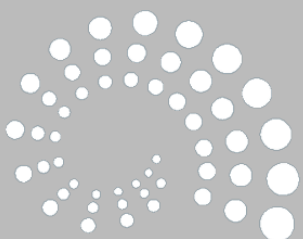




Engineering & Construction Insurance



HELLENIC
ASSOCIATION
OF INSURANCE
COMPANIES

Statistics Survey 2022

Executive Summary

Survey Points

- Records Engineering & Construction figures (number of contracts and claims, sum insured and amount of reimbursements paid and outstanding)
- Analyze reimbursements (paid and outstanding) by cause of claim
- Breaks down insurance premium per distribution channel
- Records the evolution of reimbursements during the last three years

Survey Participation

- 19 Insurance Enterprises
- 95,4% of the total premium production of Property insurance coverages

Survey Findings

	<u>2022</u>	<u>2021</u> (updated)
○ Number of Engineering & Construction Contracts	26,228	25,203
○ Number of reported claims	2,515	3,316
○ Reimbursements paid (€)	3,216,438	5,522,941
○ Outstanding Reimbursements (€)	8,228,025	12,790,111

The research

The Property, Reinsurance, Cargo & Yacht Committee of HAIC, after considering the needs of comprehensive information of insurance companies operating in the field of Engineering & Construction insurance, continued for yet another year the systematic collection of statistical data.

In this context, HAIC has developed a questionnaire, focusing on the statistical determination of both the amount of risk undertaken overall as well as the claims number and the amount of reimbursements for all participating companies.

Therefore, the questionnaire:

- Records Engineering & Construction insurance figures (number of contracts and claims, sum insured and amount of reimbursements paid and outstanding)
- Analyze reimbursements (paid and outstanding) by cause of claim
- Records the evolution of reimbursements during the last three years
- Breaks down insurance premium per distribution channel

Survey of 2022 includes the data of 19 insurance enterprises with establishment status, which are estimated to collect 95.4% of the total premium of property covers, for insurance enterprises operating in Greece.

This report records the cumulative responses of those enterprises that responded to the 2022 survey. The data used came from the specialized questionnaire to which insurance enterprises were invited to respond.

The questionnaire asked for information on the number of insurance contracts, the number of claims and amount of reimbursements for the year 2022. The data for the year 2021 was also updated with a two-year (2021 - 2022) recording of reimbursements and claims. For these figures, an analysis was requested in relation to the type of risk insured, following the grouping of contracts as follows:

- C.A.R. (Contractors All Risks): Contracts providing insurance cover against all risks (except those expressly excluded) for loss or damage to works under construction (e.g. buildings, roads, etc.), construction sites and construction equipment and/or construction machinery, as well as against third party claims for property damage or bodily injury arising in connection with the execution of the work.
- E.A.R. (Erection All Risks): Contracts providing insurance cover against all risks (except those expressly excluded) for loss or damage to erection machinery, factory installations and iron or steel structures of any kind, as well as against third party claims for property damage or bodily injury arising from the execution of the project

- C.P.M. (Contractors' Plant and Machinery): Contracts providing insurance of a contractor's plant and machinery, on an annual basis and on any project on which they are used. Covers any loss or damage (except those specifically excluded), from any cause, occurring while on the job, while off the job or during maintenance. The sum insured is the replacement value of the machine for a new one.
- C.E.C.R (Civil Engineering Completed Risks): Contracts providing insurance civil engineering projects: Insurance cover on civil engineering constructions after completion against named risks. It covers the cost of repair or replacement of material damage, mainly fire risks, risks arising from local geological conditions and risks relating to the design, operation and use of the structure.
- E.E.I. (Electronic Equipment Insurance): Contracts providing insurance coverage against all risks (except those specifically excluded) for loss or damage to electrical and electronic equipment in a facility, at work, when off work, or during maintenance operations. The sum insured is the replacement value of the damaged electrical or electronic equipment with new equipment.
- M.B. (Machinery Breakdown): Contracts providing insurance coverage against all risks (except those specifically excluded) for loss of or damage to machinery and mechanical equipment in a facility, at work, when off work, or during maintenance operations. The insured capital is the replacement value of the damaged machinery with new machinery.

