No 1 / 2013

PERILS

INSIDE

Dear Reader,

Let me start with the highlight of the Newsletter which is that PERILS now covers the Italian insurance market for the perils of earthquake and flood. This is in addition to the coverage we already provide for windstorm in Europe and flood in the UK.

The expansion of our database to include Italy was only possible due to the close cooperation we established with ANIA, the Italian Insurance Association, and naturally the Italian primary insurance industry. We are extremely grateful for their support and are convinced that the market will benefit from the greater availability of Cat data, just as the other markets that we cover have benefited.

We receive many encouragements to further extend our systematic collection of Cat-exposed sums insured and Cat event losses into other areas of the world. We are willing and able to do so. However, this alone is not enough. Much more importantly, we need the support of the national insurance markets for us to collect the data.

The inclusion of Italy provides a perfect example of this. Our first contact with the Italian market was established through ANIA which, after conducting a feasibility study, recommended to its members that they support the PERILS initiative in Italy. From that point on, the process of establishing the PERILS Industry Exposure & Loss Database for Italy went smoothly and on 7 May 2013 we were able to make this available. Starting on page 5 of this issue we look in more detail at how the new Database was set up.

In this issue, we also look at: European winterstorm activity in the 2012/2013 season; the updates of our Industry Exposure & Loss Database for Europe Storm and UK Flood; and the usage of our data in industry-loss based risk transfer.

We hope you enjoy reading this issue and are always grateful for your feedback.

Best regards,

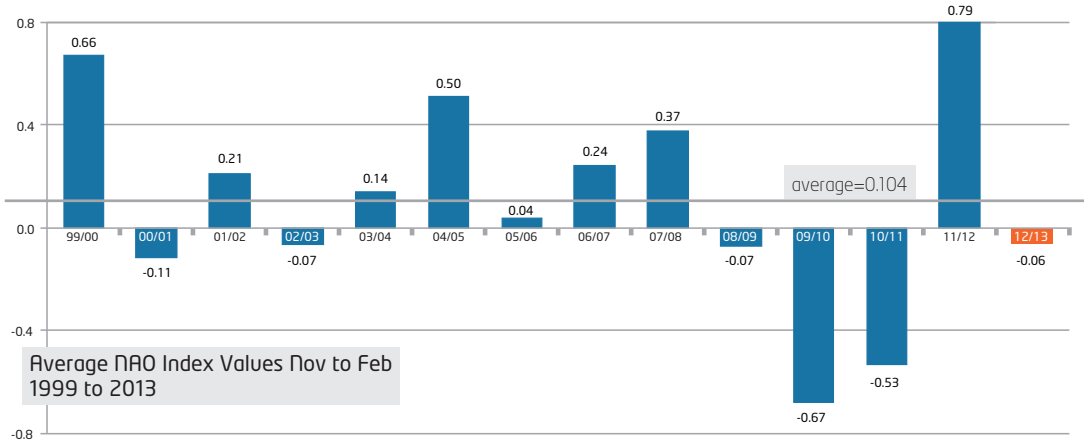
Luzi Hitz
CEO PERILS AG

Figures & Facts

20'411	number of data entries in PERILS Industry Database per 7 May 2011
125'883	number of data entries in PERILS Industry Database per 7 May 2013
12	number of countries covered: B, DK, F, D, I, IRL, L, NL, N, S, CH, UK
3	number of perils covered: wind, flood and earthquake
11	number of captured events
EUR 802m	market loss of the M5.9 earthquake in Italy of 20 May 2012
EUR 436m	market loss of the M5.8 earthquake in Italy of 29 May 2012
4	minimum number of PERILS loss reports for qualifying events
>100	number of data providing national insurance companies
>100	number of PERILS-based transactions placed since 1 Jan 2010
USD 6.7bn	total of PERILS-based capacity placed 1 Jan 2010 to 31 Mar 2013
USD 4.0bn	PERILS-based capacity at risk per 31 Mar 2013
66%	percentage of PERILS-based capacity based on a structured trigger

Cat Events

No qualifying Cat events in the winter 2012/2013. Final loss reports for storms Joachim and Andrea issued.



Source NAO values: National Oceanic and Atmospheric Administration

Figure 1: Below average NAO index values for the winter 2012/2013. *The NOA Index value is a measure for the difference in pressure over the Azores and Iceland. High values generally lead to higher storm activity in Western and Northern Europe. The winter 2012/13 was characterized by persistent low NAO index values which was reflected in a low storm activity.*

The winter of 2012/2013 in Europe was characterized by very low storm activity and during this period PERILS did not investigate any storm events. One factor which may have contributed to this was the fact that there was a continuous low difference in pressure between sub-tropical and sub-polar latitudes (low NAO index values) during those months. Such an environment is not conducive to the generation of low pressure systems. This is in marked contrast to the European windstorm season in 2011/2012 which experienced a high level of windstorm activity and high NAO values (Figure 1).

