

# REVIEW OF THE ATLANTIC HURRICANE SEASON 2024

---

DECEMBER 2024



info@twelvecapital.com – [www.twelvecapital.com](http://www.twelvecapital.com) –  [Connect with us on LinkedIn](#)

Marketing material for professional/qualified investors only.

## Executive Summary

- The 2024 Atlantic Hurricane season was above average in terms of activity, but not as intense as initial forecasts
- Warm Sea Surface Temperatures and a shift away from El Niño produced a number of strong storms, but competing factors such as Saharan dust acted to inhibit development
- Total of 11 hurricanes, of which 5 became Category 3+
- Estimated hurricane insurance industry losses for 2024 expected to be approx. USD 30 - 50bn
- The majority of insured losses from natural catastrophes in 2024 will not be from hurricanes, but from secondary perils (wildfires, tornadoes, floods, etc.), which will exceed USD 50bn – Twelve Capital focuses on peak perils



### Driving factors for hurricane formation in the 2024 season

While there are many processes and physical phenomena that influence the formation of hurricanes, the following were identified as key drivers in 2024:

- **Warm Sea Surface Temperatures (WSST):** In general, the warmer the water the more energy there is to form and sustain hurricanes. Figure 1 shows this water temperature for the 2024 season and, similar to 2023, it was above recent climatology. During the peak of the season in September, it fell below the all-time high of 2023. The high temperature was a key reason why there was above average hurricane formation this year, and why we saw phenomena such as “rapid intensification”.
- **El Niño and La Niña:** A naturally occurring and cyclical phenomenon driven by water temperatures off of the west coast of South America. The warmer or cooler they are, the more they affect the trade winds that cross the USA, creating more (or less) wind shear

and steering currents. In 2024, El Niño weakened to a neutral state during the peak of the season, reducing the winds that inhibit hurricane formation and the winds that help to push hurricanes away from the coast.

- **Saharan Dust:** A little harder to predict and account for, but given the early season conditions, driven by the warm sea surface temperatures and the move towards a La Niña, these have been responsible for a reduction in hurricane formation. Dust from Sahara blows into the waters off of Western Africa in the so-called “Main Development Region”, drying out the air and making it harder for hurricanes to form. Stronger than expected Saharan dust was a key reason for fewer hurricanes forming.



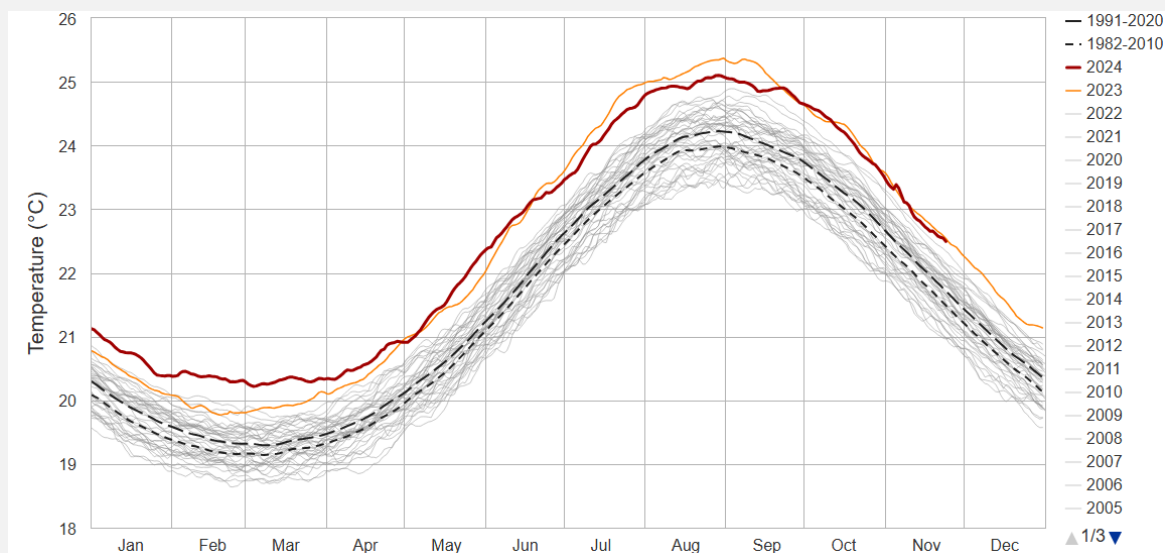
### The 2024 season in numbers

There were 18 named storms, 11 of which reached hurricane strength and five of which intensified into major hurricanes (Category 3+). Five storms made landfall in the US, two of which were major hurricanes. Please refer to Table 1 below summarising the predicted and actual numbers.

Hurricane Beryl became the earliest Category 5 hurricane on record in the Atlantic. Hurricane Helene made landfall as a Category 4 storm, becoming the 14th most powerful hurricane to hit the US since records began. Hurricane

Milton rapidly intensified from a tropical storm to a Category 5 hurricane in 24 hours, at one point becoming the fifth most intense Atlantic hurricane on record, but fortunately weakened before making landfall.

**Figure 1: Daily sea surface temperature, North Atlantic (0-60°N, 0-80°W)**



Source: [https://climatereanalyzer.org/clim/sst\\_daily/](https://climatereanalyzer.org/clim/sst_daily/). As at 25 November 2024.

