



Global Market Stats & Benchmarking 2022

announced @ 52nd IMIA conference Vienna, 2019

IMIA Indices

IRCI

ILORI

IMLI

IToL

Rate Change

Loss Ratio

Mega Loss

Type of Loss



PWG Data&Statistics



IRCI / ILORI / IMLI / ITOL

In accordance with IMIA's Anti Trust Statement

Anti Trust Statement

Anti-Trust Compliance Statement

Representatives of companies or trade associations participating in The International Association of Engineering Insurers (IMIA) are advised to bear in mind that their respective companies or the members of their respective associations are competitors in the marketplace outside their activities as participants in IMIA. Accordingly, company representatives and members of trade associations may discuss issues of a qualitative nature such as the impact of new legislation. However, they should exercise great care in discussing matters unrelated to IMIA policies or other proper business matters affecting IMIA.

1. Anti-Trust Laws

1. Purpose. The purpose of Anti-trust legislation is to maintain free enterprise through fair competition. Agreements, understandings or concerted practices between competitors which (a) fix purchase or selling prices or other trading conditions, (b) limit or control production, markets, technical development, or investment or not compete in certain geographical areas or markets, (c) boycott actual or potential customers or suppliers or apply dissimilar conditions to equivalent transactions with other trading parties, (d) engage in a tying arrangement (i.e. agreement by a party to sell a product or service only if the buyer also buys a different (tied) product or service), and (e) share markets or sources of supply may be anti-competitive in various jurisdictions.
2. Applicable Laws. Most countries have published and enforced anti-trust laws. They may apply to actions or agreements entered into abroad as well as domestically. Infringement of anti-trust laws may result in (a) fines against both the IMIA, its members and any trade associations (b) criminal sanctions and/or disqualification as a company director and (c) damages to injured third parties and (d) void or unenforceable agreements.
3. IMIA Policy. IMIA recognises the importance of compliance with those anti-trust laws which are applicable to members of the IMIA. These laws generally prohibit underwriters from entering into any agreement, understanding or concerted practice, express or implied, on matters affecting rates or conditions of insurance. It is the policy of the IMIA to require its Members, Officers and all participants in IMIA activities to honour and abide by these prohibitions in all respects.

2. Anti-Trust Guidelines for IMIA Members, Officers and Participants in all IMIA Activities The following specific guidelines should be observed:

1. Written Agenda. All IMIA meetings, including working groups, should have a written agenda. At the opening of each work session, the chairperson ought to make reference to this anti-trust document. Accurate and detailed minutes of each meeting (including reference to anti-trust guidelines) should be published. As a general rule, all involved should adhere to the written IMIA meeting agenda.
2. Rates. All involved should not discuss or exchange information on their respective companies' intentions concerning rates (including "pure premium") and should not pressure other companies to raise rates or use a particular rate or cost factor as a "benchmark" in setting rates.
3. Underwriting Guidelines. There should be neither discussion nor exchange of information between the participants about the underwriting guidelines of their respective companies.
4. Policy Forms. All involved should not discuss what specific terms are appropriate in particular policies, such as provisions governing the coverage trigger, limits, exclusions or types of risks covered, which are all elements of competition between companies.
5. Claims. All involved should not disclose their individual claims adjustment and cost containment practices.
6. Reinsurance. All involved, whether primary carriers or reinsurers, should not disclose their plans for negotiating renewals, existing reinsurance arrangements purchased or provided by their companies.
7. Markets. There should be no discussion of what market response companies should make, or threaten to make, in reaction to changes in governmental regulation. Specifically, there should be no suggestion that companies withdraw from a particular class of customers in order to induce, deter, or retaliate against such governmental action.
8. Relationship with Distributors. All involved should not discuss their individual plans regarding competitively sensitive matters in this area.
9. Report. All instances of meetings where the matters covered in this Appendix are raised or attempted to be raised should be reported to IMIA and to your respective company. If you are unsure or in doubt about what you can and cannot discuss at IMIA meetings, please take independent advice from your legal advisers before attending.



IMIA – PWG Data & Statistics Team

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Francesca De Rosa -
AXA XL
IMIA D&S PWG Chair



Florian Fuchsbrunner -
Munich Re
IMIA D&S PWG IRCI &
ILORI



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Shahrokh Shahpoori
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Theodore Rodriguez
Da Costa - Liberty
Specialty Markets
IMIA D&S ITOL



Arne Ziegert - Swiss
Re CorSo
IMIA D&S ITOL

Vision

“IMIA makes the complex engineering insurance market tangible”

Mission

“IMIA & PERILS produce reference points which help the engineering insurance markets to benchmark their activities”



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IMIA Mission

IMIA - with the support of Perils - serve Members by producing reference points which help the engineering insurance markets to benchmark their activities

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IMIA Indices - What's in for me?

Learn to sail



**ILORI – IMIA
Loss Ratio Index**

**IRCI – IMIA Rate
Change Index**

**ILORI – IRCI
Correlation**

**IMLI – IMIA Mega
Loss Index**

**ITOL – IMIA Type
of Loss**

Profitability

Portfolio Construction

Strategy

Risk Management

Guidelines





IMIA Indices - What's in for me?

Learn to sail



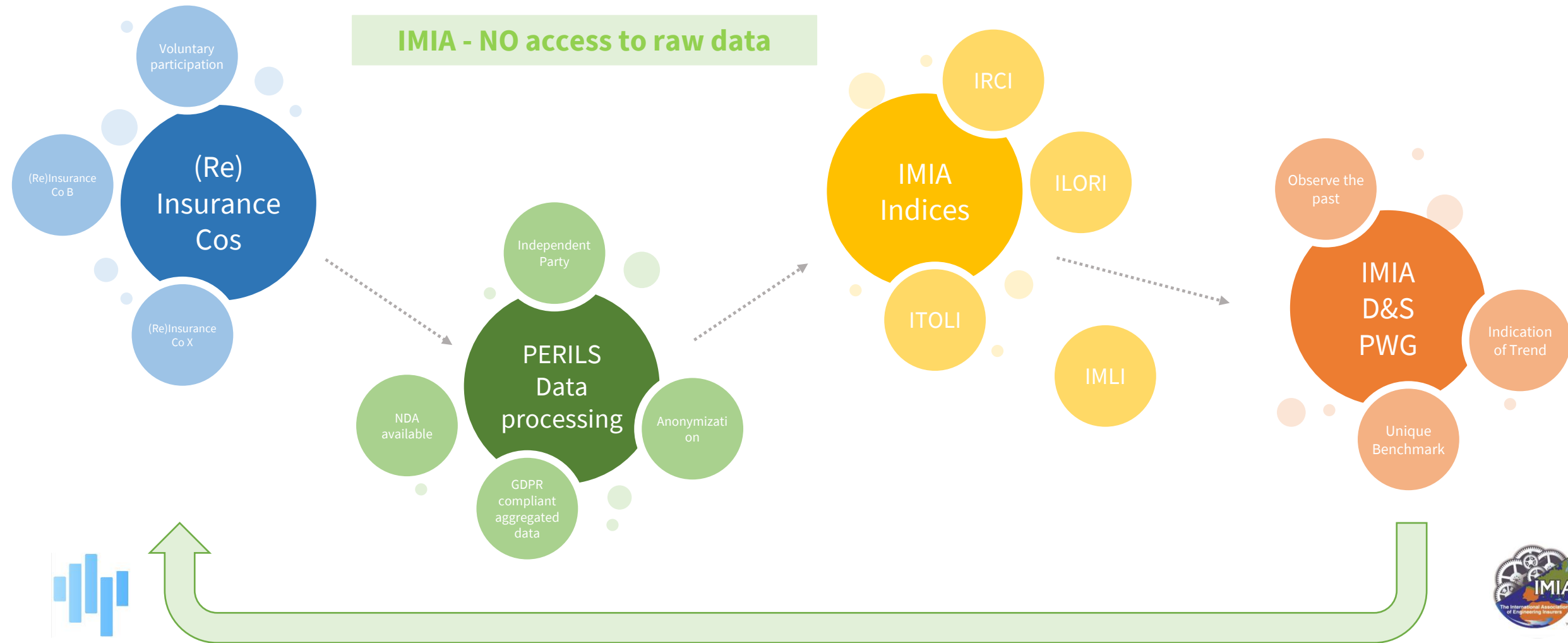
You can't stop the waves, but you can learn to sail

Meditation teacher



IRCI / ILORI / IMLI / ITOL Process

In accordance with data protection & antitrust law





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IMIA PWG Data and Statistics News and Survey findings 2022 Overview



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IMIA Indices – Data Overview

2021 vs 2022



2.5bn

USD submitted GWP
+ 21% in 2022, compared to USD
 2.1bn in 2021

+ 28%

participants in 2022

	2021	2022
Territorial scope		
Regional	19%	21%
Global	81%	79%

Key Takeaways – Data

- Strong growth of analyzed data
- Consistent database
- Market relevance
- Lead vs Follow change

More Lead (>50%)	55%	51%
More Follow (>50%)	11%	23%

LEG member	2021	2022
Yes	13	13
No	10	10

~25bn

USD Global market premium
 in line with 2021

~10%

of Global GWP analyzed by IMIA
 D&S





IMIA Indices – Data Overview

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Global	81%	79%
IAR/OAR included		
Yes	80%	73%
No	20%	16%
Portfolio split		
Direct & Fac Mrkt	74%	83%
Treaty Market	26%	17%
Lead or Follow (wghtd%)		
More Lead (>50%)	89%	67%
More Follow (>50%)	11%	23%
LEG member		
Yes		13
No		10

~25bn

USD Global market premium
 in line with 2021

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of Global GWP analyzed by IMIA
 D&S





Poll

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Given IMIA Survey market Premium is between USD 20bn and 30bn and assuming that CAR/EAR is around half of it, what portion of Construction premium is Mega Losses?

- Below 5%
- 5% - 10%
- More than 10%





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IRCI

The established qualitative UWY market rates benchmark



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IRCI – Where do we stand?

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Poll results:
Do you believe your portfolio is earning better rates than the market?

Do you know the market rates?



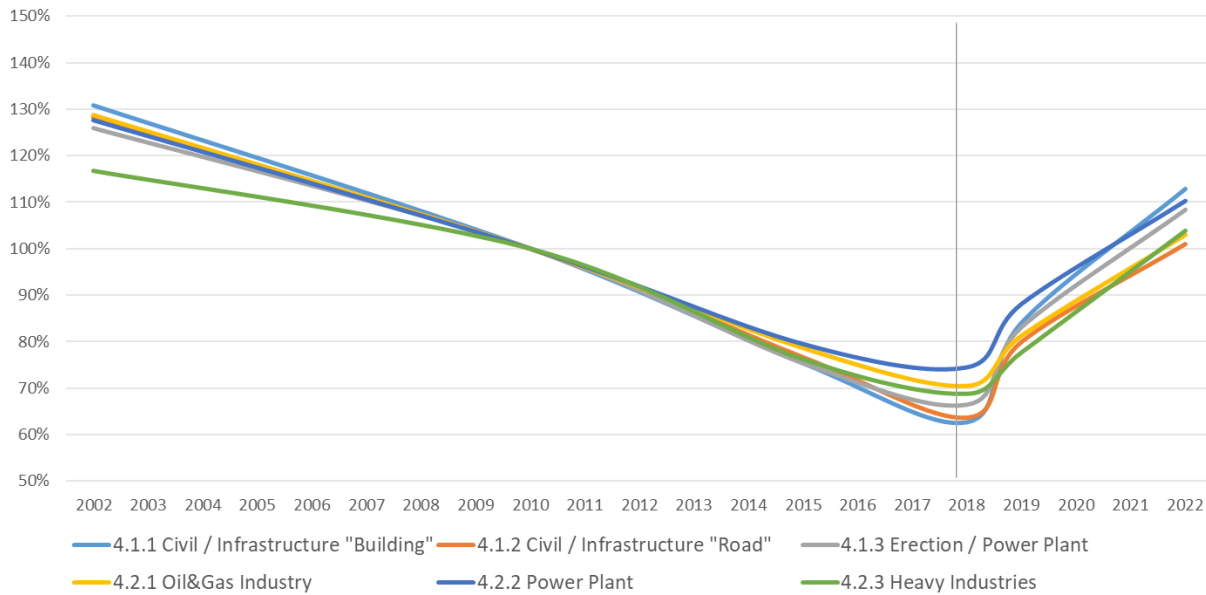


IRCI – Global Increases & Regional Stagnation



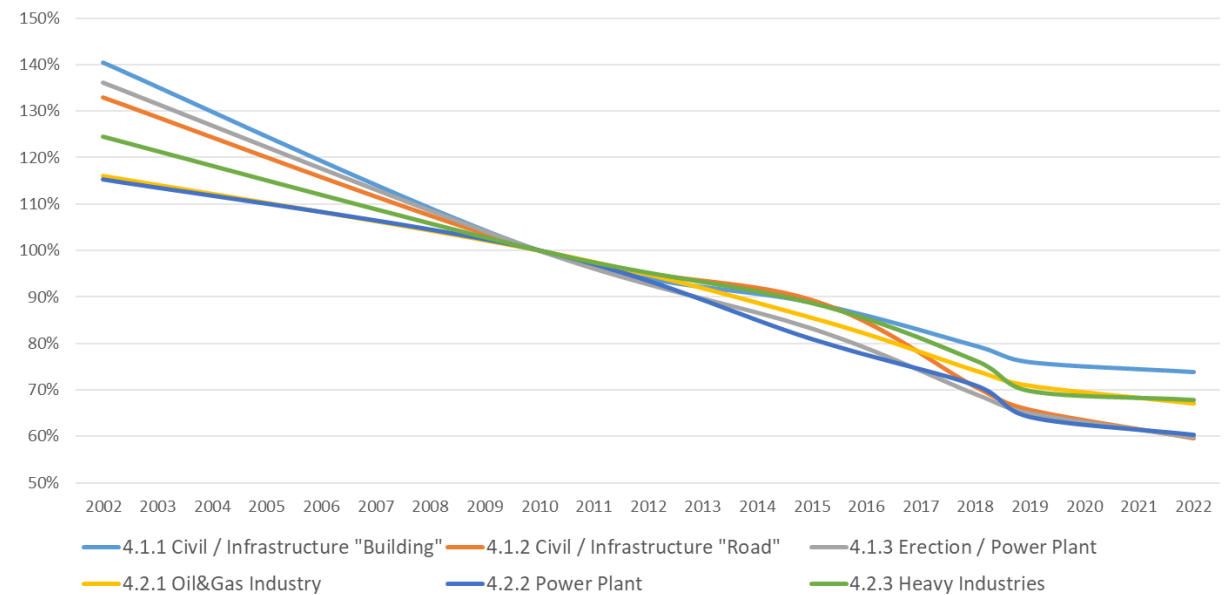
Global

Rate Level Index 2022 (2010 = 100%)



Regional

Rate Level Index 2022 (2010 = 100%)



Have global rates recovered enough?





