Q4 2020 Catastrophe Bond & ILS Market Report

Busy fourth-quarter completes record catastrophe bond year

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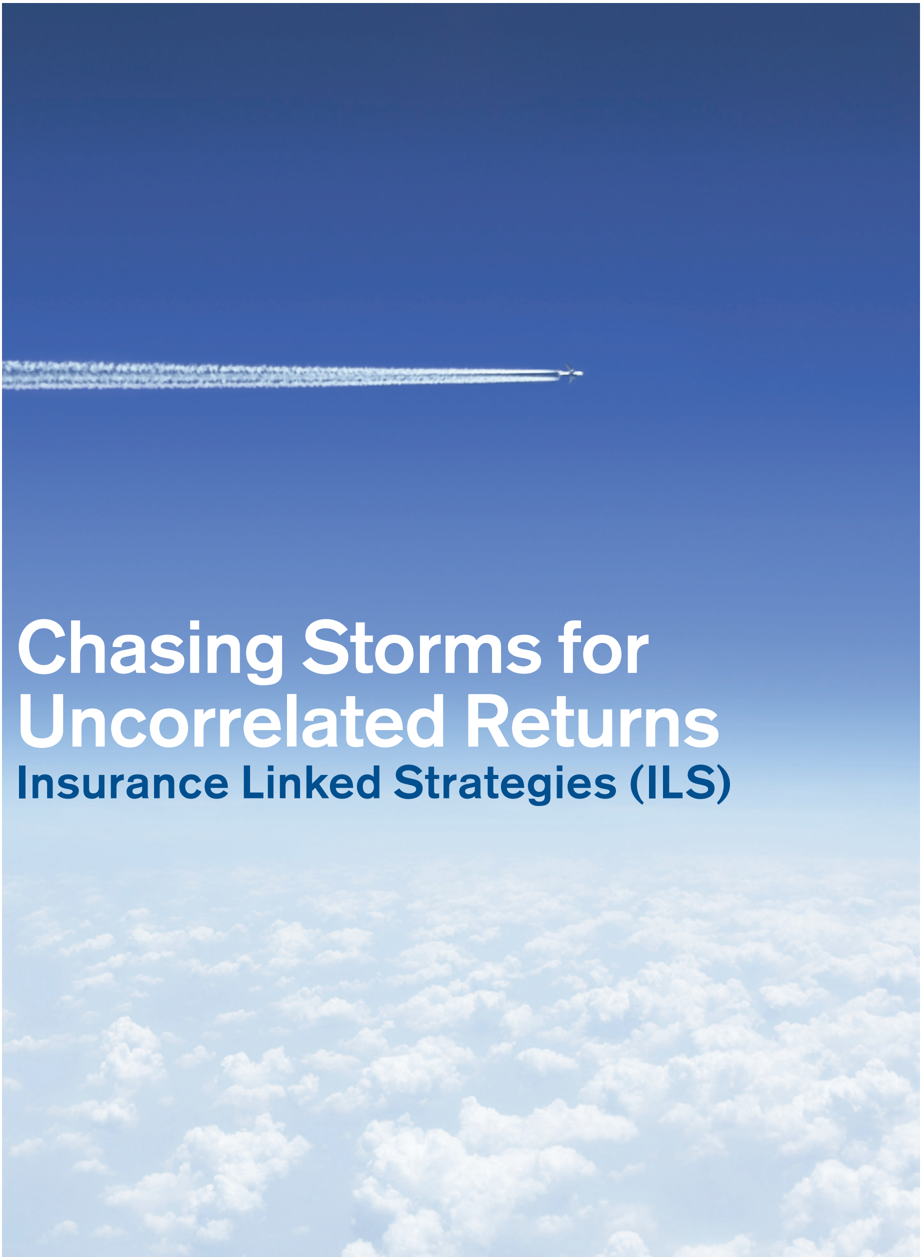

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INTRO

In this report, Artemis explores and reviews the catastrophe bond and related insurance-linked securities (ILS) market at the end of the fourth-quarter of 2020, examining new risk capital issued and the composition of transactions completed during a record-breaking quarter, as well as the activity seen during the full-year.

Catastrophe bond and ILS issuance reached a staggering $6 billion in Q4 2020. As shown by the Artemis Deal Directory, this is almost $3.5 billion above the ten-year average for the quarter, and the only time in the market's history that fourth-quarter issuance has reached this level.

In each quarter of 2020, although most notably in Q1 and Q4, catastrophe bond and ILS issuance was above average. Combined with the previous three quarters, the record-breaking level of both transactions and issuance in Q4 drove annual issuance to $16.4 billion, which, as shown by the Artemis Deal Directory, is another record.

Although $4.3 billion of mortgage insurance risk helped annual issuance in 2020 reach new heights, for the very first time, cat bonds covering property catastrophe risks exceeded $11 billion, which is yet another record for the sector.

The $6 billion of total new risk capital brought to market in the fourth-quarter came from 24 transactions consisting of 53 tranches of notes, as shown by the Artemis Deal Directory.

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.

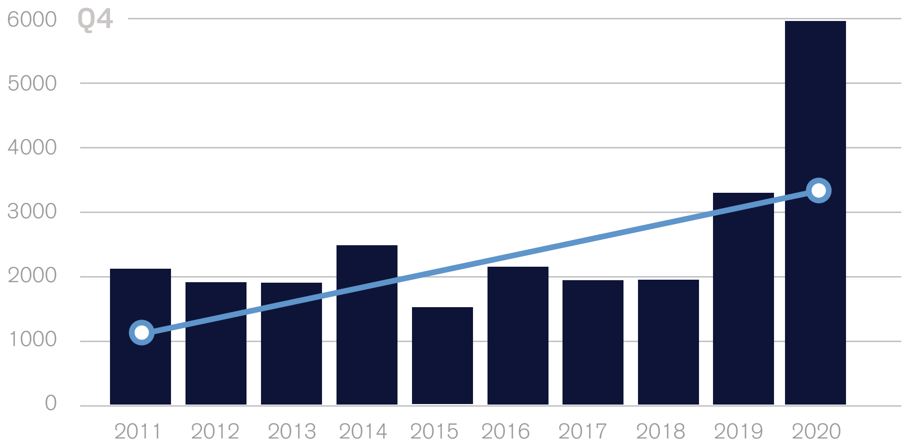
Transaction Recap

A mix of 24 traditional 144A cat bonds, private cat bond lites, and mortgage ILS transactions came to market in the final quarter of 2020. Investors took advantage of a wide range of perils and geographies of risk ceded from a growing sponsor base, including six first-time sponsors. Brief details of each transaction are below:

ISSUER / TRANCHE	SPONSOR	PERILS	$M	DATE
Easton Re Pte. Ltd. (Series 2020-1)	Hamilton Re	U.S. multi peril	150	Dec
Bellemeade Re 2020-4 Ltd.	Arch Capital Group	Mortgage insurance risks	321.393	Dec
Bonanza Re Ltd. (Series 2020-2)	American Strategic	U.S. multi peril	295	Dec
Mystic Re IV Ltd. (Series 2021-1)	Liberty Mutual	U.S. multi peril	300	Dec
Sussex Capital UK PCC Limited (Series 2020-1)	Brit Syndicates	U.S. multi peril	300	Dec
Phoenician Re Ltd. (Series 2020-2)	Alphabet Inc.	California earthquake	95	Dec
Northshore Re II Ltd. (Series 2021-1)	AXIS Capital	International multi-peril	150	Dec
Power Protective Re Ltd. (Series 2020-1)	LA DWP of Water & Power	California wildfire	50	Dec
Phoenician Re Ltd. (Series 2020-1)	Alphabet Inc.	California earthquake	237.5	Dec
Matterhorn Re Ltd. (Series 2020-5)	Swiss Re	U.S. named storm	300	Dec
2001 CAT Re Ltd. (Series 2020-1)	Allied World	International multi-peril	210	Nov
Four Lakes Re Ltd. (Series 2020-1)	American Family	U.S. multi peril	175	Nov
Residential Reinsurance 2020 Limited (Series 2020-2)	USAA	U.S. multi peril	400	Nov
Bellemeade Re 2020-3 Ltd.	Arch Capital Group	Mortgage insurance risks	418.158	Nov
Herbie Re Ltd. (Series 2020-2)	Fidelis Insurance	U.S. multi peril	275	Oct
Oaktown Re V Ltd.	NMI	Mortgage insurance risks	242.351	Oct
Cerulean Re SAC Ltd. (Series 2020-B)	Unknown	Unknown property cat risks	12.6	Oct
La Vie Re Limited (Series 2020-1)	Minnesota Life	Extreme mortality	100	Oct
Triangle Re 2020-1 Ltd.	Genworth	Mortgage insurance risks	349.621	Oct
Eagle Re 2020-2 Ltd.	Radian Guaranty	Mortgage insurance risks	390.4	Oct
Eclipse Re Ltd. (Series 2020-06A)	Unknown	Unknown property cat risks	20	Oct
Ursa Re II Ltd. (Series 2020-1)	CEA	California earthquake	775	Oct
Artex SAC Limited – Tenby Notes	Unknown	Unknown property cat risks	30	Oct
Radnor Re 2020-2 Ltd.	Essent Guaranty	Mortgage insurance risks	399.159	Oct

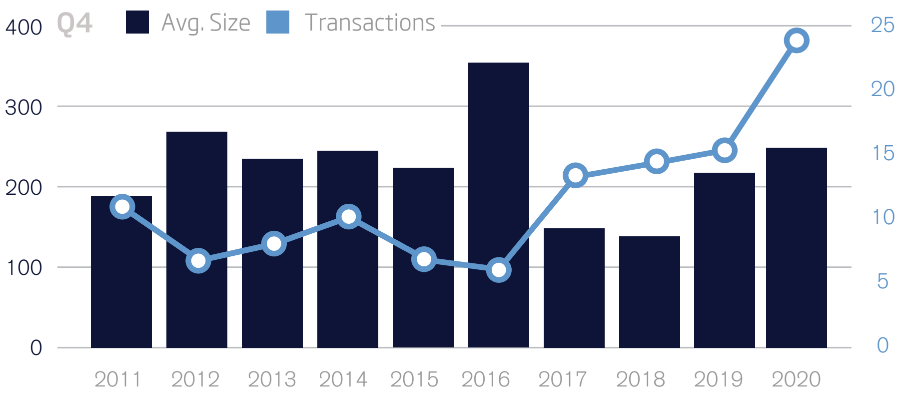
Q4 ILS issuance by year ($M)

$6 billion of catastrophe bond and ILS issuance in the fourth-quarter of 2020 is quite remarkable, and surpasses the previous record for the quarter by more than $2.7 billion and, is above the ten-year average for the period by approximately $3.5 billion.



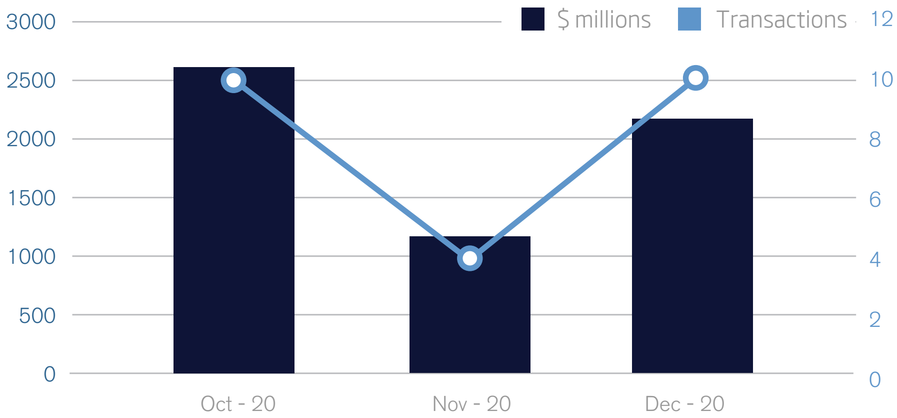
ILS average transaction size & number of transactions by year ($M)

A substantial 24 new transactions came to market in the final quarter of the year, which is more than double the ten-year average for the period. Of the deals issued, the average transaction size was approximately $250 million, which is higher than both the ten-year average and the $219 million recorded in Q4 2019.