From the 2011/12 season, PERILS captured two events: Joachim and Andrea. The final loss reports for these two events were released on 15 December 2012 and 4 January 2013, 12 months after the respective occurrence dates and in line with PERILS' loss reporting schedule. Compared to the first loss reports issued 6 weeks after the respective occurrence dates, market-wide insured property losses decreased by 16% for Joachim and increased by 26% for Andrea (Figure 2).

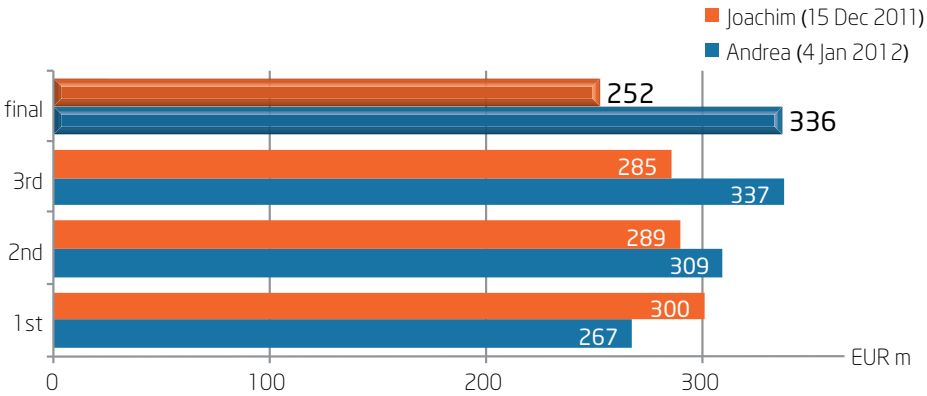


Figure 2: PERILS loss reports for storms Joachim and Andrea. *The chart shows industry-wide property losses for the two storm events captured by PERILS from the winter 2011/2012 period. The final losses amount to EUR 252m for Joachim (15 December 2011) and to EUR 336m for Andrea (4 January 2012). Subscribers to PERILS Database have access to the loss data at full CRESTA and Property Line of Business resolution.*

Business Update

Update on the PERILS Industry Exposure Database for Europe Windstorm and UK Flood. Further increase in use of PERILS data in risk transfer products.

Update of Europe Windstorm and UK Flood Industry Exposure Database for 2013

On 1 April 2013, PERILS released the Industry Exposure Database 2013. The database contains market-wide windstorm-exposed property sums insured with an in-force date of 1 January 2013 for eleven European countries, on a CRESTA zone, occupancy type (residential, commercial, industrial and agricultural) and cover type level (building, content, business interruption).

Market-wide Property Sums Insured	Change 2013 -2012 in EUR	Change 2013 - 2012 in original currency
Belgium WS	2.90%	2.90%
Denmark WS	0.40%	0.40%
France WS	1.70%	1.70%
Germany WS	2.50%	2.50%
Ireland WS	-4.90%	-4.90%
Luxembourg WS	3.30%	3.30%
Netherlands WS	0.40%	0.40%
Norway WS	6.60%	1.40%
Sweden WS	6.00%	2.20%
Switzerland WS	3.20%	2.40%
United Kingdom WS	0.20%	-1.90%
Total WS	1.90%	1.10%
United Kingdom FL	-0.10%	-2.20%

The industry exposure is based on data directly collected from more than 100 national insurance companies representing about 60% of the overall market in terms of property premium. Compared to 2012, year-on-year developments are mainly driven by movements in collected sums insured data and movements in market benchmarks (Table 1).

Further increase of use of PERILS data in industry-loss-based risk transfer

At 31 March 2013 there were USD 4.0bn of PERILS-based limits at risk, an increase of +22% compared to 31 March 2012. Of this, USD 1'727m (43%) related to private transactions and USD 2'289m (57%) to 144A ILS transactions. Some 66% of the total capacity used PERILS data for structured industry loss triggers while the remaining 34% used the unweighted total event loss (Figure 3).

