



# Global Catastrophe Recap: First Half of 2016

July 2016

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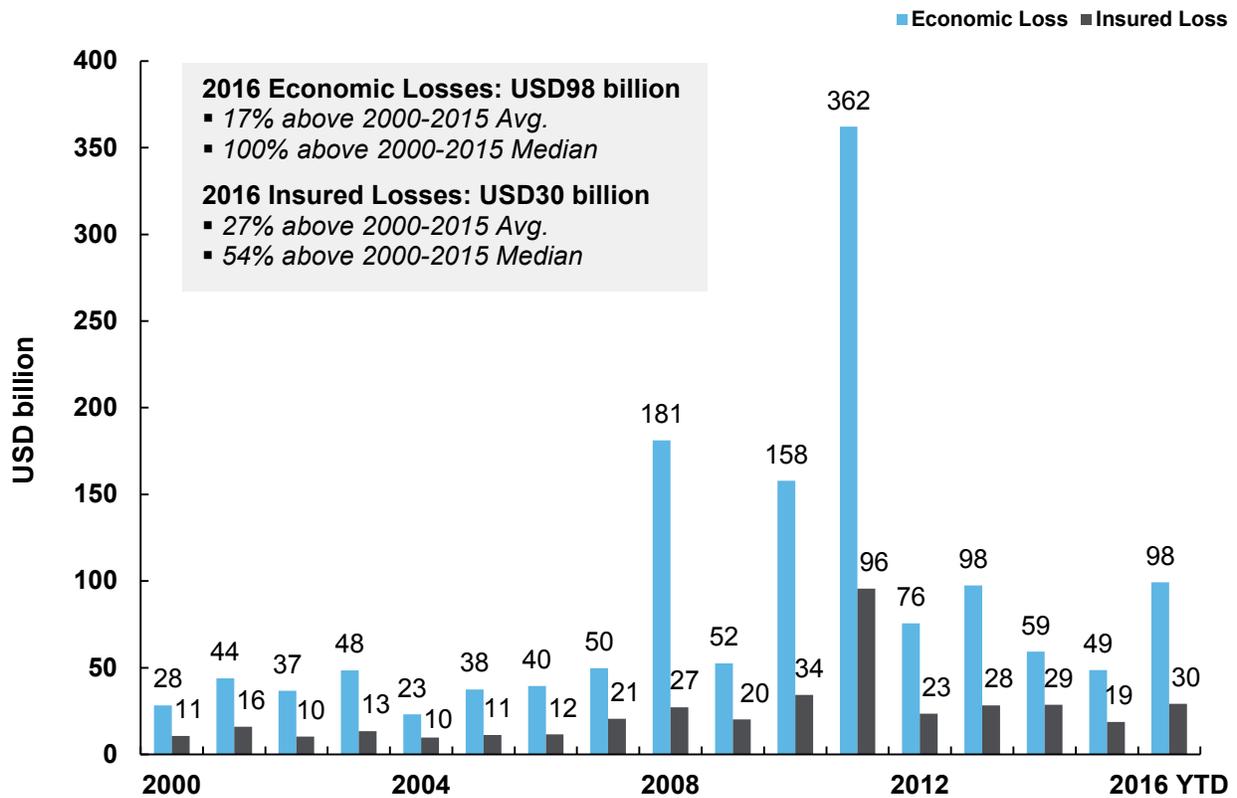
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## Overview

Global natural disaster losses during the first half of 2016 from both an economic and insured loss perspective were each above their 16-year (2000-2015) averages but slightly below the more recent 10-year (2006-2015) averages. As seen in Exhibit 1, economic losses were estimated at USD98 billion (down 13 percent from the 10-year average of USD112 billion and up 17 percent from the 16-year average of USD84 billion) and insured losses were USD30 billion (down 3 percent from the 10-year average of USD31 billion and up 27 percent from the 16-year average of USD24 billion). Each total is considered preliminary and subject to change. The overall economic and insured costs during the first two quarters of 2016 were each at their highest levels since 2011.

Given an extreme outlier year of losses during 2011, conducting median analysis provides a different and more accurate depiction of disaster losses in recent years. This analysis shows that 2016 first half natural disaster losses were 100 percent above the 2000-2015 median on an economic basis (USD49 billion) and 54 percent higher on an insured loss basis (USD19 billion).

**Exhibit 1: Preliminary Q1/Q2 Global Natural Disaster Losses (2000-2016)**



Source: Aon Benfield

The earthquake peril was the costliest disaster type during 1H 2016 on an economic basis (USD34 billion), comprising 30 percent of the loss total. Most of this loss was attributed to two powerful earthquakes that struck Japan's Kumamoto region on April 14 and April 16. On the insurance side, the severe convective storm (SCS) peril was the costliest (USD12.3 billion), comprising 42 percent of the loss total. Most of the insurable losses were attributed to major thunderstorm events that prompted widespread hail, damaging straight-line winds, and tornadoes in the United States. The U.S. state of Texas alone recorded roughly 55 percent of all insured SCS losses.