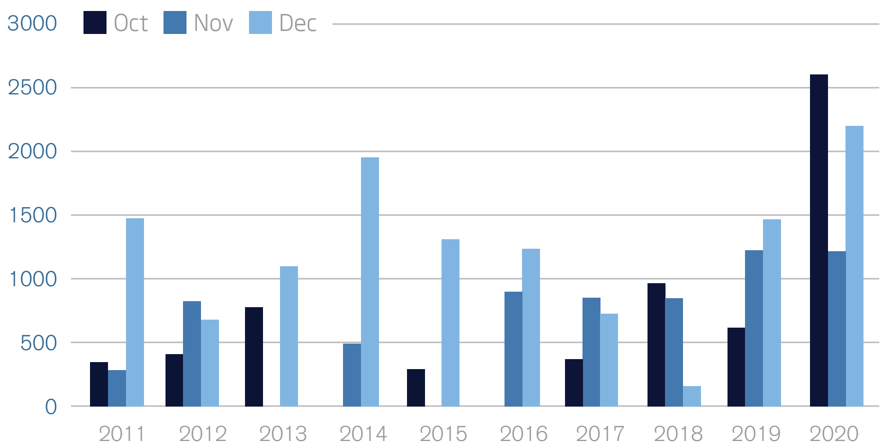
Number of transactions and volume issued by month ($M)

For the first time in the market's history, two months in the final quarter of the year saw issuance levels of above $2 billion. October issuance amounted to an impressive $2.6 billion and December issuance hit $2.2 billion, which is significantly higher than the ten-year average for both months. In November, more than $1.2 billion of new risk capital came to market, which is above the ten-year average for the month by $541 million.



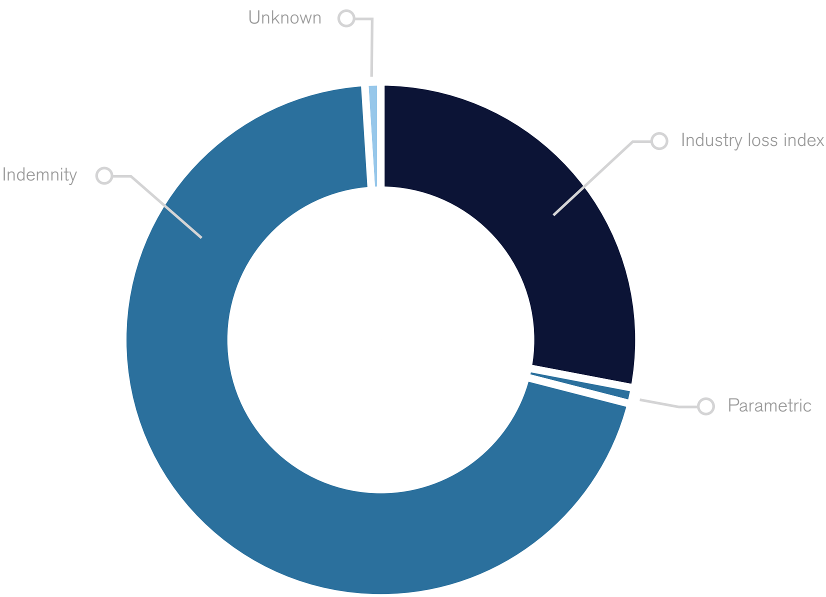
Q4 issuance by month & year ($M)

In both October and December, the record levels of catastrophe bond and ILS issuance came from 10 transactions. While in November, the above-average level of issuance came from four transactions, as shown by the Artemis Deal Directory.



Q4 2020 ILS issuance by trigger type

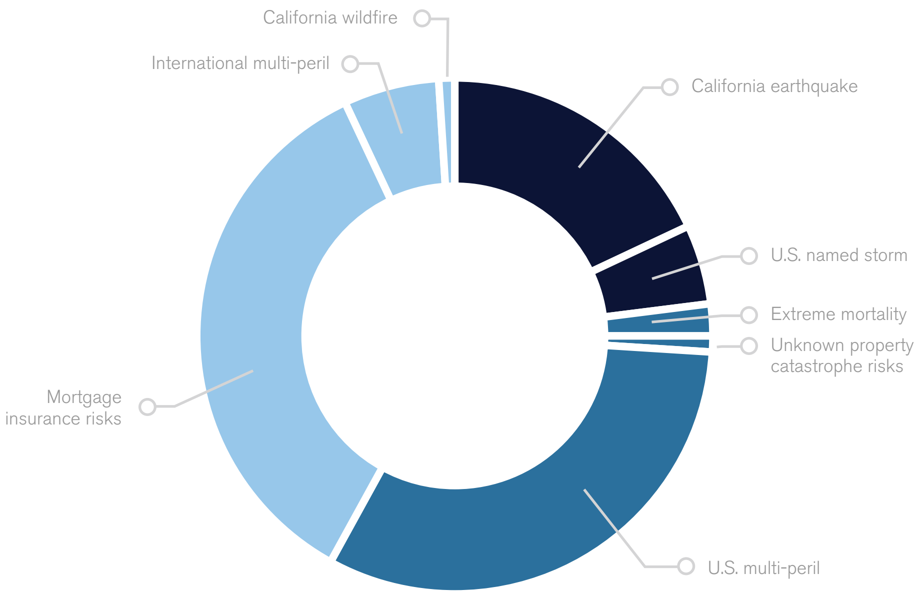
As is typical of most quarters, deals structured utilising an indemnity trigger dominated Q4, accounting for 70% of total issuance. Industry loss triggers also featured in the period, making up more than 28% of quarterly issuance.



Trigger diversification was lacking when compared with some other quarters, with just 1% of issuance in the period leveraging a parametric trigger structure. While for the remaining 1% of issuance in the quarter we do not have trigger information.

Q4 2020 ILS issuance by peril

The record-breaking volume of property cat bonds issued provided investors with both peril and geographical diversification. Combined, the CEA and Alphabet (Google) brought over $1.1 billion of California quake risk to market in Q4, while the LA Dept of Water & Power issued a $50 million California wildfire deal. Also in the U.S., Hamilton Re, Liberty Mutual, Brit, American Strategic, American Family, USAA, and Fidelis brought a combined $1.9 billion of U.S. multi-peril risks to market. Swiss Re returned with its fifth Matterhorn transaction of the year, a $300 million deal covering U.S. named storms.



