

PREFACE

THE PANDEMIC gripped the world for the years - 2020 and 2021 causing a personal toll on individuals, companies and industries all over United States.

However, not all companies and industries were affected equally.

Understanding this impact to different companies and industries allows an insight into changing spending patterns of Americans during this abrupt shift.

In order to study this, a detailed **analysis** of the - **Companies** and **Industries** that **suffered** and were **resilient** during the Pandemic along with a **headcount analysis** for subsequent effects on employees of the respective companies and industries was conducted.

For this project, the raw data was taken from the Fortune 1000 companies dataset in Excel for the years 2018-2021. This was cleaned with Excel and SQL before finally importing into PowerBI to make visualizations. The raw data files and SQL queries are given in the git hub link below.

The objective of this project is to provide the stakeholders of different organizations the ability to realign their strategy to withstand and thrive under such sudden customer behavioral shift

DETAILS

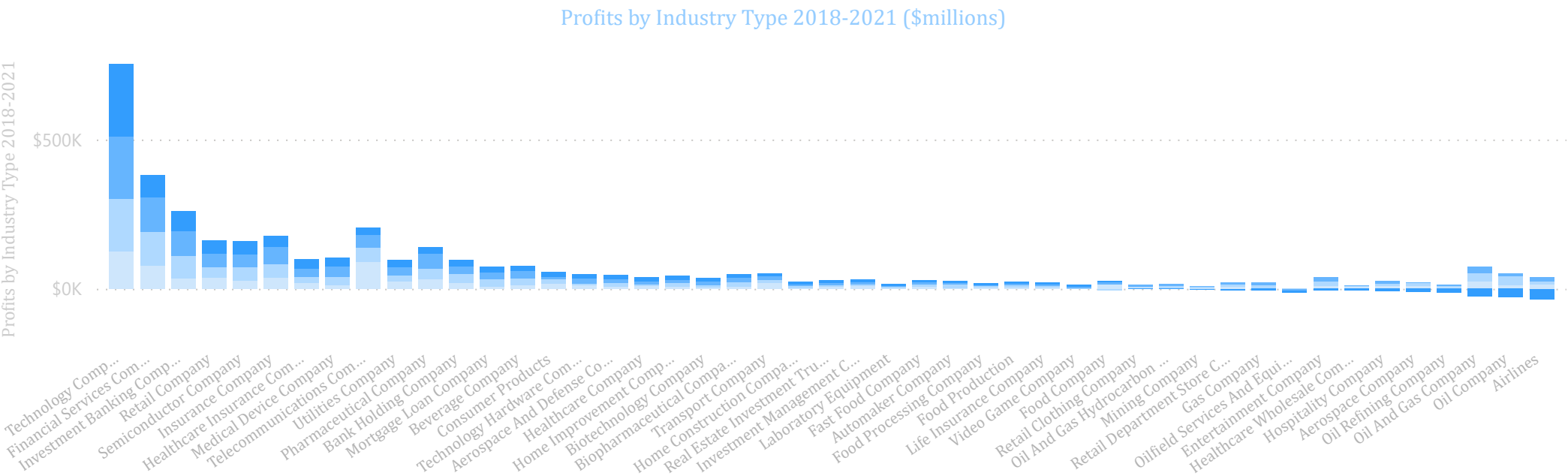
- All the raw data - Excel, SQL queries given in the project README.md file -

<https://github.com/adi1988/Winners-and-Losers-Fortune-1000-companies-from-2018-2021/blob/main/Companies%20that%20Suffered%20and%20were%20Resilient%20during%20the%20Pandemic.pdf>

CONTENTS OF THE PROJECT

- Stacked graph for Profits of the Industries and Individual companies of the US market for years 2018 - 2021 (compared with splicer)
- Visualization of the Industries and Individual Companies that **suffered** and those that were **resilient** in the pandemic
- Details of the Industries and Individual Companies that **suffered** and those that were **resilient** during the Pandemic
- Headcount Change for the same Companies in a tabular form
- Headcount Change for the Companies that **suffered** and those that were **resilient** during the Pandemic
- Losses and subsequent headcount changes for Companies and Industries that **suffered** during the pandemic
- Profits and subsequent headcount changes for Companies and Industries that were **resilient** during the pandemic
- Observations, Key Takeaways and Conclusion