**Table 1: 2024 Atlantic Hurricane Season – Prediction vs Actual**

| Forecaster                           | Named storms | Hurricanes | Major hurricanes | ACE <sup>1</sup> |
|--------------------------------------|--------------|------------|------------------|------------------|
| NOAA                                 | 17 – 24      | 8 – 13     | 4 – 7            | –                |
| Colorado State University            | 23           | 12         | 6                | 230              |
| Tropical Storm Risk                  | 24           | 12         | 6                | 230              |
| Accuweather                          | 20 – 25      | 8 – 12     | 4 – 7            | 175 – 225        |
| Weatherbell                          | 25 – 30      | 14 – 16    | 6 – 8            | 200 – 240        |
| UK Met Office                        | 22           | 12         | 4                | 212              |
| The Weather Company                  | 24           | 11         | 6                | –                |
| NC State University                  | 15 – 20      | 10 – 12    | 3 – 4            | –                |
| ECMWF                                | 23           | 13         | –                | 240              |
| Artemis Average forecast             | 23           | 12         | 5                | –                |
| <b>2024 Hurricane Season Actuals</b> | <b>18</b>    | <b>11</b>  | <b>5</b>         | <b>160</b>       |
| 1950 – 2023 long-term average        | 12           | 6          | 3                | 106              |
| 1981 – 2010 median                   | 12           | 6          | 3                | 106              |
| 1991 – 2020 NOAA average             | 14           | 7          | 3                | 123              |
| 2014 – 2023 recent average           | 16           | 7          | 3                | 121              |

Source: <https://www.artemis.bm/2024-atlantic-hurricane-season/>. As at 25 November 2024.

ECMWF: European Centre for Mid-range Weather Forecasts, NOAA: National Oceanic and Atmospheric Administration.

<sup>1</sup> Accumulated cyclone energy.

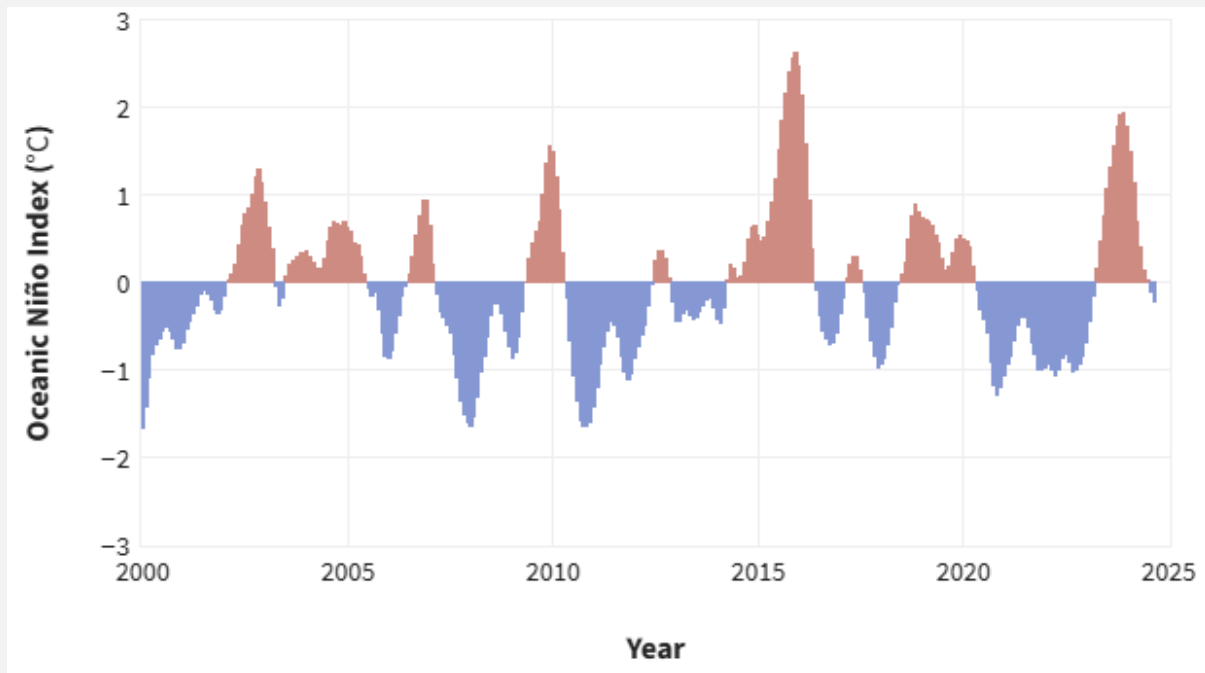
## El Niño/La Niña into 2025

Sometimes referred to as the ENSO (El Niño Southern Oscillation) cycle, it is a naturally occurring phenomenon in the Pacific Ocean where waters are warmer than normal (El Niño) or cooler than normal (La Niña). Their frequency is not regular, but their duration and periodicity are predictable or regular. A typical

El Niño lasts 9-12 months, and a typical La Niña lasts 1-3 years (although it is possible for these conditions to last shorter/longer). They usually form in March-June, peak in December-April and then weaken in May-July.

Within +/- 0.5 degrees it is often referred to as the “neutral state”, with the ONI (Oceanic Niño Index) having to go above or below this threshold to then be called El Niño or La Niña.

