

Understanding Parametric Triggers in Catastrophe Insurance

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Original post [here](#).

In the midst of a global pandemic, many businesses are finding that their [property and casualty insurance policies do not provide protection against business losses resulting from the pandemic](#).

Some property and casualty policies do include business interruption insurance, which provides supplementary coverage against interruptions to revenue flows due to external disruptions. However, business interruption insurance typically excludes coverage for viral perils--that is, threats to revenues due to viral outbreaks that force businesses to close in the interest of public safety.

A small niche has emerged for epidemic insurance in recent years, in the wake of the SARS, MERS and Ebola outbreaks. However, [few businesses purchased it](#). Moreover, even under such policies, businesses may face lengthy litigation attempting to prove coverage or the amount of benefits owed from insurance companies.

Not every catastrophe results in the delays and challenges that characterize a claim under business insurance policies due to COVID-19. For years, insurers have utilized parametric triggers--explicit conditions that, once met, automatically trigger coverage--to provide catastrophe insurance in the event of flooding, hurricanes, or earthquakes. Insurance companies have also used parametric triggers for pandemic and epidemic policies written during the Ebola and zika outbreaks.

Such triggers are especially useful for [quick deployment of payments](#); traditional indemnification claims can take several weeks to process compared to the near immediate payments issued through parametric policies. Additionally, as a bulk of parametric insurance policies payout an already agreed-upon sum, policyholders spend less time attempting to determine the extent to which their policies cover their losses. In the context of pandemics, the quick payments to businesses may provide the necessary capital for businesses to install safety equipment or purchase necessary safety supplies. Quick payments may also keep businesses with high fixed cost commitments afloat during quarantine or social distancing measures.

This blog discusses two types of parametric triggers utilized in business interruption insurance: statistical parameters and civil authority orders. [Many proposals](#) for business interruption insurance in a pandemic landscape rely on parametric triggers that begin payouts by the status of civil authority orders. Other proposals rely on externally generated statistics through statistical parameters to determine when payouts should begin. Both of these triggers may provide a useful framework for building business insurance policies for pandemics.

Statistical Parameters

Statistical parameters require measures to [meet or exceed a specific statistical threshold](#) before coverage payouts begin. These triggers often rely on third-party consultants to determine whether the trigger has been satisfied.

These triggers are typically utilized in catastrophe bonds and insurance-linked securities, instruments connected to insurance-related risks that provide issuers funding for specific events, such as tornadoes or hurricanes, as a type of reinsurance. There are several metrics which insurance companies may use.

Catastrophe bonds, bonds issued with the stipulation that the issuer no longer pays principle or interest to investors if certain conditions are met, may halt payouts based on the strength of the covered catastrophe, such as an earthquake's magnitude or a hurricane's wind speed and barometric pressure.

Insurance-linked securities include mortality swaps, investment products where cash flows depend on a mortality index. Other insurers use parametric triggers for business interruption insurance, such as the rate of hotel bookings in comparison to year-on-year averages or the measures of footfall in pedestrian areas.

For pandemic and epidemic insurance, the epidemic data analytics firm Metabiota developed a pathogen sentiment index to measure the effects of fear on drops in consumption. While some parametric triggers rely on one datapoint, others are based on an index of available data to determine when the policy payouts can begin.

Parametric triggers often utilize externally determined statistics for triggers. For example, the [World Bank Pandemic Emergency Financing Facility's](#) (PEFF's) catastrophe bonds relied on publicly available data to determine how much money the facility would release. According to the World Bank, "[the] [triggers](#) are based on outbreak size (the number of cases of infections and fatalities), outbreak growth (over a defined time period), and outbreak spread (with two or more IBRD/IDA countries affected by the outbreak." Payout occurred after all three conditions were met.

Similarly, Springboard, an independent firm, generates the [footfall metric](#) utilized by Aon, which measures changes in pedestrian traffic. The footfall metric could be particularly helpful in determining unexpected business losses due to drops in consumer sentiment; for example, it could have been used in 2018, when a fake terrorist report caused [£3 million](#) in losses to London retailers.

