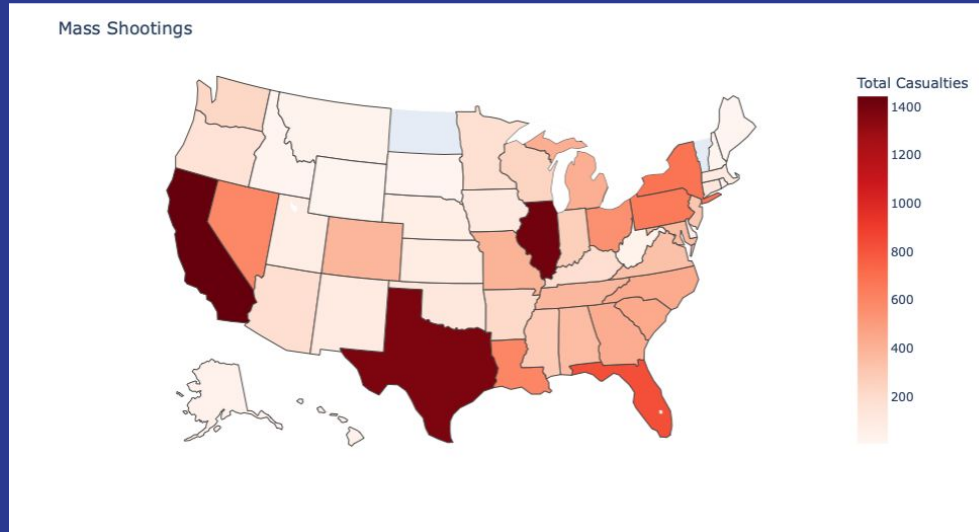


# Mass Shootings, 1920-2022



**An Analysis of Mass Shootings and Gun Ownership in the United States**

# Data Overview

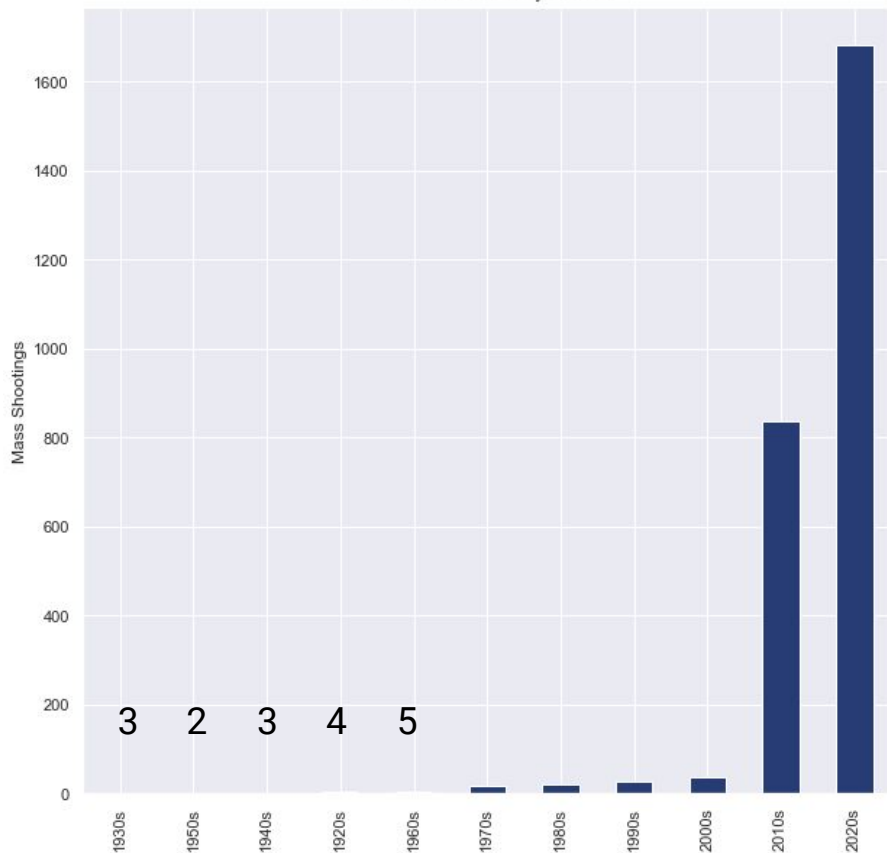
Two datasets:

- Mass shootings from 1920 to 2022, with a full breakdown of casualties, year, and description
- Registered guns by State in 2019 and 2021

# Research Questions

1. Is there a relationship between gun ownership and gun violence in the United States?
2. What parts of the United States have been most afflicted with mass shootings?

Number of Incidents by Decade

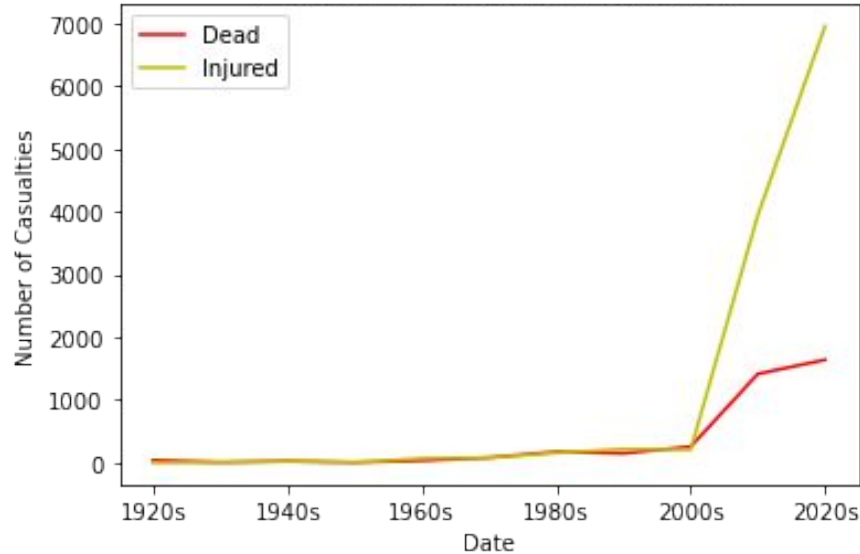


**What is a mass shooting?  
Incident of public firearm  
violence, in which the shooter  
claims at least four victims.**

**There has been a 41,975%  
increase in mass shootings  
over the last 100 years.**

**The United States has had 372  
mass shootings in 2022, so far.  
We have not gone a single week  
without a mass shooting.**