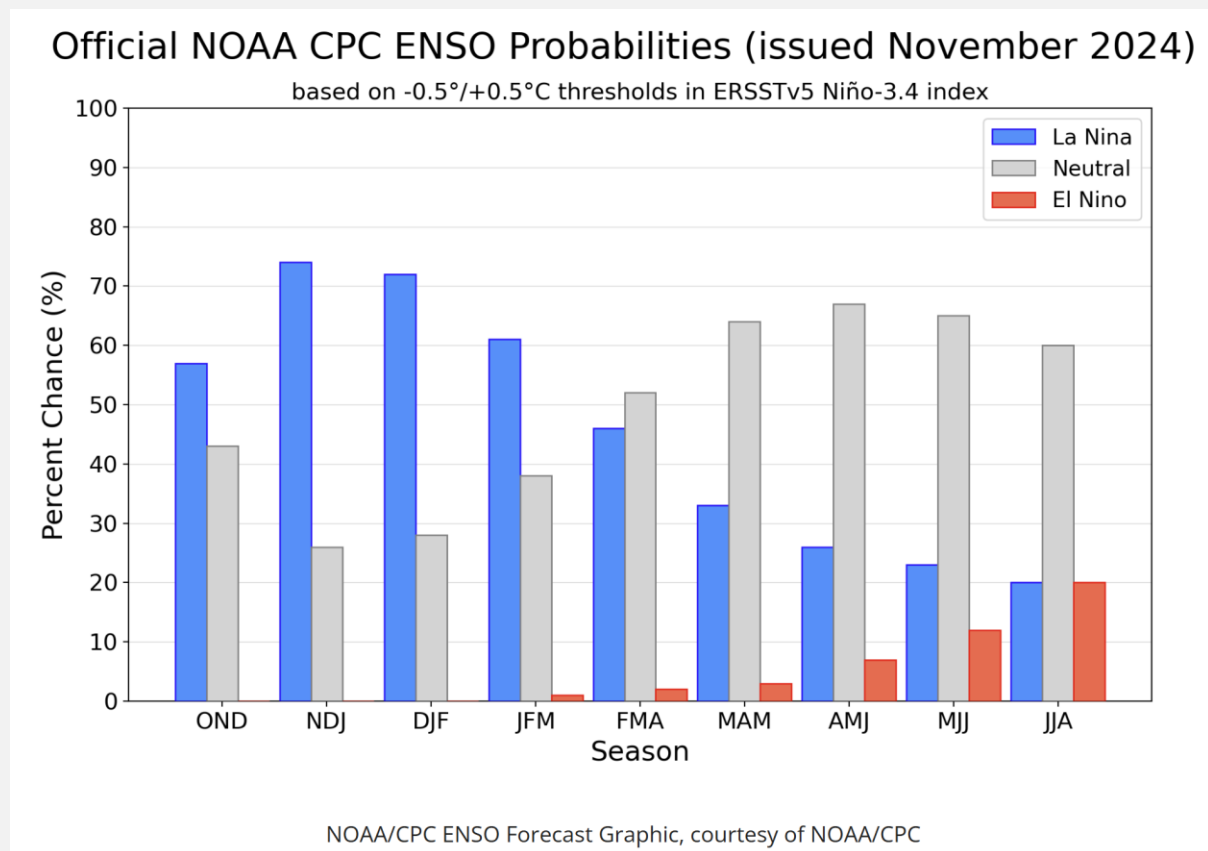
**Figure 2: Oceanic Niño Index (2000 to Present)**



Source: <https://www.climate.gov/news-features/understanding-climate/climate-variability-oceanic-nino-index> As at 27 November 2024

It is difficult to predict what will happen with the ONI during the 2025 hurricane season, but given that we have entered a neutral phase, it is likely that we will remain neutral or move into La Niña during the first few months of 2025, with a clearer picture emerging from the second quarter of 2025. The latest longer term forecasts from NOAA indicate that we are likely to be in a neutral state, possibly moving into an El Niño.

**Figure 3: NOAA forecast on ENSO**



Source: [https://iri.columbia.edu/our-expertise/climate/forecasts/ens0/current/?ens0\\_tab=ens0-cpc\\_plume](https://iri.columbia.edu/our-expertise/climate/forecasts/ens0/current/?ens0_tab=ens0-cpc_plume). As at 27 Nov 2024.

**Figure 4: ENSO probabilities**

| Season | La Niña | Neutral | El Niño |
|--------|---------|---------|---------|
| OND    | 57      | 43      | 0       |
| NDJ    | 74      | 26      | 0       |
| DJF    | 72      | 28      | 0       |
| JFM    | 61      | 38      | 1       |
| FMA    | 46      | 52      | 2       |
| MAM    | 33      | 64      | 3       |
| AMJ    | 26      | 67      | 7       |
| MJJ    | 23      | 65      | 12      |
| JJA    | 20      | 60      | 20      |

Source: [https://iri.columbia.edu/our-expertise/climate/forecasts/ens0/current/?ens0\\_tab=ens0-cpc\\_plume](https://iri.columbia.edu/our-expertise/climate/forecasts/ens0/current/?ens0_tab=ens0-cpc_plume). As at 27 Nov 2024.

This latest forecast from NOAA shows that a La Niña is expected, but there is uncertainty about when and how strong it will be, with even a 60% chance that it will be a "neutral" phase during the peak of the season.

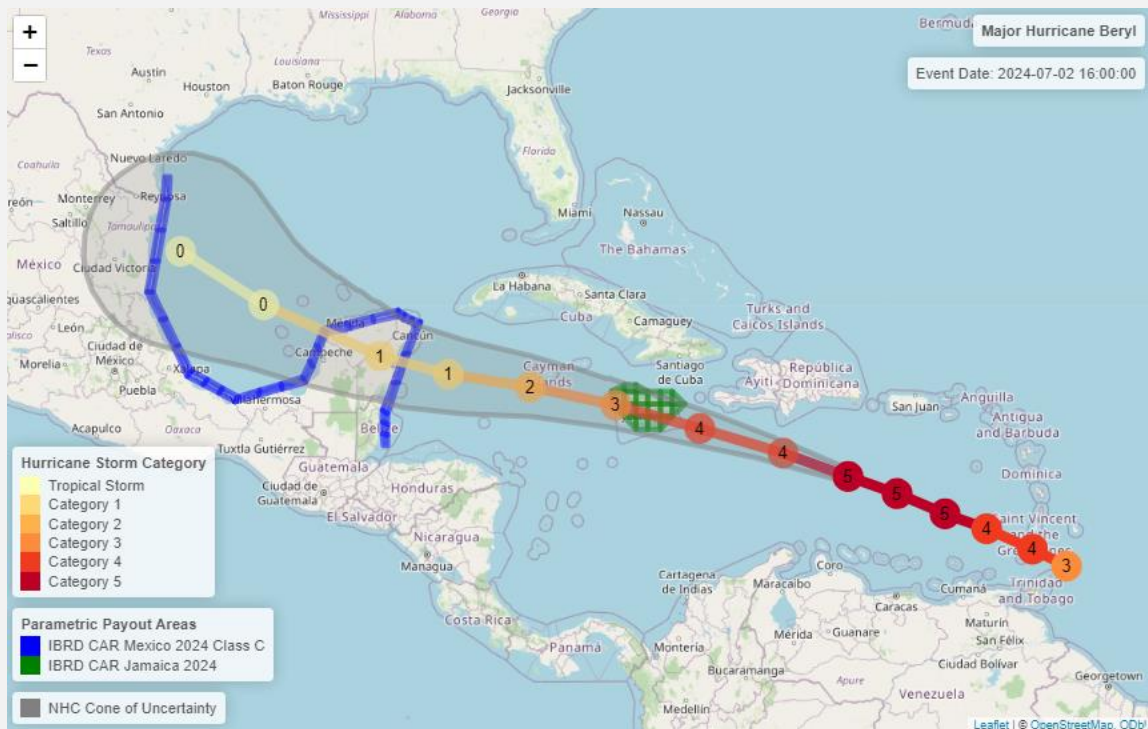
## Notable Events in 2024

Although the season was less active than expected, it was not without a number of notable events.

