

Life & Health Underwriting Insights

Aviation

Flying is the safest it has ever been – we now recommend reducing select ratings to reflect this progress and provide more competitive offers

We summarise the findings of our evidence-based review below and explain the reasoning behind our changes.

How do aviation accident rates vary in different countries?

Aviation authorities in regions such as the US and Europe demonstrate the lowest aviation accident rates and provide the richest data and statistics sources for us to analyse. When we evaluated the data, we found differences in accident rates – accident rates for helicopters are lower than fixed wing aircrafts in the US. Interestingly, the inverse is found through the rest of the world. Aviation authorities in other regions either publish higher aviation accident rates or provide altogether insufficient data to determine any accident rates. In these cases, we can make inferences from global aviation oversight programmes.

What are the main findings for commercial aviation ratings?

Transport aviation: The risk associated with airline and charter flying is minimal in many countries. Fatal accident rates in various parts of Asia and Africa have improved as a result of greater aviation regulatory collaboration and audit programmes. Consequently, the ratings for these country groups have been reduced.

Non-transport aviation: We examined the risk associated with specific flight purposes. Agricultural, fire-fighting and test-flight fatal accident rates have improved and we have reduced the ratings accordingly.

What are the main findings relating to private aviation ratings by aircraft type?

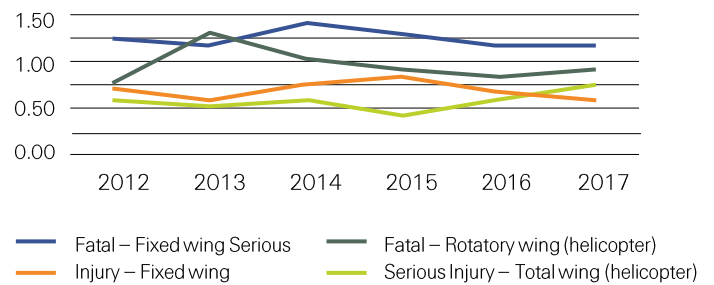
Overall, fatal accident rates for private aviation (the non-commercial activities under Civil or General Aviation) has improved slightly over the last several years. However, it still remains higher than commercial aviation activities.

'Serious Injury' risk, the closest proxy for disability risk, is consistently lower than mortality risk. Consequently, ratings for disability benefits have been reduced.

Accident rates continue to vary significantly by aircraft and engine type. Generally, we see stable to slightly improving accident rates for these categories with a few exceptions – like Special Light-Sport. We have updated the ratings accordingly for both Private Aviation and Aviation-related Sports pages in Life Guide.

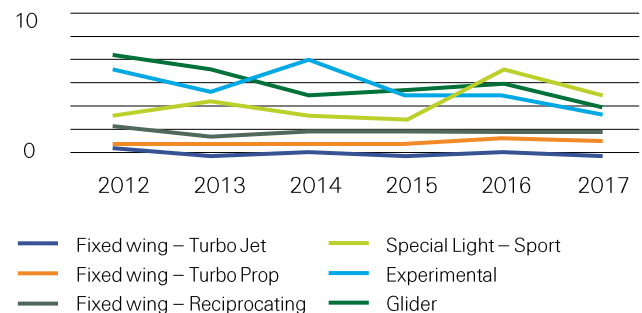
Extract of general aviation accident rates

Per Mille



Fatality rate by engine/craft type

Per Mille



How does pilot experience contribute to private aviation accident rates?

Human error continues to contribute significantly towards private aviation accident rates. Pilot experience (total flight hours) is the primary driver of human error.

- .. Student pilots demonstrate low risk until they qualify as a licensed pilot, who does not require supervision. At this time, the risk increases rapidly.
- .. Accident rate by total flying hours peaks at ~500 hours
- .. Ratings have been balanced considering the level of annual aviation risk exposure and the experience of the pilot.

In summary

The aviation industry has revolutionised travel. What was once considered dangerous is now viewed as safe and highly regulated. These regulations improve safety standards and result in lower accident rates – which are now reflected in LifeGuide to help you offer more competitive rates.

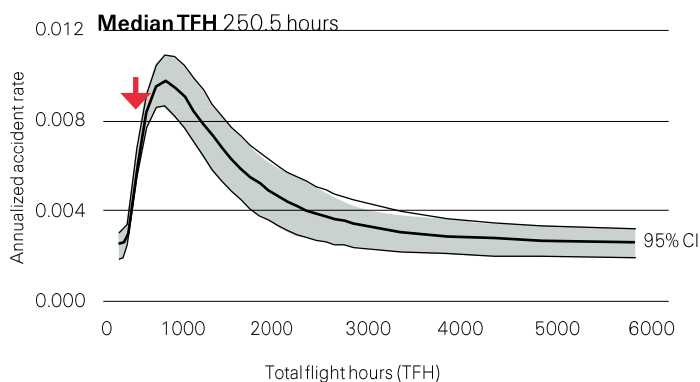
The aviation industry may undergo significant transformation as a result of the COVID-19 pandemic and its efforts to improve safety standards – both with regards to accidents and sanitation. We continue to monitor developments and are committed to providing cutting-edge research and up-to-date guidance in LifeGuide.

Key Contributor



Doug Rix
Senior Underwriting Consultant

Accident rate by Total Flight Hours (TFH) (Non-Instrument Rated Pilots, General Aviation, FAA)



References

- Federal Aviation Administration
<https://www.faa.gov/>
- Aviation accident rates:
https://www.researchgate.net/publication/272828956_Predicting_Accident_Rates_From_General_Aviation_Pilot_Total_Flight_Hours

©2020 Swiss Re. All rights reserved.

The entire content of this factsheet is subject to copyright with all rights reserved. The information may be used for private or internal purposes, provided that any copyright or other proprietary notices are not removed. Electronic reuse of the data published in this factsheet is prohibited. Reproduction in whole or in part or use for any public purpose is permitted only with the prior written approval of Swiss Re, and if the source reference is indicated. Courtesy copies are appreciated. Although all the information used in this factsheet was taken from reliable sources, Swiss Re does not accept any responsibility for the accuracy or comprehensiveness of the information given or forward-looking statements made. The information provided and forward-looking statements made are for informational purposes only and in no way constitute or should be taken to reflect Swiss Re's position, in particular in relation to any ongoing or future dispute. In no event shall Swiss Re be liable for any loss or damage arising in connection with the use of this information and readers are cautioned not to place undue reliance on forward-looking statements. Under no circumstances shall Swiss Re or its Group companies be liable for any financial and/or consequential loss relating to this factsheet. Swiss Re undertakes no obligation to publicly revise or update any forward-looking statements, whether as a result of new information, future events or otherwise. This factsheet does not constitute legal or regulatory advice and Swiss Re gives no advice and makes no investment recommendation to buy, sell or otherwise deal in securities or investments whatsoever. This document does not constitute an invitation to effect any transaction in securities or make investments.