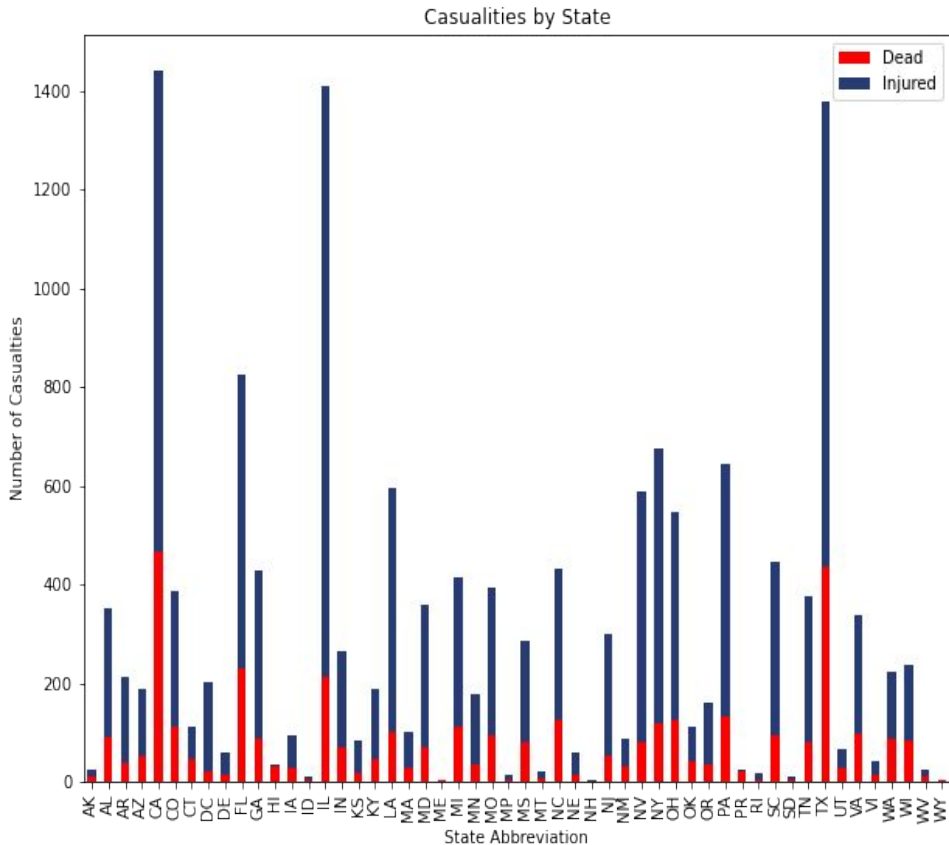
Timeline of Mass Shooting Casualties



There has been a steady increase in casualties from 1920 to 2000 in the United States.

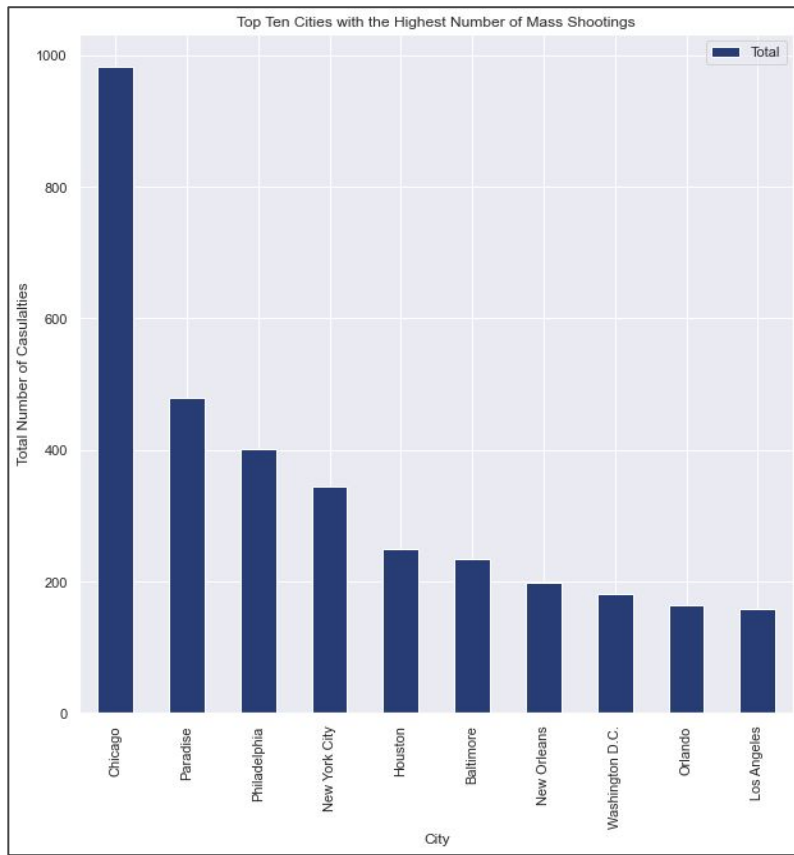
From 2000 to present we see a sharp increase, with casualties rising by 1,051% from 2000 to 2010.

Since 2010, we have seen a 60% increase in gun violence in the U.S.