Table 1: PERILS Industry Exposure Database 2013. *On 1 April 2013 PERILS issued the update of its exposure database available to its subscribers. The market-wide sums insured data are available per CRESTA zone, property occupancy type and coverage type. Changes to the figures compared to 2012 vary by country between -5% and +3% (excluding FX changes).*

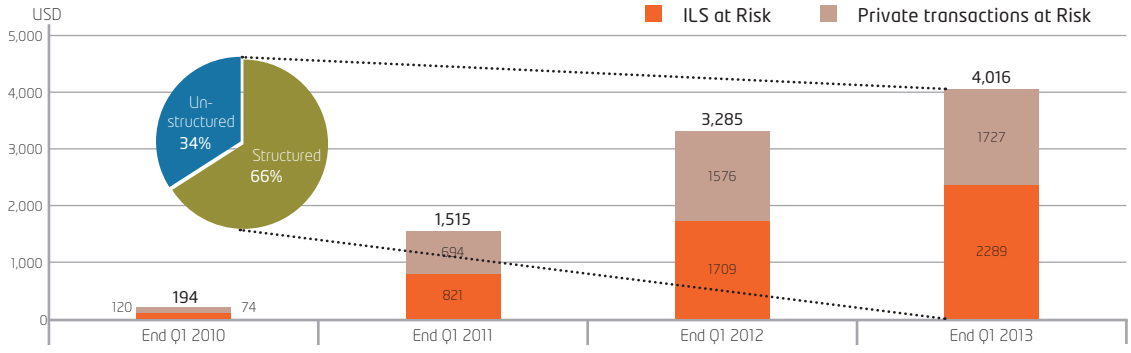


Figure 3: PERILS-based limits at risk. *As at 31 March 2013, a total of USD 4.0bn of PERILS-based limits was at risk. The cumulated total of limits issued since 1 Jan 2010 was USD 6.7bn.*

Italy

PERILS expands its market reporting to the perils of flood and earthquake in Italy. Total property market loss for the earthquakes which struck Emilia-Romagna in May 2012 is EUR 1.24bn.

The extension of the PERILS market coverage into Italy was only possible due to the high level of cooperation with the Italian Insurance Association (ANIA) and members of a working group consisting of a number of key companies representing the Italian non-life insurance market.

The parameters for PERILS Italy were defined in conjunction with the working group. These included: the covered perils, geographical and line-of-business resolution, and the loss reporting threshold and schedule.

Following the two earthquakes which occurred in Emilia-Romagna in May 2012, it was agreed by all of the data providers that loss data from these events should be included. Therefore at the launch of PERILS Italy, in addition to the market-wide exposure information for flood and earthquake, we were also able to make available loss data from the two earthquakes.

The high level of market support is reflected in the fact that well over half of the Italian property market has agreed to supply the requested insurance data to PERILS.

Figure 4: ANIA. *The Italian Insurance Association ANIA was instrumental in facilitating the setup of PERILS in Italy.*

The PERILS Industry Exposure and Loss Database for Italy

The PERILS Industry Exposure Database makes available market-wide property sums insured information for earthquake and flood in Italy. It is based on data collected directly from insurance companies writing property business in Italy. The market data is available per CRESTA zone and property occupancy type, and provides details on building, content and business interruption sums insured, as well as on loss limits and deductibles (see Table 2 and Figure 5).

The PERILS Industry Loss Database makes available market-wide loss information for earthquake and flood events in Italy where the insured industry loss exceeds EUR 30m.

< 0.5m EUR / km²
0.5-1m EUR / km²
1-2m EUR / km²
2-3m EUR / km²
3-5m EUR / km²
5-10m EUR / km²
10-80m EUR / km²

Figure 5: Market-wide flood sums insured in Italy. *The map shows the country-wide property flood sums insured per km² and per CRESTA Zone. The distribution of property sums insured covering earthquake is similar.*

Aggregate Exposure Data - Earthquake Italy - in EUR										
Agricultural and Industrial are included in COMMERCIAL						Total Sum Insured per Coverage			Insurance Condition	
Peril	Country	CRESTA ID	Occupancy Type	Currency	No. of Risks	Buildings Value	Contents Value	BI Value	Loss Limits	Deductibles
EQXX	ITA	ITA.14	COMMERCIAL	EUR	1,281	1,726,616,165	1,227,862,768	105,964,912	1,491,545,274	22,894,478
EQXX	ITA	ITA.14	RESIDENTIAL	EUR	1,173	463,492,663	45,887,695	53,603	273,520,472	37,683,299
EQXX	ITA	ITA.15	COMMERCIAL	EUR	2,387	4,962,314,081	3,189,505,515	469,031,530	3,037,570,542	30,691,820
EQXX	ITA	ITA.15	RESIDENTIAL	EUR	2,158	1,586,889,110	171,535,635	417,727	839,726,116	71,553,352

Table 2: Extract from the Industry Exposure Database for Earthquake Italy. *Market-wide number of risks, sums insured, loss limits and deductible information are given per CRESTA zone and property occupancy type. The format for the database for Flood Italy is identical.*