IRCI – Consistency of data

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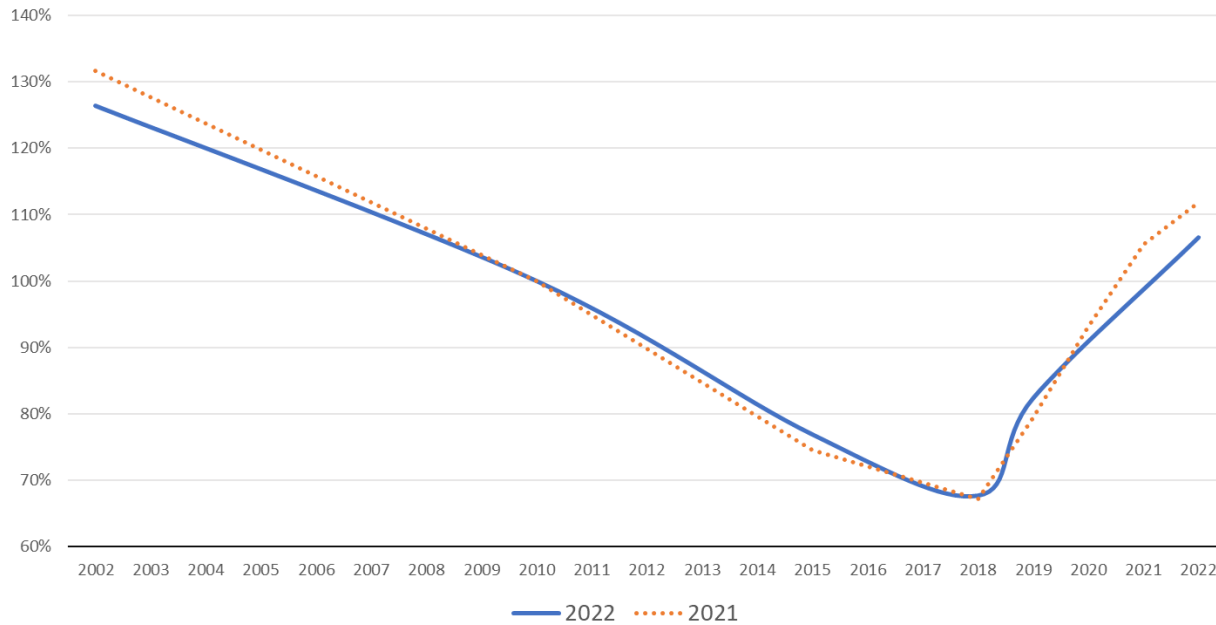
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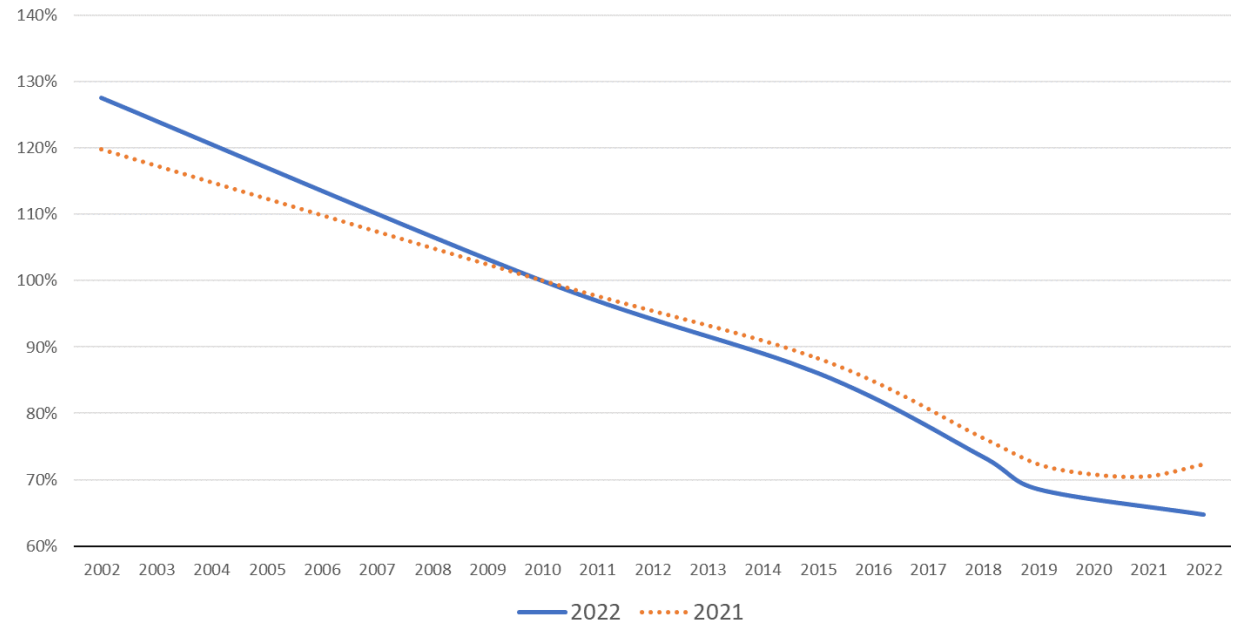
Global

Rate Level Index 2022 vs 2021 (2010 = 100%)



Regional

Rate Level Index 2022 vs 2021 (2010 = 100%)



Thank you for your contributions to the Survey!





IRCI – Do we believe the data?

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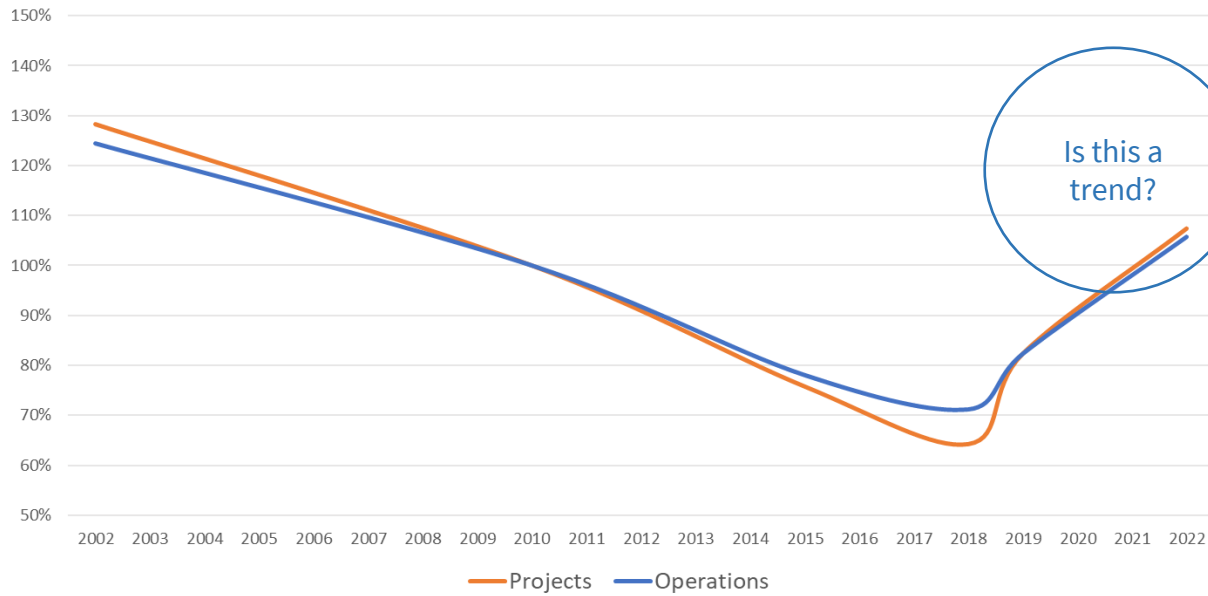
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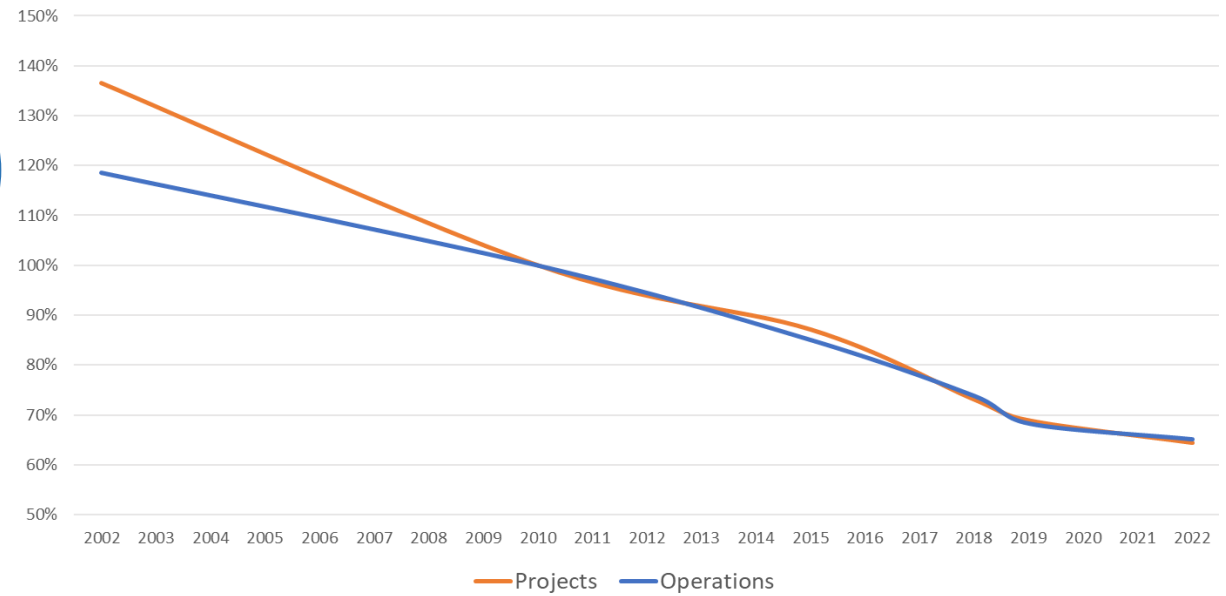
Global

Rate Level Index 2022 Projects vs Operations (2010 = 100%)



Regional

Rate Level Index 2022 Projects vs Operations (2010 = 100%)



Should we expect project rates to increase more than operation rates?





IRCI – How can we improve the story?

