

PARAMETRIC (RE)INSURANCE

XXI INTERNATIONAL SYMPOSIUM
INSURANCE MARKET FACING THE CRISIS - POSSIBILITIES AND CONSTRAINTS
Zlatibor, hotel „Mona Plaza“, June 1-4, 2023

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Vse bo v redu.

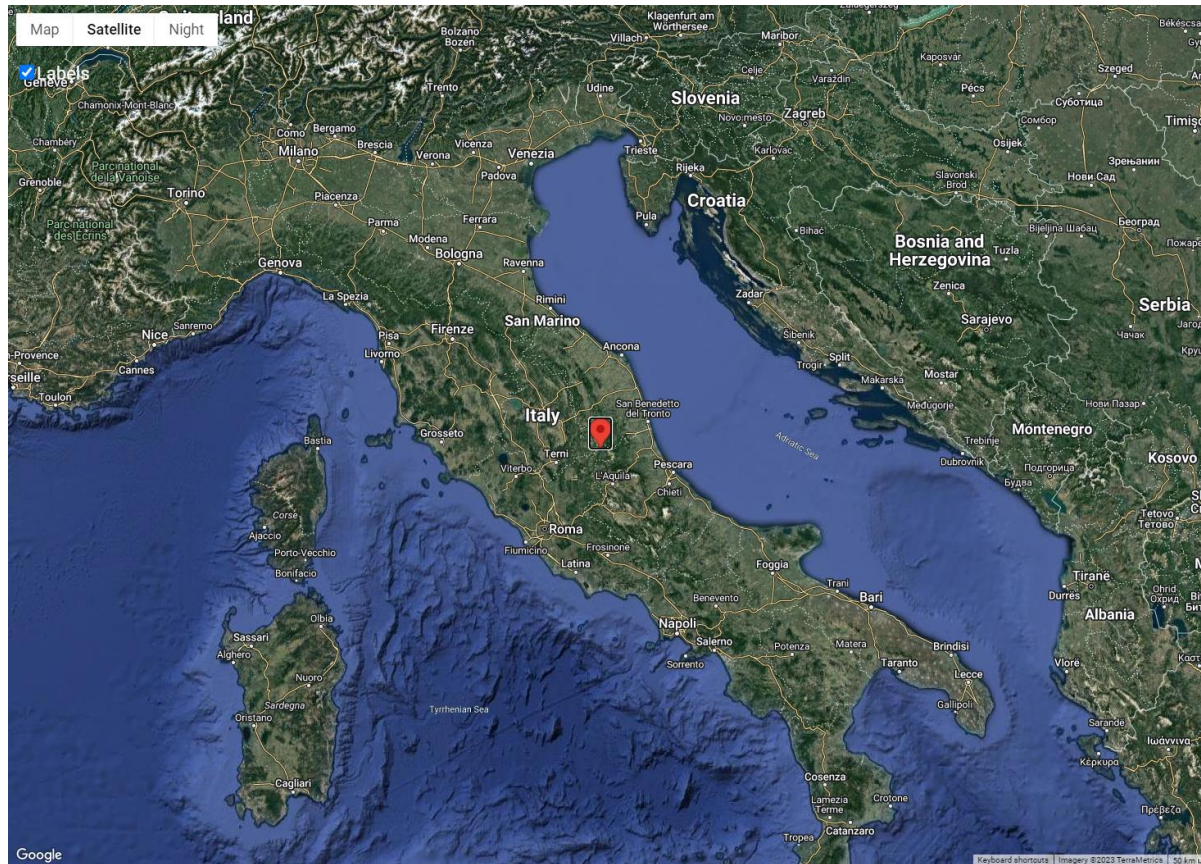
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24-08-2016

03:36:32 a.m.

Earthquake with magnitude 6.0



Monetary amounts in bill€

ECONOMIC LOSSES
7,1
⚡
STATE CONTRIBUTION
26,5

material damages, emergency expenses, monthly monetary indemnity, projects social-economic rebirth, etc.

PRIVATE	PUBLIC	RELIGIOUS BUILDINGS	+	REBIRTH PROJECTS
19,4	6,1	1		1

Amount stated for approved requests	7,6 (39%)
Liquidated requests	2 (10%)

61% are still under review

Buildings damaged (number)	50.000
Construction sites open (number)	7.259 (15%)
Construction sites completed (number)	7.000 (14%)

36.000 buildings still as originally damaged

➔ Status as @ 23-08-2022 (6 yrs later)



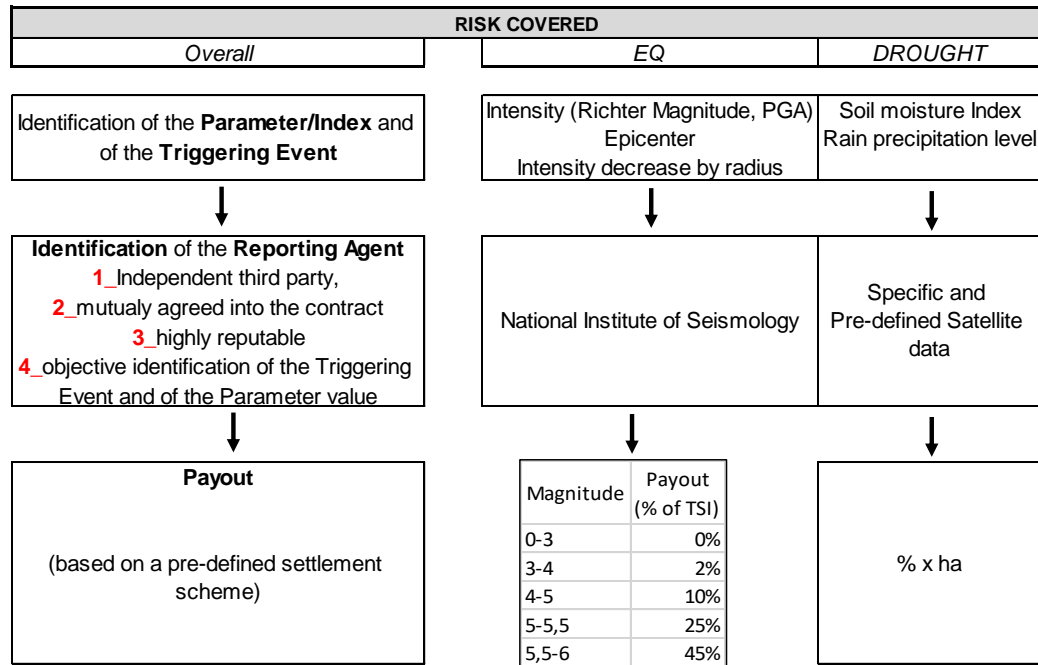
INSURED LOSSES
source: PERIL S AG
0,108 (1,5%)