Prior to analyzing the figures in this report, it should be noted that property insurance in general, faces claims which occur irregularly over time, while there is a very high variability in the amount of reimbursements each year, particularly regarding the insurance of catastrophic events, which may not occur regularly, but when they do happen, they are especially costly.

Finally, for the calculation of the total reimbursements amount over the years, account should be taken for the evolution of the number of claims as well as the reimbursements paid over a long period, information that was not known at the time of writing this report.

1. Engineering and Construction Insurance Figures

1.1. Insured risks

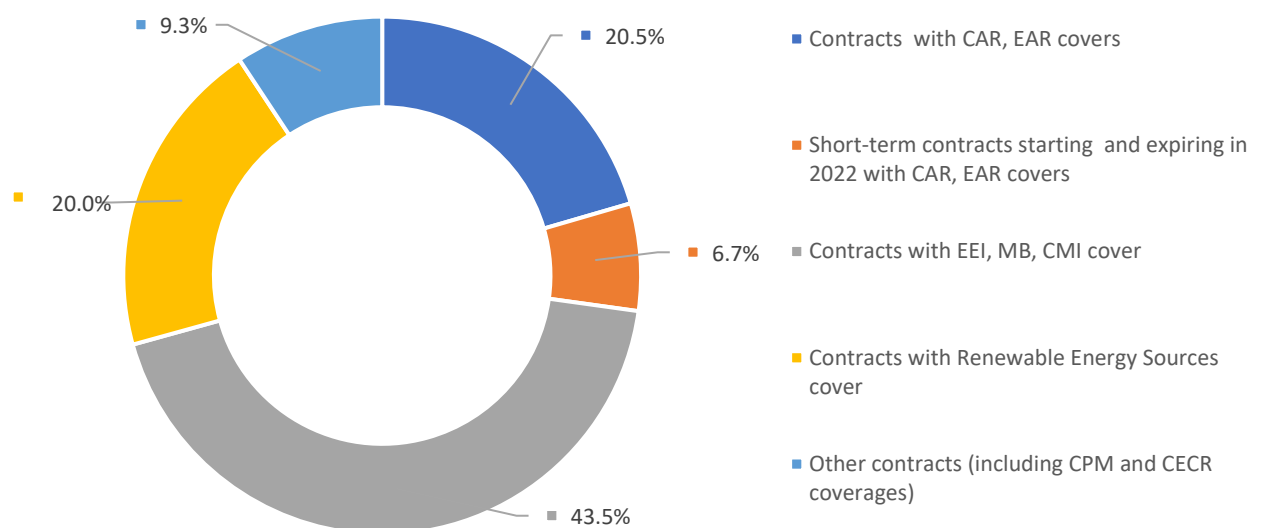
The HAIC survey collected data on 26,228 contracts issued in 2022, some of which remained in force in 2023.

According to the replies of the insurance enterprises, the distribution of these contracts is as follows:

Table 1: Contracts distribution 2022

	Number of Contracts	%
Number of contracts in force at 31.12.2022 with CAR, EAR covers ¹	5,388	20.5%
Number of short-term contracts starting and expiring in 2022 with CAR, EAR covers	1,766	6.7%
Number of contracts issued in 2022 with EEI, MB, CMI cover	11,396	43.5%
Number of contracts issued in 2022 with Renewable Energy Sources cover	5,239	20.0%
Other 2022 contracts (including CPM and CECR coverages)	2,439	9.3%
Total	26,228	100.0%

Figure 1: Number of contracts 2022 share (%)



¹ The abbreviations of the coverages appear on pages 3 - 4 of this report

Along with the survey of the 2022 data, it was requested to update the 2021 data based on the information available on 31/12/2022. The survey aggregated results of the risks covered in 2021 are presented in the table below.

Table 2: Contracts distribution 2021 (updated)

	Number of Contracts	%
Contracts in force at 31.12.2022 with CAR, EAR covers²	5,020	19.9%
Short-term contracts with starting and expiring in 2022 with CAR, EAR covers	1,937	7.7%
Contracts issued in 2022 with EEI, MB, CMI cover	10,385	41.2%
Contracts issued in 2022 with Renewable Energy Sources cover	4,916	19.5%
Other 2022 contracts (including CPM and CECR coverages)	2,945	11.7%
Total	25,203	100,0%

As a result, the 2022 contracts shows an increase in total, of 4.1% compared to the updated 2021 data of the same companies.