International multi-perils deals from AXIS Capital and Allied World also featured in Q4, accounting for $360 million of issuance. Together, three private deals brought over $62 million of unknown property catastrophe risks to market.

Transactions from Arch Capital, NMI, Genworth, Radian, and Essent brought an additional $2.1 billion of mortgage insurance risk to market in Q4, which contributed to more than a third of quarterly issuance. Additionally, a $100 million issuance from Minnesota Life covered extreme mortality risks.

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ESG GAINS TRACTION IN THE ILS MARKET

Ocorian Client Director, Sherman Taylor looks at how the insurance linked securities (ILS) industry can incorporate ESG into its operations.

The total market capitalisation of new ILS issuances surpassed USD $15B in 2020, making it another record-breaking year for the asset class.

Investor confidence remained strong despite the uncertainties of the coronavirus pandemic, with a flurry of ILS renewals and new capital inflows. That being said, the ILS industry has potential for additional growth, and innovation is increasingly seen as the key to attracting fresh capital.

One such avenue for growth could be the industry's adoption of ESG (environmental, social and governance) principles. With new investment funds increasingly geared towards younger generations interested in aligning their investment choices with ESG values, the ILS industry could benefit from accessing this fresh source of capital.

There is genuine interest in ESG adoption within the ILS industry too. A topical global issue, ESG investing is being fuelled by evidence suggesting there is a positive correlation between ESG metrics and financial performance and market value. As a result, sustainable investing is becoming a necessity for stakeholders concerned with where and how their invested funds are deployed.

The European Union has taken this one step further. It has already introduced a taxonomy regulation aimed at introducing a benchmark for environmentally sustainable economic activities and to prevent 'greenwashing'. It is also introducing a sustainable finance disclosure regulation (SFDR) in March. This will require fund managers to disclose how they have integrated in their processes an assessment of all relevant sustainability risks that might have a material negative impact on the financial return of a fund investment. If successful, these regulations could provide a future framework for other regions.

On the environmental side, it makes sense that the ILS industry - which provides capital to support natural catastrophes risk - would embrace neoteric ESG ideals. ILS is inextricably tied to events such as wildfires and other severe weather patterns that scientists generally believe to be correlated to climate change.

The social element of ESG refers to standards organisations set for their relationships with employees, suppliers, customers and communities. Notably, many large players in the ILS industry already embrace such social considerations in their operations. For example, when the coronavirus first threatened in Bermuda, the industry prioritised employee welfare by quickly rolling out 'work from home' plans and acting to ensure the safety of staff.

The governance perspective considers how organisations are managed and how investor value is guarded. It also looks at general best practices, including: board and senior management conduct; accuracy in financial reporting including appropriate disclosures; and transparency with stakeholders and regulators. This level of governance has always been present in the ILS industry due to the complexity of ILS transactions which demands high standards from all participants.

BERMUDA IS EMBRACING CHANGE

The Bermuda Stock Exchange (BSX) is a vital part of the global ILS industry. One of the world's largest electronic stock exchanges, the BSX continues to attract the majority of public ILS listings. The BSX has also been at the forefront of embracing an ESG ecosystem. In May 2019, it launched its ESG initiative in line with similar World Federation of Exchanges initiatives.

Many of the ESG ideals are already well represented in the Bermuda business community. And as ESG gains traction around the world, Bermuda will continue to be a natural home for the ILS industry as it evolves.

Ocorian provide a full suite of administration and fiduciary services to the ILS and captive market from its Bermuda office. For more information visit ocorian.com.

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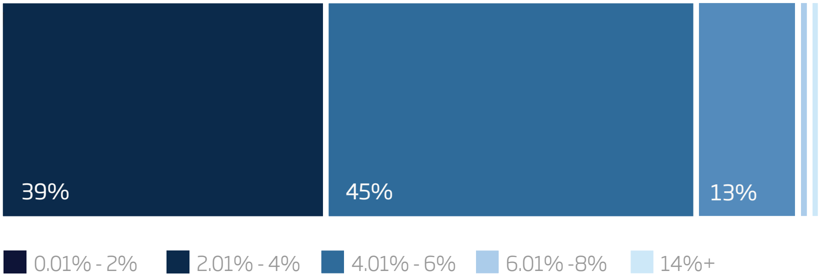
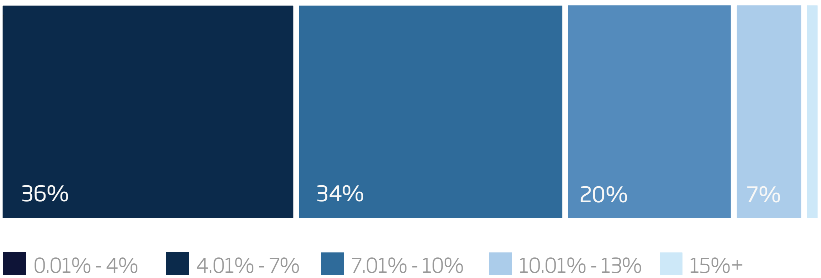
Q4 2020 ILS issuance by expected loss

We have expected loss data for roughly $3.8 billion of new risk capital issued in Q4. Of this, around $1.5 billion had an expected loss of between 0.01% and 2%, while $1.7 billion had an expected loss of between 2.01% and 4%. More than 13% of Q4 issuance had an expected loss of between 4.01% and 8%. The highest expected loss on offer came from the Class 1 tranche of ResRe notes, at 14.84%. The lowest expected loss on offer in the period, at 0.17%, came from the La Vie Re mortality cat bond notes.



