



Q2 2021 Catastrophe Bond & ILS Market Report

On track to break multiple records in 2021

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INTRO

This report reviews the catastrophe bond and insurance-linked securities (ILS) market at the end of the second-quarter of 2021, looking at new risk capital issued and the composition of transactions completed during the quarter.

For the first time in the market's history, catastrophe bond and related ILS issuance surpassed \$8 billion in a single quarter during Q2 2021, setting a new quarterly record at \$8.5 billion. This staggering level of new risk capital came from 30 transactions consisting of 66 tranches of notes.

Of the record breaking Q2 issuance total, a significant \$6 billion or over 70% covered catastrophe risks. As shown by the Artemis Deal Directory, this is behind only Q2 2017, a period in which a huge \$6.4 billion covered catastrophe risks. However, as at the end of H1 2021, cat risk issuance has reached a new high of more than \$8.5 billion, which is slightly higher than the record for property cat bonds issued in the first-half.

Year-on-year, cat bond and ILS issuance increased by approximately \$4.87billion, ensuring that for the first time ever, H1 issuance has surpassed the \$10 billion mark. In fact, combined with robust investor demand and sponsor appetite in Q1, the \$8.5 billion of issuance witnessed in Q2 takes H1 2021 total issuance to a massive \$13.12 billion.

To put this into context, more than \$13 billion of issuance at the halfway stage makes 2021 already the third most active year on record, behind only the \$16.4 billion and \$13.9 billion recorded in 2020 and 2018, respectively.

Artemis is the leading, freely accessible source of timely, relevant and authoritative news, analysis, insight and data on the insurance-linked securities, catastrophe bond, alternative reinsurance capital and related risk transfer markets. The Artemis Deal Directory is the leading source of information, data and analysis on issued catastrophe bond and insurance-linked securitization transactions.

Transaction Recap

A mix of traditional 144A cat bonds, private cat bond lite transactions, and mortgage ILS issuance featured in the second-quarter of 2021. The ILS investor base took advantage of a wide range of perils and geographies of risk ceded from an expanding sponsor base.

Q2 2021 issuance was dominated by traditional 144A structured deals with a focus on pure catastrophe risk. In total, these transactions amounted to \$6 billion, of which the large majority came from repeat sponsors.

Alongside the 22 traditional 144A deals, three private transactions from unknown sponsors brought a combined \$283.7 million of unknown property cat risk to market. Notably, one of these deals is perhaps the largest cat bond lite transaction ever, at \$250 million in size.

Impressively, five new sponsors entered the market in the period. In May, Vantage Risk sponsored its first deal, a \$225 million single tranche issuance covering multiple international perils. At the end of the month, St. Johns Insurance Company entered the space with a \$120 million Florida and South Carolina named storms deal.

June kicked off with the \$150 million, international multi-peril Titania Re transaction, the first cat bond ever to benefit an entity of Ariel Re. Later in the month, Gryphon Mutual Insurance Company, Blackstone's real estate captive, issued its debut cat bond, a \$50 million California earthquake deal. Also in June, Vermont Mutual Insurance looked to the cat bond space for the first time, sponsoring a \$150 million U.S. multi-peril deal.

As well as repeat and new sponsors of cat risk deals, Q2 2021 cat bond and related ILS issuance featured almost \$2.3 billion of mortgage risk. This slice of issuance came from repeat sponsors Genworth Mortgage Insurance, Radian Guaranty, National Mortgage Insurance Corp, Arch Capital, and Essent Guaranty.

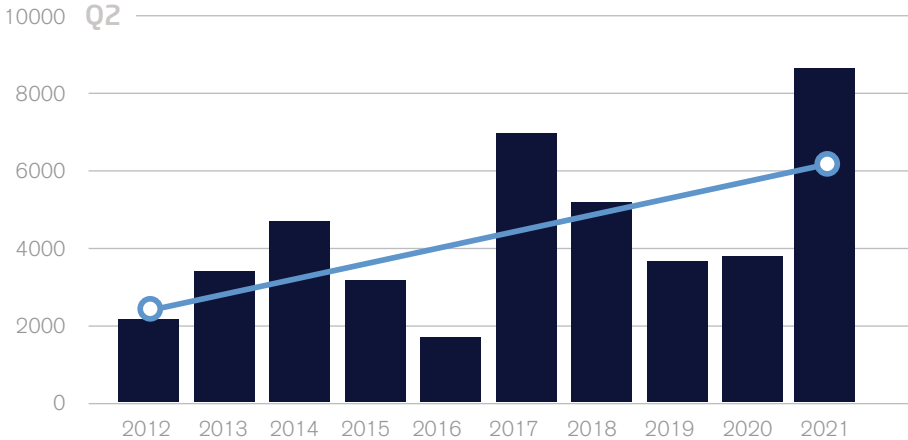
Together with the 27 transactions sponsored in Q1, the 30 issued in Q2 takes the number of deals brought to market in H1 2021 to 57. As shown by the Artemis Deal Directory, this is above the full-year total for all years prior to 2017. Furthermore, if the strong issuance trend persists, it seems likely that 2021 will see more deals than the record 80 seen last year.