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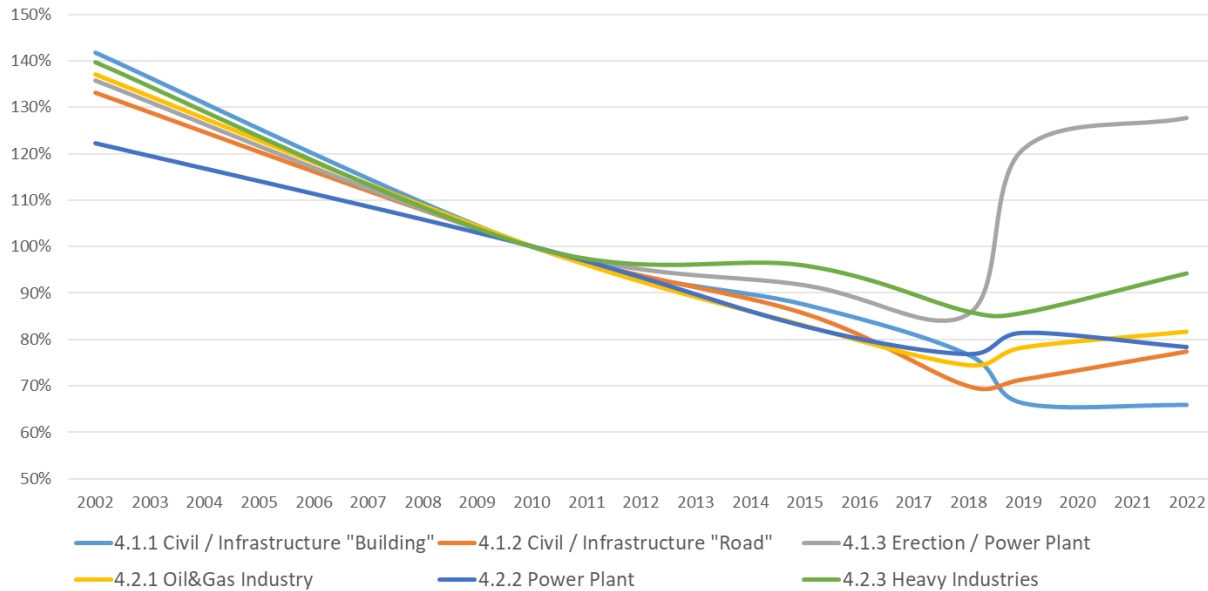
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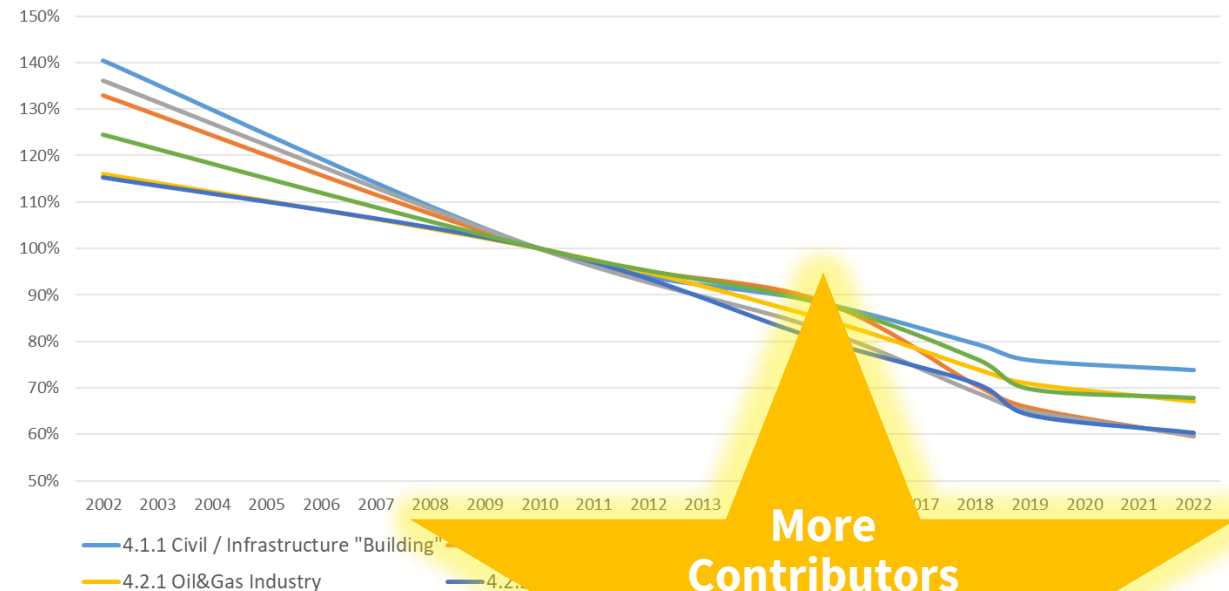
Regional – original data (7)

Rate Level Index 2022 (2010 = 100%)



Regional – outlier removed (6)

Rate Level Index 2022 (2010 = 100%)



More Contributors = Better Analysis

The impact of 1 contributor can be significant!

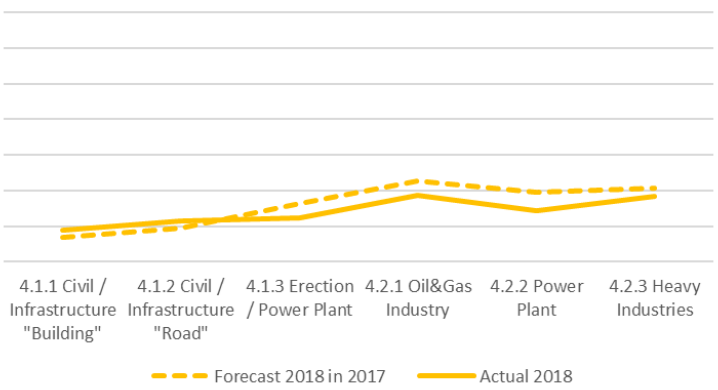




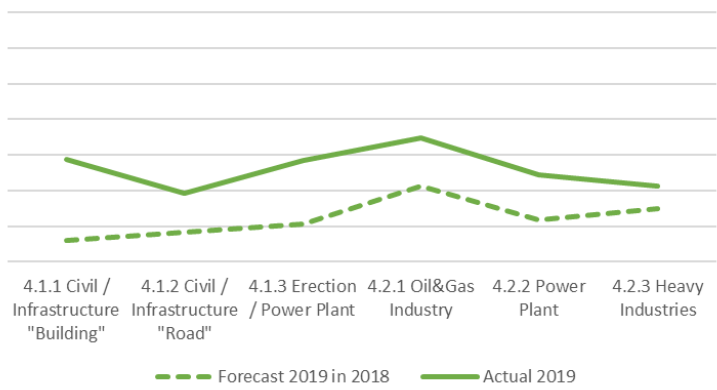
IRCI – How accurate are our forecasts?



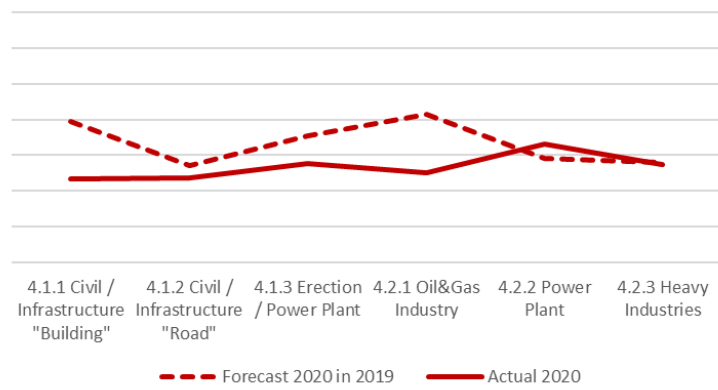
Actual vs Forecast 2018



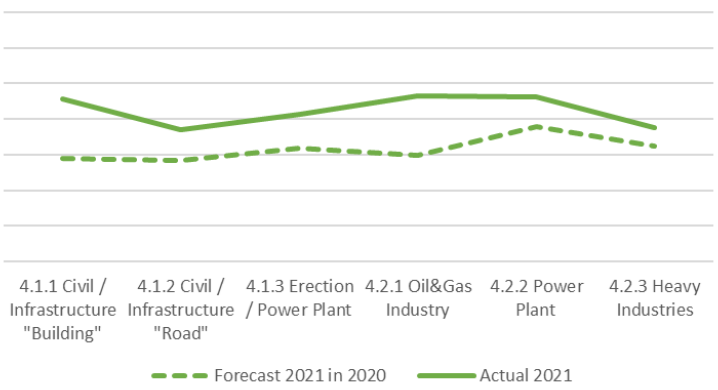
Actual vs Forecast 2019



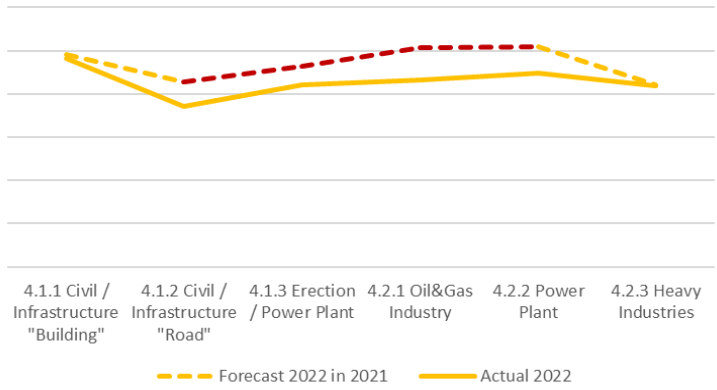
Actual vs Forecast 2020



Actual vs Forecast 2021



Actual vs Forecast 2022



How does the market adjust expectations after big events?

When is the market more optimistic/pessimistic/on target?

Is it more difficult to predict rates in a hardening market?



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ILORI

The established market Loss Ratio benchmark



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Poll ILoRI



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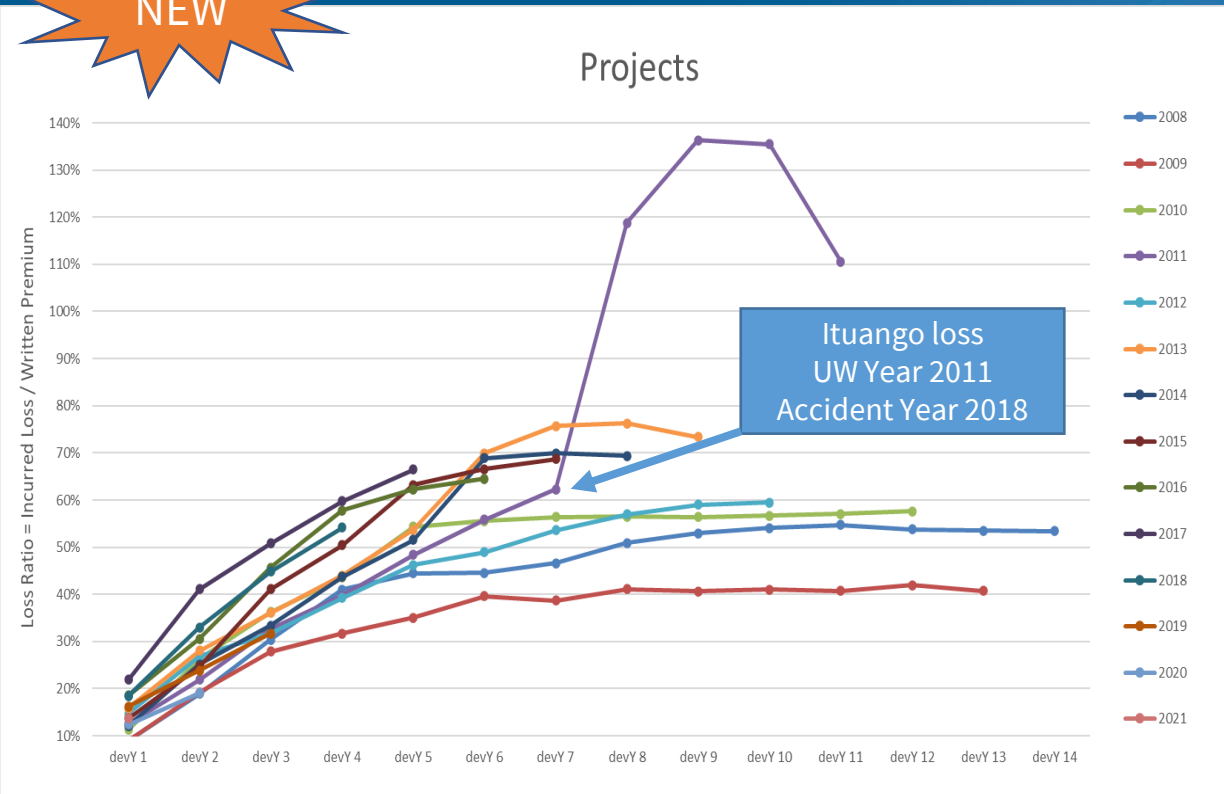
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What do you expect the tail of Projects business to be?