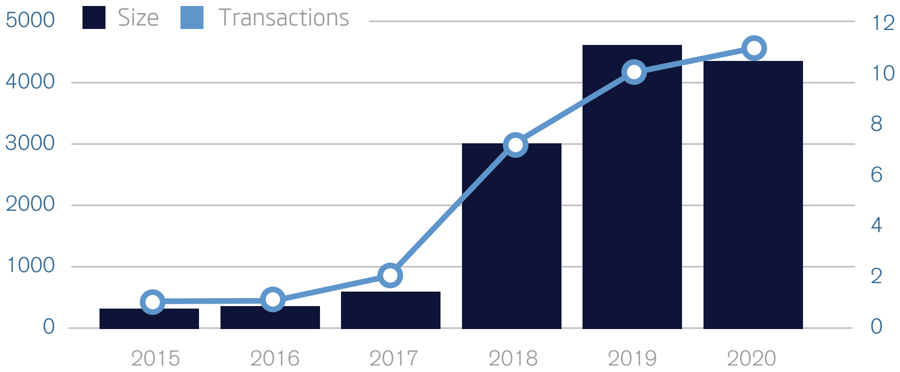
Q4 2020 ILS issuance by coupon pricing

Of the $4.8 billion of new risk capital issued where we have pricing data, 36%, or $1.74 billion paid a coupon of between 1.01% and 4%, while 34%, or $1.6 billion offered investors a coupon of between 4.01% and 7%. Almost $1 billion of issuance paid a coupon of between 7.01% and 10%, while $355 million offered a coupon of between 10.01% and 13%. At 26%, the Class 1 tranche of ResRe notes paid the highest coupon in Q4 2020. The lowest coupon offered in the period was 2%, from a tranche of mortgage ILS notes.



Mortgage ILS issuance by year

In terms of the number of mortgage transactions, the 11 issued in 2020 is a new record for the market. Combined, the 11 mortgage ILS deals seen in 2020 amounted to approximately $4.3 billion, which is down slightly from the record $4.55 billion posted in 2019. As shown by the Artemis Deal Directory, since the arrival of the first mortgage ILS deal in 2015, appetite has increased and over the last six years, total mortgage ILS issuance now stands at more than $13 billion.



Full-year 2020 ILS issuance split

While it was clearly another strong year for mortgage ILS transactions, with deals accounting for 26% of 2020 issuance, it was a record-breaking period for property catastrophe risk deals. The Artemis Deal Directory shows that a staggering $11 billion of property cat bonds were issued in the year, accounting for approximately 67% of annual issuance. Private ILS deals totalled $351 million in 2020, making up just over 2% of issuance, while deals covering medical benefit claims levels and extreme mortality totalled $761 million, or just shy of 5% of issuance.

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The Case for Deploying Enterprise Architecture in ILS

ILS managers are technology companies that happen to work at the intersection of (re)insurance and capital markets. Such a statement is increasingly adopted by companies seeing innovation as a key driver of their comparative advantage. Whether this involves creating new business products or business models, innovation and technology must be central to strategy and managed as a fundamental capability.

To gain such a competitive edge, ILS managers need a front-footed, strategically aligned innovation and technology organization. In reality, however, many lack such an organization, and experience significant challenges in their IT architecture that detract from the desired strategy instead of reinforcing or even shaping it. What is needed is the capability to manage the company's IT assets and drive the discovery and adoption of innovative solutions that advance the business strategy.

Enterprise architecture can play a central role in orchestrating this. We approach enterprise architecture as both a function and a framework to continuously assess and orchestrate a company's capabilities, business processes, systems, and information assets to advance the business strategy while delivering necessary adaptability, robustness, and efficiency.

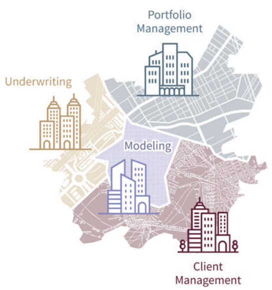
Enterprise architecture encourages ILS managers to think like a city council. We see many ILS managers living what we call the "Urban Sprawl" approach. In this approach citizens are given latitude to independently build whatever structures and infrastructure they like wherever and however they want. The resulting city lacks a systematic, cohesive layout and could be prone to challenges in the future. This often manifests due to the cross-industry nature of the business, overreliance on legacy systems stemming from underinvestment and lack of innovation, and/or as an unintentional by-product of change aversion. For some ILS managers, this happens because strategic decisions (e.g. transition from rented to self-owned reinsurer) are not matched in operational execution—or because there is an outright lack of planning from the get-go—creating impediments to scale the business to new markets and customers, to deliver new products, and other areas.

One outcome of this is that business units can be siloed along functional lines. Cross-functional interactions to conduct business-as-usual processes occur via email, via printed sign-off etc. This is reinforced by industry deficiencies in the availability of dedicated ILS IT systems. This means that a mosaic of systems and applications is often required, but in practice ILS managers often over-rely on tactical solutions that become strategic by default (e.g. user-created Excel tools). This often translates into data stored in a federated, siloed manner, which introduces operational risk, impacts reporting capabilities, and ultimately decision making. It also makes the whole system landscape less scalable and increases maintenance costs.

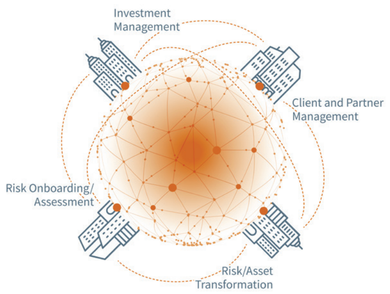
A more methodical, alternative approach is to build and maintain the city in a systematized way with interconnecting systems and structures. We call this the "Moon Wheel" approach. The Moon Wheel approach requires an overarching plan and design along with coordinated effort among teams in the design, build, and maintain phases. If sound architectural principles are applied, the city will be both structurally sound and have the flexibility to accommodate future changes that will inevitably be required.

Taking the Moon Wheel approach and ensuring innovation and technology have a seat at the strategy table is an explicit choice available to ILS managers to make. Embedding enterprise architecture within the company enables organizations to identify pain points in their current setup, define the target architecture that supports or further shapes company strategy, and determine the roadmap for achieving the vision.

