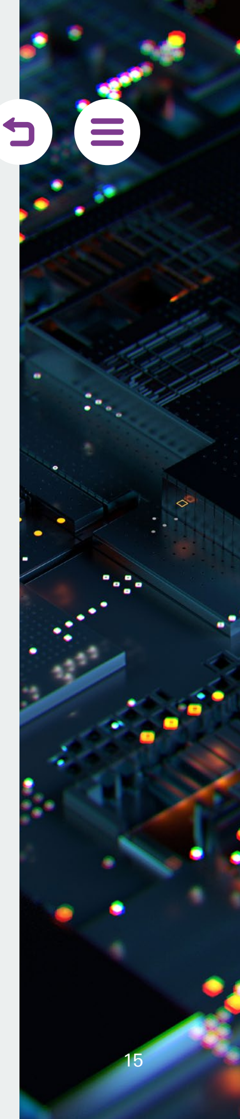
What is the difference between a Virtual Captive & a Captive?

Virtual Captive

- The insurance agreement is between you and Swiss Re Corporate Solutions
- Covers a multi-year period; finances risks over time
- We provide coverage through the agreement and handle all solvency aspects through our already efficient and existing infrastructure
- The agreement considers the risk appetite of the insurer (i.e. the amount of risk transfer capacity provided in the insurance agreement)
- Any remaining funded premium after losses is returned to the insured as a return of premium (sometimes referred to as a low claims bonus to the customer.

Traditional Captive

- The insurance coverage is agreed upon by the insured and the captive
- Set up to exist for many years or indefinitely; finances risks over time
- All regulatory aspects are handled by the captive management and contracted third parties
- The captive's capital is carrying the risk
- Remaining funds are paid through a dividend to the parent
- Additional funds: a call for capital injection by parent with the intent to continue operating the captive



Parametric River Flood – FLOW

Benefits

Certainty of insurance payment amount: when the cover is triggered by a river water level event, payments are fixed, e.g. per day

Simple claims process: payment within days or weeks, no matter what losses are covered through the insurance payment

Insurance proceeds can be used to cover any losses sustained (including NDBI or other)

Contract can be an insurance policy or be written in a derivative form

Background

Our customer operates tourist boats on a river in Europe. If the water levels of the river drop below certain thresholds, boats cannot be operated, and the respective revenues are lost. At the same time, investors are asking for certainty of revenues as a factor in their decision to invest funds in this business. Therefore, the customer decided to buy insurance for situations where boats cannot be operated anymore due to drought resulting in low river water levels. Since traditional indemnity insurance is difficult to get and because of the usually cumbersome and lengthy process to identify sustained revenue/profit losses, the customer decided to go for FLOW, a parametric insurance.

Our Innovative Risk Solution

The customer receives a daily payment if the water level at a defined gauge drops below a defined level as measured by the gauge. The daily payment is a fixed amount, reflecting the pre-assumed loss of daily revenue.

How else can this be applied?

The principle can be applied to all situations where low river water levels lead to loss of revenue or other negative financial impacts like increased cost of transportation, or production stops, etc. The actual loss circumstances are not relevant, since the coverage only looks at the event and its extent, not at the actual loss for the customer. Therefore, also losses that can otherwise not be covered under traditional indemnity insurance can be covered, such as, for example, NDBI.

FAQ

Traditional insurance versus parametric/index-based covers – what's the difference?

Traditional insurance pays based on actual damage sustained subject to exclusions, sublimits, and other conditions. FLOW pays based on the locally measured river water level. The proceeds from the FLOW policy can be used for any costs to the insured, even if the insured only suffered indirect economic cost and no physical damage at all.

What is the difference from traditional insurance in terms of claims payment process?

The claims process is fast and simple. Once the data is collected from the event, Swiss Re Corporate Solutions can provide a payout in the pre-agreed, contractual amount. There are no claims adjusters and no on-site inspections. The insured is then allowed up to one year to confirm they used the funds for costs or losses related to the event.

What is the risk that the trigger index does not perfectly correlate with the underlying risk exposure?