### Major Hurricane Beryl

Beryl was a strong start to the season, forming in late June/early July and becoming the earliest ever Category 5 hurricane, fuelled by very warm waters. Its path took it very close to Jamaica and into Mexico before weakening in the Gulf of Mexico and dissipating. The "near miss" of Jamaica meant that it came very close to triggering an IBRD Cat Bond covering Jamaica, but the central pressure of the storm and its track were outside the parametric trigger conditions.

Figure 5: Hurricane Beryl path and parametric contracts



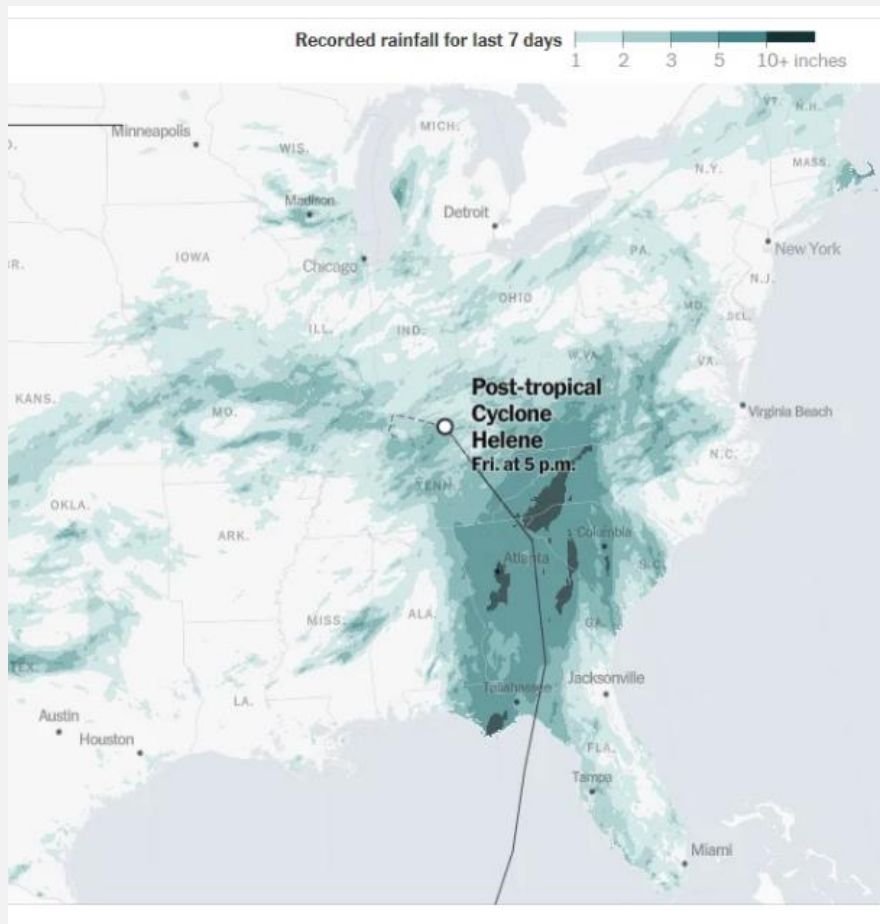
Source: Twelve Capital / NHC. As at 27 November 2024.

### Major Hurricane Helene

Helene made landfall in the Big Bend area of Florida as a Category 4 storm, causing coastal damage due to significant storm surge. Fortunately, it did not hit a densely populated area and the wind damage was not too severe, but the problem with Helene was the amount of rainfall it dumped on northern Florida, Georgia

and South Carolina as it moved inland. Much of the damage from Helene is due to precipitation, including flooding, and the economic losses are expected to be significantly higher than the insured losses due to the lack of flood insurance in some of the most affected areas.

**Figure 6: Hurricane Helene rainfall map**



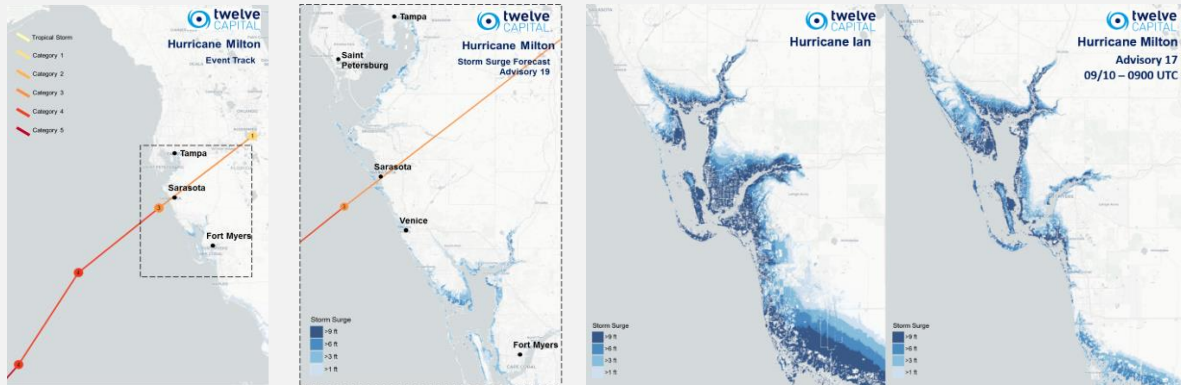
Source: Wikipedia / NOAA / NASA. As at 27 November 2024.