Urban Sprawl



Moon Wheel



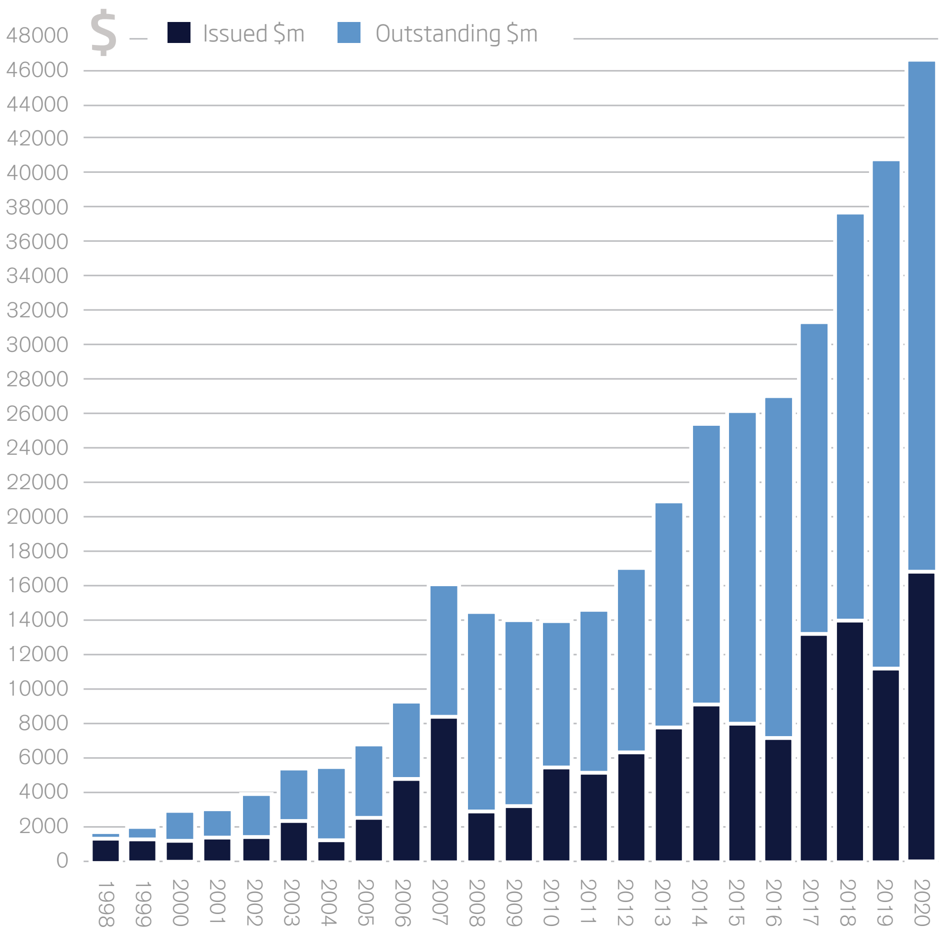
[1] In anticipation of moon and planet-landing missions, NASA required a tire that would never go flat. In response, the Superelastic Tire was invented to be strong, flexible, durable, light, and versatile to allow the tire and the vehicle to safely and efficiently navigate alien terrain. Source: https://technology.nasa.gov/patent/LEW-TOPS-99

Issued / Outstanding

$6 billion of catastrophe bond and related ILS issuance in the fourth-quarter helped total 2020 issuance reach $16.4 billion, which is the highest ever recorded and above the previous record set in 2018 by more than $2.6 billion. When compared with 2019, issuance levels in 2020 increased by a significant $5.3 billion, as shown by the Artemis Deal Directory.

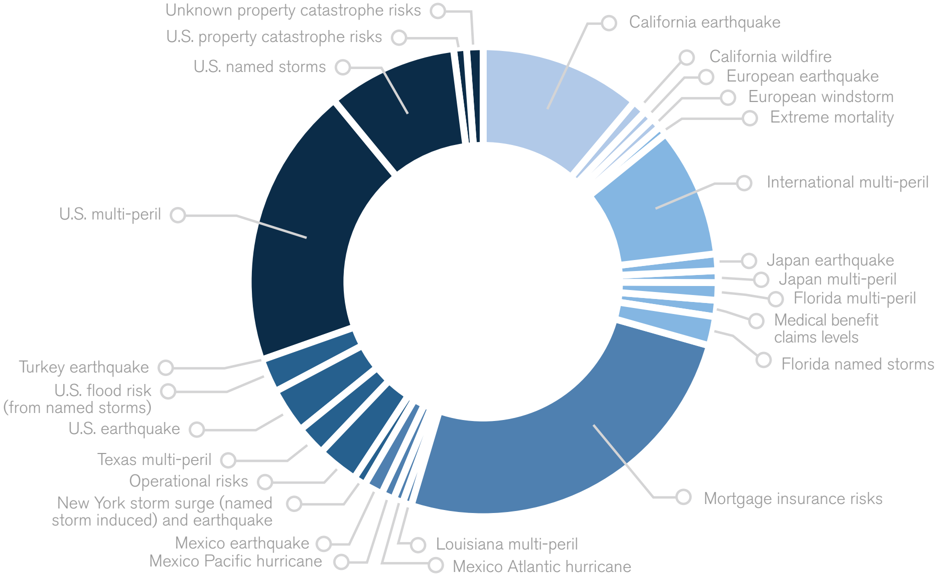
Following a record-breaking first-quarter, cat bond and ILS issuance in both the second and third quarters of 2020 came in above average, in spite of the global pandemic and financial market volatility. When combined with a record-breaking fourth-quarter, the outstanding market at year-end reached a new high of $46.4 billion. As shown by the Artemis Deal Directory, this represents year-on-year growth of approximately $5.7 billion.

While mortgage issuance was again strong, the number of property catastrophe deals that featured in 2020 shows that investors remain attracted to the pure cat risk side of the marketplace. At the same time, 10 new sponsors entered the market in 2020; so the desire to participate in the ILS space is clearly robust from both cedent and investor sides of the market.

