

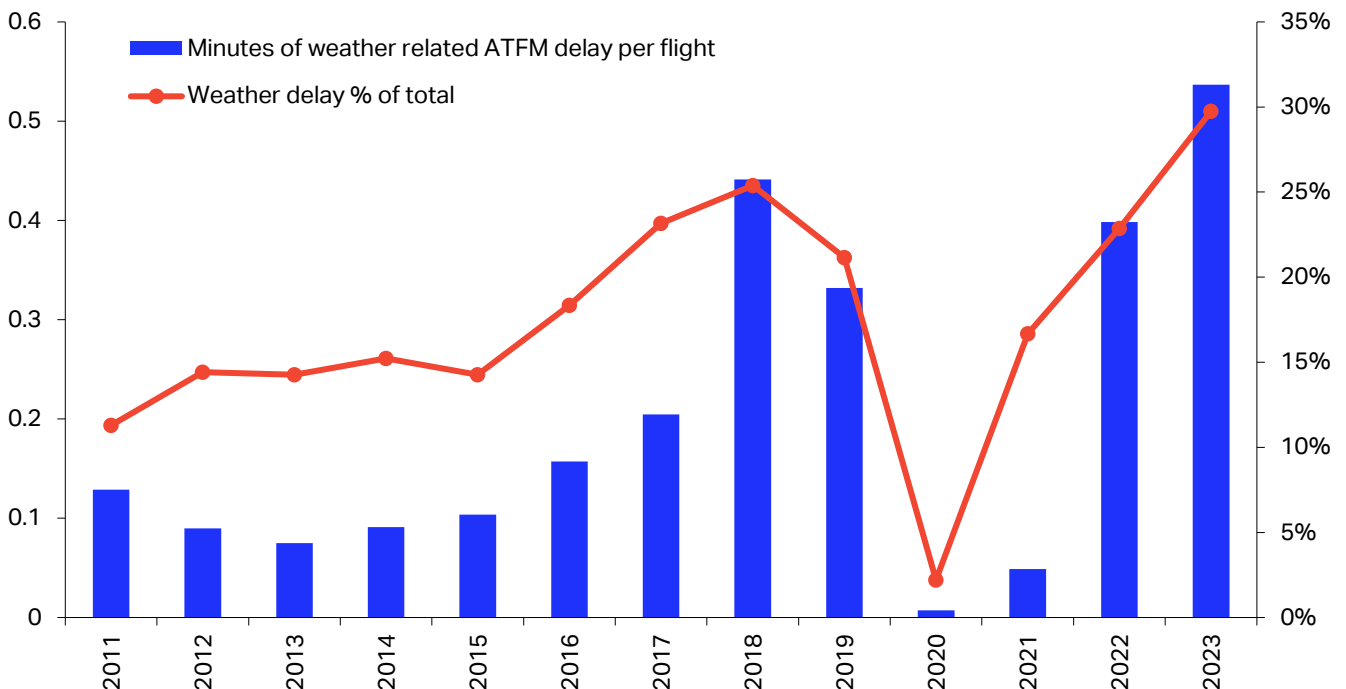


## Chart of the Week

29 March 2024

### Weather-related operational disruptions are rising

**Impact of weather events on flight delays in Europe:** Minutes of weather-related air traffic flow management (ATFM) delay per flight (left) & weather delay in % of total ATFM delay (right)



Source: IATA Sustainability and Economics, Eurocontrol

- Weather patterns have been changing, directly impacting airline operations, as evidenced by recent trends in the Air Traffic Flow Management (ATFM) delays in Europe. ATFM delays arise when there is a lack of capacity in specific airspace areas. In such cases, aircraft are asked to delay their take off by several minutes, or slightly alter their flight paths.
- The shortest average weather-related delay across the airspace covered by Eurocontrol was observed in 2020, when Covid-19 caused extraordinarily low traffic volumes which meant that there was sufficient airspace capacity to absorb any disruptions. A longer view has seen the average delay rise from 0.13 minutes per flight in 2011 to 0.54 minutes in 2023. In total, this amounted to 5.4 million minutes – or 90'000 hours of flight delays last year.
- This has a cost impact on airlines, travelers, and the environment. Although the average delay per flight is low, it is important to recognize that a relatively small number of flights are affected by weather. Additionally, this data does not capture airport-level weather delays, which have further significant operational and cost impacts on both passengers and the airlines.
- Weather delay as a proportion of the total delay increased from around 11% in 2012 to almost 30% in 2023. In fact, the number of reports of large hail and heavy rain captured in the European Severe Weather Database rose by 18% in 2023 compared to 2022, for example. Not only was there more hail in 2023 than ever before, but it was also larger and more disruptive, according to the European Severe Storms Laboratory. These changing weather patterns highlight the need for greater operational flexibility, in addition to climate change mitigation actions, or flight delays will likely become an even bigger concern.

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