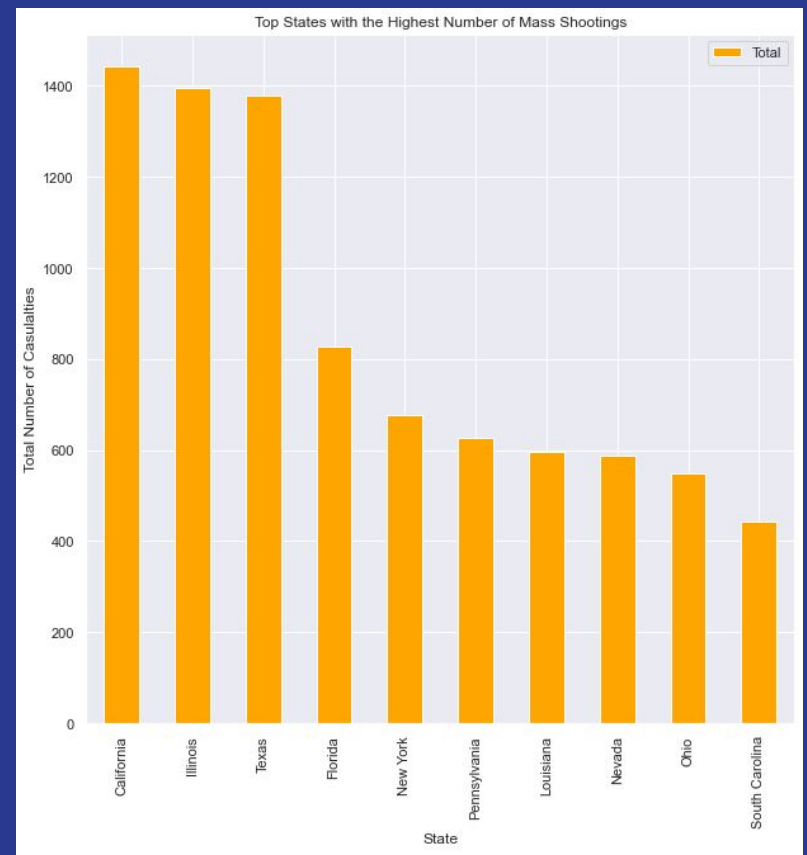


**Overall, individuals were 100 times more likely to be injured versus killed in a mass shooting.