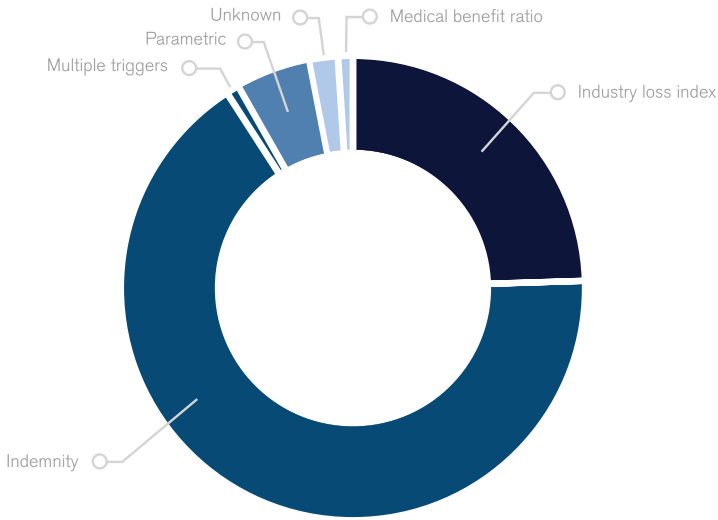


If you want to see full details of every catastrophe bond and ILS transaction included in the data in this report please visit www.artemis.bm/deal_directory/

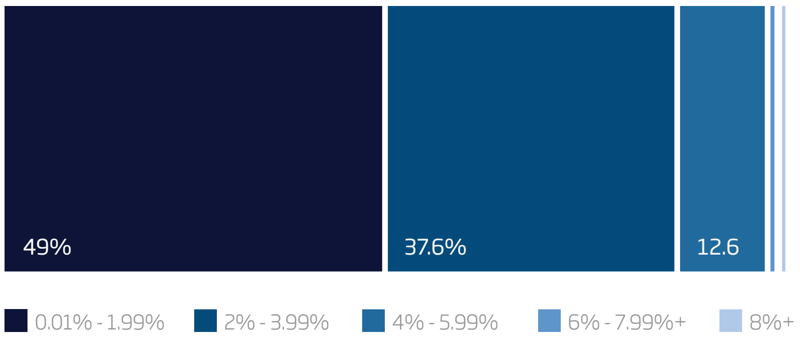
Full-year 2020 ILS issuance by peril



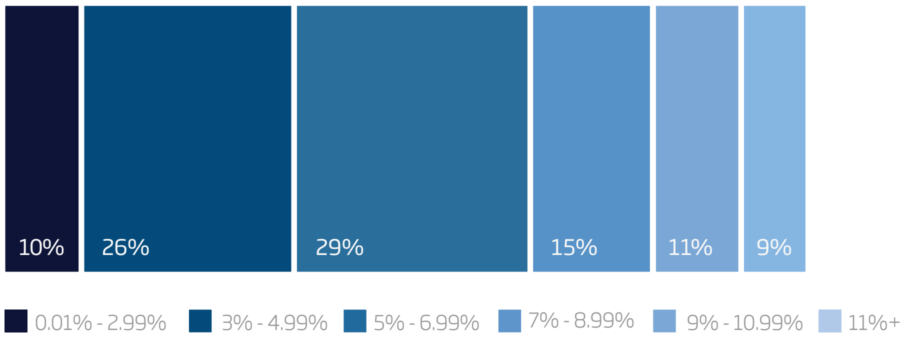
Full-year 2020 ILS issuance by trigger



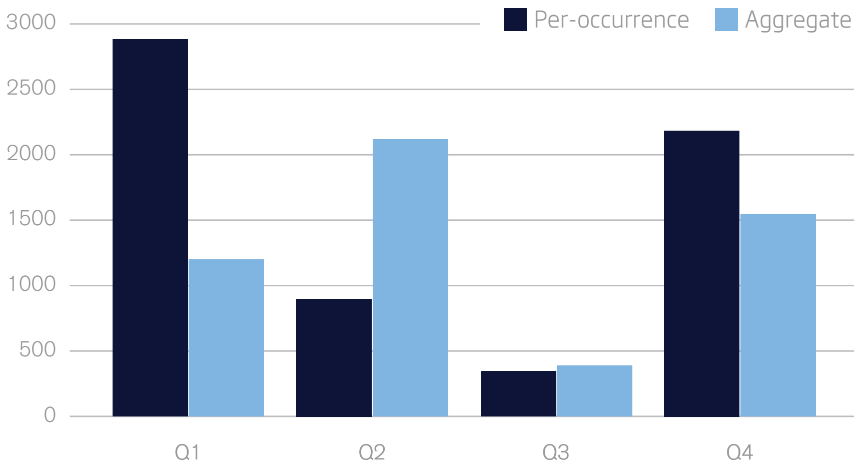
Full-year 2020 ILS issuance by expected loss



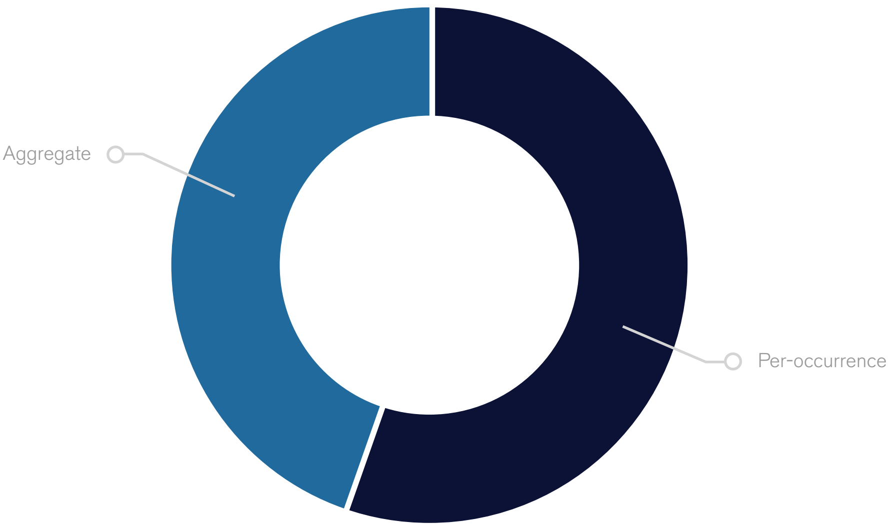
Full-year 2020 ILS issuance by coupon pricing