Deals issued in Q2 2021

ISSUER / TRANCHE	SPONSOR	PERILS	\$M	DATE
Baldwin Re Series 2021-1	Vermont Mutual Insurance	U.S. multi-peril	150	Jun
Mona Lisa Re Series 2021-1	RenRe and DaVinci Re	International multi-peril	250	Jun
Lion III Re DAC	Generali	International multi-peril	238.8	Jun
Umigame Re Pte Series 2021-1	Tokio Marine	Japan multi-peril	200	Jun
Merna Re II Series 2021-2	State Farm	U.S. earthquake	300	Jun
Wrigley Re Series 2021-1	Gryphon Mutual Insurance	U.S. earthquake	50	Jun
Radnor Re 2021-1	Essent Guaranty	Mortgage insurance risks	557.9	Jun
Bellemeade Re 2021-2	Arch Capital Group	Mortgage insurance risks	522.5	Jun
Mystic Re IV Series 2021-2	Liberty Mutual	International multi-peril	300	Jun
Titania Re Series 2021-1	Ariel Re	International multi-peril	150	Jun
Putnam Re Pte Series 2021-1	St. Johns Insurance Company	U.S. named storm	120	May
Sanders Re II Series 2021-1	Allstate	U.S. multi-peril	250	May
Alamo Re Series 2021-1	TWIA	Texas multi-peril	500	May
Riverfront Re Series 2021-1	Great American Insurance	International multi-peril	305	May
Herbie Re Series 2021-1	Fidelis Insurance	International multi-peril	150	May
Residential Reinsurance Series 2021-1	USAA	International multi-peril	400	May
Everglades Re II Series 2021-1/2	Citizens Property Insurance	U.S. named storm	950	May
Artex - Aquarelle Notes	Unknown	Unknown property cat risks	250	May
Pelican IV Re Series 2021-1	Louisiana Citizens	Louisiana multi-peril	125	May
Vista Re Series 2021-1	Vantage Risk	International multi-peril	225	May
Oaktown Re VI	National Mortgage Insurance Corp	Mortgage insurance risks	367.3	Apr
Kendall Re Series 2021-1	Aspen	International multi-peril	300	Apr
Eagle Re 2021-1	Radian Guaranty	Mortgage insurance risks	497.82	Apr
Triangle Re 2021-2	Genworth Mortgage Insurance	Mortgage insurance risks	302.65	Apr
Isosceles Insurance Series 2021-B1	Unknown	Unknown property cat risks	25	Apr
Kilimanjaro III Re Series 2021-1/2	Everest Re	International multi-peril	650	Apr
Eclipse Re Series 2021-02A	Unknown	Unknown property cat risks	8.7	Apr
Merna Re II Series 2021-1	State Farm	U.S. earthquake	350	Apr

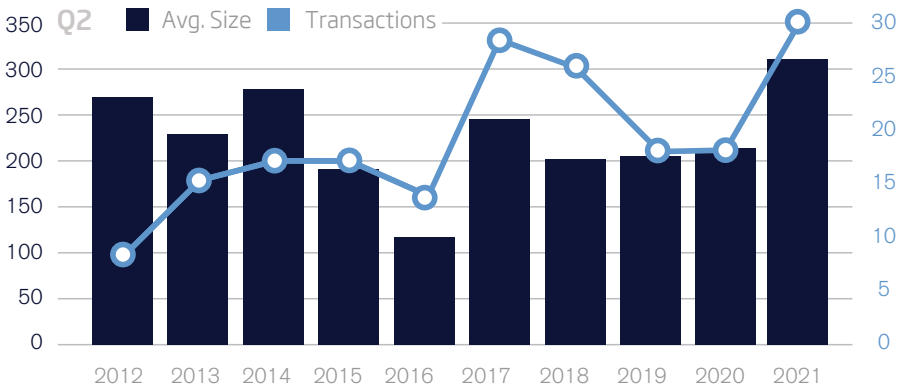
Q2 ILS issuance by year (\$M)

When compared with the second-quarter of last year, cat bond and ILS issuance increased by 126% to \$8.5 billion, which is \$4.2 billion higher than the 10-year average for the period. The Artemis Deal Directory shows that this is now the third time in the past five years that Q2 issuance has surpassed \$5 billion, and just the second time it's finished the quarter above \$7 billion.



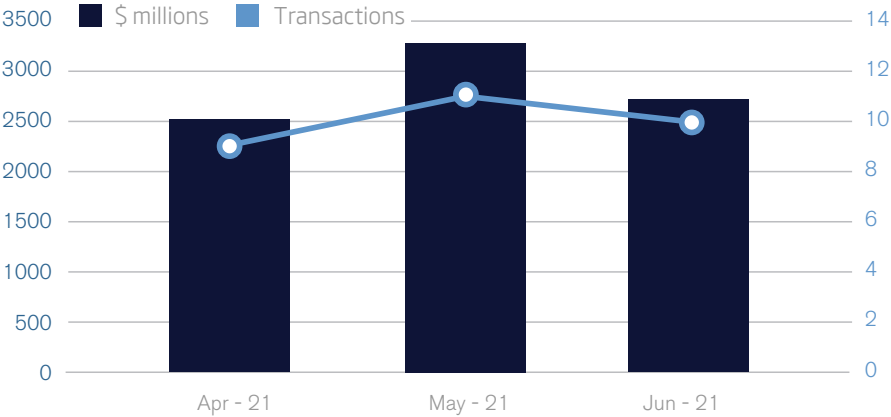
ILS average transaction size & number of transactions by year (\$M)

A significant 30 transactions came to market in the second-quarter of the year, which is some way above the average of 19 over the past decade, and above the previous record set in 2017. Combined, the average deal size of Q2 2021 issuance hit an impressive \$303 million, which is approximately \$82 million higher than the 10-year average for the period.