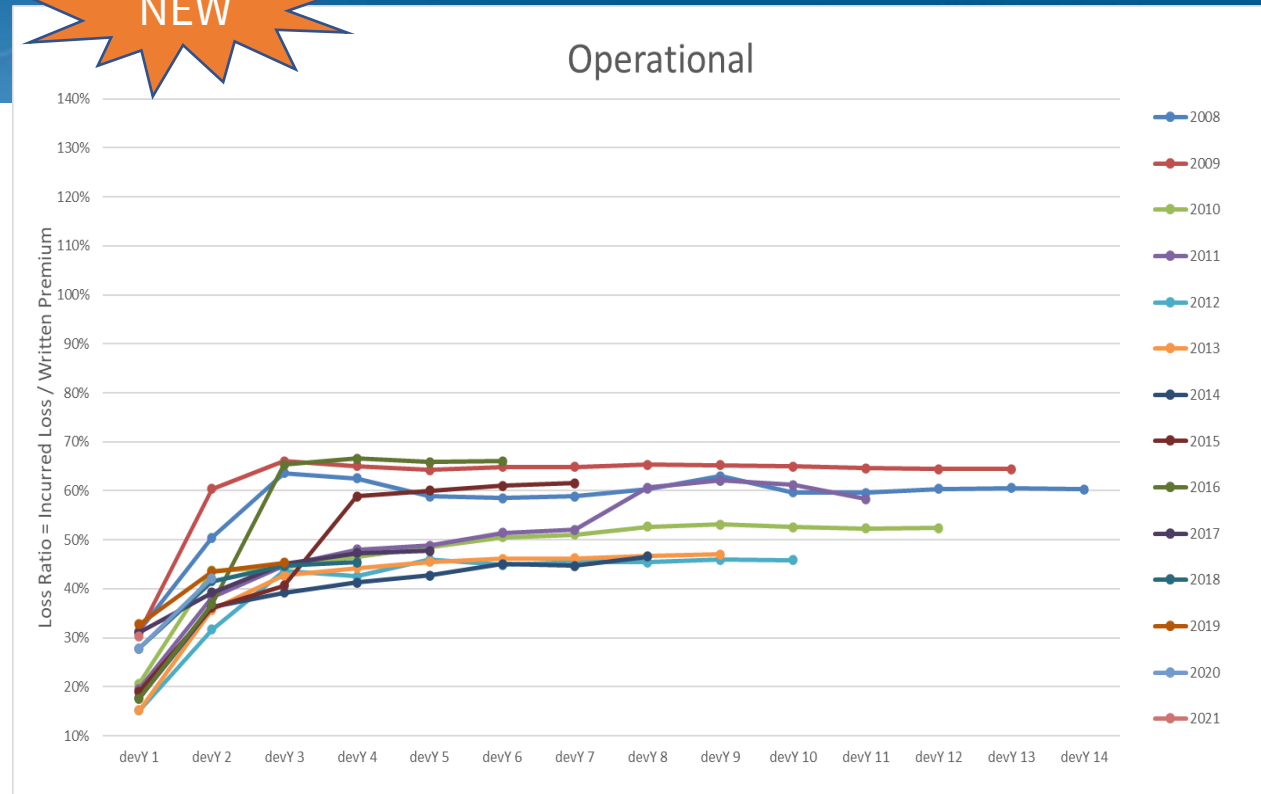
- 2 to 4 years
- 5 to 8 years
- > 8 years

ILoRI – Loss Ratio development

NEW



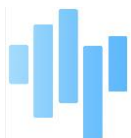
NEW



KEY TAKE-AWAYS:

- “jumps” in development driven by Large Losses e.g. 2011 for Projects
- Projects show longer development pattern than Operational policies (long tail vs short tail)
- Surprising late development on the Operational triangle

**Projects
tail:
8+ years**



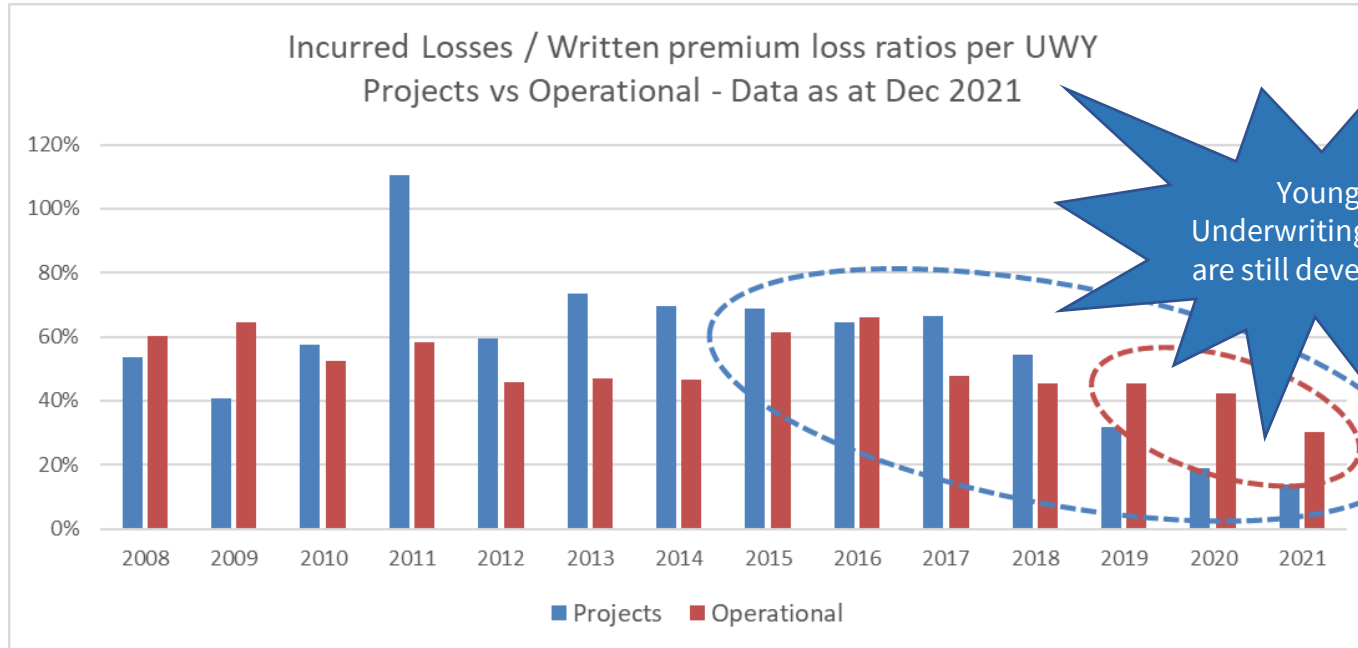


ILoRI – Where will it land?

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Young Underwriting years are still developing

KEY TAKE-AWAYS:

- Projects show higher loss ratios than Operational business
- Projects: UYW 2015 to 2017 already show loss ratio above 60% and are expected to further develop
- Young Underwriting Years have not reached ultimate yet, especially for Projects





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IRCI - ILORI

Correlation between indices

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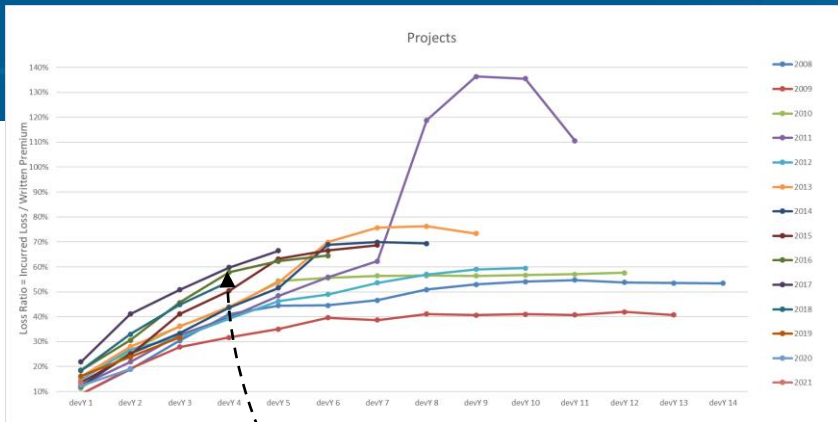
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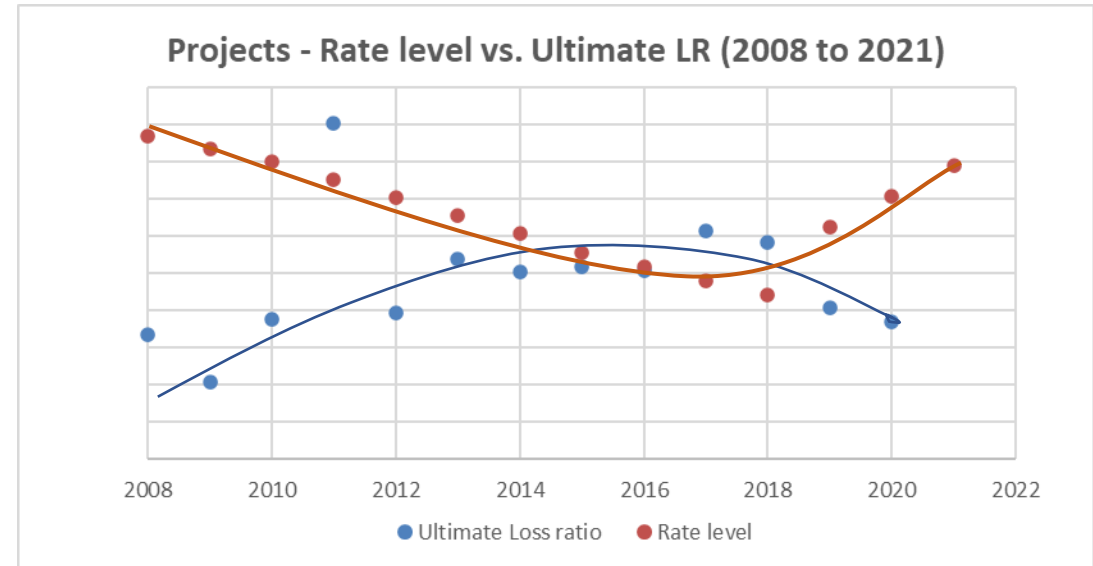
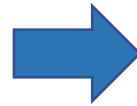
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Correlation between Loss Ratio and Rate Change



Projects



KEY TAKE-AWAYS:

- 2018 UWY shows the lowest Rate level and high Incurred Loss Ratio to date (55%)
- Rate change increasing steadily since 2018

- Negative correlation between Rate Level and Ultimate Loss ratio
- Correlation less clear on Operational policies than Projects



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IMLI

The established Mega Loss Index



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Mega Loss Data Base



FGU losses xs \$30m since 1990ies

About 137 losses in total USD 12.38

CAR/EAR Agg. Losses *per UWY & Occ. Year*

Best estimate figures FGU.

Split by

- NATCAT
- Geography
- Type of Loss
- Type of Risk

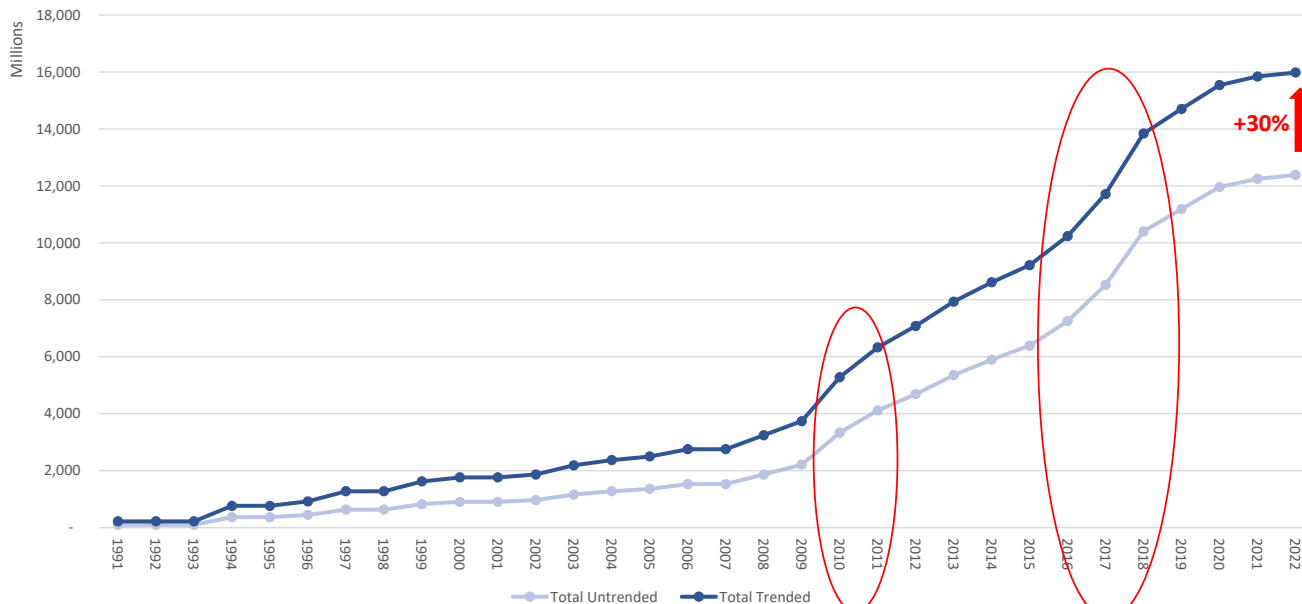


Mega Loss Accumulative Curve

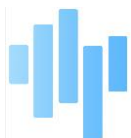
Is this trend going to stop? How much inflation will impact?