Comparing Profits by Industry Type for the Years 2018 - 2021

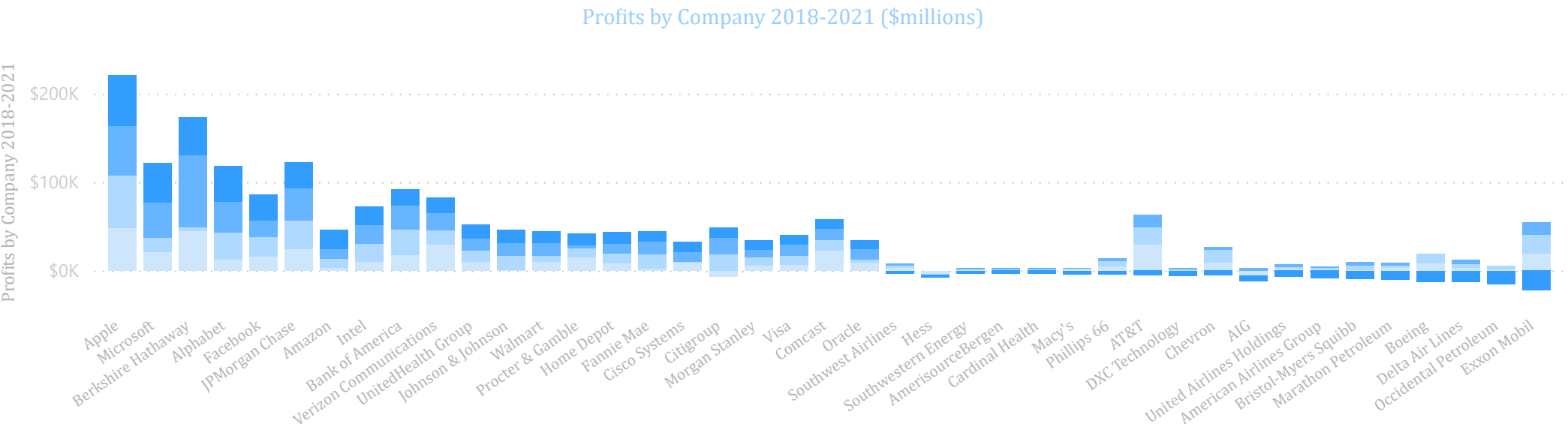


Type_of_Industry

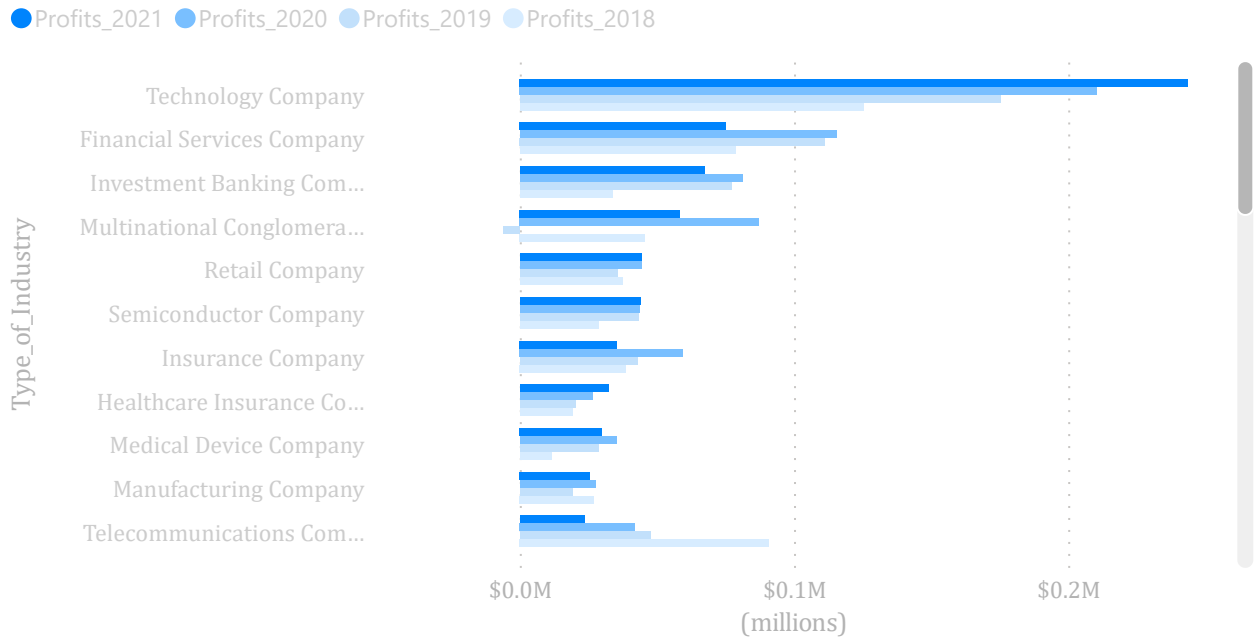
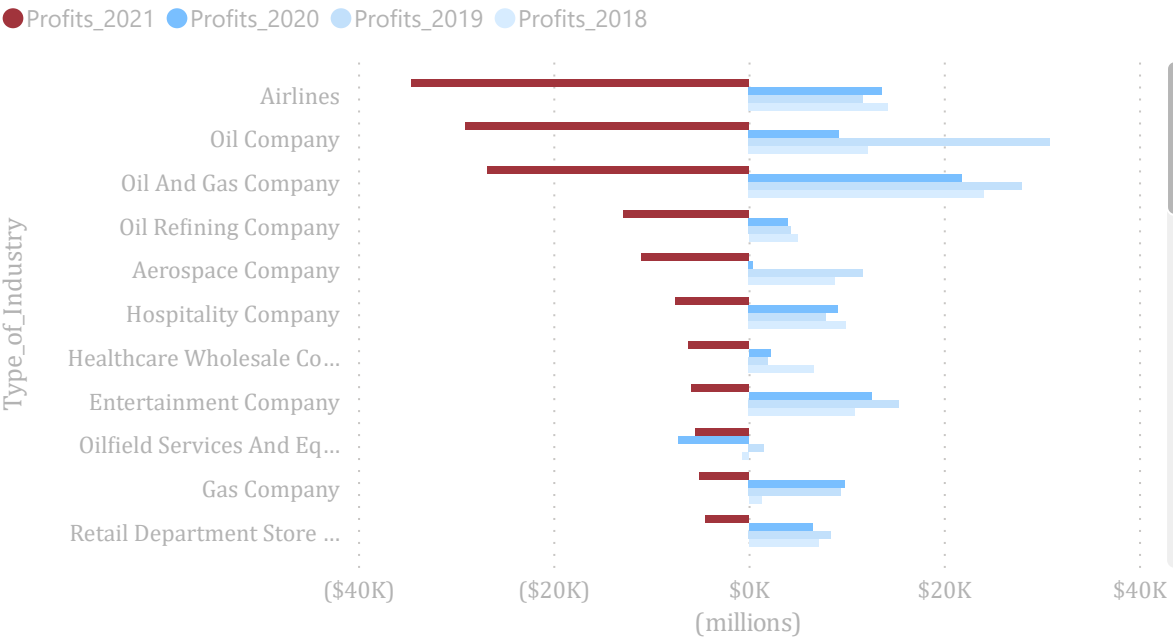
All

- For the first visualization the profits by industry are shown for 41 out of the total 166 industries as certain ones have been filtered by removing multinational conglomerations and setting industries with profits >\$4.5 billion or <0 for all four years 2018-2021. This clears all the industries that fall in the middle and focuses on the most resilient and the ones suffering the most.
- The Profits by company have been filtered by profits >10billion and <(3billion) to clear the companies in the middle and show the suffering companies and the resilient ones. Here too 41 companies of the total 820 companies are displayed by setting the filter with requirements stated above
- Size of **Technology Company** has increased to **\$243.6 billion** or **15.7%** of total profit by industry in 2021. Of these **Apple**, **Microsoft**, **Alphabet**, **Facebook** and **Amazon** have recorded the highest profits in 2021.
- Airlines** profits in 2021 seemed to have the biggest drop of all industries with a decline of **\$35billion** or **353%** from 2020.
- Losses were in all the big 4 - but **Delta Airlines**, **American Airlines** and **United Airlines** have recorded the highest losses