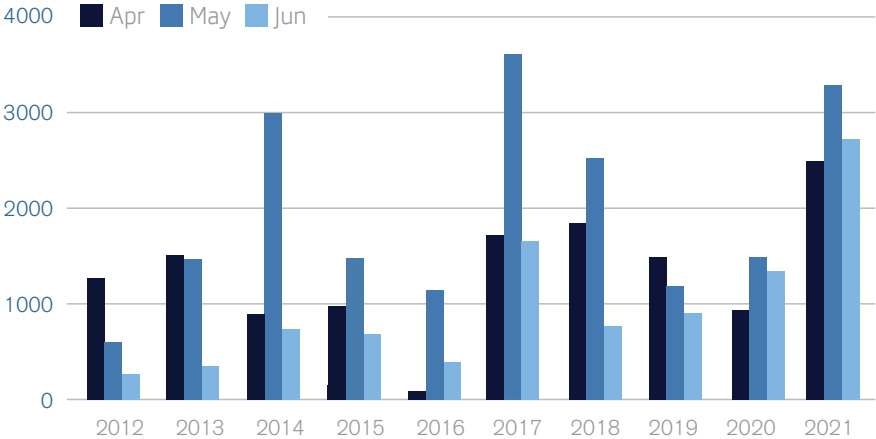
Number of transactions and volume issued by month (\$M)

For the very first time, cat bond and ILS issuance exceeded \$2 billion in each month of the second-quarter in 2021. Typical of any Q2, May issuance was the strongest this year at \$3.3 billion. Issuance in both April and June, at \$2.5 billion and \$2.7 billion, respectively, set a new record for the months as investor appetite remained strong throughout the quarter.



Q2 issuance by month & year (\$M)

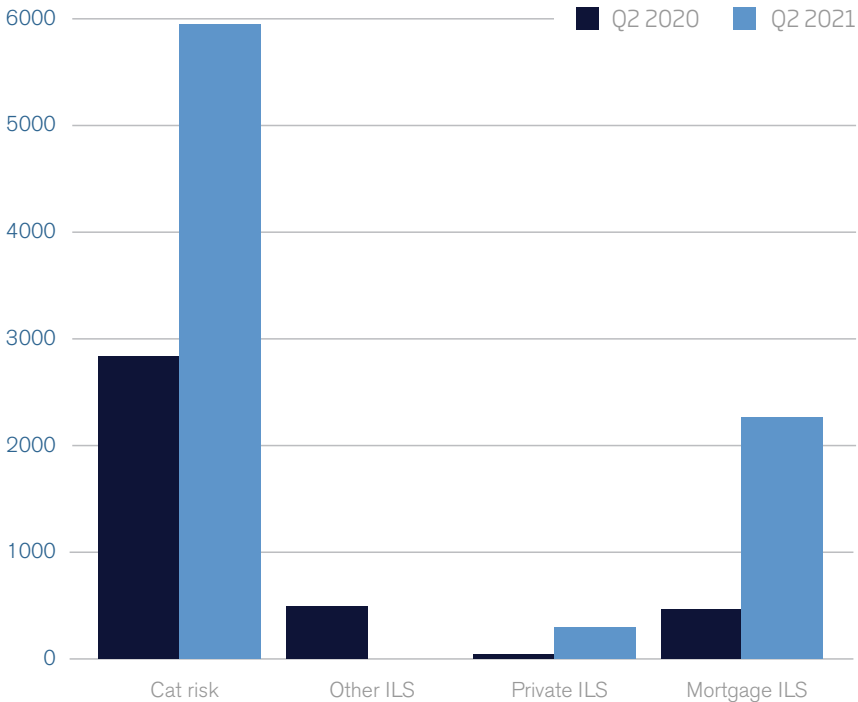
In terms of the number of deals, May was the most active month this year with 11 transactions. In April, nine new transactions came to market, while the quarter finished strong with 10 deals in June.



Q2 ILS issuance by type

The large majority of Q2 2021 issuance came in the form of a traditional 144A catastrophe bond, with sponsors securing \$6 billion of reinsurance and retrocession protection against a wide range of perils spanning numerous territories. Year-on-year, the volume of cat risk brought to market in Q2 increased by 112%, but remains below the record \$6.4 billion of cat risk issued in Q2 2017.

Mortgage ILS issuance was also robust in Q2 2021, reaching almost \$2.3 billion from five transactions. Private deals also made a greater contribution to overall issuance this year when compared with Q2 2020, driven by a particularly large \$250 million deal from an unknown sponsor.



2020 set the record for property cat risk issuance at more than \$11 billion, the only time since 2017 this figure has surpassed \$10 billion in a single year. At the end of H1 2020, cat risk deals amounted to approximately \$6.6 billion, which is actually \$1.9 billion less than the more than \$8.5 billion of cat risk deals secured so far in 2021, suggesting the market is well on-track to achieve full year records as well.