### Major Hurricane Milton

Milton made landfall in Florida about two weeks after Helene, but further south in Sarasota. While in the Gulf, Milton gained strength, but as it approached the west coast of Florida, it began to weaken and made landfall as a Category 3

storm. Given the location of landfall, it has been compared to Ian, but we are seeing a number of differences between the events, most notably in the strength and amount of storm surge. Milton is likely to be a much smaller insurance event than Ian.

Figure 7: Hurricane Milton vs Hurricane Ian (2022)



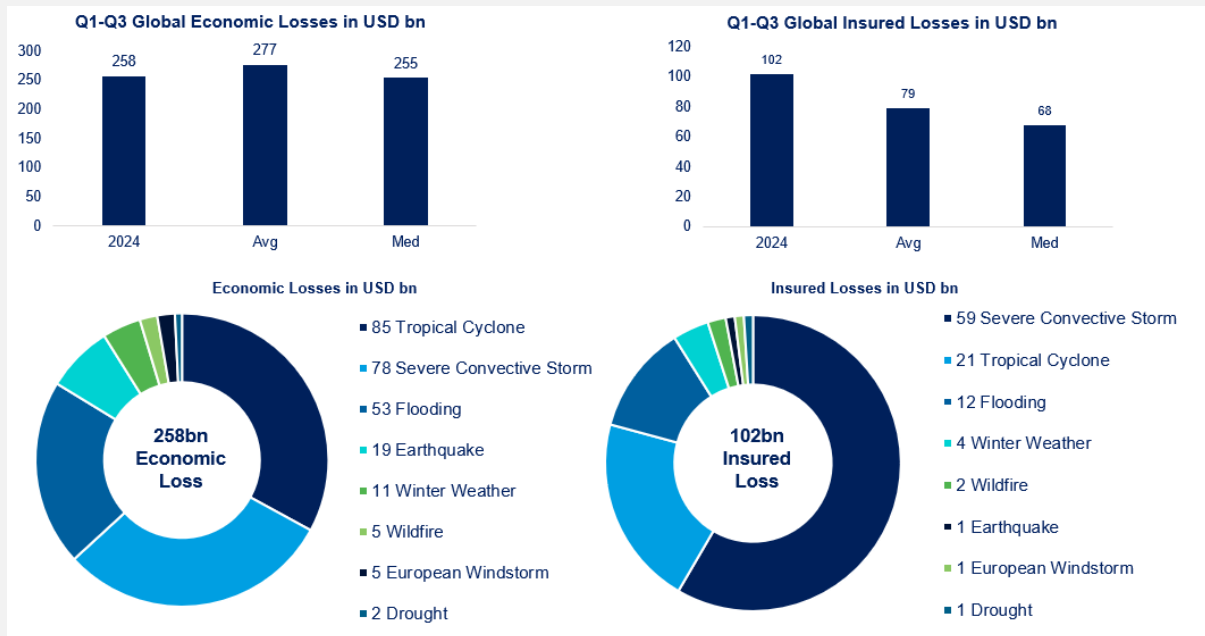
Source: Twelve Capital / NOAA. As at 27 November 2024.

## Secondary Perils in 2024

In 2024, there were not only hurricanes but, as always, other catastrophic events, a significant proportion of which were "secondary" or "non-peak" in nature.

Although the report only covers Q1-Q3, we can see that 2024 is another year of significant severe convective storm events (tornadoes and hail), which will cause over USD 50bn in insured losses.

Figure 8: Q1-Q3 2024 report into insurance losses



Source: Aon Q3 Global Catastrophe Recap. October 2024.

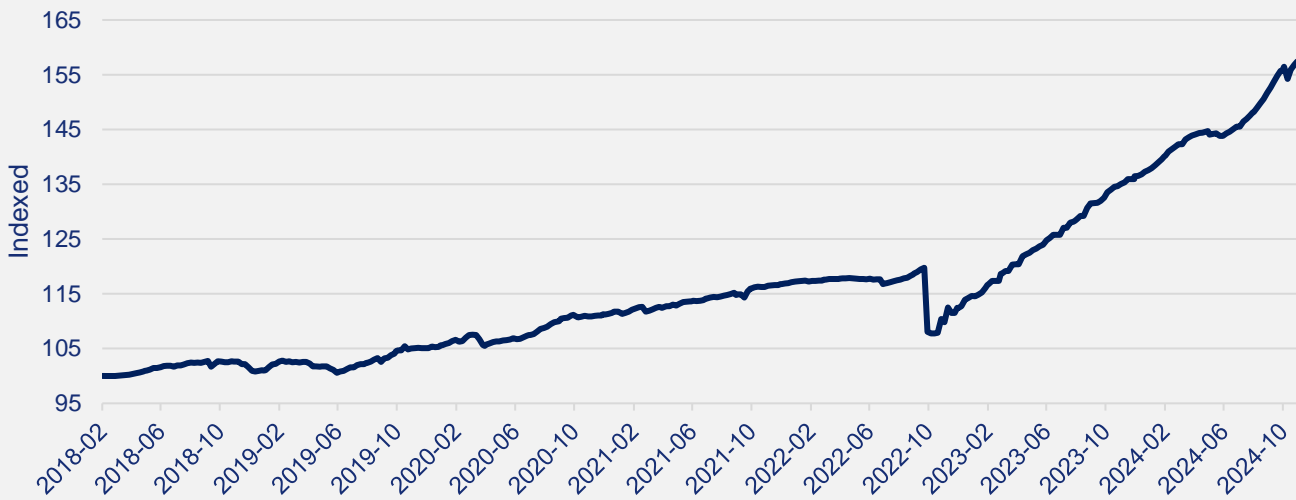


## Impact on the Cat Bond Market

Year to date, 2024 has seen minimal losses in the Cat Bond market. The high level of severe convective storm activity resulted in aggregate

erosion for a number of Cat Bonds, leaving them more exposed during the hurricane season. Given the current level of industry losses from the major events affecting the US, the current level of losses in the Cat Bond market is likely to be minimal.