The risk that an insured's loss does not perfectly align with the parametric payout is known as "basis risk". The basis risk can be reduced by carefully analysing the correlation between event and expected losses through historical data analysis. Note, traditional indemnity insurance policies also contain basis risk through exclusions, deductibles, sublimits, and the requirement of physical damage to recover business interruption and extra expenses.

What is the maximum capacity that you can deploy per deal?

When working with Swiss Re you´re accessing the expertise and scale of a global insurance, reinsurance, and capital markets company. We regularly develop solutions for customers with limits ranging from USD 1m to USD 40m. We can also scale limits up to and in excess of USD 100m by using our reinsurance and capital markets capabilities.

What is the structure that would suit my company best?

Parametric policies such as FLOW are a powerful tool to help an organization manage risk. They're highly customizable, and our team of experts work with customers and brokers to find the right structure and triggers for their particular needs and concerns.

How much time do you need to consider from the start of discussions until signing?

Since the concept is new to most customers and many brokers, education is the key component of FLOW and getting out well ahead of envisaged inception maximizes the chance of success.

Parametric Haze – HazeShield

Benefits

Broader coverage based on a pre-agreed payout which can be used to cover non-damage business interruption losses

Simplified and **transparent** claims payment as no loss investigation and adjudication is required

Customizable features to meet specific business needs

Background

Singapore has been struck by a number of severe haze outbreaks over the past two decades – the source of which has stemmed from the burning of peat forests in the region. According to the Swiss Re Institute, the total economic losses sustained in Singapore as a result of the haze events was estimated at USD 900 million (c. 0.3% of GDP). For businesses which rely on customers or employees to spend significant time outdoors, a prolonged haze event can result in significant disruptions and additional costs due to loss of revenues from customers choosing to stay indoors due to an unhealthy environment, reimbursement costs from events being cancelled or postponed, reduced productivity. This could also mean flight delays, event cancellations, reduced construction activity, a decline in tourism and more. Until now, there was no protection available.

Our Innovative Risk Solution

HazeShield was developed to bridge an existing protection gap by offering a parametric insurance solution to an exposure that was so far not insurable. It indemnifies local businesses against earnings volatility caused by reduced footfall, forced shut-downs, and additional operating costs stemming from a severe haze event in Singapore. HazeShield combines our expertise in parametric insurance and non-damage business interruption with our industry leading weather modelling skills. It's an index-based insurance solution based on the Pollutant Standards Index (PSI) level as reported by the Singapore National Environment Agency (NEA), which also provides the following guidance on human activity:

- Good (0-50): Normal activities
- Moderate (51-100): Normal activities
- Unhealthy (101-200): Reduced prolonged or strenuous outdoor or physical exertion
- Very unhealthy (PSI 201-300): Avoid prolonged or strenuous outdoor physical exertion
- Hazardous (PSI >300): Minimize outdoor activity

Once a pre-agreed PSI level is reached or exceeded, the policy is triggered, and the insurance pays a pre-agreed amount almost instantly. The solution is an NDBI (Non Damage Business Interruption) cover that allows our customers to insure pure financial and economic losses not caused by physical damage, an exposure that cannot be insured by conventional insurance programs.

How else can this be applied?

Currently the standard offering includes two options: (i) Cumulative Unhealthy Days for a prolonged haze event over weeks or months and (ii) Extreme Days for short term but very high haze pollution levels. The cumulative unhealthy days option is structured with step up payout based on the number of “bad haze days” exceeding a cumulative threshold. We pay a fixed amount for each day with PSI >100, with an aggregate deductible of 20 “Bad Haze Days”.

Customized structures can be tailored to individual customers’ needs. As an alternative HazeShield can also be used to enhance the product offering of our customers, thereby supporting them to differentiate and generate additional revenue. As an example in the tourism sector, during a severe haze event a hotel could offer guests with a free night’s stay or a refund as compensation, which is then indemnified via the haze insurance. For HazeShield, Singapore was chosen as our launch market due to the integrity and availability of data (NEA). Depending on take-up rate and market need, other countries with similar issues (e.g. Malaysia) can be considered.

FAQ

How is the solution triggered?