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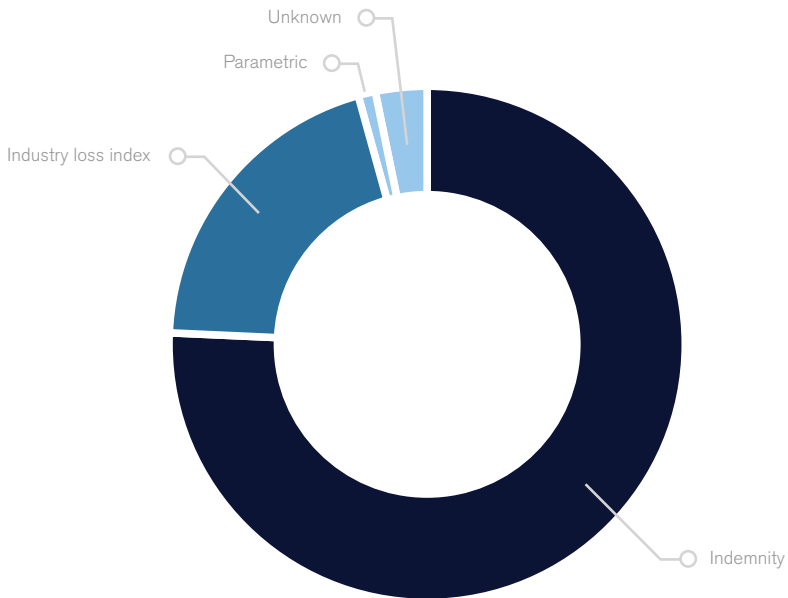
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Q2 2021 ILS issuance by trigger type

Despite sponsors utilising a variety of trigger structures during the second-quarter, once again, indemnity coverage dominated issuance. 76%, or more than \$6.4 billion of new risk capital issued in the period featured an indemnity trigger.

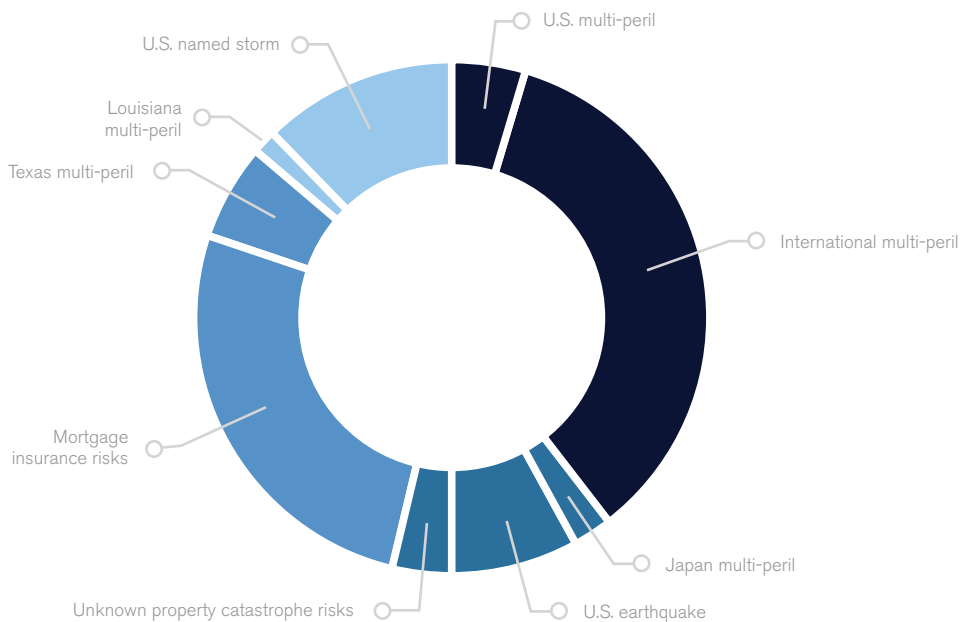


Over \$1.7 billion of deals placed in the quarter were structured using an industry loss index trigger, which accounts for more than 20% of total issuance. Just one deal, sized at \$50 million, leveraged a parametric trigger in Q2 2021, making up less than 1% of issuance. We do not have trigger information for the three private deals that featured in Q2, accounting for 3.3% of issuance.

Q2 2021 ILS issuance by peril

Deals covering a range of perils in various territories (international multi-peril) provided the largest single slice of Q2 2021 issuance, at roughly \$3 billion, accounting for 35% of issuance. Through these transactions, investors were treated to broad peril and region diversification.

The huge level of property cat bond issuance witnessed in the period also featured \$200 million of Japan multi-peril protection, and \$500 million and \$125 million of Texas multi-peril and Louisiana multi-peril protection, respectively. The largest slice of state specific issuance in Q2 came from two Florida named storm deals, amounting to \$950 million. \$120 million of additional U.S. named storm risk, \$700 million of U.S. quake risk, and \$400 million of protection against multiple U.S. perils completed the quarter's 144A issuance.



Mortgage ILS issuance was also strong in Q2, and with five transactions bringing a combined \$2.3 billion of mortgage risk to market, this accounted for 27% of total cat bond and related ILS issuance in Q2 2021.

Helped by an especially large cat bond lite transaction, the \$283.7 million of unknown property cat risk issued on behalf of unknown sponsors contributed 3.3% to total issuance for the period.

Seeing the Whole Iceberg

The European Union Sustainable Finance Disclosure Regulation (SFDR) came into effect on 10 March 2021 to promote transparency in the fast growing area of environment, social, and governance (ESG) financial products. The SFDR is an opportunity for financial product providers, including ILS fund managers, to clearly signal to investors which of their products promote sustainable investment.

In the three months since the regulation came into effect, at least three ILS fund managers have seized the opportunity and declared funds as either Article 8 (light green) or even Article 9 (dark green). Several additional fund managers are working on corresponding classifications.

The common theme behind those Article 8 or 9 classifications for ILS fund managers revolves around insurance creating social value. But while insurance indeed has inherent ESG qualities, this is not a sufficient condition alone to classify as Article 8 or 9 as per the SFDR's explicit and implicit guidelines and definitions for ESG qualities. As part of the classification, the ILS fund manager needs to define and disclose the sustainable objective for the fund (Article 9), sustainability indicators, binding selection criteria, and other components depending on circumstances.