The first-half percentage of global economic losses in 2016 that were covered by insurance (including both private insurers and government-sponsored programs) was 30 percent, which is slightly above both the near-term 10-year and 2000-2015 averages of 28 percent. The slightly higher percentage between the economic and insured loss is indicative of a greater majority of the disaster losses occurring in regions with higher insurance penetration. It additionally suggests that insurance take-up rates continue to grow in areas beyond the United States—notably in parts of Asia-Pacific (APAC) and the Americas.

A large portion of the insured losses during 1H 2016 were sustained in the United States, with the country representing 47 percent of global losses sustained by public and private insurance entities. A series of significant severe weather outbreaks across central and eastern sections of the country led the way for losses. Most of the claims were filed given a substantial volume of hail claims. The state of Texas was particularly impacted, with major metropolitan areas such as Dallas-Fort Worth and San Antonio sustaining the brunt of noteworthy SCS events. Asia-Pacific (APAC) was second with 23 percent of the insured loss. EMEA (Europe, Middle East & Africa) was third with 16 percent, and the Americas had 14 percent. 2011 remains the record holder for all-time first-half losses at USD96 billion (2016 USD).

## Economic Losses

From an economic loss standpoint, the costliest natural disaster during the first half of 2016 was the combination of two major earthquakes that struck Japan's Kumamoto region on April 14 (M6.2) and April 16 (M7.0). Damage to residential and commercial properties was extensive, with Japan's Fire and Disaster Management Agency noting that nearly 160,000 structures had been damaged or destroyed. Additional costs resulting from damaged infrastructure and business interruption was also considerable. Total damage and reconstruction costs throughout the impacted areas were estimated at roughly USD30 billion, though the Japanese government indicated that final costs could reach as high as USD42 billion.

Additional noteworthy events included major flooding along the Yangtze River basin in China during the late spring and summer months. The ongoing event has caused an estimated USD22 billion in economic damage—with large portion of these losses occurring in Q3. Also, severe floods led to significant impacts in parts of France and Germany during late May and early June. The floods caused an estimated USD5.5 billion in overall economic damage. In Canada, the Horse Creek Fire caused catastrophic damage in the Fort McMurray region in May. The fire destroyed roughly 15 percent of the city and led to considerable business interruption. The overall direct economic impact was expected to approach USD5.0 billion once all attributable losses are realized. It became the costliest disaster in Canadian history.

There were at least 22 separate billion-dollar events in 1H 2016—including at least 20 that were weather-related events. The billion-dollar events were led by the U.S. (9), APAC (7), Americas (3), and EMEA (3).

## Notable Multi-Billion Dollar Economic Loss Events

Date	Event	Location	Deaths	Economic Loss <sup>1</sup> (USD)
April 14 & 16, 2016	Earthquake(s)	Japan	75	30 billion
Summer 2016	Flooding	China	330	22 billion <sup>2</sup>
May/June 2016	Flooding	France, Germany, Belgium, Austria	17	5.5 billion
May 2016	Wildfire	Canada	0	5.0 billion
April 10-15, 2016	Severe Weather	United States	1	3.8 billion
April 16, 2016	Earthquake	Ecuador	670	3.3 billion