Upon the occurrence of a triggering event, the insured will need to submit a Notice of Loss to Swiss Re Corporate Solutions summarizing the total loss sustained following the event. Upon receipt of the Notice of Loss, we will:

- Validate the triggering event with the NEA data
- After receipt and verification, the policy will make a payout based on the submitted statement of loss not exceeding the maximum pre-agreed payout amount in the policy. Interim payments are possible, but the ultimate amount payable can only be finalized at the end of the haze season **
(i.e.. December of any one year)

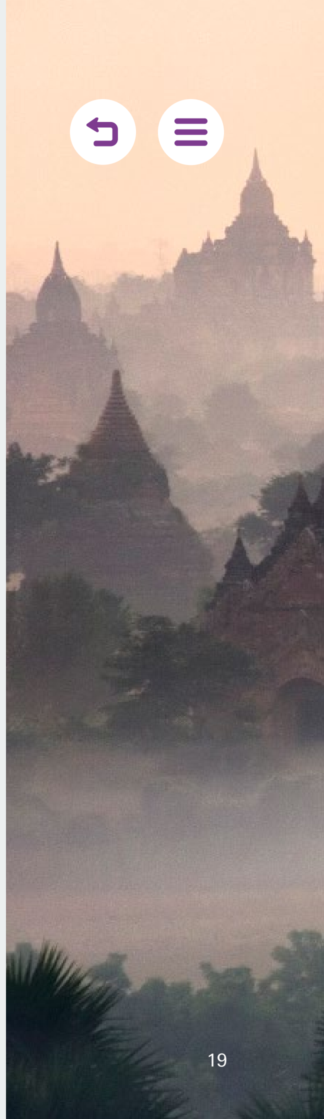
** the haze season is defined as 1 June – 30 November determined by the burning season and wind patterns that shift towards a south-westerly direction, in line with the Monsoon season.

Is the solution fixed, or is it customizable?

Although the above are examples of the standard covers available, we can discuss tailored solutions depending on a customer’s needs.

How do we know when the trigger has been reached?

The NEA provides PSI readings for five locations (North, East, South, West, Central) where reporting is done on an hourly basis. With HazeShield, we’re covering an extreme event affecting the whole of Singapore (vs localized spikes in PSI levels) therefore our measurement is done on a 24-hour average. For example, if the NEA showed the following 24hour PSI readings at 1pm - North 126, East 97, South 80, West 90, and Central 110 - the average would be 101. If the PSI threshold at which a payout would be triggered is 100 (as set out in the customer’s policy), a payout would be made.



Parametric Hail – HAIL

Benefits

Quick Payout: When affected by a triggering event, our insureds receive a payout within days of the event to get them back up and running as quickly as possible.

Broad Coverage: Payout can be used for any loss associated with the event. This allows our insureds to fill in the gaps in their traditional coverage (e.g. deductible, inadequate limits, excluded coverages, etc.).

Customized Structure: These covers are built specifically for the insured and are highly customizable based on 1) the insured's exposure and 2) the specific problem the insured is trying to solve.

Background

Over the past few years, hail has been an increasingly large contributor to both insured and insurer losses. As a result, the insurance market has been forced to significantly increase retentions, decrease limits and reduce coverages. This leaves insureds in a difficult position with considerable gaps in their traditional coverage. This presented a unique opportunity to provide an innovative parametric cover to help supplement the available traditional market. It was against this backdrop that we designed our HAIL parametric insurance cover.

Our Innovative Risk Solution

We partnered with CoreLogic, a leading data provider in the hail space, to provide a cover that triggers based on the maximum hail size at a pre-defined point. The higher the hail size, the higher the parametric payout. Upon receiving an event notice from an insured, within days we determine from CoreLogic the hail size that fell at the insured's site and the corresponding parametric payout. We then pay the insured quickly. Typically, these covers pay within 30 days.

How else can this be applied?