Though these public disclosures for Article 8 and 9 classifications present an opportunity to attract ESG-oriented investment, they raise important question under the surface.

They necessitate that ILS fund managers re-assess key aspects of their operating model to answer new questions such as: "What additional data do I need to assess the ESG nature of an incoming transaction? What ESG impact does the incoming transaction have on my overall fund or portfolio? And, how does my SFDR classification change my process for assessing that transaction?"

Further to the process question and as an additional complication, the SFDR is not written specifically with ILS in mind and therefore requires interpretation and also flexibility to accommodate future



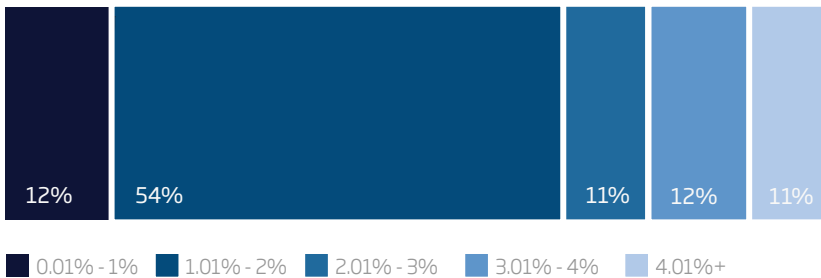
changes in regulation. A prime example of where SFDR requirements need to be put in context of the peculiarities of an ILS transaction is when it comes to look-through requirements (i.e. assessing the ESG qualities of not just the sponsor but also the underlying policies). This raises the question of data availability, or rather the lack thereof, and how to deal with it. A fund manager's answer to this question depends on its interpretation of the SFDR but also its ESG philosophy and needs to take into consideration aspects of feasibility.

Addressing this question can present a significant challenge for ILS fund managers, but it can also be an opportunity to be a first mover and market maker for the shaping of norms and standards for how the SFDR applies to ILS.

Whether an ILS fund manager aims to be a market maker, a box ticker, who addresses the most immediate stakeholder expectations, or a barrel scraper, who only does what the law requires them to do, a solid operating mode needs to be in place. Such an operating model needs to be able to support the promises made to investors, regulators, and other stakeholders.

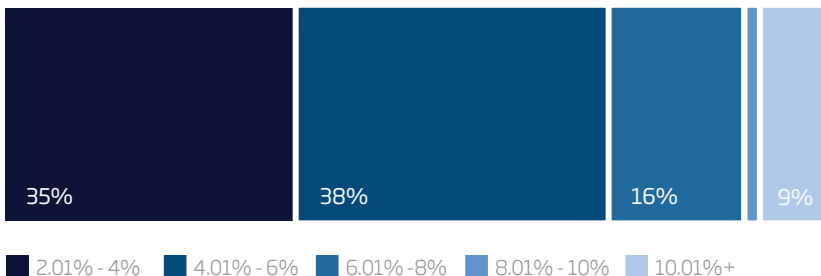
Q2 2021 ILS issuance by expected loss

We have expected loss data for roughly \$5.7 billion of second-quarter issuance, of which more than 65% offered an expected loss of below 2%. In fact, more than half of quarterly issuance, or \$3.1 billion had an expected loss of between 1% and 2%. Over \$1.3 billion of Q2 issuance had an expected loss of between 2.01% and 4%. The highest expected loss in the quarter, at 7.32%, came from the tranche of Herbie Re notes. While the Class B tranche of Pelican IV Re notes had the lowest expected loss, of 0.44%.



Q2 2021 ILS issuance by coupon pricing

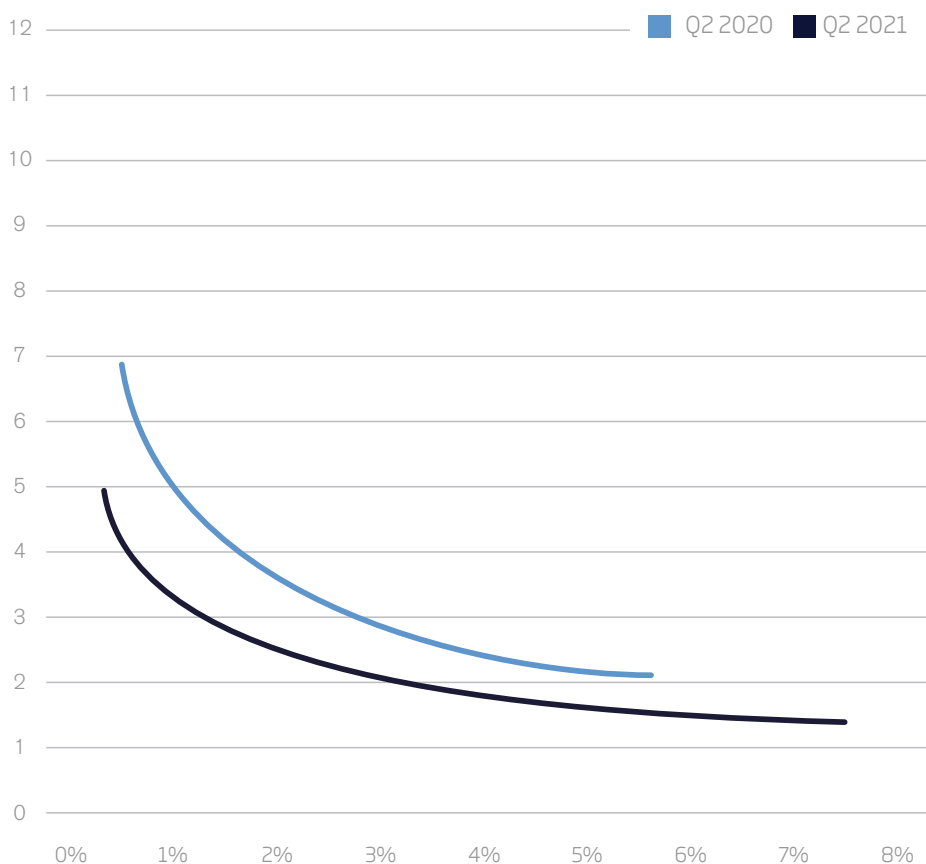
We have pricing data for approximately \$6 billion of second-quarter issuance. Of this, just over a third paid investors a coupon of between 2% and 4%, with slightly more, or \$2.3 billion of risk capital issued offering investors a coupon of between 4.01% and 6%. More than \$1 billion of Q2 2021 issuance paid a coupon of between 6.01% and 10%. While notes amounting to \$525 million paid a coupon of more than 10%. The tranche of Herbie Re notes, which offered the highest expected loss, paid the highest coupon in Q2, at 17.25%. While three tranches of notes paid a coupon of just 2.25%, the lowest on offer in the period.