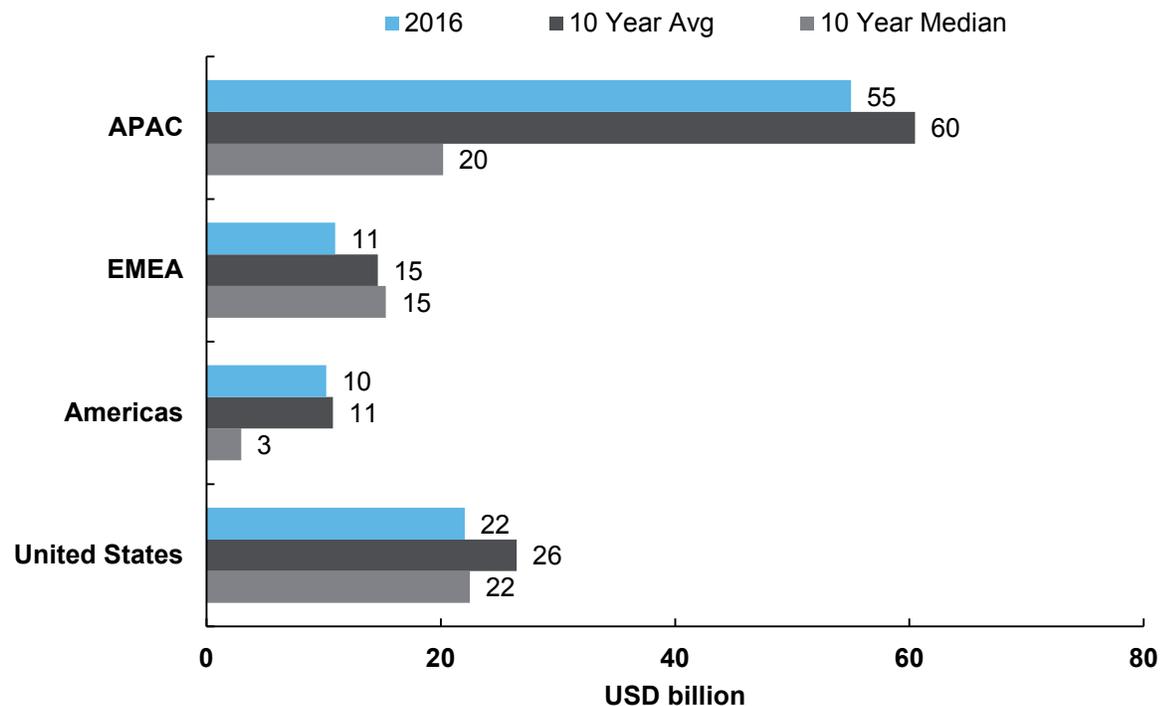
<sup>1</sup>Totals subject to change

<sup>2</sup>Significant portion of the loss has occurred in July 2016 (Q3); only Q1/Q2 losses included in this report

Exhibit 2 provides a breakdown of first-half global economic losses by region, and also a comparison of losses dating to 2006 on both a mean and median basis. In 1H 2016, APAC sustained the highest level of economic losses (USD55 billion), with the United States second at USD22 billion. EMEA incurred economic losses at USD11 billion and the Americas noted losses at USD10 billion.

Economic losses were up 100 percent from 2015 (USD49 billion) and up 51 percent from 2014 (USD59 billion). The losses were up more substantially on a median basis in APAC and the Americas.