There are many different ways this cover can be used, depending on the nature of the insured's exposure. For example, we have many customers who have large vehicle exposure in hail prone areas (e.g. auto dealers), and this cover helps to supplement their traditional insurance placements. Our list of customers also includes public entities, who have unique exposure to hail. Another industry group with significant interest in this concept are solar owners/operators (and the lenders behind them); as solar becomes more prevalent in the coming years, we'll need to continue to provide innovative solutions such as this to provide necessary coverage for the significant hail exposure to those sites. We've seen many other industry groups interested in this cover, so the application is very wide.

FAQ

How does HAIL work?

The parametric structure of HAIL delivers the coverage with clear, transparent terms and speedy payout timelines. With the help of data analytics, each policy is tailored to reflect the way the insured experiences the event – from its severity to the potential losses. The benefit of knowing the payout amount in the event of a severe hail event impacting the business before such an event happens is key for our customers. They also appreciate having the flexibility to use the funds in the best way to help the business recover.

Maximum Hail Size (inches)	Payout (% of Limit)
1.25 - 1.49	25%
1.50 - 1.74	50%
1.75 - 2.0	75%
2.0+	100%

What can the payout be used for?

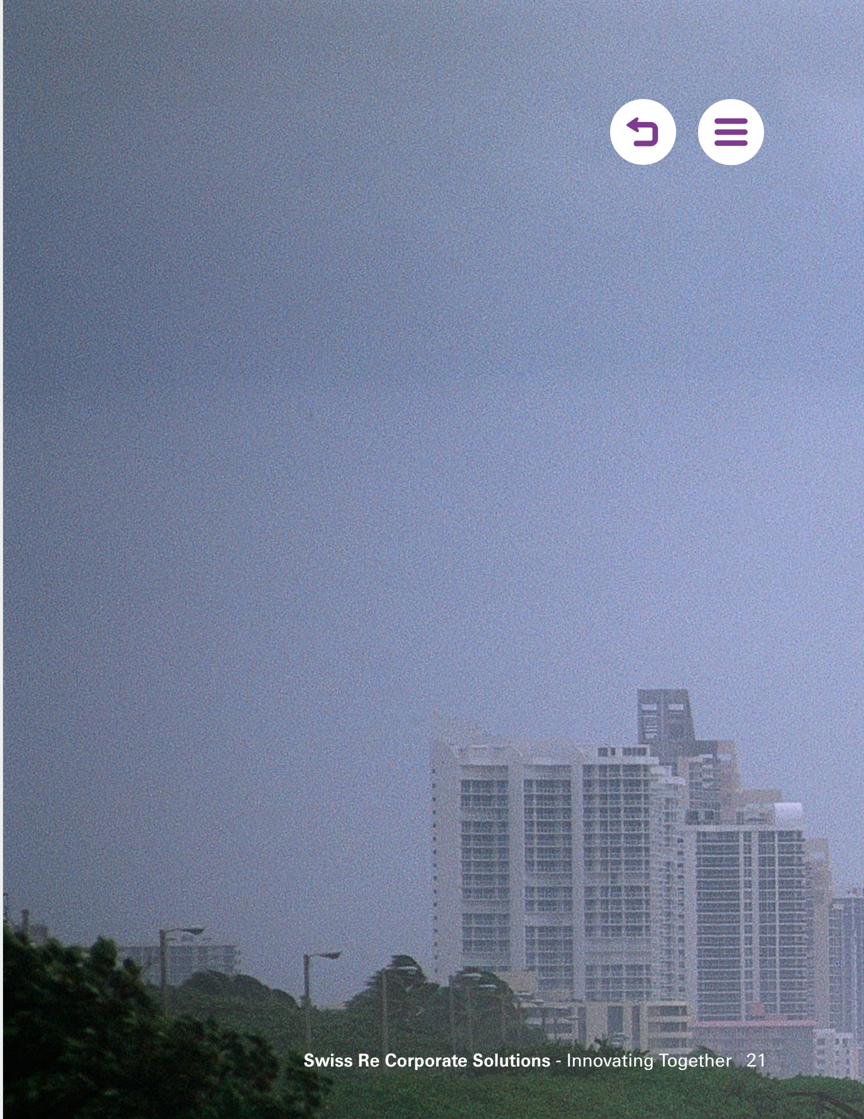
- Fill in the traditional insurance deductible
- Cover business interruption and other additional expenses following a hail event
- Fund losses from coverages that are excluded or sub-limited in the traditional insurance program

Where is HAIL available?