Accumulative Incurred Mega Losses



- 2010 & 2011 higher larger loss activities than average before 2010
- No reaction from market
- 2016-2018 frequency and severity of large losses increased sharply
- 2018 onwards market hardening plus low construction activities because of Covid-19
- **The trended mega losses is about 30% higher than loss amounts**





Increase CAR/EAR Mega Losses/Occurrence Year

Financial year results remain under pressure



90%

of aggregate losses are PD

6.7 times

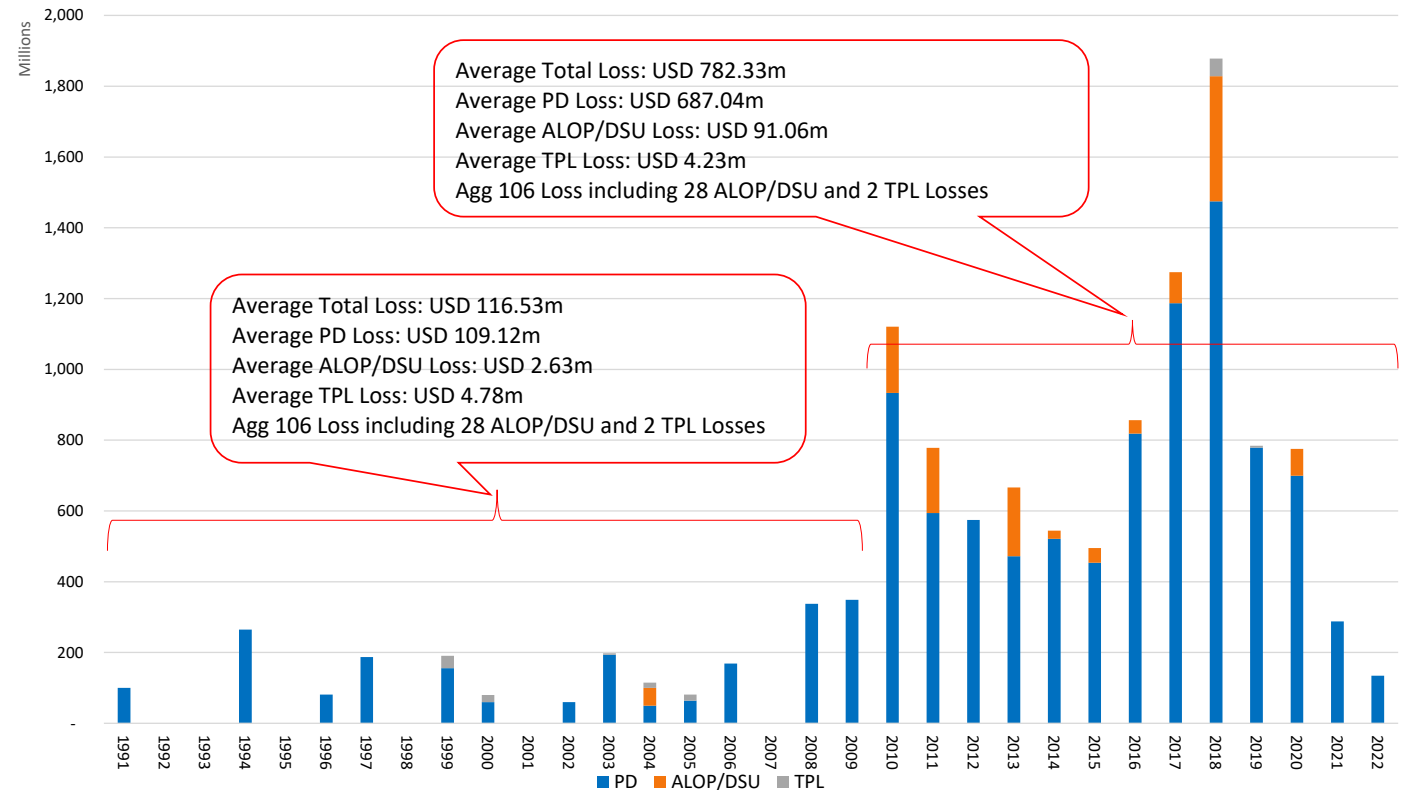
More Average per year losses

34.6 times

More Average per year ALOP/DSU losses



Untrended Losses on Occurance Year Basis





Increase CAR/EAR Mega Losses/Occurrence Year

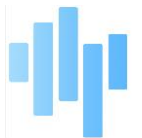
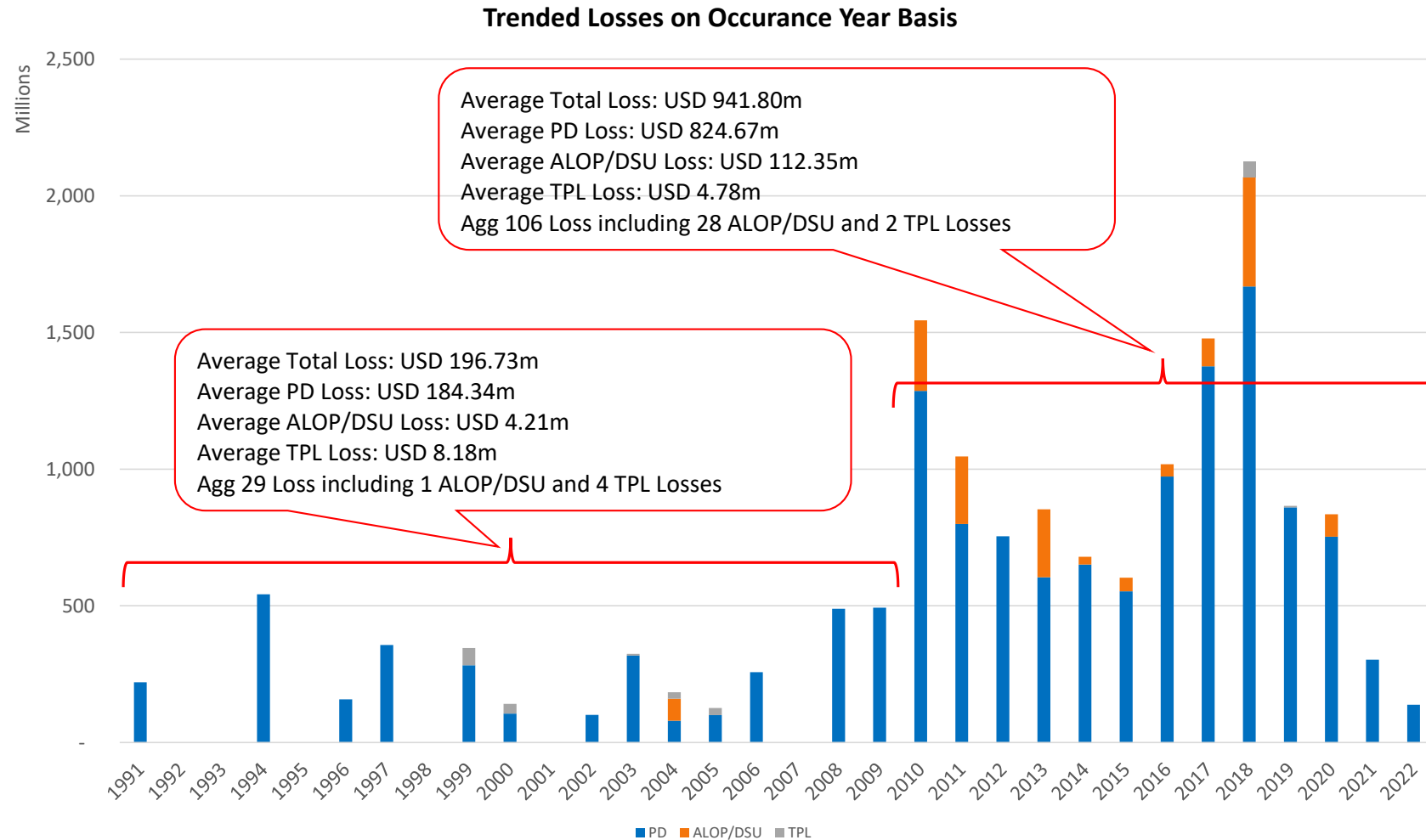
Financial year results remain under pressure



Mega Losses

7%-10%

of Construction market premium



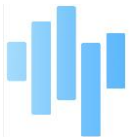
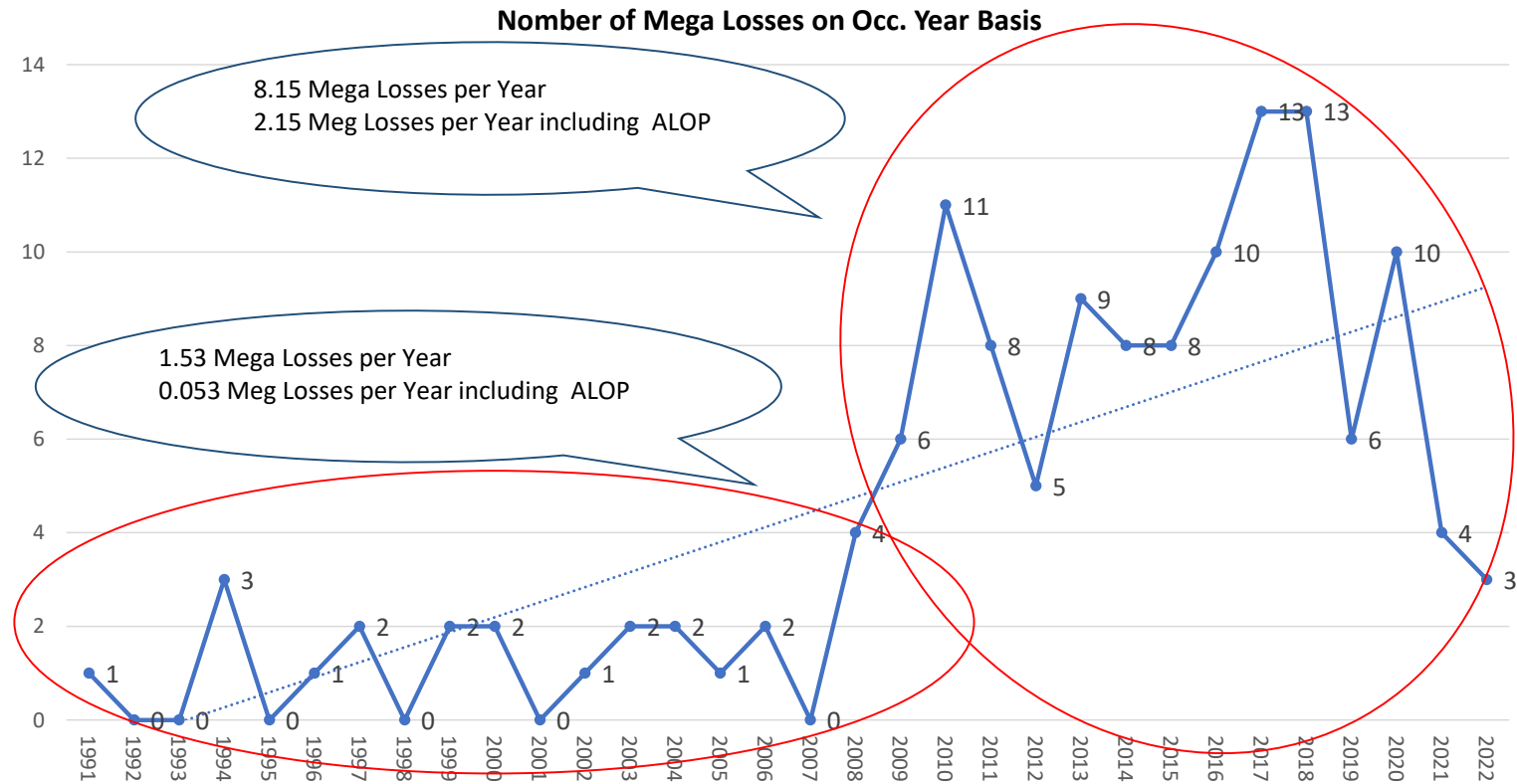