**

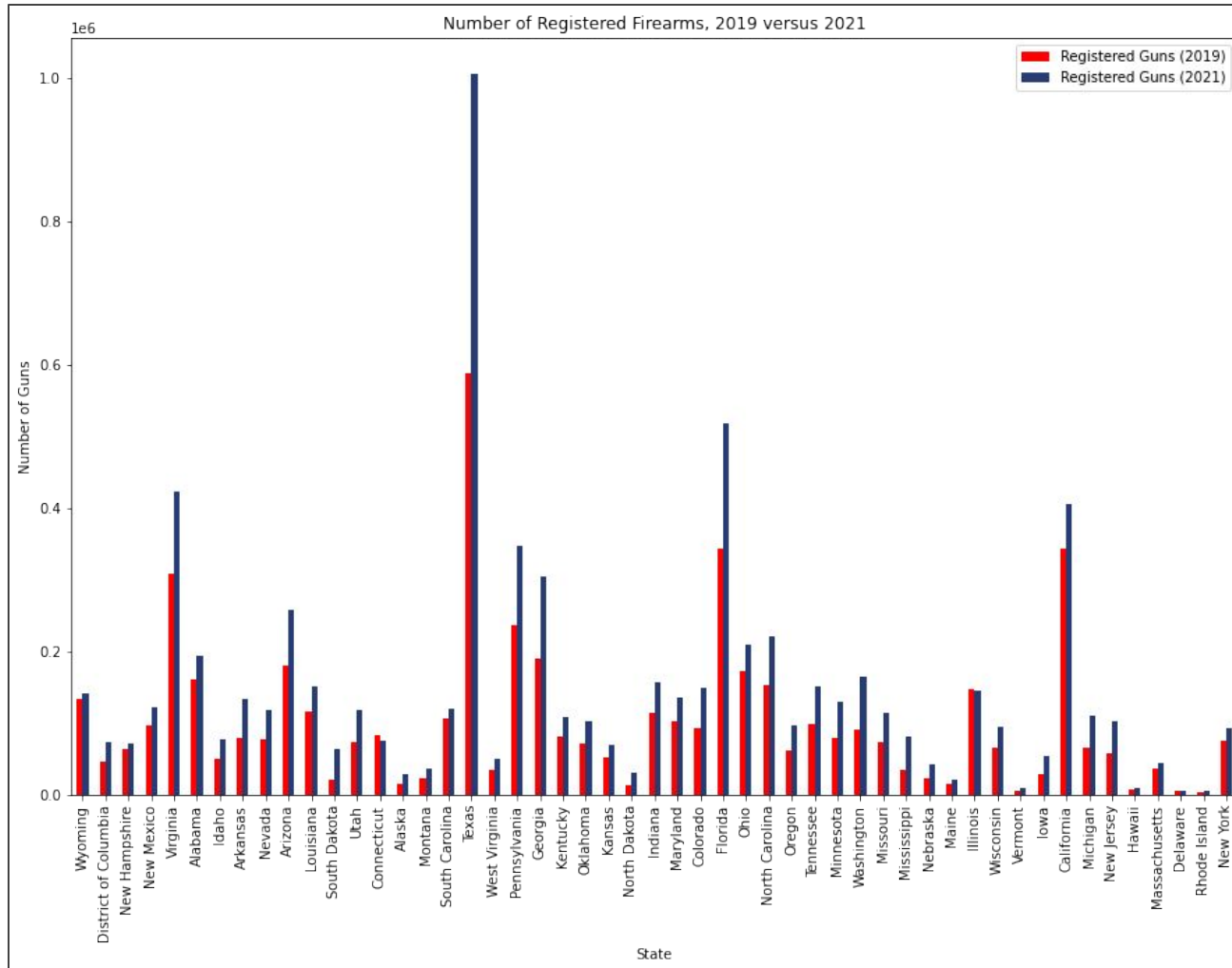
**On average, there are four people injured for every person killed.**



