

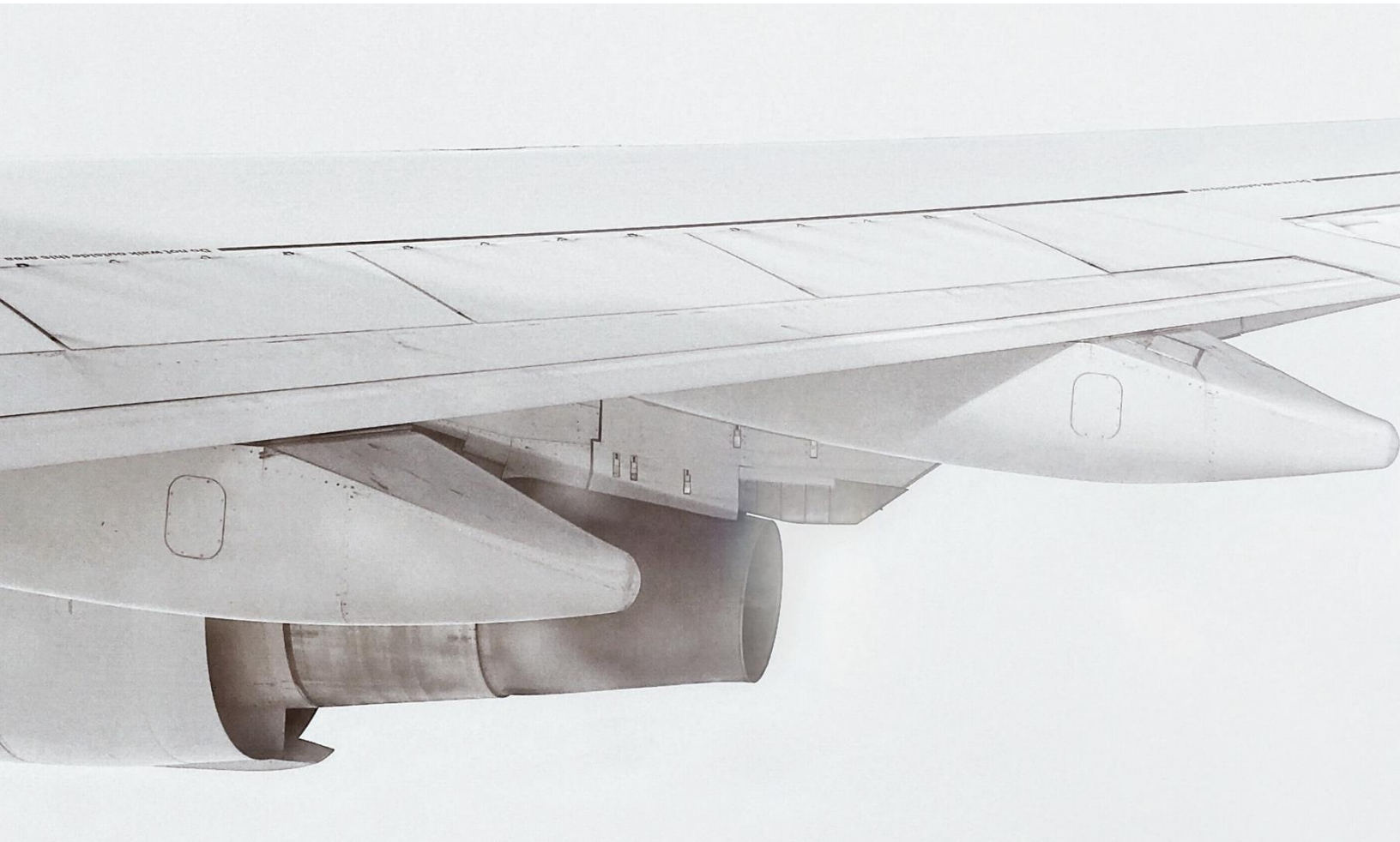
MILLIMAN REPORT

United States General Aviation – Admitted Market

Summary of 2020 Statutory Financial Results

Based on Data Submitted through July 2021

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Introduction

We are pleased to summarize key year-end 2020 financial results for domestic U.S. General Aviation – Admitted Market insurers. This review includes data from the “Aircraft (All Peril)” line of business within statutory annual statement data obtained from S&P Global Market Intelligence. We excluded insurers with surplus line eligibility or domestication as the majority of large aviation risk, such as airline and major product liability, is written on a surplus lines basis in the United States. As a result, we believe the data reviewed provides the best publicly available snapshot for the performance of the U.S. general aviation (USGA) market. Our review has concluded the following:

- USGA premium increased significantly over the last two years, specifically a 33% increase in written premiums from 2018 to 2020. In 2020, the premium stands at \$2.1 billion. This 33% increase is the largest increase in written premium for the USGA market since the period immediately following 9/11.
- Market profitability has been consistently negative over the last five years. From 2016 through 2020, the market has lost more than three-quarters of a billion dollars on an underwriting basis. This is based on information presented in the Insurance Expense Exhibits from insurers’ statutory annual statements.
- Even with the 2019 and 2020 premium increases, the 2020 underwriting result was negative for the USGA market, with an underwriting loss of approximately \$50 million. However, this loss is significantly smaller than in 2019 (almost \$300 million).
- The 2020 underwriting losses were not attributable to one single large event, as over half the USGA market by premium volume reported losing money.
- Due to reduced air traffic as a consequence of the COVID-19 pandemic, one would expect a decrease in claims costs in 2020. However, incurred losses in 2020 were the second-highest in the latest seven years. Reviewing exposure and event data more closely, we noted:
 - General aviation traffic recovered more quickly than airline traffic.
 - National Transportation Safety Board (NTSB) data shows that fatalities and severe injuries reduced only modestly in 2020.
 - Severe weather events impacted the aviation market in 2020. Munich Re estimates that the Nashville tornado¹ on March 3, 2020, alone cost the market \$100 million.
 - Heightened claims inflation continues to be a problem for the insurance industry as a whole. Given the relatively high policy limits provided in certain general aviation segments, claims inflation and the risk of runaway verdicts are of particular concern in aviation.

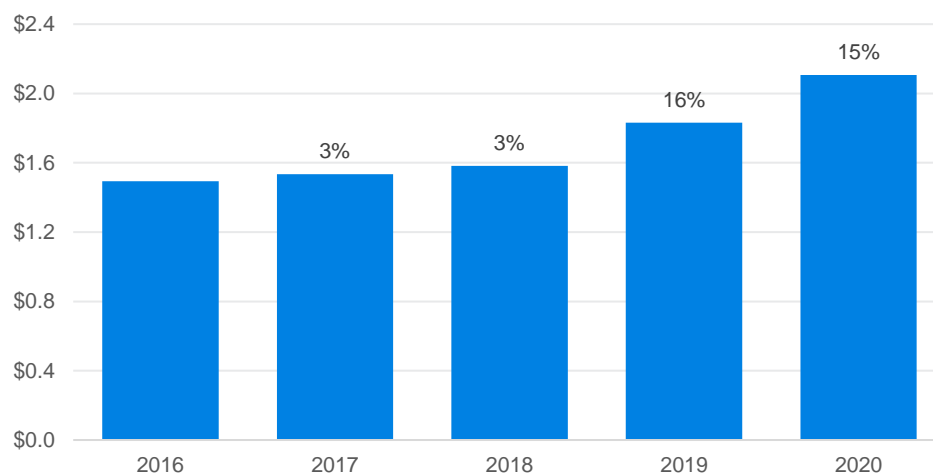
As a note, “Incurred Losses” within this report includes both loss and Defense and Cost Containment Expenses (DCCE). Additionally, throughout this report we modified the admitted market’s incurred losses for select insurance companies that reported favorable development due to the takedown of September 11 claims.

¹ Video: Impact of the Series of Tornadoes on Aviation Insurers This Spring. The Binder Vol. 45 No. 2 – Summer 2020. Retrieved August 17, 2021, from https://issuu.com/aiabinder/docs/binder_7-20_issuu/18.

Changes in premium

The USGA market reported \$2.1 billion in admitted aviation premium in 2020. This is an increase of 33% from the \$1.6 billion reported by insurers in 2018. Aviation insurers benefited from more significant increases in certain segments, like large commercial managed fleets, which were historically written on a 100% basis by many markets and are now more commonly placed in the subscription market. In certain other segments, like personal light aircraft (PB&P) and unmanned aircraft system (UAS), the premium and rate increases were lower. The 33% increase in premium may understate the scale of increase, as some large USGA accounts that went to the subscription market may have been written in part by European insurers or via surplus lines capacity. The USGA written premium with growth rates for the last five years is displayed in the chart in Figure 1.