### Exhibit 2: First Half Economic Losses by Region (2006-2016)



Source: Aon Benfield

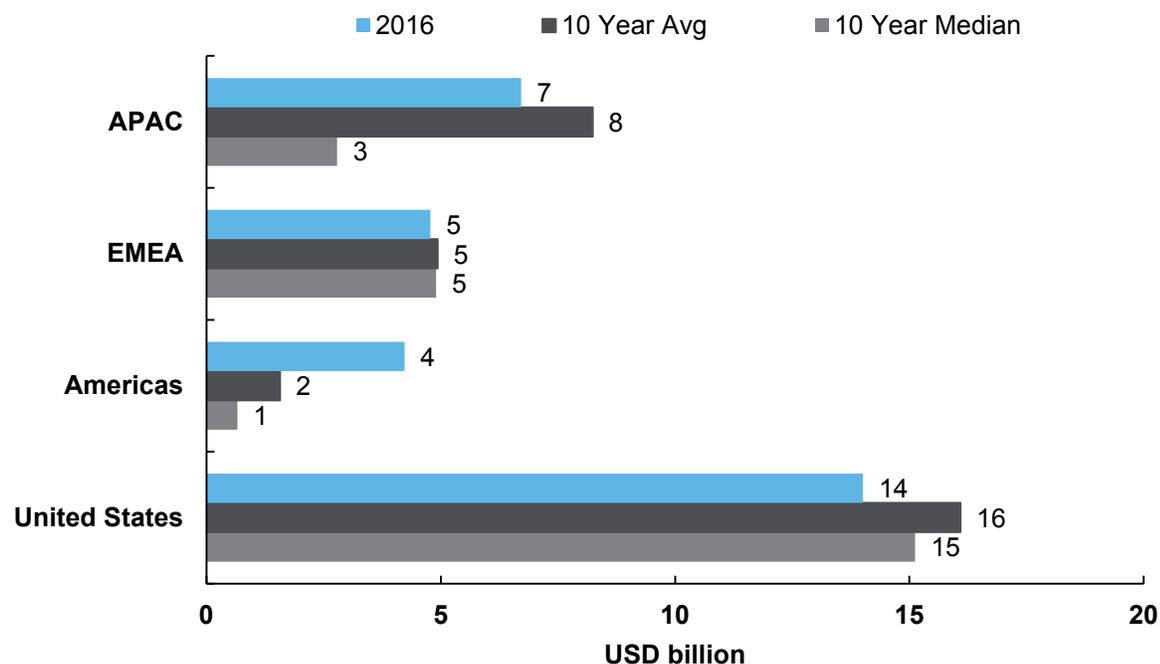
## Insured Losses

Public and private insurers endured an elevated level of losses—USD30 billion—during the first half of 2016. This is 60 percent higher from the approximately USD19 billion sustained in 2015 and 5 percent higher than the nearly USD29 billion in 2014. The costliest event during 1H 2016 was the Kumamoto Earthquake foreshock and main shock in Japan during the month of April. Total insured losses—including losses incurred due to physical damage and business interruption—were expected to exceed USD5.0 billion. Other major insured loss events included the late May and early June flooding and severe weather in Europe (USD3.4 billion), the Fort McMurray wildfire (USD3.2 billion), and the April 10-15 severe convective storm outbreak in the central United States (USD3.2 billion). All of the estimates are subject to revision as losses are further developed.

It is worth noting that the third quarter has historically been the costliest for the insurance industry, which is typically driven by the peak of the Atlantic Hurricane Season. With the likely transition from El Niño to La Niña during the second half of 2016, there is a chance that hurricane frequency could be higher than seen in recent years. An analysis conducted in the 2015 Annual Global Climate and Catastrophe Report determined that catastrophe losses on an economic (+75 percent) and insured (+76 percent) basis have been historically much higher during La Niña years versus El Niño years since 1980.

Exhibit 3 provides a breakdown of first-half global insured losses by region, and also a comparison of losses dating to 2006 on both a mean and median basis. In 1H 2016, the United States sustained the highest level of insurable losses (USD14 billion), with APAC second at nearly USD7.0 billion. The Americas (USD5.0 billion) and EMEA (USD4.0 billion) were close behind. The aggregated USD30 billion was only the third occurrence on record that first quarter and second quarter losses reached that threshold—even after adjusting for inflation to today’s dollars.

**Exhibit 3: First Half Insured Losses by Region (2006-2016)**



Source: Aon Benfield

## Billion-Dollar Insured Loss Events

Globally, there were at least six individual billion-dollar insured events (five of which were weather-related) during the first two quarters of the year. Four of the events crossed the multi-billion dollar loss threshold (USD2.0 billion or greater). As mentioned previously, the costliest event for the industry during 1H 2016 was the series of April earthquakes in Japan's Kumamoto prefecture (USD5.0 billion). However, Storm Elvira in Europe, the wildfire event in the Canadian province of Alberta, and the series of major hailstorms in Texas from April 10-15 were also significant with losses exceeding USD3.0 billion.

When looking further at the first-half data, there were at least 14 events that minimally cost insurers USD500 million. Of those 14, eight were recorded in the United States and all were severe convective storm or flood-related.

The table below lists the billion-dollar insured loss events for 1H 2016. These loss totals, which include those sustained by public and private insurance entities, are preliminary and subject to change.

Date	Event	Location	Deaths	Insured Loss <sup>1</sup> (USD)
April 14 & 16, 2016	Earthquake(s)	Japan	75	5.0 billion
May/June 2016	Flooding	France, Germany, Belgium, Austria	17	3.4 billion
May 2016	Wildfire	Canada	0	3.2 billion
April 10-15, 2016	Severe Weather	United States	1	3.2 billion
March 22-25, 2016	Severe Weather	United States	0	1.5 billion
April 15-19, 2016	SCS/Flood	United States	9	1.0 billion

<sup>1</sup>Totals subject to change

## Additional Comments

For a more detailed analysis of 2016 natural disaster events or any previous editions of the Annual Global Climate and Catastrophe Report, please see Aon Benfield's monthly Global Catastrophe Recap series, which can be found at the link below:

<http://thoughtleadership.aonbenfield.com/Pages/home.aspx?reportcategory=impact%20forecasting>

For additional historical natural disaster loss data and other climatological information, please visit Aon Benfield's Catastrophe Insight website: [www.aonbenfield.com/catastropheinsight](http://www.aonbenfield.com/catastropheinsight)

## Contact Information

**Adam Podlaha**

Head of Impact Forecasting

Aon Benfield Analytics

Impact Forecasting

+44 (0) 20 7522 3820

[adam.podlaha@aonbenfield.com](mailto:adam.podlaha@aonbenfield.com)

**Steve Bowen**

Director (Meteorologist)

Aon Benfield Analytics

Impact Forecasting

+1.312.381.5883

[steven.bowen@aonbenfield.com](mailto:steven.bowen@aonbenfield.com)

**Claire Darbinyan**

Senior Analyst (Meteorologist)

Aon Benfield Analytics

Impact Forecasting

+65 6645 0110

[claire.darbinyan@aonbenfield.com](mailto:claire.darbinyan@aonbenfield.com)

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