Increase CAR/EAR Mega Losses/Occurrence Year Frequency increase trend



5.33 times

Higher average frequency





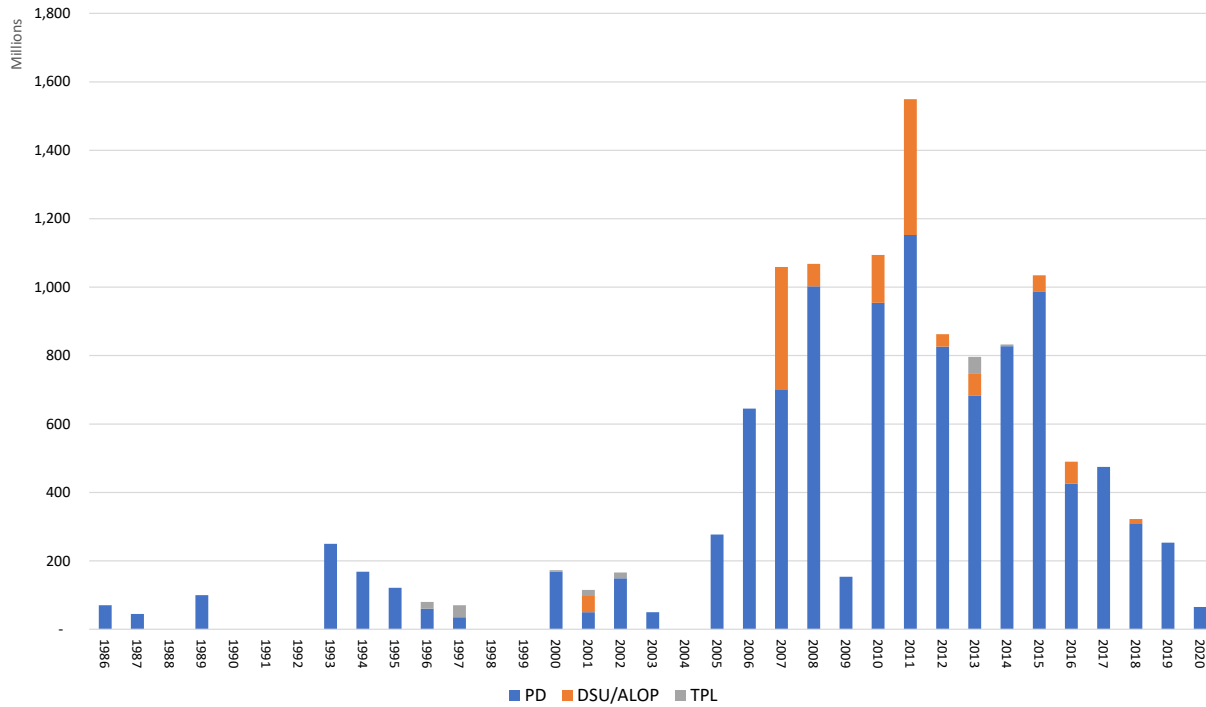
Increase of CAR/EAR Mega Losses/UWY

Frequency increase trend

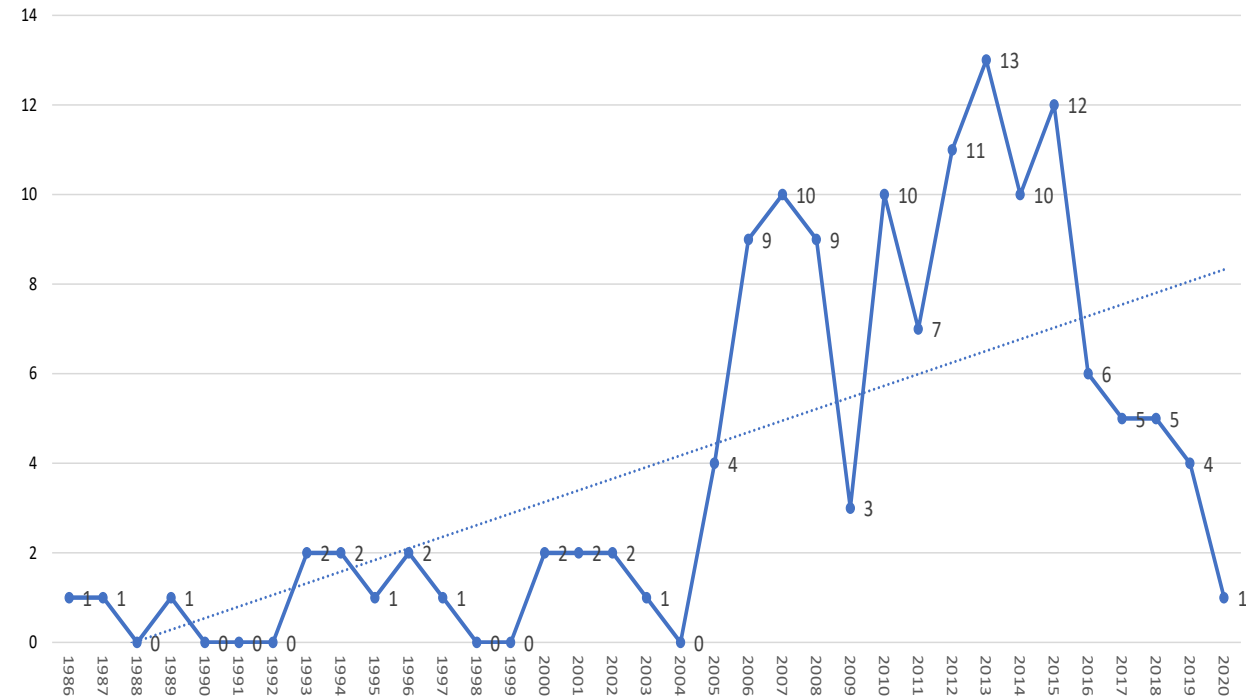
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Untrended Loss on UWY basis



Number of Mega Loss on UWY Basis



KEY TAKE-AWAYS:

- UWY view is inline with Occ. Year
- 3-4 years lead from Occ. Year





NATCAT / MAN-MADE

Frequency concerns more than severity

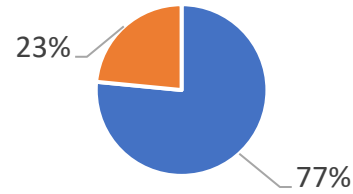
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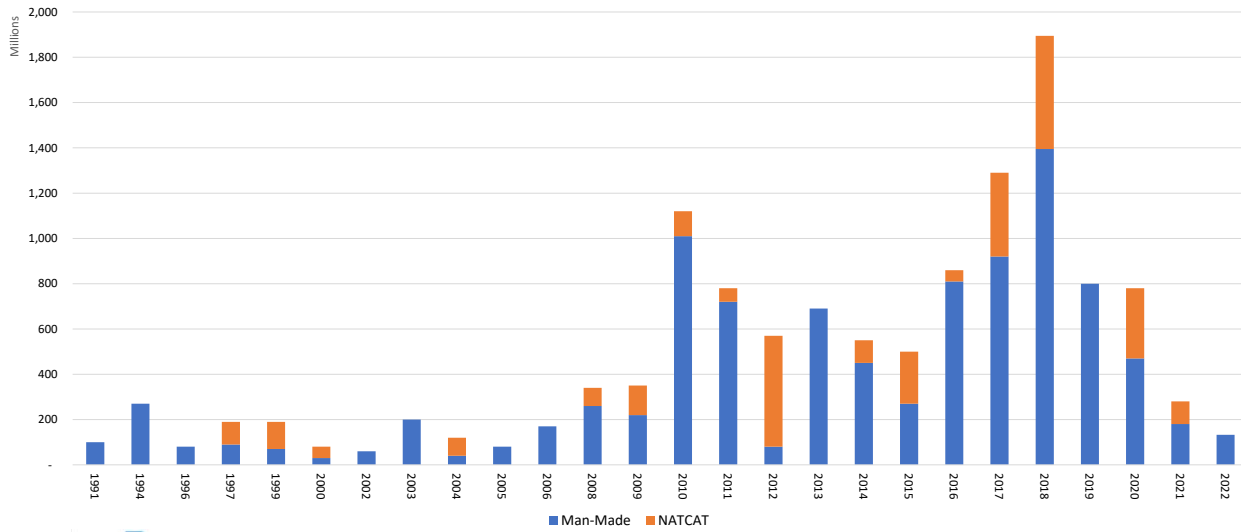
~ 1 per Year
NATCAT mega loss

NATCAT/Man-Made



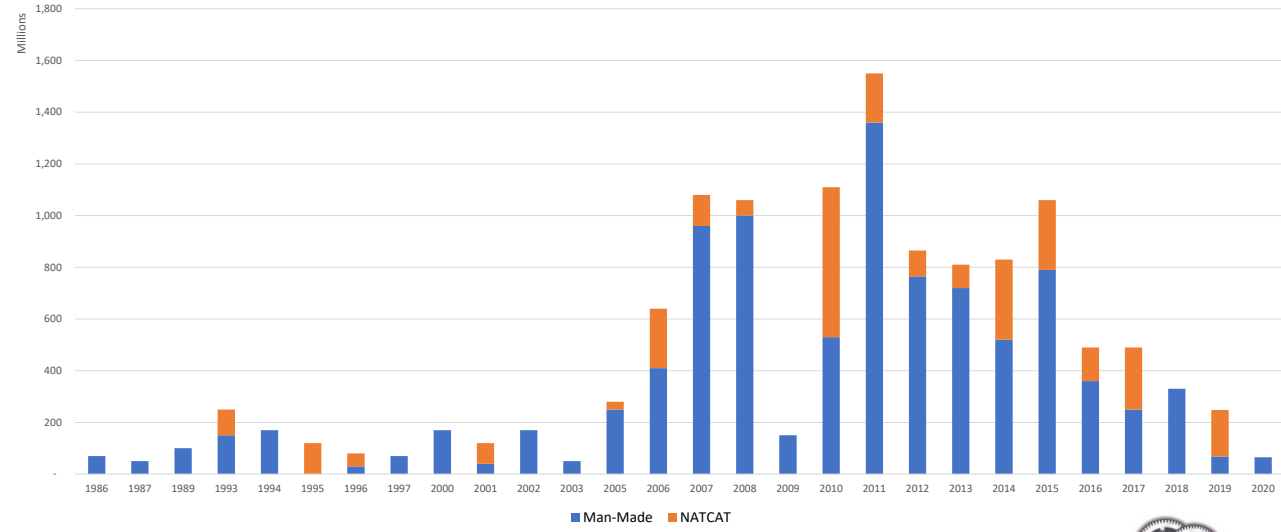
■ Man-Made ■ NATCAT

Occ. Year



■ Man-Made ■ NATCAT

UWY



■ Man-Made ■ NATCAT



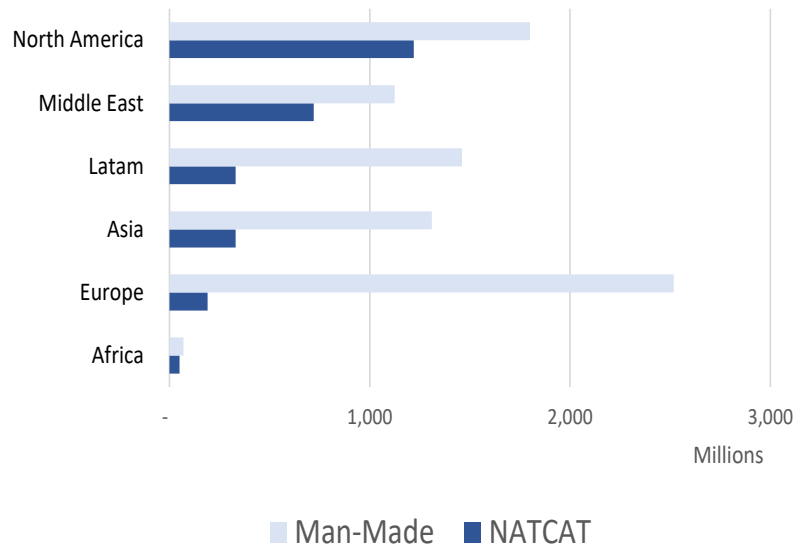


NATCAT / MAN-MADE Continued

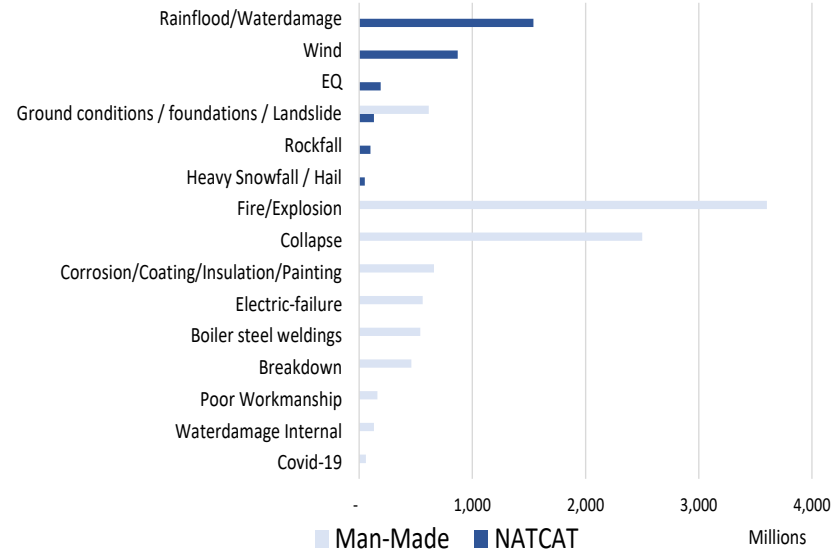
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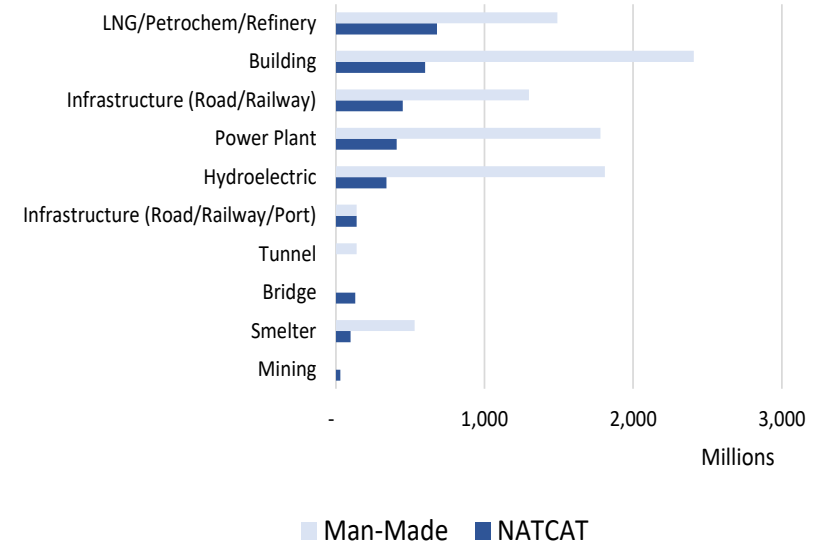
Regions NATCAT / Man-Made



Type of Loss NATCAT / Man-Made



Type of Risk NATCAT / Man-Made



2nd biggest

NATCAT contribution **Middle East**

water wind

drivers NATCAT losses

No dominant Occupancies for NATCAT losses





Region and Country Drivers?