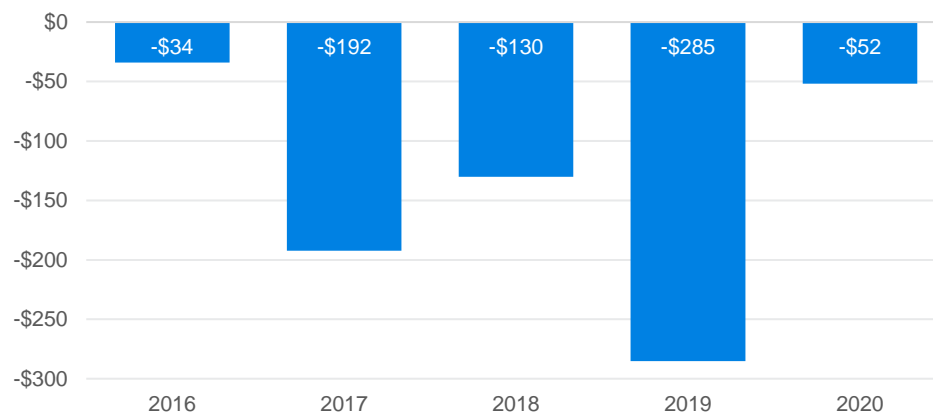
FIGURE 1: ADMITTED AVIATION DIRECT WRITTEN PREMIUM (\$BILLIONS)



USGA underwriting results

Reviewing the USGA market underwriting results over the last few years helps to explain the firming of the market in 2020. In 2019, the market lost almost \$300 million on \$1.8 billion in premium. However, even with the continued firming, the market still reported an underwriting loss in 2020. As noted in the chart in Figure 2, the 2020 USGA market underwriting loss of \$50 million is significantly lower than the underwriting losses in the three previous years.

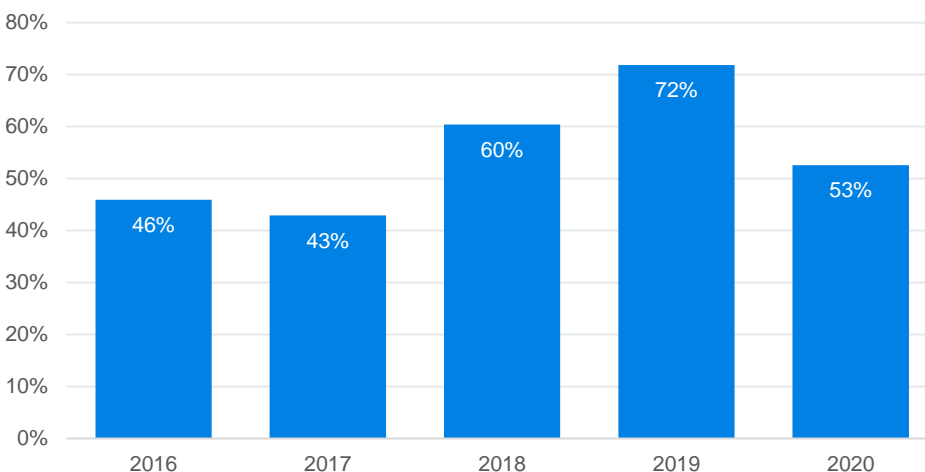
FIGURE 2: ADMITTED AVIATION UNDERWRITING RESULTS (\$MILLIONS)



WERE POOR RESULTS DUE TO ONE INSURER OR ONE MAJOR EVENT?

The capacity provided in some segments of USGA is regularly in the hundreds of millions of dollars on a single policy. We therefore assessed whether the underwriting losses were due to one individual company's results. That notion was quickly dismissed, as insurers that reported an underwriting loss represented more than half (53%) of the USGA market premium. This was notably better than in 2019, where 72% of the market reported a loss. These observations, along with a longer-term review, are provided in the chart in Figure 3.

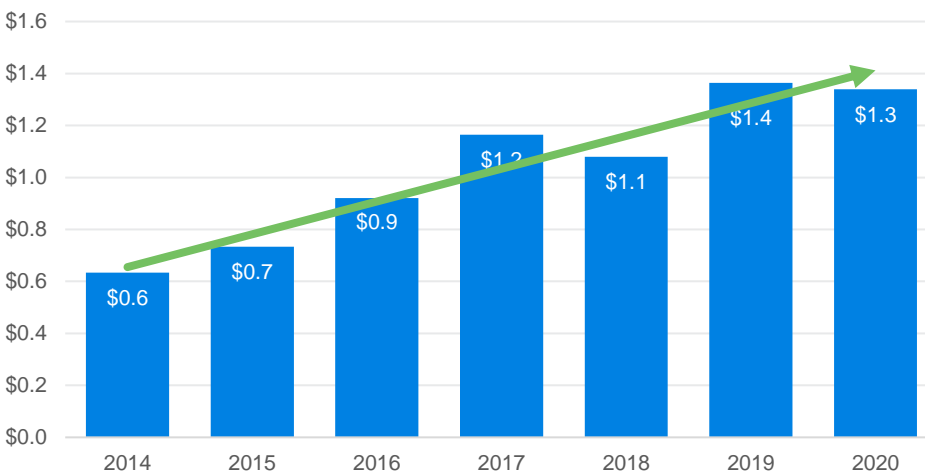
FIGURE 3: PERCENTAGE OF INSURERS REPORTING UNDERWRITING LOSSES – ADMITTED AVIATION