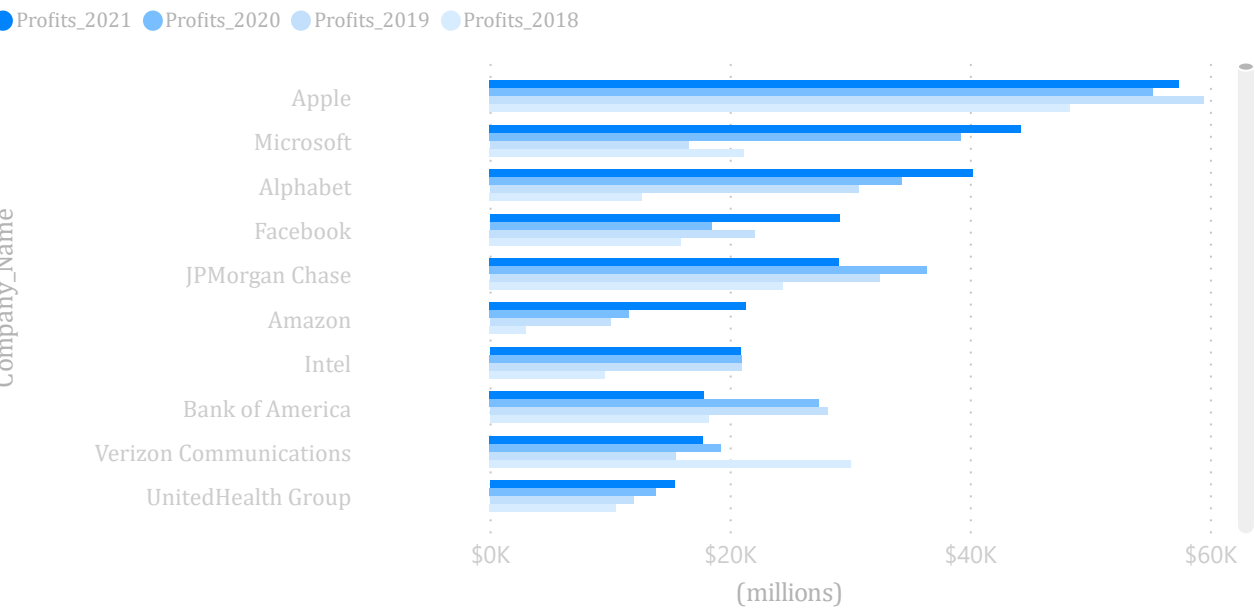
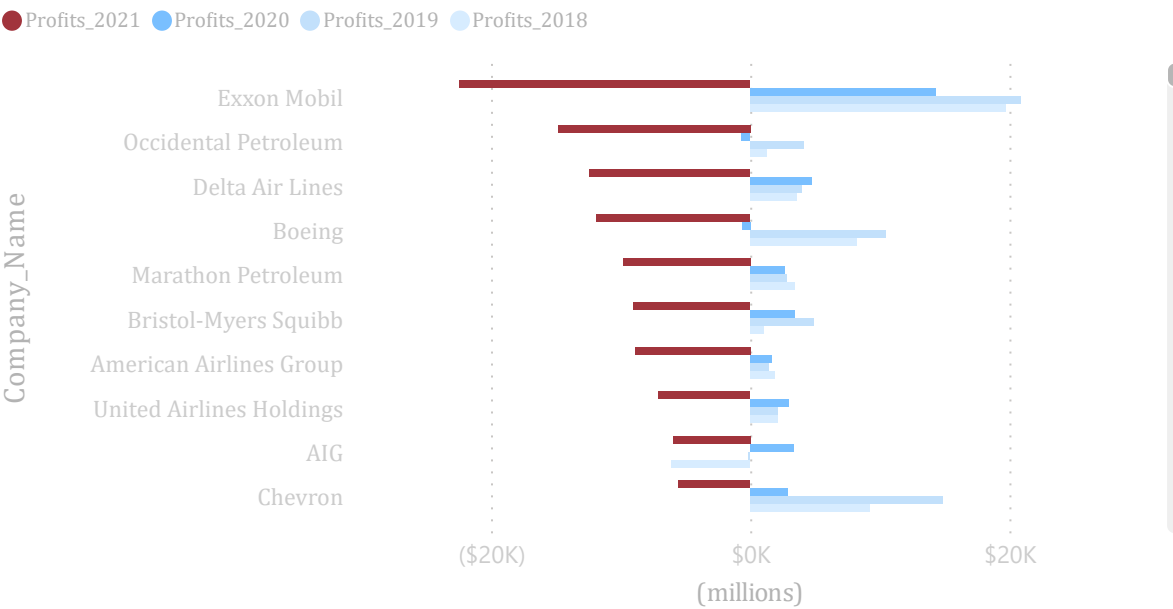
Comparing Profits by Company for the Years 2018 - 2021



