

Executive Summary – Project Task 2

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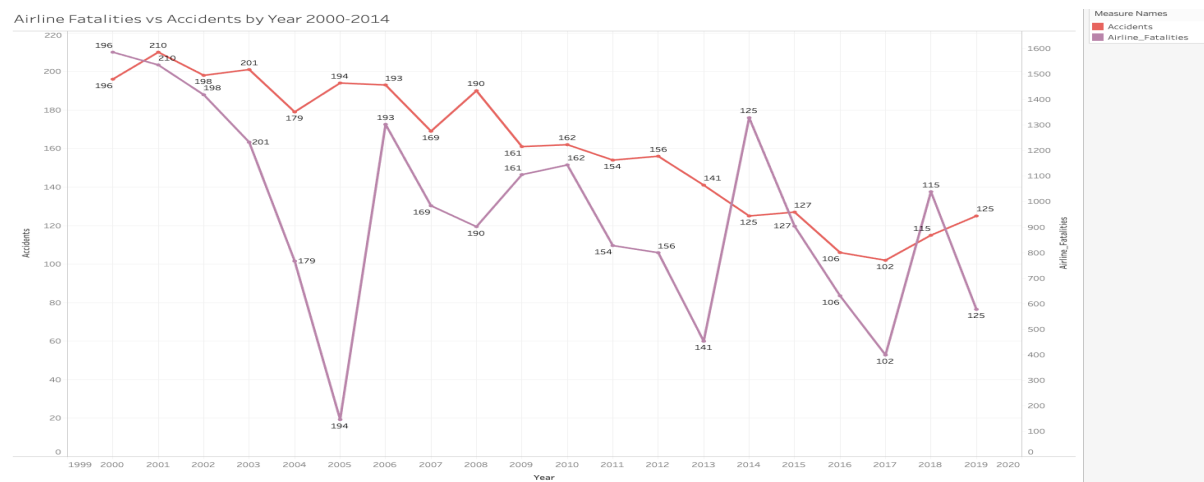
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The odds of dying on a commercial airline flight are actually as low as 9 million to 1. That said, a lot can go wrong at 33,000 feet (10,058.4 m) above the ground, and if you're unlucky enough to be aboard when something does, the decisions you make could mean the difference between life and death. Almost 95% of airplane crashes have survivors, so even if the worst does happen, your odds aren't as bad as you might think.

Even so the number of crashes and fatalities is decreasing, the number of flights is also increasing. And we could actually see that the ratio of fatalities/total amount of passengers trending down (for 2000s). However, we cannot make decisions about any Operator like "which airline is much safer to flight with" without knowledge of total amount flights. If Malaysia airline has the largest number of crashes this doesn't mean that it is not worse to flight with because it might have the largest number of flights.

- Total Incidents declined 57% over the previous period, while fatal accidents declined 30% over the same period.
- 30% of incidents were fatal in the 1985 – 1999 time period, compared to 16% in the 2000 – 2014 time period.
- As number of miles flown increased, incidents decreased, while those incidents were less fatal overall.

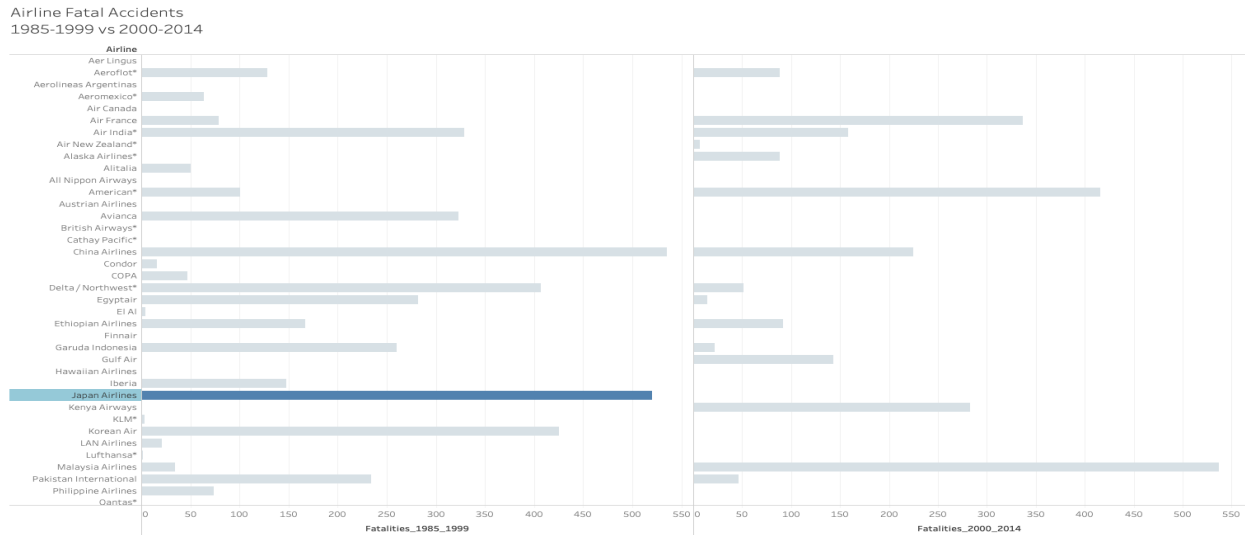
We can see those peaks like 2000, 2002, 2006, 2014 look scary, while ratio actually trends down. Of course, there are some questions that's are wanted to be asked, like "is it full database of airplane accidents?" or "does total number of passenger include military flights or just passenger?" so this line chart is that an estimation.