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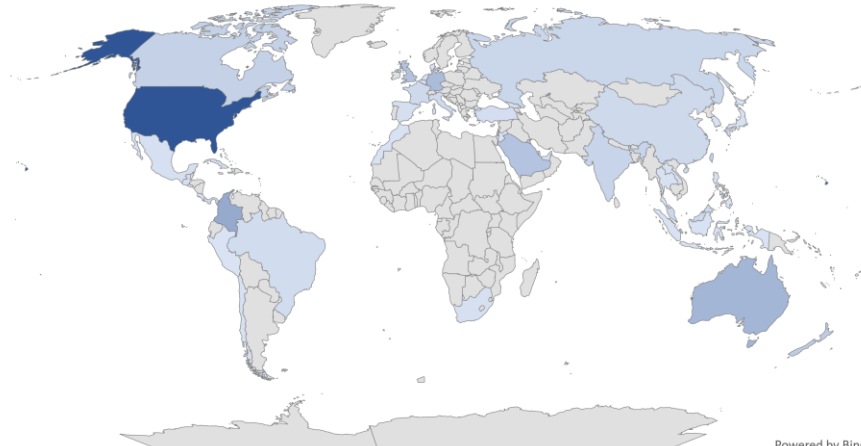
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Total Mega Losses per Country

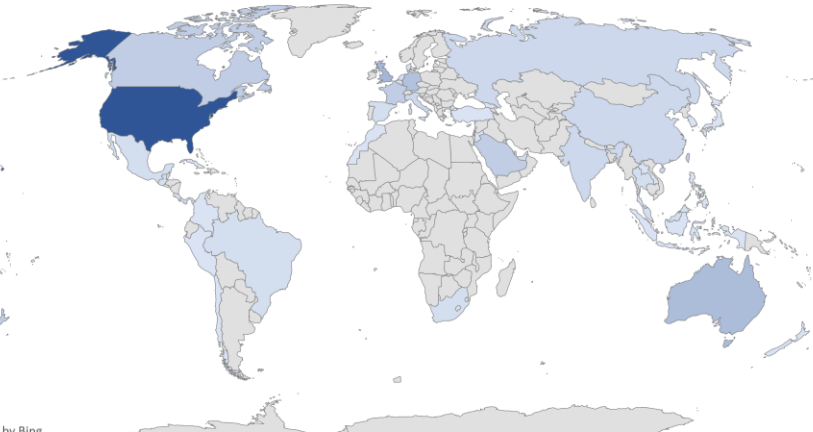
Total Mega Loss (MUSD)  30 2,645



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Number of Mega Losses per Country

No. Mega Loss  1 27



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Average Mega Losses per Country

Average Mega Loss (MUSD)  30 1,070



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- Very well distributed in all 5 regions almost same percentage.
- Some countries like US, UK, Australia, Germany and Saudi Arabia are more dominant





Type of Loss Drivers

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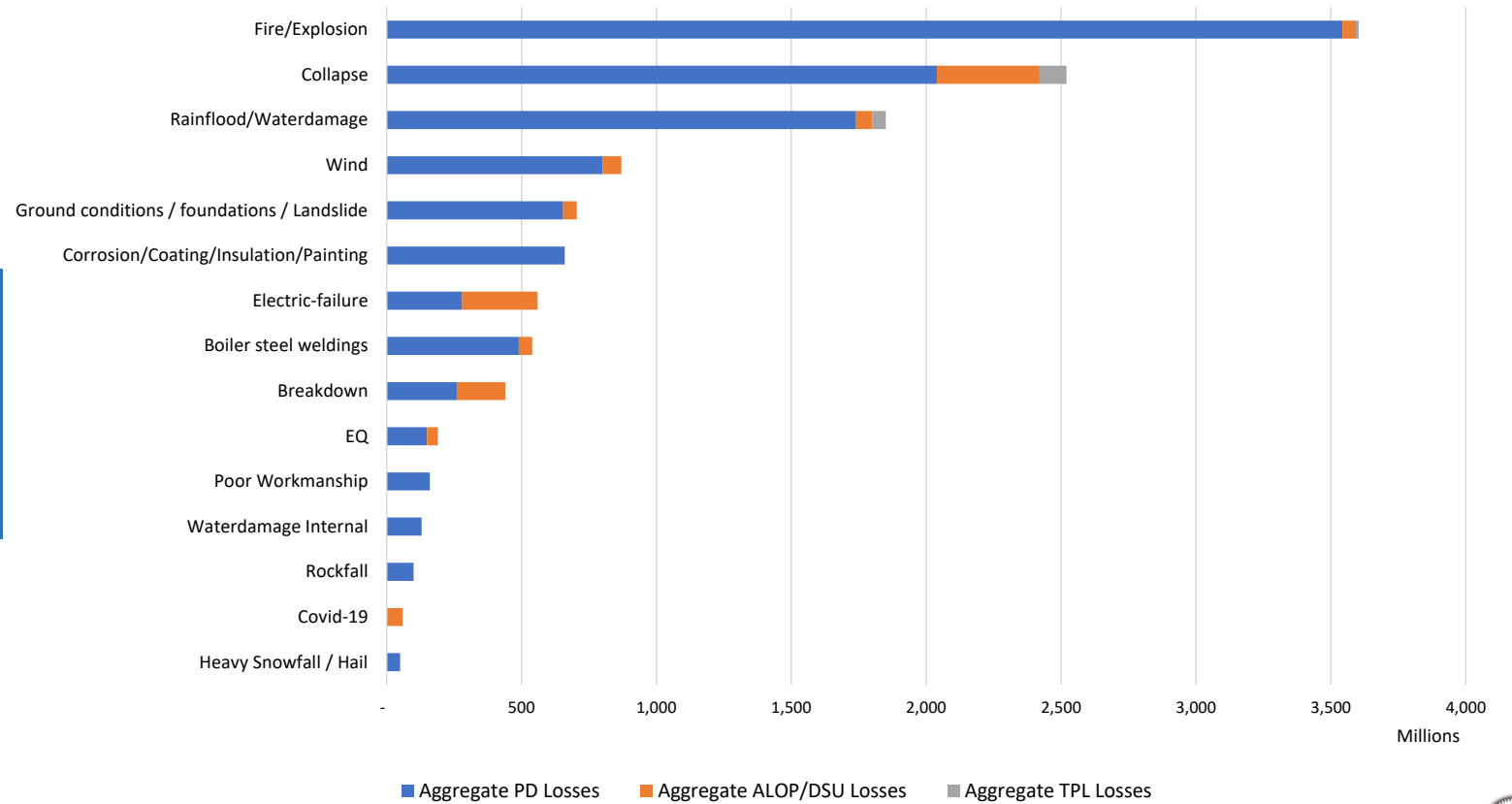
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Dominant Type of mega loss:

- Fire
- Water damage (internal/external)
- Collapse
- Wind





Type of Risk

No dominant type risk?



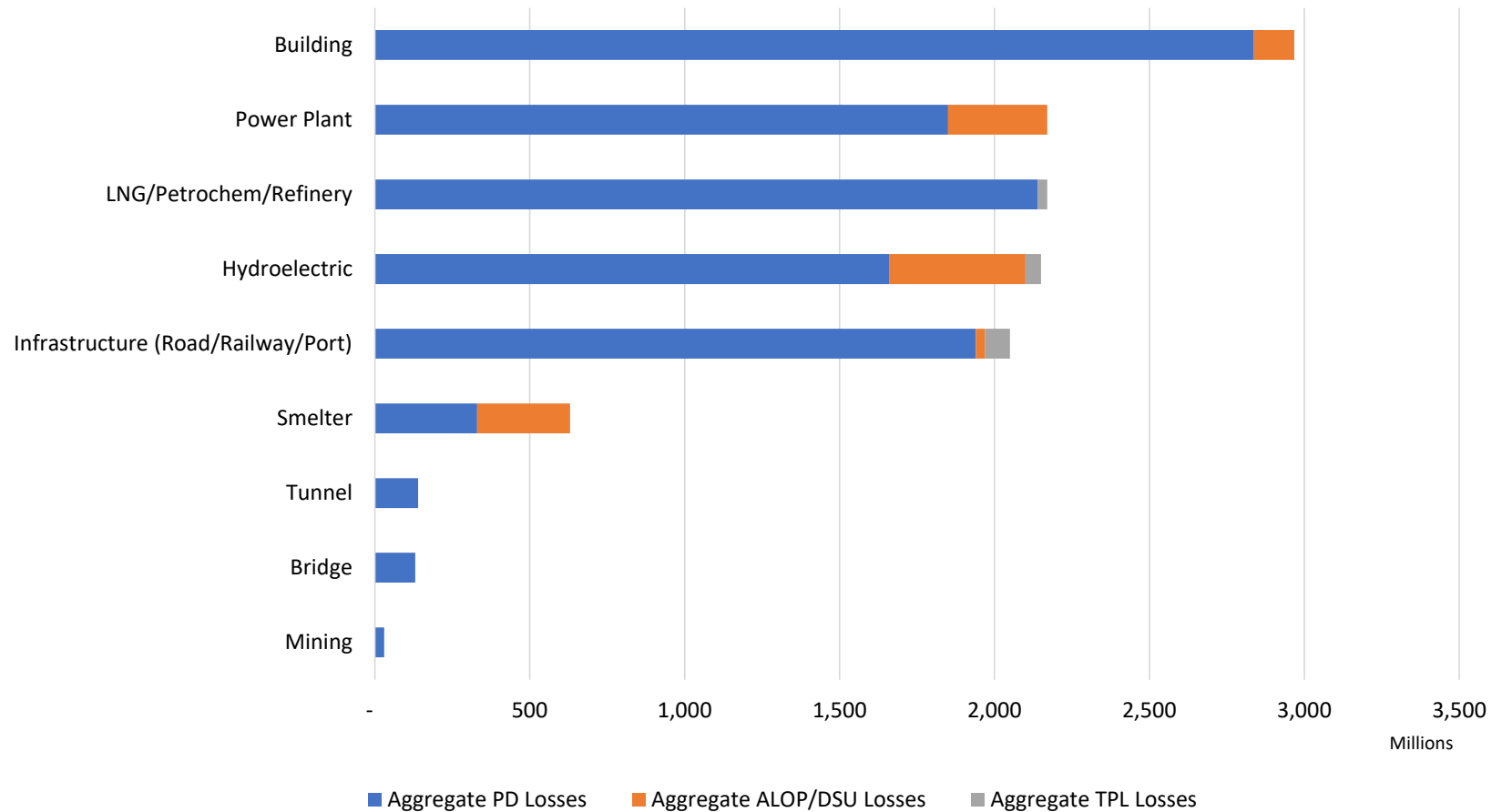
24%

of mega losses amount are **Building**

~17%

of mega losses amount are for each

- **Power Plant**
- **Hydro Power Plant**
- **Energy**
- **Civil Projects**





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ITOL

The established Type of Loss



PWG Data&Statistics

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IMIA IToL – Data Overview

2021 vs 2022

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~21bn

USD Aggregated Losses vs
10.5bn in 2021

+ 28%

participants in 2022

GWP wghtd %	2021	2022
Territorial scope		
Regional/Local	19%	26%
Global	81%	74%

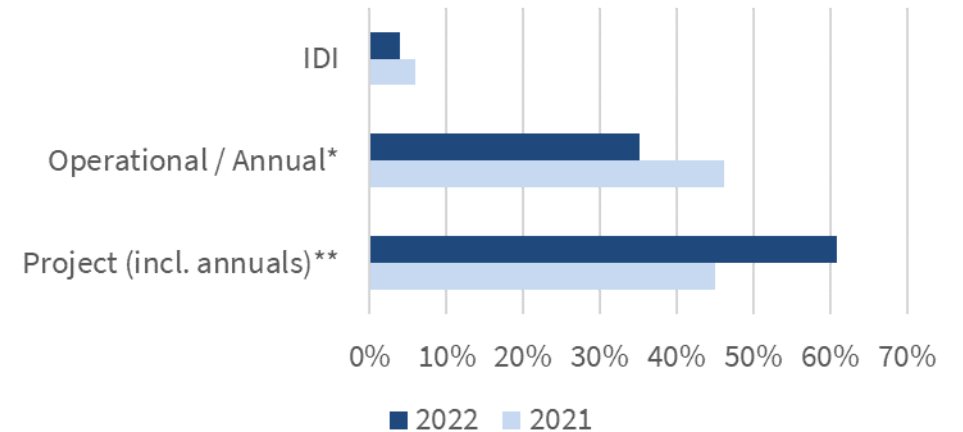
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Portfolio split	2021	2022
Direct & Fac Mrkt	74%	83%
Treaty Market	26%	17%

Lead or Follow	2021	2022
More Lead (>50%)	89%	81%
More Follow (>50%)	11%	8%

LEG member	2021	2022
Yes		86%
No		14%

IMIA IToL Survey Portfolio Composition



*Operational / Annual includes, but not limited to EEI, MB, CECR, DOS, CPE/M, BPV, IAR (Industrial All Risk), OAR (Operational All Risk)

**Project (incl Project annuals), includes but not limited to CAR/EAR including annual project covers (World-wide Open Covers, annual contractors etc.)