Industries that **Suffered** and were **Resilient** During the Pandemic



Individual Companies that **Suffered** and were **Resilient** During the Pandemic



Industries and Individual Companies that **Suffered** and were **Resilient** During the Pandemic

(\$22.44K)

Min Profits for a Company in 2021 (in millions)

\$57.41K

Max Profits for a Company in 2021 (in millions)

166

Different Types of Industry

820

Number of Companies in List

Type_of_Industry

☐ Aerospace And Defense Company

□ Aerospace Company

Profits 2018-2021 (millions)

\$1.4M

The following are observations on details of both industries and individual companies that **suffered** and were **resilient** during the Pandemic

Airline Companies

- Profits in 2021 were **-\$35 billion** or decline of **353%** from year 2020.
- **Delta Airlines, American Airlines** and **United Airlines** had the most losses to the tune of **\$12.4 billion** or decline of **359.8%** , **\$8.8 billion** or decline of **627%** , **\$7.0 billion** or decline of **335%** as compared to 2020 profits.

Oil Companies

- Profits in 2021 declined by **-\$29 billion** or decline of **415 %** from the year 2020
- **Occidental Petroleum** had the most losses of **-\$14.2 billion** or decline of **2123.5%**

Oil and Gas Companies

- Profits in 2021 were **-\$26.8 billion** or decline of **222.5 %** from the year 2020
- **Exxon Mobil** had the most losses of **-\$22.4 billion** or decline of **256.6 %**

Hospitality Companies

- Profits in 2021 declined by **-\$7.6 billion** or decline of **182.7%** from the earlier year 2020

Technology Companies

- Profits in 2021 increased by \$243.6 billion or a 15.7 % from the earlier year and also had the highest profit of all four years 2018-2021
- Apple, Microsoft, Alphabet, Facebook and Amazon showed \$57.4 billion or a 3.9%, \$44.3 billion or a 12.8 %, 40.3 billion or a 17.3%, \$29 billion or a 57.7% and \$21.3 billion or a 45.7% increase in profits in 2021 respectively

\$1.05M

Cumulative Profits for all Companies 2018 (in millions)

\$1.19M

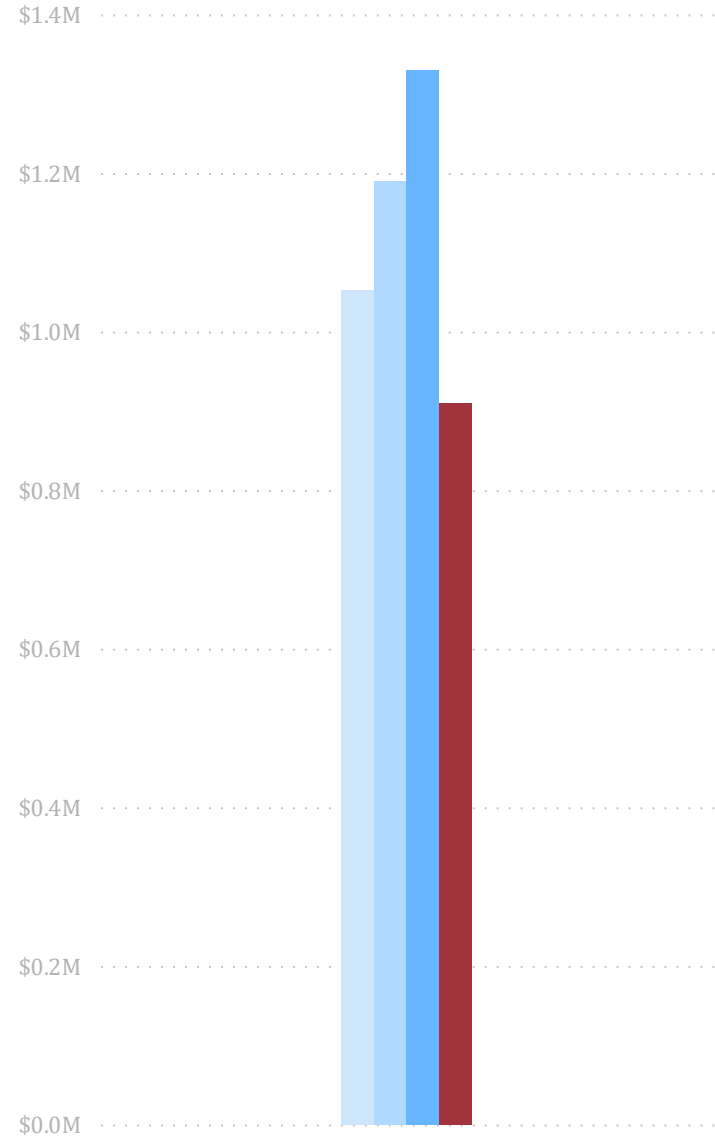
Cumulative Profits for all Companies 2019 (in millions)