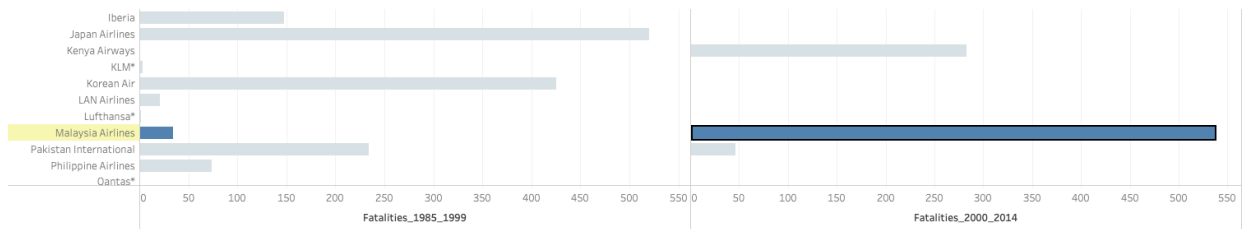
1985 shows a spike in fatalities per crash. However, looking at the dataset limited to just that year shows that it was simply a year with incredibly bad luck for large flights. Several Boeing 727s, 737s, 747s and a McDonnell Douglas DC-8 Super 63PF crashed that year, including the deadliest single-aircraft accident in history

(https://en.wikipedia.org/wiki/Japan_Airlines_Flight_123).

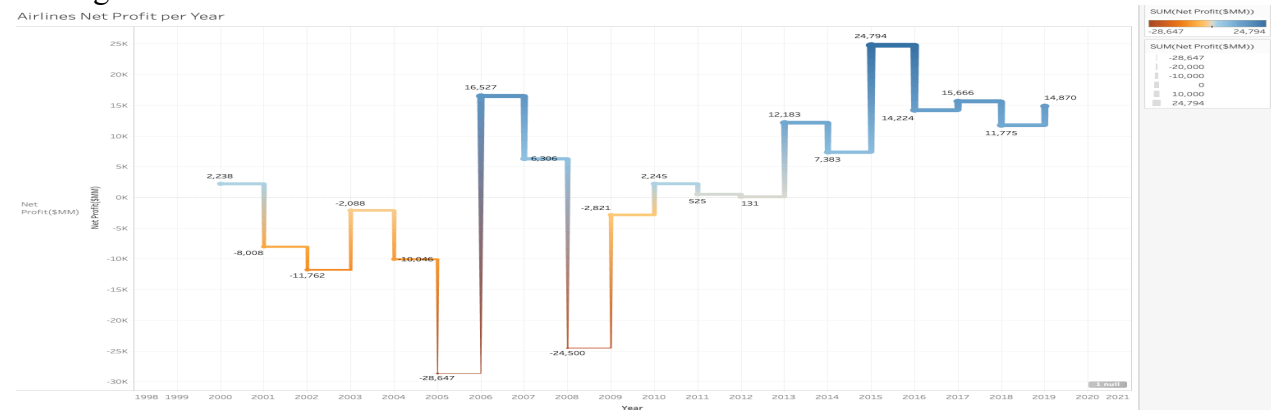
Japan Airline 1985



Malaysia Airlines 2000



Profit growth



As I concluded, the graph and stats show how the number of incidents and fatalities has decreased in the recent times compared to last century, shows us the increase of safety measures implemented over the period. When compared to the Traffic accidents with air travel the percentage is very less. The increase of the net profit of the airline industry over the period, shows the people that traveling is safe. I would recommend not to fly with Malyaia airline for that they increased their fatalities rate by nearly 90%. America Airline is second to this list and they have increased their fatalities 87% . Overall, traveling safe is always in the airlines best interest and this report will help airline corporation improve their systems.

Reference:

(https://en.wikipedia.org/wiki/Japan_Airlines_Flight_123

<https://www.kaggle.com/chadmunger/plane-crashes-1908-2019>

<https://aviation-safety.net/database/>

Airline Accidents: [List of accidents and incidents involving commercial aircraft - Wikipedia](#)

Airline Safety: <https://github.com/fivethirtyeight/data/tree/master/airline-safety>

Bellevue dataset - <https://github.com/fivethirtyeight/data/tree/master/airline-safety>

https://docs.google.com/spreadsheets/d/1SDp7p1y6m7N5xD5__fpOkYOrJvd68V7iy6etXy2ce tb8/edit#gid=1448957446

<https://www.nhtsa.gov/research-data/fatality-analysis-reporting-system-fars>