Q2 2021 expected loss & multiple year-on-year

The below chart, which plots the expected loss against the multiple (price coupon divided by expected loss) of second-quarter issuance, shows that once again, investors demanded the highest multiple for the lowest risk/return deals.

The light blue line represents Q2 2020 and the dark blue line Q2 2021, and reveals that during both periods, the lower the expected loss the higher the multiple on offer.



ILS AND ESG: DUE DILIGENCE NEEDED THROUGHOUT THE VALUE CHAIN

Ocorian Executive Director, Sherman Taylor explains how insurance-linked securities (ILS) managers active in Europe will need to be conscious of their dealings with service providers and take steps to show their ESG processes at work.

You'll do well not to see at least one reference to environmental, social and governance (ESG) somewhere in your working day: it's everywhere. Investors are increasingly applying non-financial ESG factors as part of their analysis process to identify material risks and growth opportunities. It has now become a key facet of many investors' due diligence; Lloyd's of London have even formed an ESG Advisory Group to guide the organisation and ensure accountability.

This is particularly true in Europe, where the European Supervisory Authority (ESA) developed the EU's Sustainable Finance Disclosure Regulations (SFDR) which became effective on 10 March, 2021 (the more detailed requirements relating to disclosures in the periodic reports of ESG-focused products will apply from 1 January 2022). The SFDR imposes requirements on European fund managers, financial advisors and certain other EU firms to disclose information to potential investors related to their ESG frameworks.

Geared towards promoting sustainable investing practices and combatting "greenwashing" by introducing transparency obligations, it is still uncertain what the full impact of the SFDR will be on the ILS market. The immediate impact will largely depend on the extent to which new ILS capital is sourced from the EU, with EU-based ILS funds likely to have to incorporate ESG processes within their investment activities. ILS fund managers from outside the EU who market their funds to investors within the EU will also need to be mindful of the SFDR's disclosure requirements.

SFDR is the first significant attempt by a regulator to codify ESG disclosure requirements and it's reasonable to assume that regulators in other regions will follow suit. Responsible investing considerations already form a significant part of the decision-making process within global capital markets, and ILS funds are aligning their activities accordingly.

The ILS sector is well placed to accommodate this shift. It has long recognised the necessity of incorporating ESG into its activities in order to continue to access fresh capital. Other sectors have not been as proactive, and we have already seen the capital markets divest from companies that fail to meet investors' ESG standards.

This presents an opportunity for the ILS sector, as capital divested from companies with poor ESG frameworks can be redeployed into ILS funds exhibiting positive ESG ratings. A significant recent development is the announcement by Lloyds that, for the first time, it is setting targets for responsible underwriting and investment to help accelerate society's transition away from fossil fuel dependency and towards renewable energy sources. From 1 January 2022, Lloyd's agents will no longer provide new insurance coverages or investments in these activities. The capital freed up by this could potentially find its way to the ILS market.

However, the ILS sector brings together the insurance and capital markets and creates a complex securitised product with numerous variables and service providers involved across the value chain, which means it's difficult to ensure uniform ESG standards are being met. A cautionary note is that companies in other sectors have suffered ESG rating downgrades not because of their own direct action, but because of the actions of their outsourced service providers. The lesson that Ocorian, as a provider of administrative and fiduciary services to the ILS sector, can postulate is that in this new investment era, ILS funds must consider their ESG frameworks to be equally weighted with their balance sheet performance.

Ocorian provides a full suite of administration and fiduciary services to the ILS and captive market from its Bermuda, Cayman and British Virgin Islands' offices, providing certainty and confidence to its clients when entering into complex transactions. For more information visit ocorian.com.