**Cities with the highest number of mass shootings casualties:**  
**Chicago, Paradise (NV), Philadelphia**



**States with the highest number of mass shooting casualties**  
**: California, Illinois, Texas**



## Total Registered Firearms

2019: 5,201,947

2021: 7,511,303

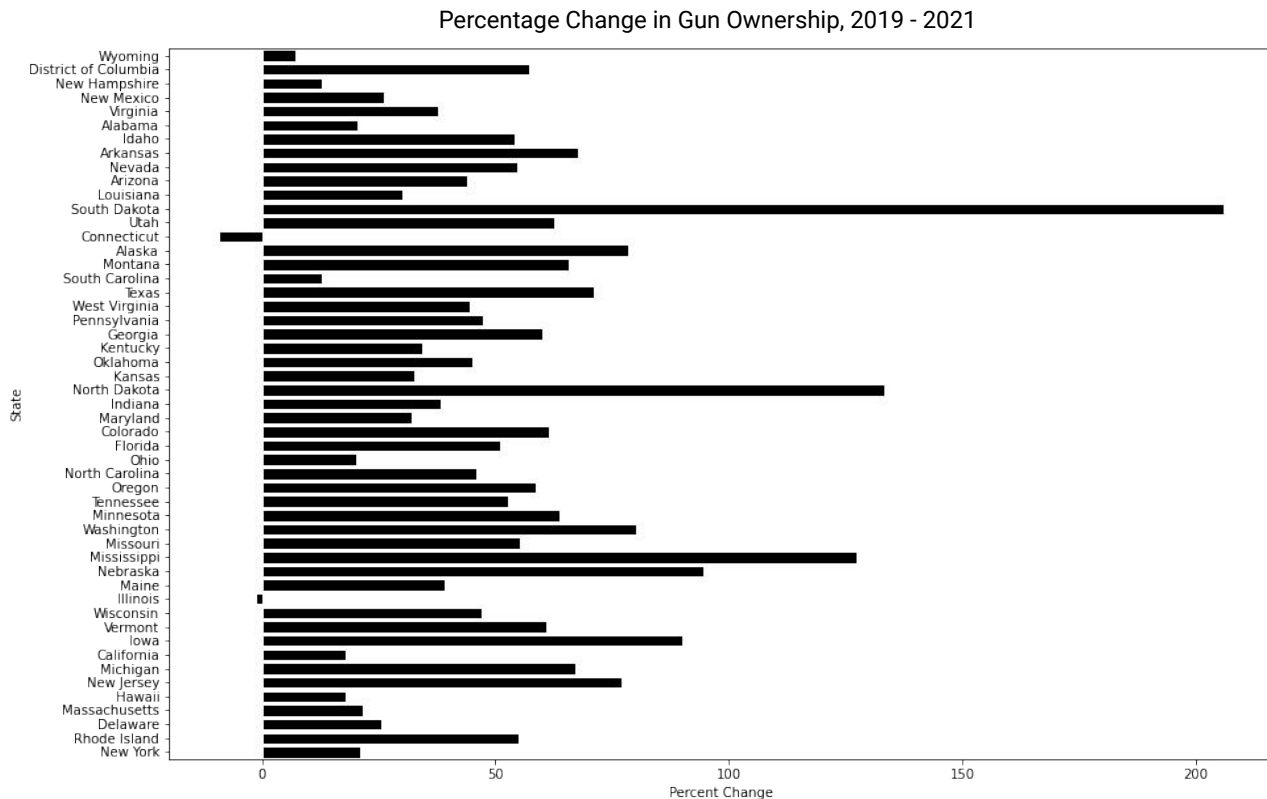
Southern states have more federal registered firearms compared to the Northeast.

## Important caveats

-There are only six states which require the registration of firearms.

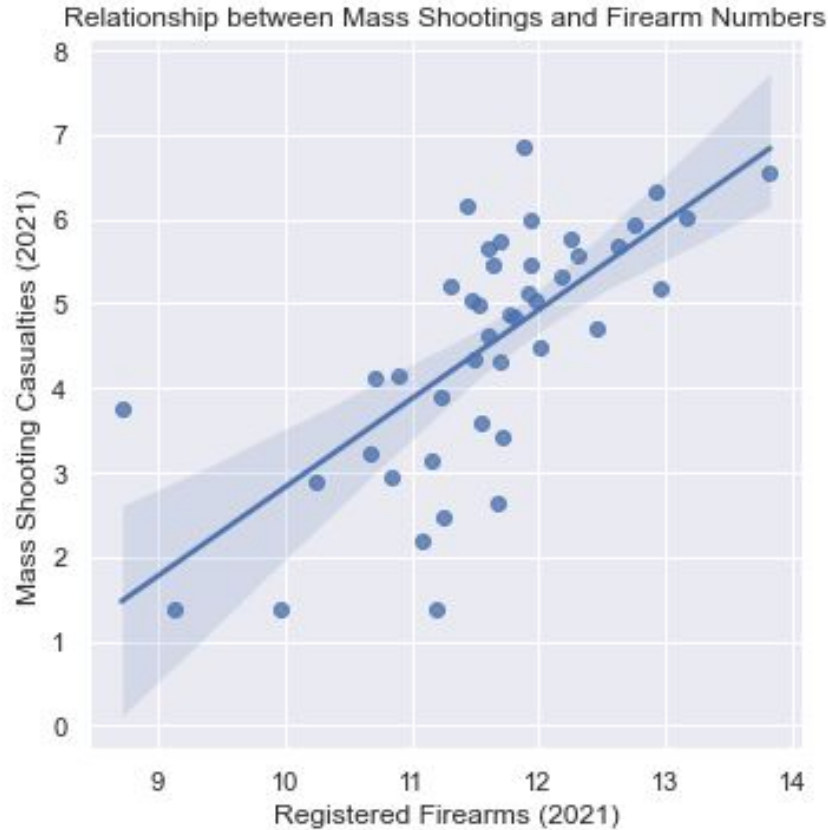
-There is an estimated 393 million total firearms in the United States.