**Figure 9: Development of the Swiss Re Cat Bond Index**



Source: Bloomberg, Twelve Capital. As at 31 October 2024. Past performance is not indicative of future returns. Swiss Re Cat Global Bond Index – The index calculated by Swiss Re Capital Markets, is a market value-weighted basket of natural cat bonds tracked by Swiss Re Capital Markets, calculated on a weekly basis.

## Summary

While the conditions were ripe for a very active hurricane season, we have again seen that catastrophe losses are ultimately a stochastic process and nothing is a given. There were a number of strong hurricanes that made landfall, but as they did not directly hit major metropolitan areas, the impact on the reinsurance and Cat Bond markets is likely to be muted.

While hurricanes have been the focus of our attention, it is important to remember that secondary perils remain very active with another year of heavy tornado and hail losses, in what may be a "new normal" for this peril.

Looking ahead to 2025, very early indications seem to point to neutral or possibly El Niño conditions at the peak of the season, but it remains to be seen how warm Atlantic waters will remain.

## Key risk associated with investments in Cat Bonds include

**Concentration in one industry risk:** When a portfolio is reliant on one industry or market segment (i.e., insurance industry), this creates concentration risk. Thus, it increases the likelihood that a single impact can have a big effect.

**Event risk:** Should an insured event occur and the defined threshold values be exceeded, then the value of a specific ILS instrument may decrease to the extent of a total loss.

**Liquidity risk:** Potentially situationally dependent, certain instruments may not be liquidated in a reasonable time frame.

**Model risk:** The calculated event probability of certain events is based on risk models. These only represent an approximation of reality and may be fraught with uncertainty and errors. Consequently, event risks can be significantly under- or over-estimated.

**Valuation risk:** Due to a wide variety of market factors, there is no guarantee that the value determined by the Administrator will represent the value that can be realised on the eventual disposition of the investment or that would, in fact, be realised upon an immediate disposition of the investment.

### Twelve Capital AG

Dufourstrasse 101  
8008 Zurich, Switzerland  
Phone: +41 (0)44 5000 120

### Twelve Capital (UK) Ltd

Moss House, 15-16 Brook's Mews  
London W1K 4DS, United Kingdom  
Phone: +44 (0)203 856 6760

### Twelve Capital (DE) GmbH

Rosental 5  
80331 Munich, Germany  
Phone +49 (0)89 839316 110

info@twelvecapital.com  
www.twelvecapital.com

### About Twelve Capital

Twelve Capital is an independent investment manager specialising in insurance investments for institutional clients. Its investment expertise covers the entire balance sheet, including Insurance Bonds, Insurance Private Debt, Catastrophe Bonds, Private Insurance-Linked Securities and Insurance Equity. It also composes Multi Asset portfolios. It was founded in October 2010 and is owned by its employees. It has offices in Zurich, London and Munich.

## Disclaimer

This material has been prepared by Twelve Capital AG, Twelve Capital (UK) Limited, Twelve Capital (DE) GmbH or their affiliates (collectively, "Twelve Capital"). This material has been furnished solely upon request and is intended for the recipient personally and may not be reproduced or otherwise disseminated in whole or in part without prior written consent from Twelve Capital. It is expressly not intended for persons who, due to their nationality or place of residence, are not permitted access to such information under local law as the product may not be authorised or its offering may be restricted in certain jurisdictions. It is the responsibility of every investor to satisfy himself as to the full observance of such laws, regulations and restrictions of the relevant jurisdiction. This is an advertising document.

This information was produced by Twelve Capital to the best of its knowledge and belief. However, the information herein may be based on estimates and may in no event be relied upon. All information and opinions contained in this document at the time of writing are subject to change without notice and there is no obligation to update or remove outdated information. Twelve Capital's analyses and ratings, including Solvency II compliance analysis, Twelve Capital's Counterparty Credit Rating and Twelve Capital's Legal Rating, are statements of Twelve Capital's current opinions and not statements of fact. Source for all data and charts (if not indicated otherwise): Twelve Capital. Twelve Capital does not assume any liability with respect to incorrect or incomplete information (whether received from public sources or whether prepared by itself or not). This material does not constitute financial research or analysis, a prospectus, a request/offer, nor a recommendation of any kind, e.g. to buy/subscribe or sell/redeem investment instruments or to perform other transactions. It is not intended to be a final representation of the terms and conditions of any investment, security, other financial instrument or other product or service. The investment instruments mentioned herein involve significant risks including the possible loss of the amount invested as described in detail in the offering memorandum(s) for these instruments which will be available upon request. Investments in foreign currencies involve the additional risk that the foreign currency might lose value against the investor's reference currency. Investors should understand these risks before reaching any decision with respect to these instruments. The information does not take account of personal circumstances and therefore constitutes merely promotional communication for information purposes, and not investment advice. Consequently, Investors are advised to take all necessary legal, regulatory and tax advice on the consequences of an investment in the product, since this document is not intended to provide any such advice. The value of investments and the income derived from them can fall as well as rise, and you may not get back the full amount originally invested. Past performance is no indication or guarantee of future performance. The performance shown does not take account of any commissions and costs associated with subscribing to and redeeming shares.