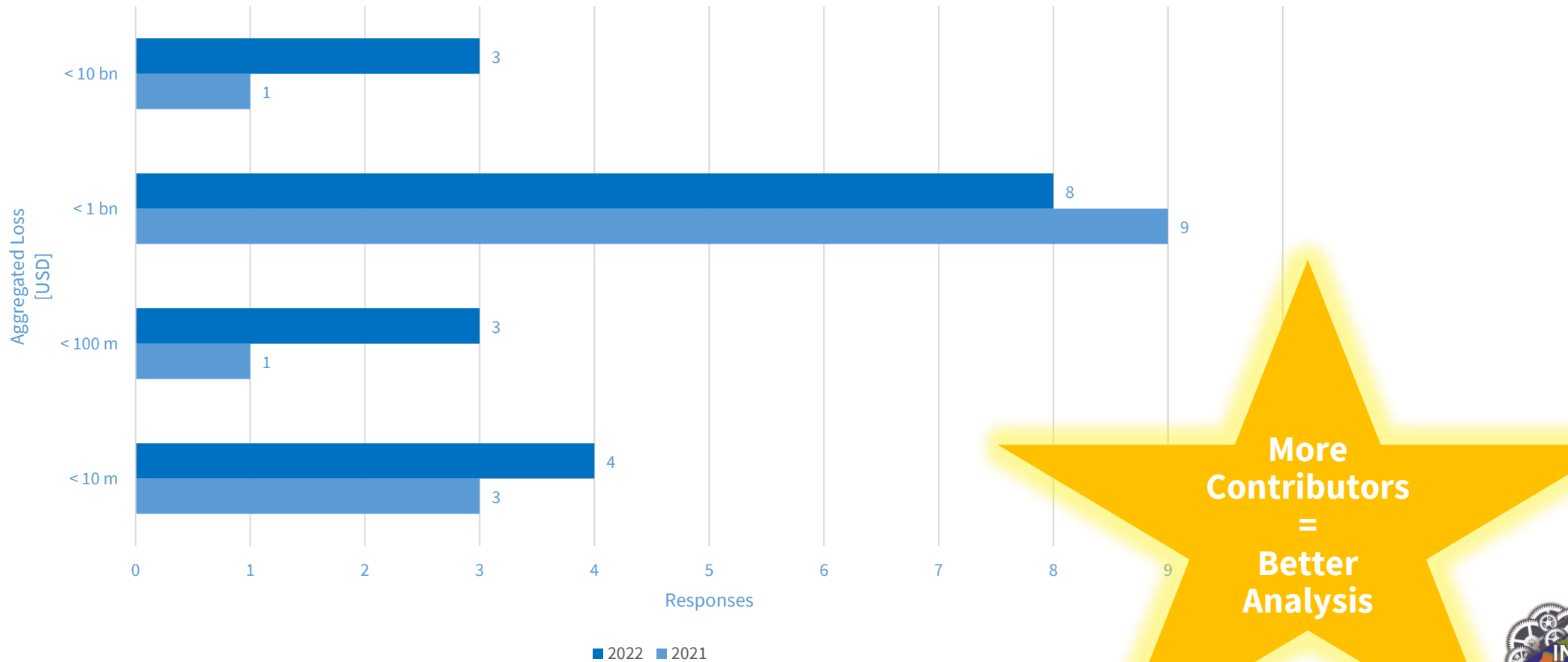




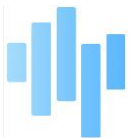
Range of aggregated losses responses 2022 vs. 2021

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More Contributors = Better Analysis

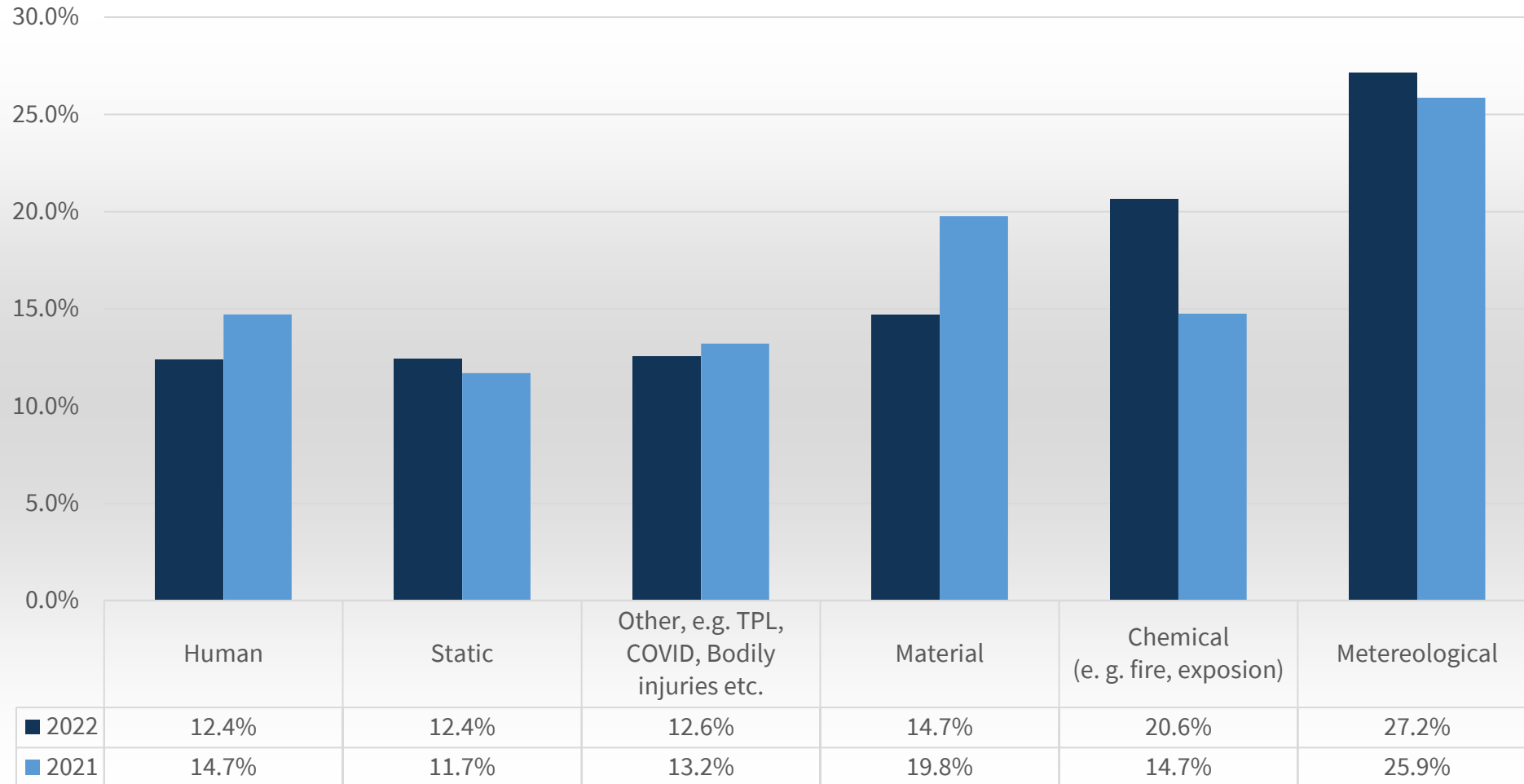




IToL Survey Data

Mapping of losses 2022 vs. 2021

4.11





General distribution type of loss - 2022

4.11

0.11

3.11



Photos courtesy of Richard Radevsky

Human Static Other, e.g. TPL, COVID, Bodily injuries etc. Material Chemical (e.g. fire, exposition) Metereological





Top 3 and Bottom 3 2022 vs. 2021

3.11

4.11



1

**Water damage
External/Flood**
up by 2.5% units

2

Fire/Explosion up
and still high

3

**Mechanical
Breakdown** down
but still high

4

**Vandalism/Theft/
SRCC**
down by 0.9%
units

5

**Heavy
Snowfall/Hail/Ice**
still low

6

**Corrosion/Coating/
Welding/Boilers**
doubled but still low





0.05

0.11

3.11

4.11



IMIA PWG Data and Statistics Conclusions

2022 Overview



PWG Data&Statistics

0.11

0.21

0.41





Key Takeaways

0.11

3.11

4.11



Survey and Data

- **+20% GWP contribution** increase
- IMIA Indices – **portfolio benchmark**
- Survey contributors – **access to aggregated data!**

IRCI and ILORI

- **IRCI positive trend**
- **Regional** IRCI – need for more data
- Difficult to **predict RC** in hardening mkt
- Projects: **UWY 2015 to 2017** already show **loss ratio above 60%** Expected to further develop

ILORI – IRCI Correlation

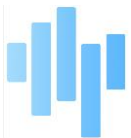
- **Negative correlation** Rate Level and Ultimate loss ratio
- Young UWY still developing
- are we **predicting the adequacy correctly?**

IMLI

- Almost **7 times bigger** in recent years
- More than **5 times frequency**
- ML drivers **Water, Wind, Fire, Collapse**

ITOL

- **Meteorological** contributes for more than **25%** to ToL
- **Top 3** contributors are CAT, Fire and Explosion, Mechanical Failure
- **Water, Wind, Fire** drivers for ML and ToL





Key Takeaways

0.11

3.11

4.11



Survey and Data

- **+20% GWP contribution** increase

IRCI and ILORI

- **IRCI positive trend**
- **Regional** IRCI – need for more data

ILORI – IRCI Correlation

- **Negative correlation** Rate Level and Ultimate

IMLI

- Almost **7 times bigger** in recent years

ITOL

- **Meteorological** contributes for more than **25%** to ToL

IMIA PWG D&S need your contribution!





Conclusion

0.11

3.11

4.11



You can't stop the waves,
but you can learn to sail

Meditation teacher



How do I fill the Survey?

...easier than expected with some tricks

IMIA Annual Engineering Market Survey
Introduction

Background
The IMIA Engineering Market Survey has been annually performed, since 2017, in order to monitor and provide the Engineering market with information.
The IMIA Survey 2022 includes 3 studies to further its analysis, understanding and monitoring of the Engineering Market.
1. Loss Ratio Benchmark (ILORI)
2. Rate Change Index (IRCI)
3. Global Type of Loss Survey (ITOL)

Tab Overview
See below a brief description of the purpose for each of the sections that you are required to fill out during this survey. There is further instructions available in each tab explaining what is needed to complete each section.

Introduction | Data_Input --> | Company_Overview | Loss_Ratio_Survey | Global_Market | Rate_Change_Survey | Global_ToL_Survey

Type of Loss	% Split (Monetary)
1. Meteorological & Water	0%
Wind incl. Storm Surge Waterdamage Internal Waterdamage External / Flood Heavy Snowfall / Hail / Ice	
2. Static	0%
Collapse Ground conditions/Settlement/Subsidence/Landslide/Rockfall EQ	
3. Chemical	0%
Fire/Explosion Corrosion/Coating/Welding/Boilers	
4. Human	0%
Faulty Design & Workmanship Vandalism/Theft/SRCC	
5. Material	0%
Electric-Failure Mechanical Breakdown	
6. Other, e.g. TPL, COVID, Bodily injuries etc.	0%
Total:	0%

- 5 tabs to fill
- 3 independent surveys
- Embedded instructions
- Guided video available
- Type of Losses mapping - continuously valid – WG23
- 2023 – IMLI Survey?





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Appendix Abbreviations



IRCI	IMIA Rate Change Index	CAR	Contractors all risk
ILORI	IMIA Loss Ratio Index	EAR	Erection all risk
IMLI	IMIA Mega Loss Index	ALOP/DSU	Advanced Loss of profit / Delay Start up
UWY	Underwriting Year	MB	Machinery Breakdown
Occ.	Occurrence	LOP	Loss of profit
FY	Financial year	EEI	Electronic Equipment Insurance
iLR	Incurred loss ratio	SRe	Swiss Re
ULR	Ultimate Loss Ratio	FGU	from ground up
CR	Combined Ratio	xs	in Excess of
LL	Large Loss	Agg	Aggregate
ML	Mega Loss	MD	Material damage
D&F	Direct & facultative	Neg.	Negative
Fac	Facultative	MGA	Managing General Agency





IMIA D&S – Market and Data Overview

2021 vs 2022



~25bn

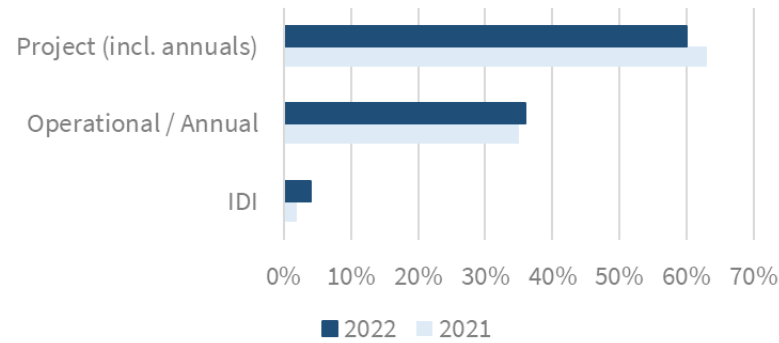
USD Global market premium
in line with 2021

~10%

of Global GWP analyzed by IMIA
D&S

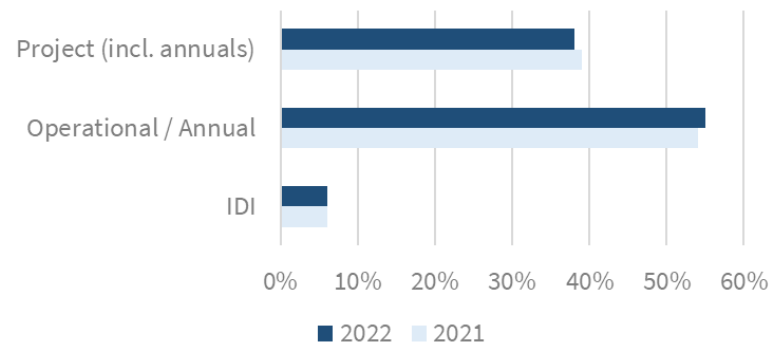
IMIA Survey

Portfolio Composition



IMIA Survey

Market Portfolio Composition



Key Takeaways – Data

- Strong growth of analyzed data
- Consistent database
- Market relevance
- Lead vs Follow change