RISING INCURRED LOSSES

Incurred losses in 2020 were higher than all recent years except 2019, continuing a trajectory that has greatly outpaced general inflationary pressures in recent years. The chart in Figure 4 shows that incurred losses have more than doubled since 2014. Given that the COVID-19 pandemic caused a reduction in flight activity, it was expected that accidents in 2020, and resulting claims, would have been significantly lower than losses in prior years. Instead, the incurred losses in 2020 provide further evidence that USGA claims costs continue to increase.

FIGURE 4: ADMITTED AVIATION DIRECT INCURRED LOSSES (\$BILLIONS)

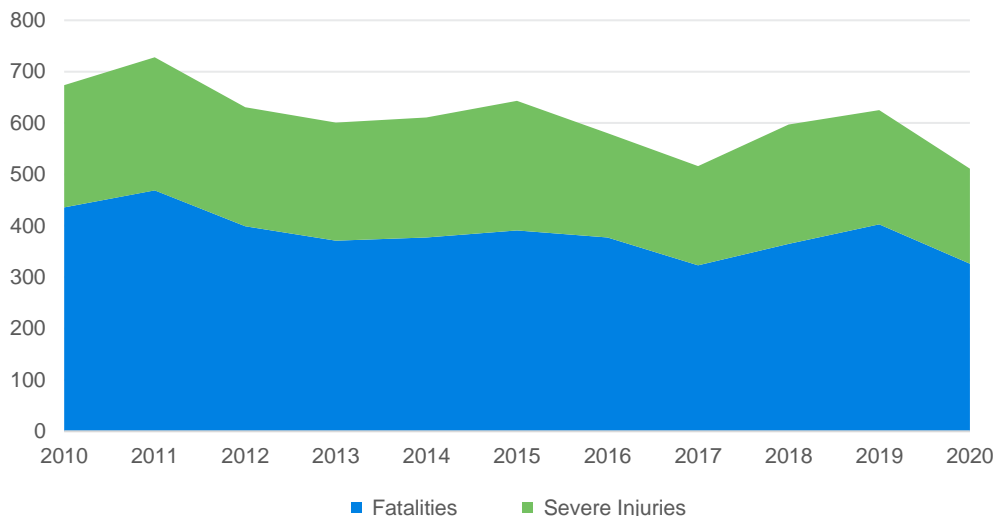


WHY ARE INCURRED LOSSES INCREASING?

The NTSB data tells us that there were fewer fatalities and fewer severe injuries in 2020 than in any of the prior 10 years in the United States (see the chart in Figure 5). This is likely due to the impact of the COVID-19 pandemic and the resulting fewer flights taken.

This reduction in fatalities and severe injuries, which came about because of reduced flying activity, did not result in significantly lower claims costs for insurers. Below we look at a couple of reasons this may be the case.

FIGURE 5: NUMBER OF AIRCRAFT FATALITIES AND SEVERE INJURIES BY YEAR



ADVERSE WEATHER EVENTS

USGA policies typically cover the cost of repair or replacement of aircraft due to adverse weather events, such as hail, wind, and heavy snowfall. Munich Re estimates that the 2020 Nashville tornado alone cost insurers \$100 million. This event, combined with other tornados and hurricanes that impacted the aviation insurance market, will certainly affect profitability but alone they do not explain the long-term upward trend in loss activity.