Currently, HAIL is available in Colorado, Iowa, Illinois, Indiana, Kansas, Minnesota, Missouri, Nebraska, Oklahoma, South Dakota, and Texas.

What is parametric insurance?

Parametric insurance policies are index-based products that pay out when a specific peril meets or exceeds a certain predetermined intensity (trigger) at a defined location, and the insured incurs losses.



Solar Revenue Put

Benefits

The Solar Revenue Put **lowers the cost of solar project financing** for project sponsors, allowing for more efficient (and lower cost) capital to be secured.

Solar Revenue Put can be a supporting metric or strength in support of Investment Grade rating for project debt. An Investment Grade rating opens up additional pool of debt buyers that are required to invest in higher rated (or investment grade) opportunities.

Existing network of global banks and lenders have financed projects utilizing the Solar Revenue Put, **leading to efficiencies and "speed to market."**

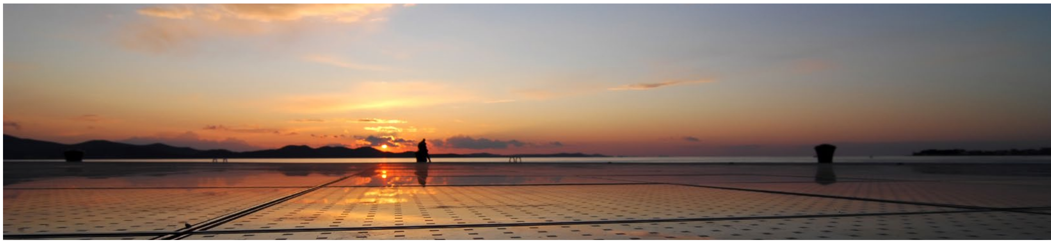
Background

In September 2020, Swiss Re Corporate Solutions and its data partner, kWh Analytics, successfully developed a ten-year Solar Revenue Put for an investor in large, utility-scale solar projects. The client was familiar with the Climate-Energy team's power-generation expertise and its claims experience from previous insurance transactions.

The Solar Revenue Put is an insurance product that guarantees up to 95% of a solar farm's expected output, helping to mitigate a central risk of financing solar power – unpredictable power production caused by mechanical deficiencies or poor climate conditions. With the Solar Revenue Put, the client pays a premium for the product, and in the event the project does not generate enough power, Swiss Re Corporate Solutions covers the lost revenue.

The product helped the client to refinance its portfolio of solar projects in Utah. By driving down the investment risk, the client successfully issued around USD 300 million in senior-secured private placement debt.

This was a landmark deal on two counts. Firstly, a leading renewable project ratings agency gave the solar project an investment grade rating of BBB–, citing the Swiss Re Solar Revenue Put as a contributing factor. Secondly, it was the first time that this product was used in the financing or refinancing of solar projects within the US private-placement debt market.



How else can this be applied?

Utility scale solar growth is occurring in many countries seeking to "de-carbonize" their utility industries. The Solar Revenue Put offering can be introduced in additional countries.

FAQ

Do you write such deals always 100%?

Yes. Swiss Re Corporate Solutions writes 100% of the Solar Revenue Put via company owned carriers.

What is the maximum capacity that you can deploy per deal?

Typically, most Solar Revenue Put transactions written by Swiss Re Corporate Solutions have capacity of USD 10m to USD 40m.

How much time do you need to consider from the start of discussions until signing?

Two weeks, upon receipt of typical solar project due diligence information.

Non-physical Damage Business Interruption (NDBI)

Benefits

No need for a physical damage: By linking the cover to an index and/or determining an independent trigger event, there is no requirement for an actual physical damage to the affected insured location.

Quick payout: The tedious process of claim adjustment is skipped thanks to the transparent payout mechanism.

Replicability: The solution is adjustable to different locations and different perils.