SHERMAN TAYLOR
EXECUTIVE DIRECTOR

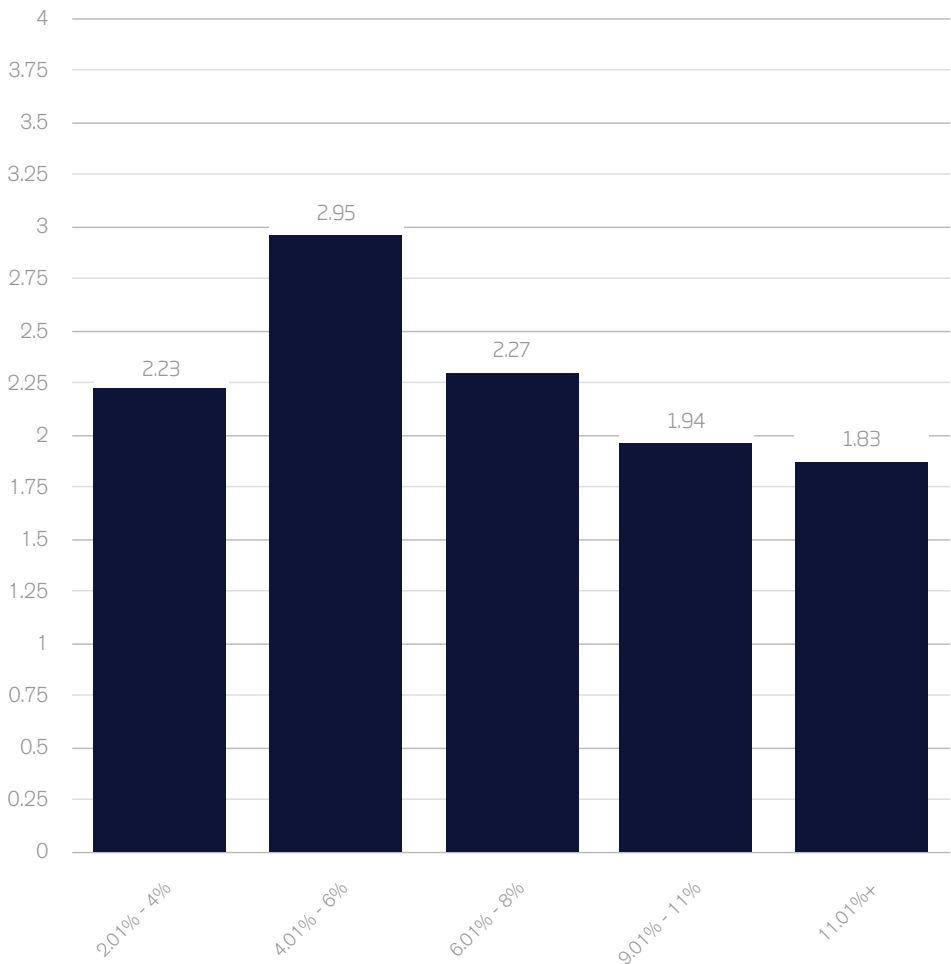
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Q2 2021 average multiple by coupon pricing

Year-on-year, the average multiple of Q2 issuance, where we have both expected loss and pricing data, declined from 2.89 in 2020 to 2.28 in 2021, which is also below the 2.54 average multiple recorded in Q1 2021.

As the chart shows, investors generally achieved a higher multiple the lower the coupon on offer, with some of the lowest priced deals being an exception to this rule. Although down on the prior quarter and comparative period last year, the average multiple of quarterly issuance has remained above 2 for some time now.



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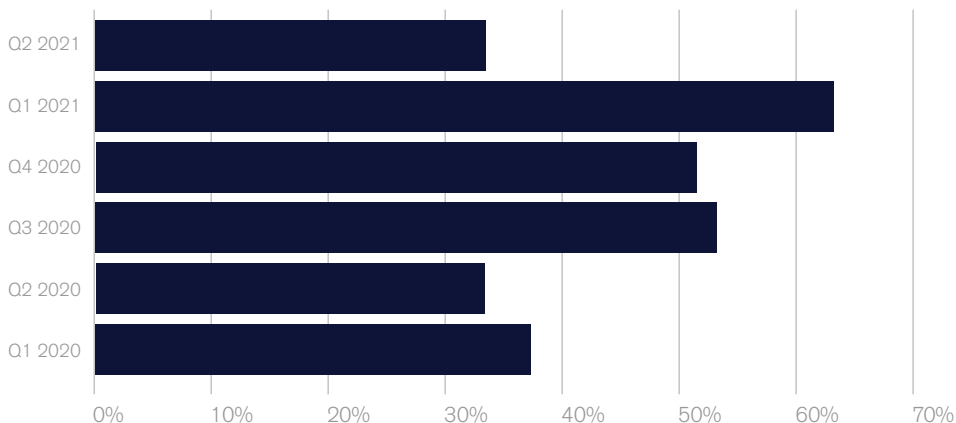
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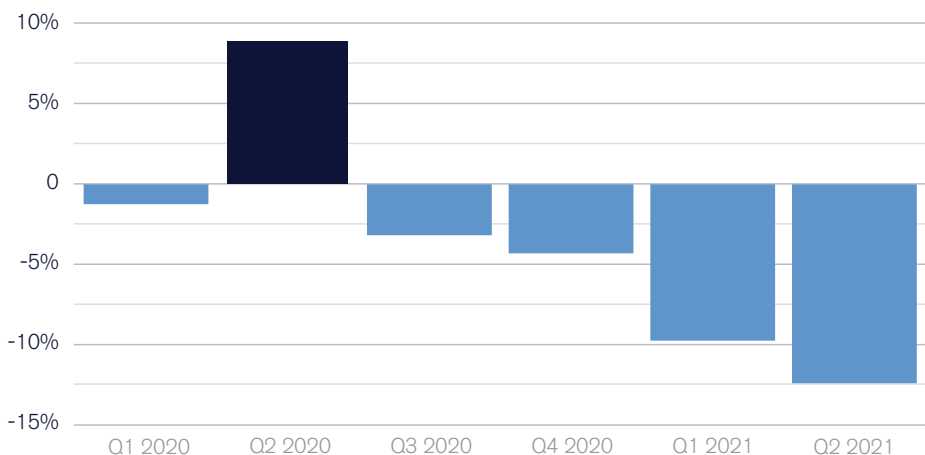
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Issuance size and price changes

The chart below, which shows the average upsized of property cat bonds issued over the past six quarters, shows that as in Q2 2020, deals have upsized while marketing by roughly a third. This represents a dip from the average upsized of 63% seen in Q1 2021. For the first half of the year, the Artemis Deal Directory shows that on average, deals increased in size by 41%, compared with 36% in the prior year period.