2020 ILS issuance per-occurrence vs aggregate split by quarter



Full-year 2020 ILS issuance per-occurrence vs aggregate split

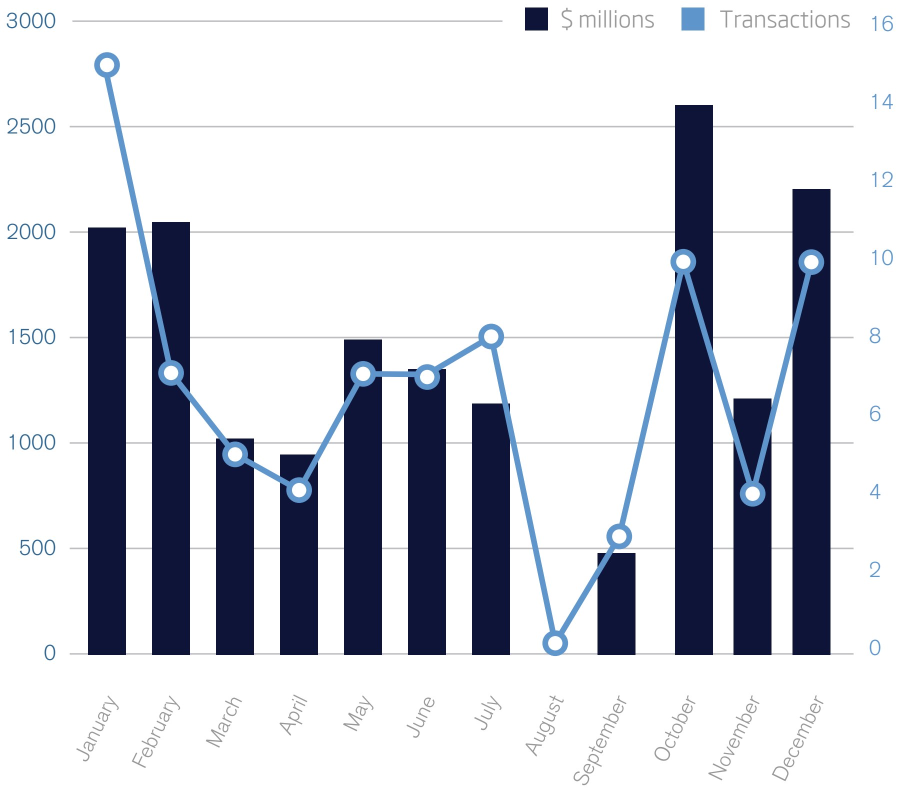


Full-year 2020 number of ILS transactions and volume issued by month ($M)

Once again, the majority of catastrophe bond and ILS issuance occurred in the opening half of the year, both in terms of the number of deals and the volume of issuance. From January 1 to June 30, 45 separate transactions came to market, with a combined value of $8.81 billion. From July 1 to December 31, 35 transactions were issued, amounting to $7.63 billion of new risk capital.

In 2020, nine months of the year witnessed issuance levels of more than $1 billion, while four months saw issuance surpass the $2 billion mark. In terms of risk capital issued, the busiest month of the year was December, which saw $2.2 billion of new risk capital come to market. In terms of the number of transactions, the 15 issued in January made it the most active month of the year.

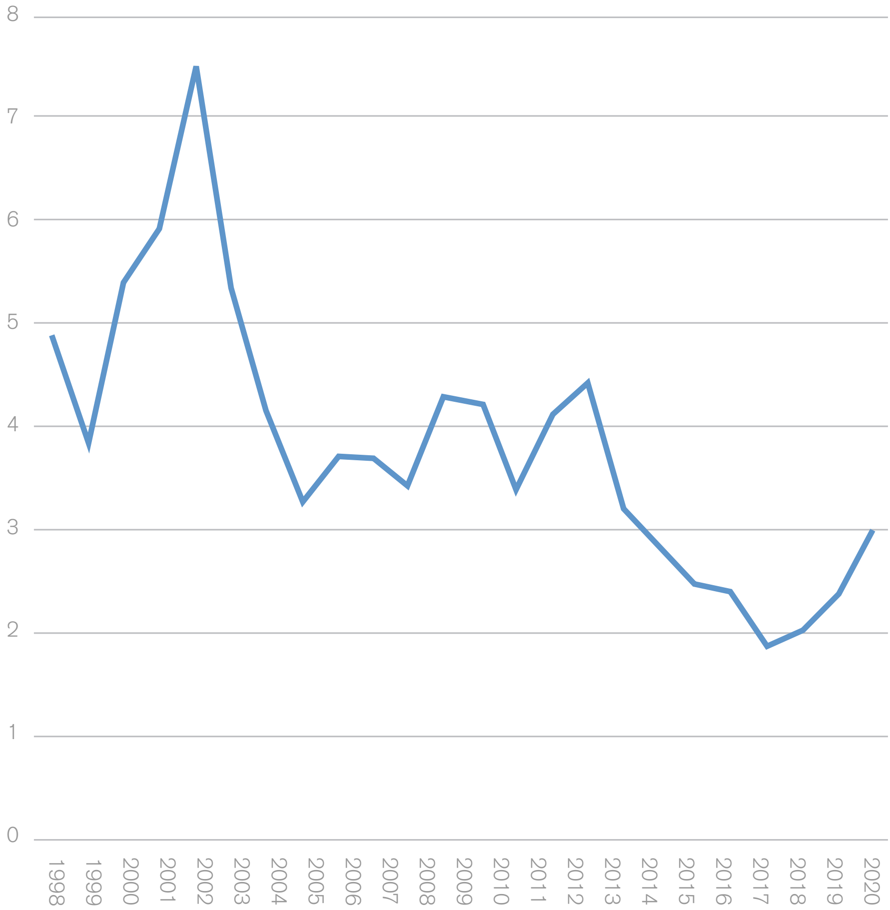
The Artemis Deal Directory shows that overall, 80 transactions came to market in 2020, which is the most ever witnessed in a single year and some way above the previous record of 67 deals.



Catastrophe bond and ILS average multiple by year

The chart below shows the average multiple (price coupon divided by expected loss) of annual catastrophe bond and ILS issuance, which in 2020 increased to 2.98. This is the highest since the 3.14 recorded in 2013. As shown by the chart, the average multiple declined steadily since 2014, reaching an all-time low of 1.86 in 2017, before once again climbing towards the 3 times expected loss mark.

Artemis' data shows that in 2020, the spread (price coupon minus expected loss) of catastrophe bond and ILS issuance also increased, to 4.96% against 4.78% in 2019. In fact, this is the widest spreads have been in the marketplace since 2012, when the spread between the average coupon and expected loss ended the year at 7.13%.



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

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