Background

A U.S. hotel company is exposed to "Black Swan" events that can result in significant loss of income at most of its properties in North America. Black Swan events (i.e. Named Perils) include: terrorism; acts of civil authority and widespread travel disruption. The hotel company would like to protect earnings, its balance sheet and maintain liquidity in a protracted down-market post event.

Our Innovative Risk Solution

An independent hotel industry index was selected whereby both parties could evaluate movements in revenue per available room ("RevPar"). The independent industry index was used rather than actual business interruption losses to strip out moral hazard and poor business decisions from the loss calculation and to enable a quick payout. Coverage is triggered if one of the Named Perils occurs and the industry RevPar index decreases by 10% or more from prior year monthly RevPar. The hotel company was now able to insure against non-physical damage Black Swan events which impact earnings. No traditional insurance product was available to cover the risk. The solution is fully transparent and objective based on an independent index.

How else can this be applied?

Non-physical damage business interruption (NDBI) covers can be applied across many industries for Black Swan events which include terrorism, acts of civil authority and widespread travel disruption.

If the cover is based on an independent index, is this still insurance?

Yes, commonly, such covers are structured as insurance solutions but could be offered on a derivatives basis if desired.

What are common information requirements?

Information requirements depend heavily on the specific case but usually the costing is based on fundamental business and financial data, in addition to the more standard experience and exposure data used for traditional P&C business. Quite frequently we also access 3rd party data to establish a benchmark or parameter that reflects the underlying risk.

How long does it take to get a quote?

Depending on the specifics of a case, we quote NDBI covers within three weeks to two-months from the receipt of the required underwriting information. Often, the most time-consuming part is the identification of the insurable interest and the determination of a pay-out that is consistent with the economic loss sustained.

B2B2Employee

Benefits

Improve business continuity: a simple and transparent solution that would allow the company to support their employees following a catastrophic event, and help maintain business operations.

Increase employee retention: foster risk awareness among the employees and develop a risk-aware culture within the firm.

Elevate corporate branding: a unique benefit that upgrades the company's offering and differentiates it from market standards.

Background

Earthquake insurance take-up rates in California are approximately 10% and according to the USGS, there is a 72% chance that a magnitude 6.7 earthquake will hit the San Francisco Bay area in the next 30 years. A large technology firm headquartered in California with a sizeable employee presence residing within the region, was looking to provide their employees with an earthquake insurance benefit. The company's goal was to raise awareness among their workforce of the imminent risk in the region, limit business interruptions and ensure they and their employees were well-prepared to return to "business as usual" following an earthquake. This solution would allow the firm to differentiate their employee benefits package, supporting the attraction and retention of talent. By offering a simple, transparent and flexible parametric insurance cover, the employees would be eligible to receive quick cash following an earthquake, that could be used for any direct or indirect expenses related to the event.

Our Innovative Risk Solution

With the shift to remote work, there has been an emphasized importance on ensuring employee comprehension of the risks they encounter and support they receive following a natural catastrophe. Our Parametric QUAKE solution is perfectly suited for this type of employee benefit package. QUAKE relies on independent third-party data reported by the US Geological Survey (USGS). Payment is based on the shaking intensity of an earthquake at the insured's site. If the shaking intensity meets or exceeds the pre-agreed threshold, funds are disbursed to the insured, often within 30 days. These funds may be used for any direct or indirect expenses arising from the earthquake, such as: infilling traditional homeowner's CA earthquake deductibles, transportation and moving fees, food and supplies, utility disruption, day care and pet costs, medical expenses, and much more. The claims process is very different from a traditional earthquake cover as no lengthy claims assessments is required, resulting in faster payouts, less disruption, and a quicker return to the norm.

How else can this be applied?

This solution can easily be replicated for other firms with a significant workforce in earthquake-exposed regions. For companies in hurricane-exposed states, we have a parametric STORM solution, which follows a similar outline. The STORM solution relies on actual windspeeds at pre-defined locations reported by RMS HWind, a third-party independent data provider. Following a named windstorm event, RMS HWind produces a granular wind footprint, allowing us to determine the highest one-minute sustained wind speed closest to the policyholder's location(s). There are several ways to structure such a transaction, either B2B or B2B2C. In B2B, Swiss Re Corporate Solutions would insure the corporate entity. In B2B2C, Swiss Re Corporate Solutions would act as a reinsurer behind a licensed personal lines carrier.