\$1.33M

Cumulative Profits for all Companies 2020 (in millions)

\$909.77K

Cumulative Profits for all Companies 2021 (in millions)



HEADCOUNT ANALYSIS

- After Visualization of the Industries, Companies that both suffered and were resilient during the Pandemic, it is important to turn our attention to the changes in the Headcount for the same
- This allows us to not only see which industries and companies changed but also how it affected the headcount subsequently

Headcount of Companies that Suffered and were Resilient During the Pandemic (Table form)

Company Name	2018	2019	2020	2021
Walmart	2,300,000.00	2,200,000.00	2,200,000.00	2,300,000.00
Amazon	566,000.00	647,500.00	798,000.00	1,298,000.00
Yum China Holdings	450,000.00	450,000.00	450,000.00	271,000.00
Kroger	449,000.00	453,000.00	435,000.00	465,000.00
Home Depot	413,000.00	413,000.00	415,700.00	504,800.00
Berkshire Hathaway	377,000.00	389,000.00	391,500.00	360,000.00
FedEx	404,336.00	359,000.00	389,500.00	418,000.00
IBM	397,800.00	381,100.00	383,800.00	364,800.00
UPS	346,415.00	364,575.00	377,640.00	408,255.00
Target	345,000.00	360,000.00	368,000.00	409,000.00
Starbucks	277,000.00	291,000.00	346,000.00	349,000.00
UnitedHealth Group	260,000.00	300,000.00	325,000.00	330,000.00
Cognizant Technology Solutions	260,000.00	281,600.00	292,500.00	289,500.00
CVS Health	203,000.00	295,000.00	290,000.00	256,500.00
Walgreens Boots Alliance	290,000.00	299,000.00	287,000.00	277,000.00
TIJX	249,000.00	270,000.00	286,000.00	320,000.00

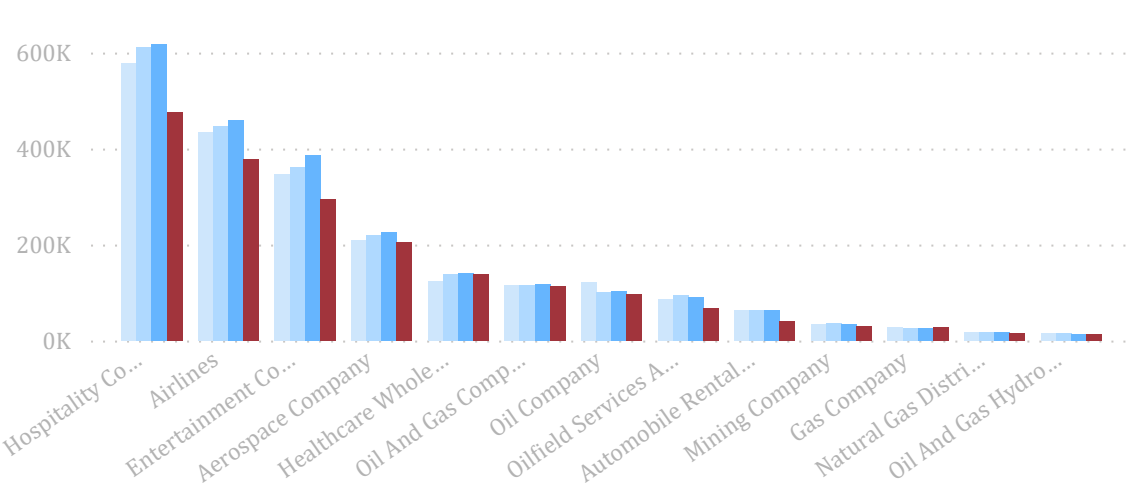
Most companies recorded an increase in headcount in 2019 and some such as Boeing, American Airlines Group, Delta Air Lines, Marathon Petroleum, Bristol Myers-Squibb, Amerisource Bergen, Phillips66 and Occidental Petroleum further on in 2020 too. However most companies with the exception of DXC Technologies, Bristol Myers Squibb and Amerisource Bergen lost headcount in 2021