² The abbreviations of the coverages appear on pages 3 - 4 of this report

1.2. Distribution Channels

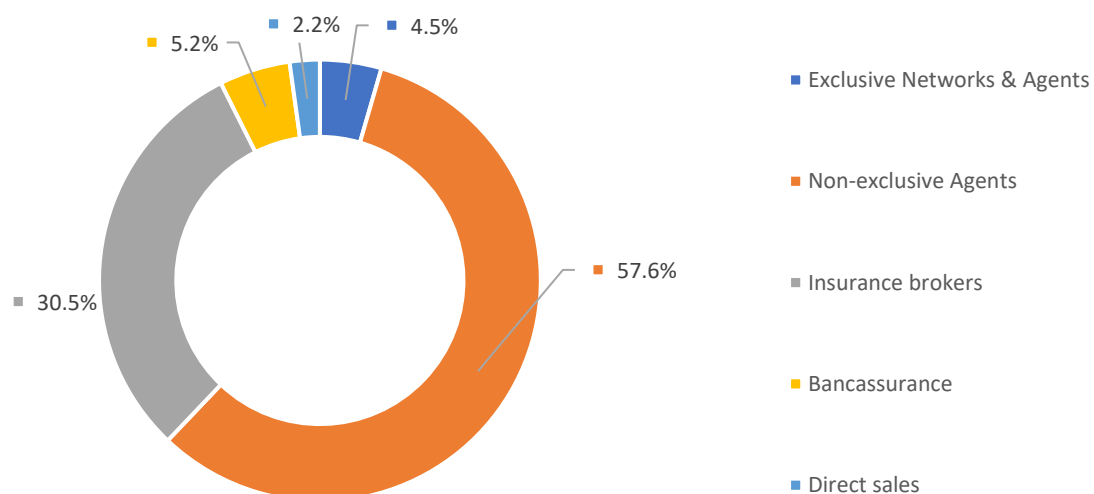
The survey of the premium allocation (including policy fees) per distribution channel for the year 2022 was also conducted in full alignment with Law 4583/2018 "Distribution of Insurance Products".

Distribution channels defined in terms of their form of cooperation (same definition for all HAIC research) are reported as follows: Insurance Intermediaries of exclusive cooperation, Non-exclusive insurance intermediaries, Insurance brokers, Cooperation with banks, Direct sales (mail order sales, insurance employees, internet, call centers), Secondary activity intermediaries (whose main activity is not intermediation of insurance products).

The dominant distribution channel in engineering & construction insurance was non-exclusive cooperation with intermediaries (57.6% of total premium production of the engineering and construction insurance), followed by cooperation with insurance brokers (30.5% respectively).

The percentage share for 2022 of all distribution channels, according to the responses of the insurance companies that participated in the survey, is shown in the figure below.

Figure 2: Distribution channels share (%)



2. Claims - Reimbursements

For insurance contracts issued in 2022 a total of 2,515 claims were reported in 2022. Reimbursements paid within 2022 reached €3.2 million, while outstanding reimbursements reached € 8.2 million on 31/12/2022.

It is noted that the above reported outstanding reimbursements refer to the initial estimation of the first year (2022 year of the insurance contract issuance). Both the number of claims and the final amount of reimbursements for these contracts will vary significantly, when we add the subsequent information for these contracts, that was not available at the time of writing this report, until the expiration of all contracts issued within the year.

2.1. Claims – reimbursements analysis 2022

The aggregated results of the survey regarding the type of the risks covered are presented in the tables and figures below.

Table3: Distribution of claims – reimbursements 2022

	Number of claims	Paid Reimbursements (€)	Outstanding Reimbursements (€)
Contracts with CAR, EAR cover	456	1,437,394	4,821,062
Contracts with EEI, MB, CMI cover	1,365	900,699	1,775,163
Contracts with Renewable Energy Sources cover	431	433,133	653,440
Other contracts (including CPM and CECR coverages)	263	445,212	978,360
Total	2,515	3,216,438	8,228,025

The percentage distribution of total claims number and reimbursements for 2022 is shown in the following table.