FAQ

What is parametric insurance?

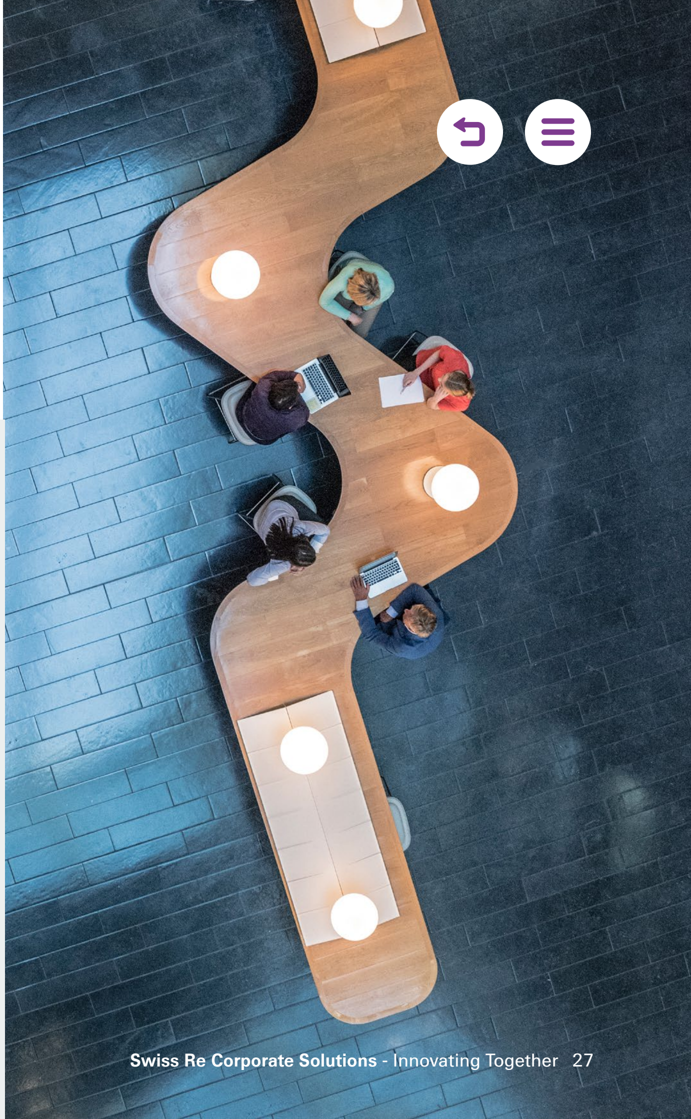
Parametric insurance policies are index-based products that pay out when a specific peril meets or exceeds a certain predetermined intensity (trigger) at a defined location, and the insured incurs losses.

What is the difference from traditional insurance in terms of claims payment process?

The claims process is fast and simple. Once the data is collected from the event, Swiss Re Corporate Solutions can provide a payout in the pre-agreed, contractual amount. There are no claims adjusters and no on-site inspections. The insured is then allowed up to one year to confirm they used the funds for costs or losses related to the event.

What is the maximum capacity that you can deploy per deal?

When working with Swiss Re you're accessing the expertise and scale of a global insurance, reinsurance, and capital markets company. We regularly develop solutions for customers with limits ranging from USD 1m to USD 40m. We can also scale limits up to and in excess of USD 100m by using our reinsurance and capital markets capabilities.



Digital Ecosystem

Algorithm failure revenue loss

Benefits

The transition to a digital ecosystem that includes Artificial Intelligence, industrial or commercial Internet of Things (IoT) and other intelligent application of IT hardware and software deserves a risk transfer response rooted in innovative thinking and expert knowledge.

Through close collaboration and partnership with our customers, we develop highly tailored "fit for purpose" risk transfer solutions that respond to specific digitalization-driven demands.