However, though parametric triggers are unambiguous, they may not necessarily result in timely payouts. The World Bank's pandemic catastrophe bonds, issued in July 2017, utilized a series of parametric triggers to determine when payments would begin. Once trigger conditions were met, funding from the bond issuance was made available to 77 countries through the PEFF's insurance window. Payouts required a slew of conditions: 1) a rolling daily average of at least 250 cases; 2) the virus to exist for at least 84 days; 3) total confirmed deaths to be greater than 250 cases (for class B issuances) or 2,500 cases (for class A issuances); 4) an exponential growth rate; and 5) geographic spread of the virus.

The World Bank's pandemic bonds have [faced criticism](#) for their relatively late payout. With the number of elements making up the parametric triggers, global statistics met conditions to trigger halting interest payments for the bonds only on April 17, nearly 40 days after the WHO [officially characterized](#) COVID-19 as a pandemic.

Used thoughtfully, these triggers hold promise as a means of efficiently triggering payouts to business interruption insurance policyholders in the case of a global pandemic by providing a means of speedy coverage determination.

Civil Authority Parameters

Within pandemic and epidemic insurance, insurers may rely on local decrees to determine payouts. During viral breakouts, cities and municipalities may institute lockdown or social distancing orders. In 2014, during the Ebola outbreak, NAS Insurance, an American insurer, [provided](#) business interruption insurance that would automatically pay out if there was a mandatory shutdown ordered for the area specified in the policy. To account for mobility, the Insurance Services Office (ISO), an insurance advisory organization, proposed a [new policy endorsement](#) in response to COVID-19 that also triggers coverage if civil authorities suspend travel services in the area where the business is located.

The Caisse Centrale de Réassurance (CCR), a French publicly administered reinsurance company, demonstrates an interesting implementation of local decree triggers through a public-private reinsurance program. Like the insurance policies outlined above, insurers (reinsured by CCR) [automatically begin payouts](#) to policyholders once a local government declares an emergency and the policyholder meets a deductible. However, the size of the deductible changes based on the number of times the local government has declared an emergency for the same catastrophe event in the previous five years. The standard deductible will apply for the first two incidents and will rise with each succeeding incident to four times the standard deductible for the fifth incident in a five year period.

Many proposals aimed to protect businesses from losses resulting from a possible second wave of the virus incorporate civil authority response triggers to determine when funding should be provided to businesses. An insurance industry proposal, entitled the [Business Continuity Protection Program](#), only pays out once a state or local government orders a shutdown. As mentioned above, the ISO [COVID policy endorsements](#) trigger payment exclusively based on civil authority decrees. Munich Re's product, Pathogen RX, [triggers](#) if a government orders a shutdown or travel ban.

Civil authority triggers provide a strategy to account for non-physical damages, which most business insurance policies do not currently include in their coverage. [Courts have repeatedly held](#) under common policy wording that the following types of incidents were not covered: government action that negatively impacted the insured without physical damage to the insured property or an adjacent property, government action predating any physical damage, physical damage not resulting from a covered event, and when government orders did not actually prohibit customers from entering the property. By instituting civil authority triggers, physical damages would no longer be a necessity when responding to the economic consequences of a pandemic.

While civil authority triggers can be indicative of the extent to which pandemics have affected the local economy, some cities may lift quarantines and social distancing guidelines before individuals feel safe enough to participate in the economy again. Cities in a rush to reopen may still experience [depressed sales](#) and slow economic growth as consumers and employees are cautious about returning to normal activities. Fear of the spread of COVID [reduced consumption](#) even before government shutdown orders came into effect, indicating that government shutdown triggers alone may not be enough to define periods of lost revenue due to pandemic fears. Under traditional indemnification, losses due to lack of consumption may not be completely captured if relying exclusively on civil authority triggers. However, automatic payments of predetermined sums common to parametric insurance addresses some of the difficulties in determining the scale of losses.