This material contains information about Twelve Capital and its products as at the date of this material. The information contained herein is of a general nature and does not purport to be complete or contain all the information that an investor should consider when making an investment decision nor does it contain all the information which would be required in a disclosure document or prospectus prepared in accordance with the requirements of the Australian Corporations Act 2001 (Cth) ("Corporations Act"). To the maximum extent permitted by law, Twelve Capital makes no representation or warranty (express or implied) as to the accuracy or completeness of the information contained herein and disclaims all responsibility and liability for the information (including without limitation, liability for negligence). This material is for information purposes only and is not a prospectus, disclosure document, product disclosure statement or other offering document under Australian law or any other law (and will not be lodged with the Australian Securities and Investments Commission ("ASIC")). The material is not and should not be considered an offer or an invitation to subscribe for or acquire securities or any other financial products. The material is available to persons who are "wholesale" investors (as defined in sections 708 and 761G of the Corporations Act). Determination of eligibility of investors for the purposes of the Offer is by reference to a number of matters, including legal requirements and the discretion of Twelve Capital. To the maximum extent permitted by law, Twelve Capital disclaims any liability in respect of the exercise of that discretion or otherwise. The distribution of this material in other jurisdictions outside Australia may also be restricted by law and any such restrictions should be observed. Any failure to comply with such restrictions may constitute a violation of applicable securities laws. By accepting this material you represent and warrant that you are entitled to receive such material in accordance with the above restrictions and agree to be bound by the limitations contained herein. This material contains certain "forward looking statements". Forward looking statements can generally be identified by the use of words such as, "expect", "anticipate", "likely", "intend", "should", "could", "may", "believe", "forecast", "estimate", "target" "outlook" and other similar expressions and include, but are not limited to, indications of, or guidance or outlook on, future earnings or financial position or performance of the funds or Strategies mentioned. The forward-looking statements contained in this material are not guarantees or predictions of future performance and involve known and unknown risks and uncertainties and other factors, many of which are beyond the control of Twelve Capital, and may involve significant elements of subjective judgement and assumptions as to future events, which may or may not be correct. There can be no assurance that actual outcomes will not differ materially from these forward-looking statements. A number of important factors could cause actual results or performance to differ materially from the forward-looking statements, including the risk factors set out in this material. Investors should consider the forward-looking statements contained in this material in light of those disclosures and not place reliance on such statements. The forward-looking statements are based on information available at the date of this material. Except as required by law or regulation, Twelve Capital undertakes no obligation to provide any additional or updated information whether as a result of new information, future events or results or otherwise. Indications of, and guidance or outlook on, future earnings or financial position or performance are also forward looking statements. Twelve Capital does not guarantee any particular rate of return or performance nor does it guarantee the repayment of capital invested or any particular tax treatment.

This is marketing material in the meaning of MiFID II.

This is marketing material in the meaning of FIDLEG.

All transactions should be based on the most up-to-date prospectus, the relevant key information documents and all applicable local offering documents. These documents together with the articles of association as well as the annual and semi-annual reports may be obtained free of charge from the legal representative, the fund manager or Twelve Capital's regional contact.

Note to EEA investors: when distributed in the EEA, this information has been distributed by Twelve Capital (DE) GmbH in accordance with the terms of its authorisation and regulation by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin).

Note to US investors: Please note that the Securities have not been, nor will they be, registered or qualified under the U.S. Securities Act of 1933, as amended (the "U.S. Securities Act") or any applicable securities laws of any state or other political sub divisions of the United States, and may not be offered, sold, transferred or delivered, directly or indirectly, in the United States or to, or for the account or benefit of, any U.S. Person, except pursuant to an exemption from, or in a transaction not subject to the

requirements of, the U.S. Securities Act and any applicable U.S. state securities laws. The Fund has not registered and does not intend to register under the U.S. Investment Company Act of 1940, as amended (the "Investment Company Act") in reliance on the exemption from such registration pursuant to Section 3(c)(7) thereunder and certain interpretations of Section 7(d) of the Investment Company Act by the staff of the U.S. Securities and Exchange Commission. Accordingly, the Interests are being offered and sold only: (i) outside the United States to persons other than U.S. Persons in offshore transactions that meet the requirements of Regulation S under the U.S. Securities Act; or (ii) to U.S. Persons who are (a) "accredited investors" as defined in Rule 501 of Regulation D promulgated under the U.S. Securities Act and (b) "qualified purchasers" within the meaning of Section 2(a)(51) of the Investment Company Act.

Note to Singaporean investors: this document has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this document and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the product may not be circulated or distributed, nor may the product be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor (as defined in Section 4A of the Securities and Futures Act 2001, as modified or amended from time to time (SFA)) pursuant to Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275 of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where products are subscribed or purchased under Section 275 by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the product pursuant to an offer made under Section 275 except:

(1) to an institutional investor or to a relevant person or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(c)(ii) of the SFA,

(2) where no consideration is or will be given for the transfer;

(3) where the transfer is by operation of law; or

(4) pursuant to Section 276(7) of the SFA or Regulation 37A of the Securities and Futures (Offers of Investments)(Securities and Securities-based Derivatives Contracts) Regulations 2018

Note to Israeli Investors: Twelve Capital AG ("the Company", or "TCAG") has not been licenced by the Israel Securities Authority ("ISA") under the Israeli Regulation of Investment Advice, Investment Marketing and Portfolio Management Law, 5755-1995 (the "Investment Advice Law"). As such, Twelve Capital AG does not hold any insurance in Israel as generally prescribed by the ISA for Israeli-licenced entities. The Fund/Product mentioned in this paper has not been registered with the ISA for public offering in Israel. Therefore, this document has not been approved by the ISA and will only be distributed to Israeli residents in a manner that will not constitute "an offer to the public" under sections 15A(a) and (b) of the Israel Securities Law, 5728-1968 (the "Securities Law") or section 25 of the Joint Investment Trusts Law, 5754-1994 (the "Joint Investment Trusts Law"), as applicable. The Fund's interests are exclusively being offered: a) to a limited number of investors (35 investors or fewer during any given twelve-month period); and/or b) to those categories of investors listed in the First Schedule to the Securities Law or in the Schedule One to the Investment Advice Law (together, the "Sophisticated Investors") and provided that such investors have furnished written confirmation that they qualify as Sophisticated Investors and that they are aware of the consequences of such designation and agree thereto; and / or c) in any case under circumstances that will fall within the private placement or other exemptions of the Joint Investment Trusts Law, the Securities Law, the Investment Advice Law and any applicable guidelines, pronouncements or rulings issued from time to time by the ISA. As a prerequisite to the receipt of a copy of this document, a recipient may be required by the Fund to provide confirmation that it is a Sophisticated Investor purchasing an interest for its own account or, where applicable, for other Sophisticated Investors. Any offeree who purchases an interest is purchasing such interest for its own benefit and account and not with the aim or intention of distributing or offering such interest to other parties (other than, in the case of an offeree which is a Sophisticated Investor by virtue of it being a banking corporation, portfolio manager or member of the Tel-Aviv Stock Exchange, as defined in the First Schedule to the Securities Law and in Schedule One to the Investment Advice Law, where such offeree is purchasing an interest for another party which is a Sophisticated Investor). Nothing in this document should be considered investment advice or investment marketing defined in the Investment Advice Law.