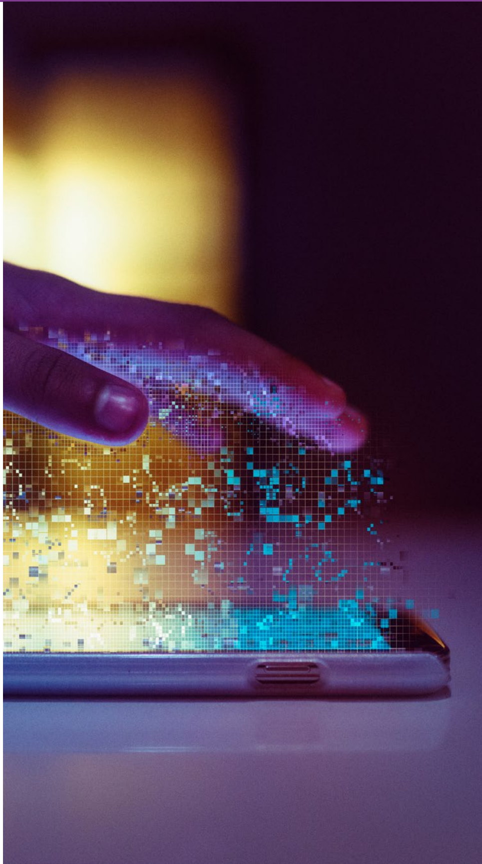
We recently **structured an insurance back-up for a predictive maintenance software** package of one of the leading household appliance manufacturers.

Background

The digitalization of our world continues with a fast pace, promising to make the world more resilient, efficient and transparent. Original equipment manufacturers (OEMs) face new realities for their products and their current business models. Condition-based maintenance (CBM and predictive maintenance) replaces scheduled maintenance cycles, and income streams increasingly come from services rather than product sales. Early adopters of CBM need risk transfer innovators able to develop a truly responsive, "out of the (traditional) box" solution.

Our Innovative Risk Solution

Identifying and defining what precisely needs to be insured (the "risk transfer problem") is key. We developed a customer-specific algorithm failure coverage on a pre-agreed value basis. An insurance solution that is structured similarly to a parametric product, offering speed and simplicity. Claims handling process is fully automated and API-based. Based on known machinery breakdown, business interruption and reliability data, we pre-defined the monetary compensation for "false positive" events to model the exposure and agree on the risk transfer premium. We worked collaboratively with the customer, providing full transparency and developing a solution that worked exactly the way our customer needed.



FAQ

What's the difference between "algorithm failure" insurance and a standard Machinery Breakdown insurance?

Algorithm failure revenue loss covers the consequences of a machinery breakdown but a physical damage is not necessary. The expected loss burden, the loss frequency and premium levels are different. You can expect quick and easy loss payments for the "algorithm failure cover" as the claims handling is based on automated loss event reports and with pre-agreed compensation amounts.

What does a pre-agreed value mean?

This is the pre-agreed loss amount that we'll pay a customer upon the reporting of each covered loss event. It may vary, depending on the covered loss events, but common to all these amounts is the fact that the agreed loss amounts are all based on realistic loss (scenario) calculations.

Is this "algorithm failure" insurance the only IOT offering of Swiss Re

No, by no means. It is just an illustrative example of a tangible and executed coverage in the context of the transition to a digitalized world. More and different coverages will emerge over the next couple of years when it becomes clearer what the real customer needs are in such a changed environment and what an agile and adoptive insurer like Swiss Re Corporate Solutions is able and willing to develop on the basis of improved data search and analytics and more advanced loss modeling techniques. Let's be clear on this: a risk is eligible for risk transfer only if the underlying exposure can be defined, measured and rationalized (modelled) in terms of its frequency and loss size. That fundamental paradigm will remain unchanged. However, new and better data combined with better IT hard- and software will allow the application of more advanced data analytics and the design of improved loss models which in turn will stimulate the creation of new and different risk transfer solutions.

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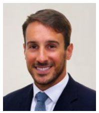

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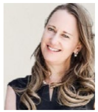

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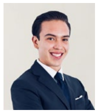

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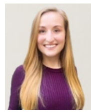

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