Table 4: Percentage distribution of total claims number and reimbursements 2022 (%)

	Number of claims	Paid Reimbursements (€)	Outstanding Reimbursements (€)
Contracts with CAR, EAR cover	18.1%	44.7%	58.6%
Contracts with EEI, MB, CMI cover	54.3%	28.0%	21.6%
Contracts with Renewable Energy Sources cover	17.1%	13.5%	7.9%
Other contracts (including CPM and CECR coverages)	10.5%	13.8%	11.9%
Total	100.0%	100.0%	100.0%

Figure 3: Number of claims 2022 share (%)

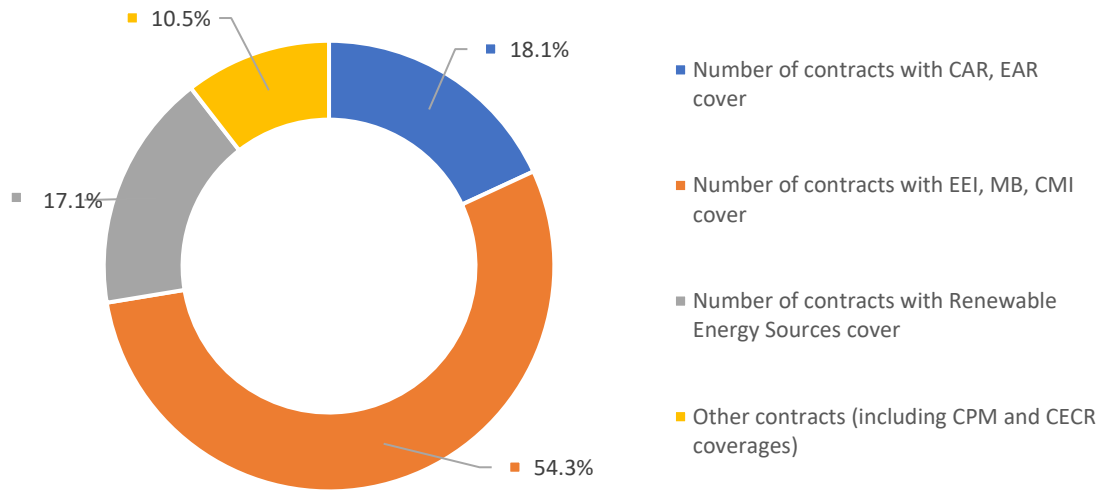
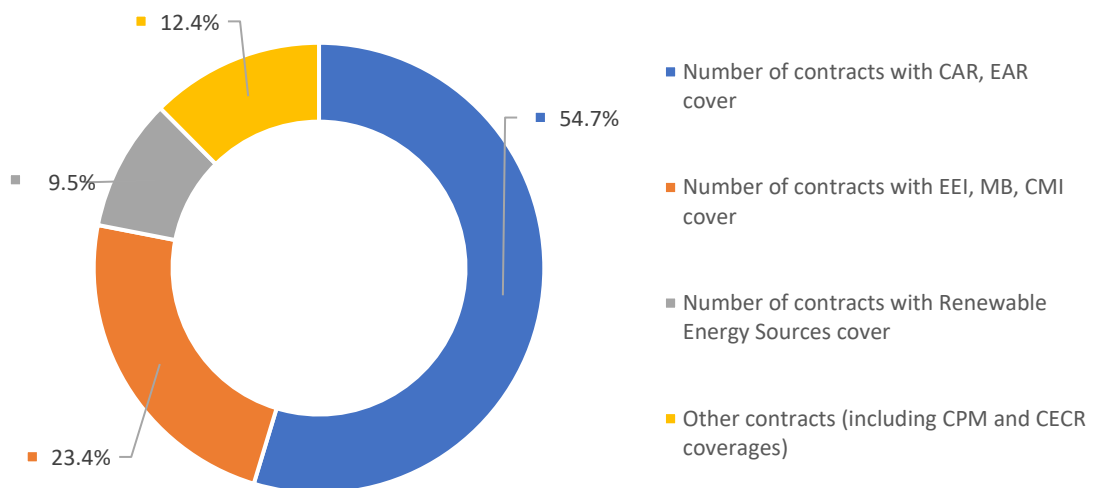


Figure 4: Reimbursements (paid & outstanding) 2022 share (%)



2.2. Claims – reimbursements analysis 2021 (updated)

Along with 2022 research, the updated data for 2021 was requested, based on the information available on 31/12/2022.

The aggregated results of the survey regarding claims and reimbursements for 2021 are presented in the tables below.