Where we have full pricing data, the average price change of property cat bond issuance during Q2 2021 was -12.5%, which signals even stronger pricing execution for sponsors than seen in Q1. Year-on-year, the shift in pricing dynamics is even more stark, with the -12.5% average price change in Q2 2021 comparing to a +9% average price change in Q2 2020. This quarter, strong investor demand saw 32 out of 34 tranches of notes price below the mid-point of initial guidance.



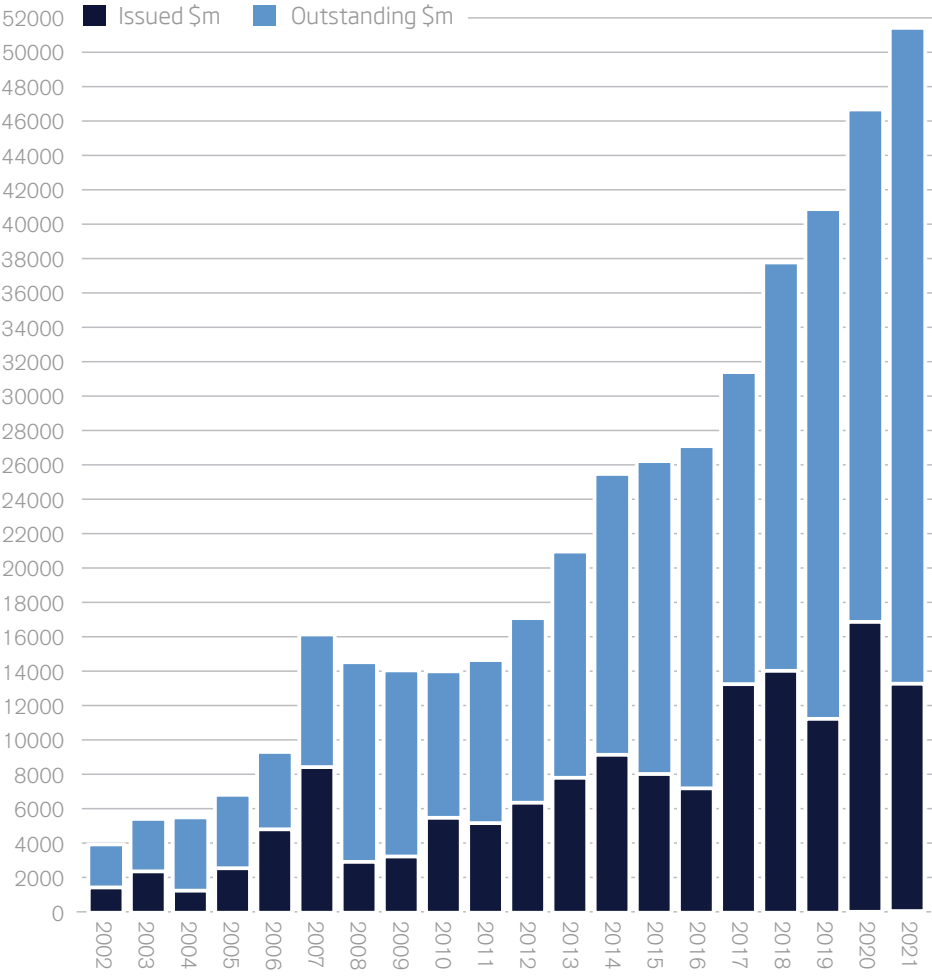
Issued / Outstanding

Overall, catastrophe bond and related ILS issuance has been fairly remarkable in both the second-quarter and opening half of the year. Quarterly issuance surpassed \$8 billion for the very first time, ensuring that at the halfway stage, a new issuance high of \$13.12 billion has been achieved. Impressively, this huge amount of new risk capital has come on the back of record annual issuance in 2020.

Undoubtedly, mortgage ILS deals, as has been the case for the past few years, has been a strong contributor to Q2 and H1 2021 issuance. However, property cat risk deals continue to account for the large majority of deals, and as shown by the Artemis Deal Directory, the \$6 billion of property cat bonds issued in Q2 2021 helped H1 cat risk issuance reach a new high.

Full-year cat bond and ILS issuance has only ever exceeded \$13 billion on two occasions, so the fact it's already passed this milestone in 2021 is really quite impressive. Furthermore, the strong start to the year has taken the outstanding market to a new high of more than \$51.5 billion.

The Artemis Deal Directory shows that more than \$4 billion of deals are scheduled to mature in the remainder of 2021. However, if current market trends persist and investor demand remains high, it seems likely that despite maturities the market will achieve outright growth once again.



If you want to see full details of every catastrophe bond and ILS transaction included in the data in this report please visit www.artemis.bm/deal_directory/



All catastrophe bond and ILS issuance data sourced from the Artemis Deal Directory.

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