ALTERNATIVE SCENARIO – Let's imagine that...

Few days after the EQ, a person living within the impacted area would have received a message from the XY ins. Company, confirming the **settlement of 20-30.000 €** into a predefined bank account, as a **payment for the loss incurred**.

This is the logic behind the **Parametric Insurance**: it consists in a fast and clear repayment of a pre-defined amount of money, based only on the value of a specific and pre-defined Parameter



In practice

Conceptual Revolution: the Loss Settlement process is not driven by a long and complex Loss Assessment anymore, but by a Parameter only.

BENEFITS (1st wave)	
Policyholder	Insurer
* Fast money availability (few days) --> e.g. SMALL COMMERCIAL needs	* Settlement costs tend to zero
	* No litigations or legal actions
	* Product more attractive

NOTE

The fundamental principle of Insurance (Known Premium vs. Unknown Loss) is kept – the Loss remains unknown when the contract is issued. But it becomes 100% known once the event occurs and it's formally identified.



Impact on **Claim Reserves and Reserving Risk**

PARAMETRIC REINSURANCE (1)

Some differences (Cedant and Reinsurer are both Insurance players, with high-level technical knowledge) ---> fine tuned and bespoke structures

RISK ASSESSMENT						
PORTFOLIO IDENTIFICATION	INSURED PERIL(S)	TYPE OF INDEMNITY		LOSSES SIMULATION and ANALYSIS		
Retail	EQ	Property replacement	➔	MODELS	HISTORICAL COMPANY'S DATASET	OTHER HISTORICAL CATALOGUE
Small Commercial	Flood	Loss of Income/BI		Exposure		
...	Drought	Emergency Losses		Hazard		
Farmers	...	e.g. debris removal, temporary accomodation		Vulnerability		
Fisheries	Excess Rainfall			Financial Impact		

RI CONTRACT SETTING			
INDEX/TRIGGER and REPORTING AGENT selection	PAYOUT	RI PREMIUM and OTHER CONTRACT CONDITIONS	
1 "Cat-in-a-box"		depending on the type of contract and partners agreements	
an extreme event ("Cat"), with a pre-defined intensity, occurs in a pre-defined area ("box")	function of the Intensity (e.g. linear or a step function)		
2 "2nd generation"			
per each event, all the intensities recorded by different instruments (seismographs, anemometers) geographically spread ≈ "aggregated index"	function of the "aggregated Index"		
3 "Model Losses"			
each real event is reproduced into the Loss Simulation Model	the Payout correspond to the loss coming from the Simulation Model		

ELT		
Event	Intensity	Loss
1	0,5	0
2	2,5	1.700
3	2,5	12.500
	6,7	10 mio€
9998		
9999		
10000	5	1,5 mio€

Loss impact by different clusters of Intensity (0-2, 2-3, etc)

CALCULATION AGENT



PARAMETRIC REINSURANCE (2)

EFFECTS	
<i>Cedant/Insurer</i>	<i>Reinsurer</i>
	<ul style="list-style-type: none"> ▪ Reserving Risk tends to zero ----> part of the Loss settlement volatility is transferred to the Cedant
<ul style="list-style-type: none"> ▪ Basis Risk i.e. the risk of getting a payout higher/lower than the real Loss 	←
<ul style="list-style-type: none"> ▪ Claim handling costs depends on the Insurance contract (Traditional or Parametric) 	
	<ul style="list-style-type: none"> ▪ Costs for the Calculation Agent
	<ul style="list-style-type: none"> ▪ Costs for the Reporting Agent (split?)
<ul style="list-style-type: none"> ▪ (as for the Par. Ins.) amount of money immediatly available ----> No Future Inflation impact ----> Management of the Insurance (Direct) Loss 	
	<ul style="list-style-type: none"> ▪ No Future Inflation impact
<ul style="list-style-type: none"> a) Parametric Insurance: the payout from the Reinsurer is (simultaneously) used to give the payout to the policyholder b) Traditional Insurance: the payout from the Reinsurer is immediatly taken but the settlement to the Policyholder will be deferred later on 	
	↓
Impact on the RI Premium	

Examples of Non-Standard Parametric Insurance contracts - currently active

- FISHERIES
- BEEKEEPERS
- STATE INSURANCE
 - Full coverage (Property Damages Private/Public + Emergency Losses)
 - Partial Coverage (Public Assets only)
 - Partial Coverage (Emergency Losses only) <-- lower budget
- WATER UTILITIES
- POWER UTILITIES

Open aspects

- IFRS17 (LIC, LRC)
- Capital Requirement

CONTACTS

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