Company Name	2018	2019	2020	2021
3M	91,536.00	93,516.00	96,163.00	94,987.00
A.O. Smith	16,100.00	16,300.00	15,100.00	13,900.00
Abbott Laboratories	99,000.00	103,000.00	107,000.00	109,000.00
AbbVie	29,000.00	30,000.00	30,000.00	47,000.00
Abercrombie & Fitch	22,500.00	24,500.00	26,000.00	20,550.00
ABM Industries	140,000.00	140,000.00	140,000.00	114,000.00
Acadia Healthcare	34,050.00	35,350.00	35,600.00	35,400.00
Activision Blizzard	9,800.00	9,900.00	9,200.00	9,500.00
Acuity Brands	12,500.00	13,000.00	12,000.00	11,500.00
Adobe	17,973.00	21,357.00	22,634.00	22,516.00
ADP	58,000.00	57,000.00	58,000.00	58,000.00
ADT	18,000.00	19,000.00	17,500.00	20,500.00
Advance Auto Parts	55,500.00	55,500.00	53,000.00	54,000.00
Advanced Micro Devices	8,900.00	10,100.00	11,400.00	12,600.00
AECOM	87,000.00	87,000.00	86,000.00	54,000.00

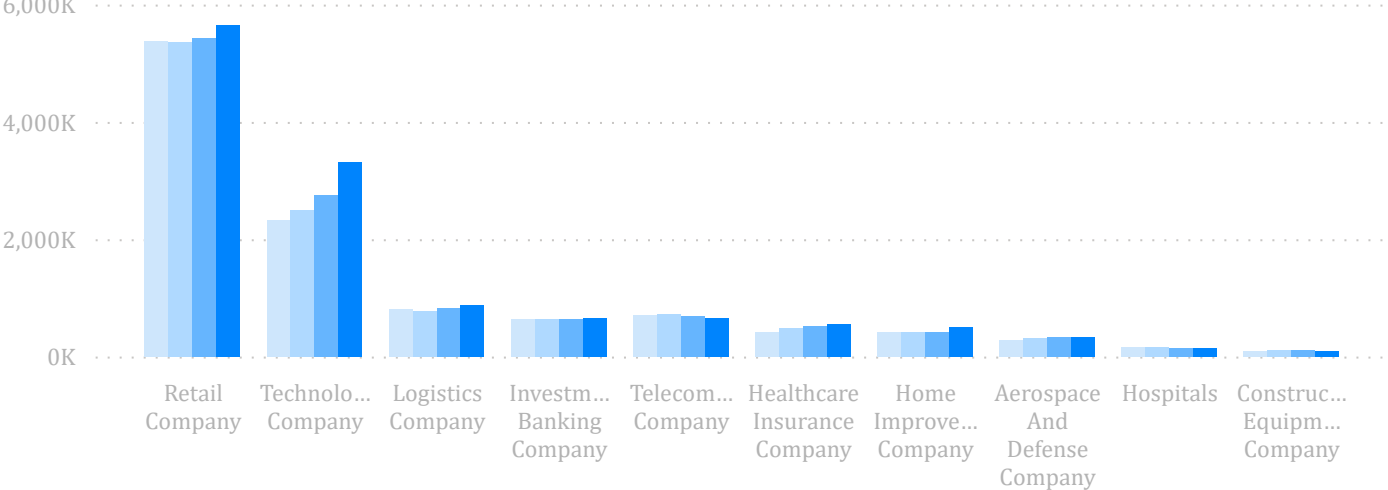
Most of the Technology Companies such as Facebook, Microsoft, Amazon, Alphabet kept increasing its headcounts by over 5-15% year on year despite the Pandemic causing other companies to fluctuate annual headcounts over 2018-2021