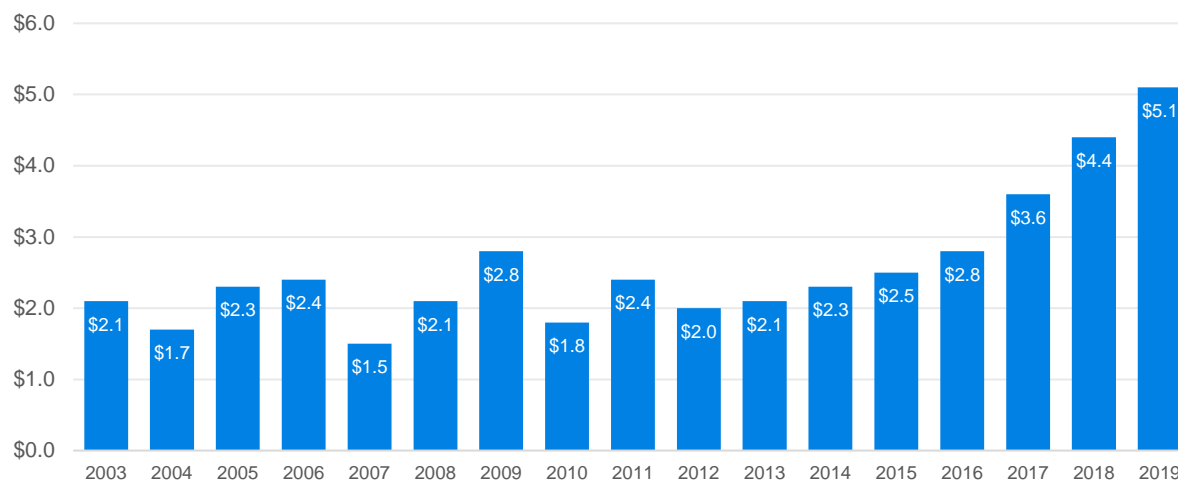
CLAIMS INFLATION

Claims inflation continues to be a problem for the insurance industry and the aviation market is not immune from these trends. Claims inflation is showing up in a number of areas, including:

Liability claims: Higher settlement values

U.S. juries have been awarding significantly higher sums over the last few years. As displayed in the chart² in Figure 6, the median value of a single-fatality award by U.S. juries has gone from \$2 million to \$5 million over the last few years. Reviewing Figure 6, it can be seen that the median value hovered around \$2 million for a number of years before this recent acceleration in costs.

² Source: Advisen, a Zywave company.

FIGURE 6: MEDIAN VALUE OF AWARDS IN THE U.S. OF SINGLE-FATALITY (\$MILLIONS)

In addition to the increase in median awards, insurers are also experiencing the impact of an increase in the frequency and severity of runaway verdicts.

The aviation market has not been immune to this trend; with two very significant verdicts in 2018:

- \$115.75 million was awarded³ to the families of three crew members that perished in a cargo flight in Afghanistan
- \$148 million was awarded to a person who was injured at O'Hare Airport⁴

These judgments have had a spiraling effect, with past verdicts leading to routinely higher demands by plaintiffs, and increased costs of settlements. Some of the claims that are impacted are those that have occurred in the last few years. These claims had previously been reserved on the basis of the historical loss values, but appear likely to be under-reserved based on recent claims trends. Changes in reserves on these claims are likely also having an impact on the 2020 result and helping to drive the industry to an ongoing underwriting loss.

Hull claims: Cost to repair composite material

Newer-generation aircraft are made with composite materials that are much more expensive to repair than aircraft of previous generations. They require proprietary bonding techniques and specialist equipment that significantly reduce the number of entities with the expertise to make the repairs.

³ Nolan Law Group (June 30, 2017). Jury awards \$115.75 million to families of flight crew killed in Afghanistan cargo plane crash. Cision PR Newswire. Retrieved August 17, 2021, from <https://www.prnewswire.com/news-releases/jury-awards-11575-million-to-families-of-flight-crew-killed-in-afghanistan-cargo-plane-crash-300482616.html>.

⁴ Wojciechowski, C. & Orlando, T. (August 24, 2017). Jury awards \$148M to dancer paralyzed in O'Hare shelter collapse. 5Chicago. Retrieved August 17, 2021, from <https://www.nbchicago.com/news/local/verdict-reached-in-case-of-dancer-paralyzed-by-ohare-shelter-collapse/22562/>.

Conclusion

The USGA insurance market has been very competitive for a number of years, with USGA customers benefiting from reduced premiums and competitive rates up until around 2019, at which point rates in the market began to harden. Even with the increase in premium achieved over the last few years, the 2020 calendar year reported an underwriting loss. A number of factors such as challenging claims trends and the broader liability environment continue to be a significant challenge for insurers and many of these factors are likely to perpetuate into the future. Looked at together, the statistics shown in this paper appear to show that the USGA insurance market needs to continue to increase premiums to return to profitability, after many years of negative underwriting results.



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