Note to Qatar Investors: The materials contained herein are not intended to constitute an offer, sale or delivery of the financial products under the laws of Qatar. The products have not been and will not be authorised by any regulator in the State of Qatar, including the Qatar Financial Markets Authority, the Qatar Financial Centre Regulatory Authority or the Qatar Central Bank in accordance with their regulations or any other regulations in Qatar. The products are not and will not be traded on the Qatar Stock Exchange. These materials are being provided on an exclusive basis to the specifically intended recipient thereof, upon such recipient's request and initiative, and for such recipient's personal use only.

Note to Abu Dhabi Investors: This document constitutes an Exempt Communication or is not otherwise subject to the financial promotion restriction or the general prohibition on carrying on regulated activity in accordance with the Financial Services and Markets Regulation of the ADGM. It is intended for distribution only to persons of a type specified in that regulation. It must not be delivered to, or relied on by, any other person. The ADGM does not accept any responsibility for the content of the information included in this document, including the accuracy or completeness of such information. The ADGM has also not assessed the suitability of the products or services to which this document relates to any particular investor or type of investor. If you do not understand the contents of this document or are unsure whether the products or services to which this document relates are suitable for your individual investment objectives and circumstances, you should consult an authorised financial adviser.

Note to Oman Investors: Twelve Capital neither has a registered business presence nor a representative office in Oman and does not undertake banking business or provide financial services in Oman. Consequently Twelve Capital is not regulated by either the Central Bank of Oman or Oman's Capital Market Authority ("CMA").

The information contained in this document neither constitutes a public offer of securities in the Sultanate of Oman as contemplated by the Commercial Companies Law of Oman (Royal Decree 18/2019) or the Capital Market Law of Oman (Royal Decree 80/98), nor does it constitute an offer to sell, or the solicitation of any offer to buy Non-Omani securities in the Sultanate

of Oman as contemplated by Article 139 of the Executive Regulations of the Capital Market Law (issued by Decision No.1/2009). Additionally, this document is not intended to lead to the conclusion of a contract for the sale or purchase of securities.

Twelve Capital does not solicit business in Oman and the only circumstances in which Twelve Capital sends information or material describing financial products or financial services to recipients in Oman, is where such information or material has been requested from Twelve Capital by an Investor. By receiving this document, the person or entity to whom it has been dispatched by Twelve Capital understands, acknowledges and agrees that this document has not been approved by the CBO, the CMA or any other regulatory body or authority in Oman.

Twelve Capital does not market, offer, sell or distribute any financial or investment products or services in Oman and no subscription to any securities, products or financial services may or will be consummated within Oman.

This document has not been approved by the CMA or any other regulatory body or authority in Oman, and no authorization, licence or approval has been received by Twelve Capital from the CMA or any other regulatory authority in Oman, to market, offer, sell, or distribute the securities within Oman. Twelve Capital does not advise persons or entities resident or based in Oman as to the appropriateness of investing in or purchasing or selling securities or other financial products. Nothing contained in this document is intended to constitute Omani investment, legal, tax, accounting or other professional advice.

The recipient of this document represents that it is a financial institution or a sophisticated investor (as described in Article 139 of the Executive Regulations of the Capital Market Law) and that its officers/employees have such experience in business and financial matters that they are capable of evaluating the merits and risks of investments.

Note to Bahrain Investors: Twelve Capital neither has a registered business presence nor a representative office in Bahrain and does not undertake banking business or provide financial services in Bahrain. Consequently, Twelve Capital is not regulated by the Central Bank of Bahrain. Twelve Capital does not solicit business in Bahrain and the only circumstances in which Twelve Capital sends information or material describing financial products or financial services to recipients in Bahrain, is where such information or material has been requested from Twelve Capital by an investor. By receiving this document, the person or entity to whom it has been dispatched by Twelve Capital understands, acknowledges and agrees that this document has not been approved by the Central Bank of Bahrain or any other regulatory body or authority in Bahrain.

Note to Kuwaiti Investors: This material is not for general circulation to the public in Kuwait. The product has not been licensed for offering in Kuwait by the Kuwait Capital Markets Authority or any other relevant Kuwaiti government agency. The offering of the product in Kuwait on the basis a private placement or public offering is, therefore, restricted in accordance with Law No. 7 of 2010 (the Kuwait Capital Markets Law) (as amended) and the bylaws thereto (as amended). No private or public offering of the product is being made in Kuwait, and no agreement relating to the sale of the product will be concluded in Kuwait. No marketing or solicitation or inducement activities are being used to offer or market the product in Kuwait.

Twelve Capital AG is licensed as "Manager of collective investment schemes" by the Swiss regulator FINMA. Twelve Capital AG is incorporated in Switzerland, registered number 130.3.015.932-9, registered office: Dufourstrasse 101, 8008 Zurich. Twelve Capital (UK) Limited is registered as a limited company in England & Wales: Registered No. 08685046. Registered office: Moss House, 15-16 Brook's Mews, London, W1K 4DS. Twelve Capital (UK) Limited is an appointed representative of Carne International Financial Services (UK) Limited which is authorised and regulated by the Financial Conduct Authority of the United Kingdom (FRN 823316). Registered in England, No. 11555138. Registered office: 2nd Floor 107, Cheapside, London, United Kingdom, EC2V 6DN. Such registration in no way implies that the FCA has endorsed Twelve Capital (UK) Limited's qualifications to provide the advisory services described in this document. Twelve Capital (DE) GmbH is authorised and regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) in Germany. Twelve Capital (DE) GmbH is incorporated in Munich, Germany, commercial register number (registry court: Munich) HRB 252423, registered office: Rosental 5, 80331 Munich. Disclosure Brochures with further regulatory information about our entities can be found in the "Regulatory" section on our website.

© 2024 Twelve Capital. All Rights Reserved