Table 5: Distribution of claims – reimbursements 2021 (update)

	Number of claims	Paid Reimbursements (€)	Outstanding Reimbursements (€)
Contracts with CAR, EAR cover	584	1,252,805	5,955,160
Contracts with EEI, MB, CMI cover	2,155	2,664,727	3,525,296
Contracts with Renewable Energy Sources cover	160	200,550	1,031,301
Other contracts (including CPM and CECR coverages)	417	1,404,859	2,278,354
Total	3,316	5,522,941	12,790,111

The percentage distribution of total claims number and reimbursements for 2021 is shown in the following table.

Table 6: Percentage distribution of total claims number and reimbursements 2021 (%) (update)

	Number of claims	Paid Reimbursements (€)	Outstanding Reimbursements (€)
Contracts with CAR, EAR cover	17.6%	22.7%	46.5%
Contracts with EEI, MB, CMI cover	65.0%	48.3%	27.6%
Contracts with Renewable Energy Sources cover	4.8%	3.6%	8.1%
Other contracts (including CPM and CECR coverages)	12.6%	25.4%	17.8%
Total	100.0%	100.0%	100.0%

2.3. Engineering and Construction Insurance ratios calculation

The figures reported in the previous sections were indexed and the results obtained are presented as ratios in the following tables. The ratios used, aim to calculate the technical basis for the insurance of the specific risks undertaken in 2022 by the insurance enterprises surveyed.

For their calculation, it has not been considered (as it was not known) the full cost of reimbursements as this will be formed in the future, as well as any damages that may arise until the expiration of these contracts. Therefore, the calculated indicators should be reassessed in subsequent time, based on more complete information. The indicators used are:

$$\text{Average claims frequency} = \frac{\text{Average reported claims}}{\text{Number of contracts}}$$

$$\text{Average claim cost} = \frac{\text{Claims Paid} + \text{Outstanding Claims}}{\text{Number of Reported claims}}$$

$$\text{Average risk coverage cost} = \text{Average Frequency} * \text{Average claim}$$

or

$$= \frac{\text{Paid claims} + \text{Outstanding claims}}{\text{Number of contracts}}$$

Table 7: Ratios 2022 (first estimation)

	Contracts with CAR, EAR cover	Contracts with EEI, MB, CMI cover	Contracts with Renewable Energy Sources cover	Other contracts (including CPM and CECR coverages)	Total
Average Claim (€)	13,725	1,960	2,521	5,413	4,550
Claims Frequency (%)	6.37%	11.98%	8.23%	10.78%	9.59%
Average cost of risk coverage (€)	875	235	207	584	436

Respectively, according to the updated 2021 survey data, the 2021 indicators are recalculated as follows.

Table 8: Ratios 2021 (update)

	Contracts with CAR, EAR cover	Contracts with EEI, MB, CMI cover	Contracts with Renewable Energy Sources cover	Other contracts (including CPM and CECR coverages)	Total
Average Claim (€)	12,342	2,872	7,699	8,833	5,523
Claims Frequency (%)	8.39%	20.75%	3.25%	14.16%	13.16%
Average cost of risk coverage (€)	1,036	596	251	1,251	727

2.4. Reimbursements analysis by cause of claim

The causes of engineering and construction insurance claims are analyzed below, separately for the number of reported claims, reimbursements paid and outstanding reimbursements at the end of 2022. In terms of causes, the following are considered separately: fire, natural perils, electrical damage (lightning, short circuit, etc.), civil liability and other causes. Regarding the causes of claims included in other causes, indicative examples are: theft, ground subsidence, collapse, malicious acts, defective material, and machinery breakdown.