Only two states showed a decrease in registered firearms from 2019 to 2021: Connecticut (-9.13%) and Illinois (-1.18%).

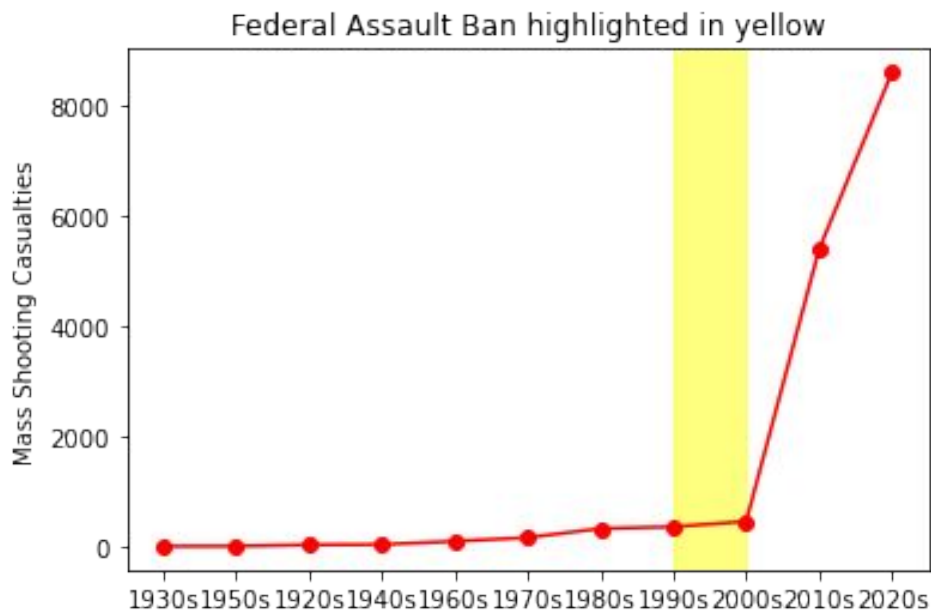
The three states with the highest increase are South Dakota (206%), North Dakota (133.3%), and Mississippi (127.3%).



**Overall, there appears to be a relationship between number of firearms and risk of gun violence by state.**

**The states with a higher number of registered firearms generally have a higher number of gun violence casualties.**

---



**The Federal Assault Weapons Ban lasted from 1994 to 2004.**

**After its expiration in 2004, we can see a dramatic increase into present day. Mass shootings were 70% less likely to occur during the ban compared to present day.**

**Some of the deadliest mass shootings in US history have occurred in our lifetime.**

# Future Work

- Accessing earlier records for firearm ownership
- Additional data on shooter demographics (age, gender, race, income, etc.)
- Further breakdown mass shooting incidents, looking at political party of state leadership

# References

<https://www.kaggle.com/datasets/rprkh15/history-of-mass-shootings-in-the-usa>

<https://www.thoughtco.com/gun-owners-percentage-of-state-populations-3325153>

<https://www.cbsnews.com/pictures/gun-ownership-rates-by-state/>

[https://en.wikipedia.org/wiki/Federal\\_Assault\\_Weapons\\_Ban](https://en.wikipedia.org/wiki/Federal_Assault_Weapons_Ban)