M5.9 Earthquake Emilia-Romagna (Italy) 20 May 2012 - in EUR - Final Estimate											
						Loss Amounts	Instrumental Intensity INGV		Mean Damage Ratios (Loss in % TSI)		
Peril	Country	CRESTA ID	Occupancy Type	Currency	No. of Losses	All Loss	Minimum	Maximum	All MDR (%)	Affected Risks (%)	Avg Loss
EQXX	ITA	ITA.42	COMMERCIAL	EUR	113	9,689,001	2.53	5.32	0.062422%	2.879512%	85,743
EQXX	ITA	ITA.42	RESIDENTIAL	EUR	38	3,759,461	2.53	5.32	0.130660%	1.312108%	98,933
EQXX	ITA	ITA.43	COMMERCIAL	EUR	14	1,657,134	2.44	4.26	0.012551%	0.467299%	118,367

Table 3: Extract from the Industry Loss Database for the M5.9 Earthquake of 20 May 2012 . *The number of losses, the loss amount, the loss in % of sums insured, as well as maximum and minimum instrumental intensity values are given per CRESTA zone and per Commercial and Residential Property Lines.*

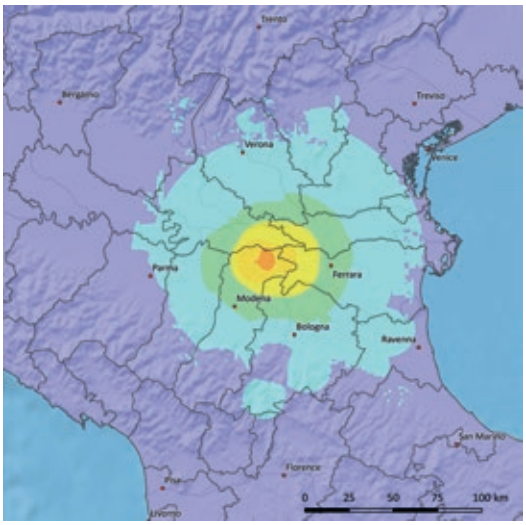
The information is based on data collected directly from insurance companies writing property business in Italy. The current database contains event loss data from the two earthquake events which took place in Emilia-Romagna on 20 and 29 May 2012. As for the Exposure Database, the data resolution is per CRESTA zone (two-digit postal codes = provinces) and per Commercial and Residential Property Lines (see Table 3 and Figure 6, page 7).

The resulting market-wide insured property losses from the two captured earthquake events amount to EUR 802m (20 May 2012) and EUR 436m (29 May 2012), totaling EUR 1.24bn. This makes it the biggest ever insured loss for the Italian market.

The use of the PERILS Database for Italy
Portfolio benchmarking
Market share analysis
Development of new insurance products
Model validation
Structured industry loss triggers
Scenario loss calculation
Solvency II

Table 4: Possible applications of the PERILS Exposure & Loss Database for Italy.

The PERILS Industry Exposure & Loss Database for Italy enables a wide range of applications. These include: exposure and loss market share analysis per CRESTA Zone and property line of business; validation of natural catastrophe models; and the use of the data for the definition of geo-weighted factors for structured industry loss triggers (see Table 4).



III or lower
IV
V
VI
VII
VIII

0.0-0.1m EUR
0.1-1m EUR
1-10m EUR
10-100m EUR
100-500m EUR

Figure 6: Earthquake from 20 May 2012 in Emilia-Romagna.

Top: *Modified Mercalli Shaking Intensity. The map shows MMI shaking intensities as instrumentally determined by the Italian Seismological Service (INGV).*
Bottom: *Property Market Losses per CRESTA Zone. The insured property market loss of the earthquake from 20 May was EUR 802m. A second earthquake which hit the same region on 29 May 2012 generated a market loss of EUR 436m, leading to a total of EUR 1.24bn for both events.*

The entire process of setting up PERILS Italy was a highly efficient one and can be considered a model case. The database meets a real demand from the Italian insurance industry for independent and high quality data on insured natural catastrophe risk. It is hoped that the increased data availability will assist the market in achieving a deeper understanding of Cat risk and will lead to further developments in natural catastrophe insurance solutions.

PERILS looks forward to duplicating the positive experiences it had in Italy as it continues to extend into other new territories.

Outlook

Over the coming month, the PERILS team will be fully focused on our data providers. We aim to visit as many as possible and give them feedback on the data we have collected from them. In addition, we will be visiting potential new data providers to ask them for their support to further enhance our overall market penetration. Our work in this area will not be finished until we have achieved the maximum market coverage possible.

We at PERILS feel privileged to be doing such meaningful work. Being able to provide straightforward, comprehensive data which aids the better understanding and management of Cat risk is very satisfying.

We look forward to the work ahead and are confident that there is still much more that we can achieve.

With our very best regards,

Your PERILS Team

Zurich, May 2013