Table 9: Number of claims by cause, year 2022

	Fire	Natural Perils	Electrical Damage	Civil Liability	Other causes	Total
Contracts with CAR, EAR cover	5	22	-	162	267	456
Contracts with EEI, MB, CMI cover	2	6	-	-	1.357	1,365
Contracts with Renewable Energy Sources cover	2	54	350	-	25	431
Other contracts (including CPM and CECR coverages)	1	14	-	-	248	263
Total	10	96	350	162	1,897	2,515

Table 10: Percentage distribution of claims by cause, year 2022

	Fire	Natural Perils	Electrical Damage	Civil Liability	Other causes	Total
Contracts with CAR, EAR cover	1.1%	4.8%	-	35.5%	58.6%	100.0%
Contracts with EEI, MB, CMI cover	0.1%	0.4%	-	-	99.5%	100.0%
Contracts with Renewable Energy Sources cover	0.5%	12.5%	81.2%	-	5.8%	100.0%
Other contracts (including CPM and CECR coverages)	0.4%	5.3%	-	-	94.3%	100.0%
Total	0.4%	3.8%	13.9%	6.4%	75.5%	100.0%

Table 11: Reimbursements paid by cause, year 2022 (€)

€	Fire	Natural Perils	Electrical Damage	Civil Liability	Other causes	Total
Contracts with CAR, EAR cover	535,936	191,560	-	131,639	578,259	1,437,394
Contracts with EEI, MB, CMI cover	19,124	2,230	-	-	879,345	900,699
Contracts with Renewable Energy Sources cover	-	141,804	253,550	-	37,779	433,133
Other contracts (including CPM and CECR coverages)	338	25,254	-	-	419,620	445,212
Total	555,398	360,848	253,550	131,639	1,915,003	3,216,438

Table 12: Percentage distribution of reimbursements paid by cause, year 2022

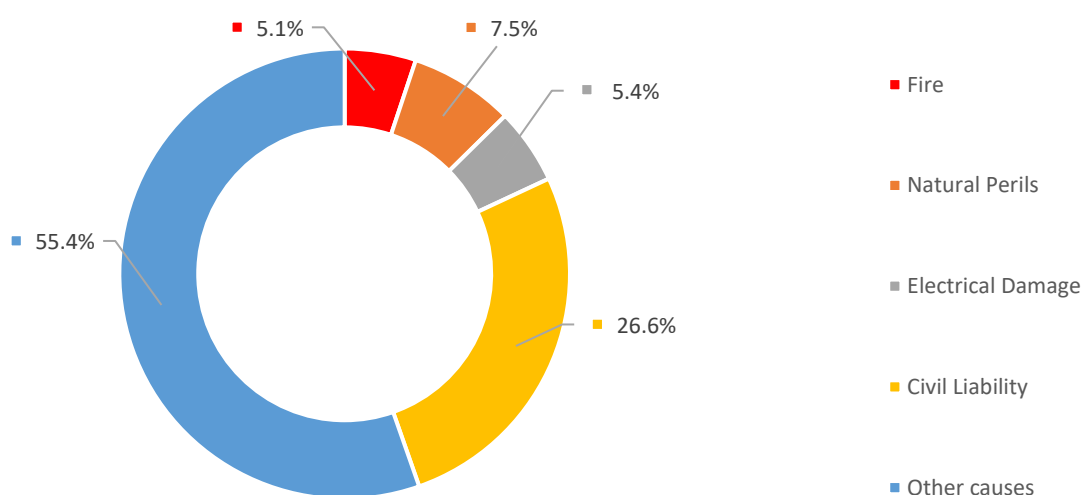
	Fire	Natural Perils	Electrical Damage	Civil Liability	Other causes	Total
Contracts with CAR, EAR cover	37.3%	13.3%	-	9.2%	40.2%	100.0%
Contracts with EEI, MB, CMI cover	2.1%	0.2%	-	-	97.7%	100.0%
Contracts with Renewable Energy Sources cover	-	32.7%	58.6%	-	8.7%	100.0%
Other contracts (including CPM and CECR coverages)	0.1%	5.7%	-	-	94.2%	100.0%
Total	17.3%	11.2%	7.9%	4.1%	59.5%	100.0%

Table 13: Outstanding reimbursements by cause, year 2022 (€)

€	Fire	Natural Perils	Electrical Damage	Civil Liability	Other causes	Total
Contracts with CAR, EAR cover	6,401	202,511	-	2,911,732	1,700,418	4,821,062
Contracts with EEI, MB, CMI cover	3,027	59,224	-	-	1,712,912	1,775,163
Contracts with Renewable Energy Sources cover	13,750	151,512	368,882	-	119,296	653,440
Other contracts (including CPM and CECR coverages)	7,500	85,424	-	-	885,436	978,360
Total	30,678	498,671	368,882	2,911,732	4,418,062	8,228,025

Table 14: Outstanding reimbursements percentage distribution by cause, year 2022

	Fire	Natural Perils	Electrical Damage	Civil Liability	Other causes	Total
Contracts with CAR, EAR cover	0.1%	4.2%	-	60.4%	35.3%	100.0%
Contracts with EEI, MB, CMI cover	0.2%	3.3%	-	-	96.5%	100.0%
Contracts with Renewable Energy Sources cover	2.1%	23.2%	56.4%	-	18.3%	100.0%
Other contracts (including CPM and CECR coverages)	0.8%	8.7%	-	-	90.5%	100.0%
Total	0.4%	6.1%	4.5%	35.3%	53.7%	100.0%

Figure 5: Reimbursements percentage distribution (paid + outstanding) by cause, year 2022

From the above figures, the average reimbursement ratios per cause of claim are calculated. It should be noted that in the table below, the average ratios are calculated on the total number of contracts for each group of cover, which means that they do not refer to a specific cover or package of covers.

Their calculation does not take into account (as it was not known) the full cost of reimbursement as it will be formed in the future, as well as any claims incurred up to the expiry date of the specific contracts.

Table 15: Average reimbursement calculation, year 2022(€)

€	Fire	Natural Perils	Electrical Damage	Civil Liability	Other causes	Total
Contracts with CAR, EAR cover	108,468	17,912	-	18,786	8,534	13,725
Contracts with EEI, MB, CMI cover	11,075	10,242	-	-	1,910	1,960
Contracts with Renewable Energy Sources cover	6,875	5,432	1,778	-	6,283	2,521
Other contracts (including CPM and CECR coverages)	7,838	7,906	-	-	5,262	5,413
Total	58,608	8,953	1,778	18,786	3,338	4,550

Respectively, according to the updated survey data for 2021, the average reimbursement for the year 2021 is recalculated as follows:

Table 16: Average reimbursement calculation, year 2021 (€) (update)

€	Fire	Natural Perils	Electrical Damage	Civil Liability	Other causes	Total
Contracts with CAR, EAR cover	46,169	48,852	-	14,684	5,443	12,342
Contracts with EEI, MB, CMI cover	20,000	6,875	-	-	2,740	2,872
Contracts with Renewable Energy Sources cover	10,500	23,982	2,859	-	9,442	7,699
Other contracts (including CPM and CECR coverages)	207,884	6,089	-	-	5,361	8,833
Total	77,461	25,784	2,859	14,684	3,456	5,523

3. Total portfolio reimbursements evolution

3.1. Recording of reimbursements per underwriting year

The tables below show the evolution of reimbursements by year of issue of insurance contracts for the engineering and construction insurance sector. The data relate to the amounts of reimbursements, paid and outstanding, for the last three years (2020 - 2022). Their collection is intended to monitor the "maturity" of reimbursements over time in terms of their amount. The available data, in terms of duration of the coverage period, are currently not sufficient to give a full insight into the evolution of the figures in the future. According to the statistical treatment of the three years' reimbursements (2020-2022), it appears that the reimbursements at the end of the second year from the year of issue evolve with a factor of 2.34 (first estimate).

Table 17: Reimbursements paid (€)

		Payment Year ³		
Underwriting year	€	2020	2021	2022
	2020	1,400,905	7,040,510	4,960,414
	2021		1,000,214	5,703,303
	2022			1,790,663

Table 18: Year-end outstanding reserves (€)

		Outstanding year ⁴		
Underwriting year	€	2020	2021	2022
	2020	8,848,509	16,694,914	9,237,280
	2021		7,698,532	12,756,563
	2022			6,266,790

³ For contracts issued in 2020, the paid reimbursements in 2020, in 2021 and 2022 etc.

⁴ For contracts issued in 2020, the reserves of outstanding claims at the end of 2020, of 2021 and 2022 etc.

Table 19: : Gross paid reimbursements (€) – Cumulative basis

		Payment Year		
Underwriting year	€	2020	2021	2022
	2020	1,400,905	8,441,415	13,401,829
	2021		1,000,214	6,703,518
	2022			1,790,663

Table 20: Gross paid (cumulative) and outstanding reimbursements (€)

		Payment Year		
Underwriting year	€	2020	2021	2022
	2020	10,249,415	25,136,329	22,639,109
	2021		8,698,746	19,460,080
	2022			8,057,453

25 October 2023