Headcount of Industries and Companies that **Suffered** and were **Resilient** During the Pandemic

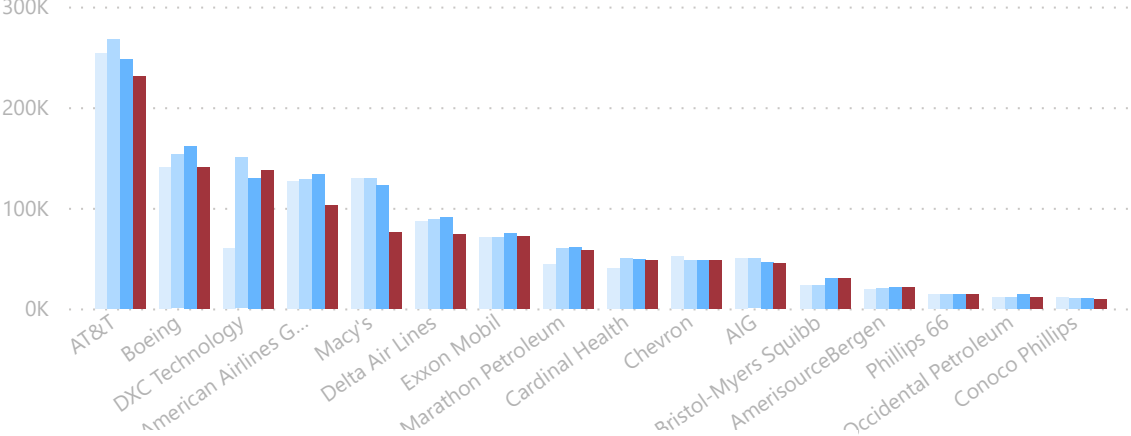
Headcount 2018-2021 by Industry



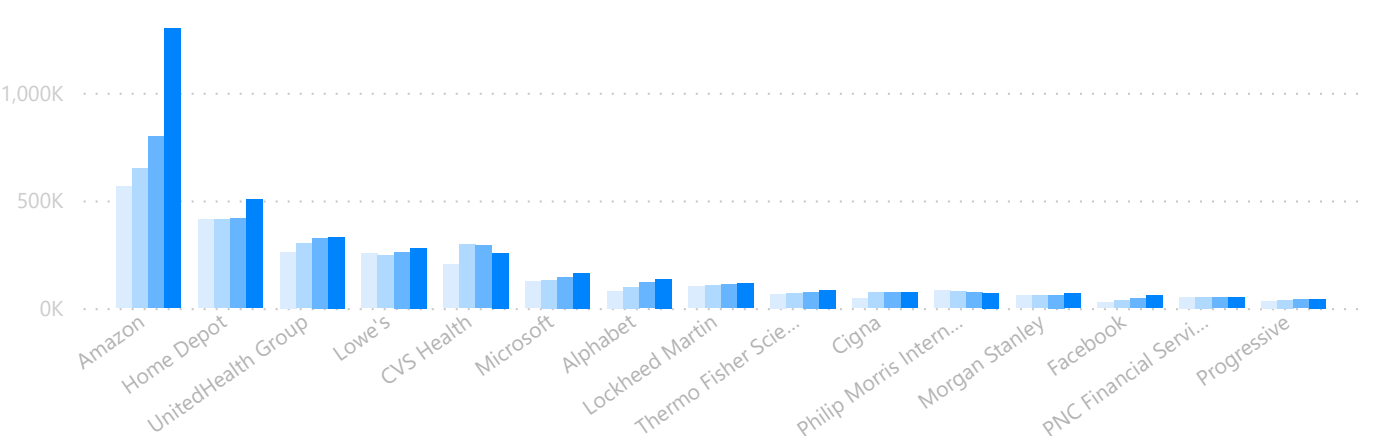
Headcount 2018-2021 by Industry



Headcount 2018-2021 by Company



Headcount 2018-2021 by Company



183

218.00

2.20M

2.30M

32.48M

32.45M

Min Headcount for a Company 2020

Min Headcount for a Company 2021

Max Headcount for a Company 2020

Max Headcount for a Company 2021

Sum of Headcounts for 2020

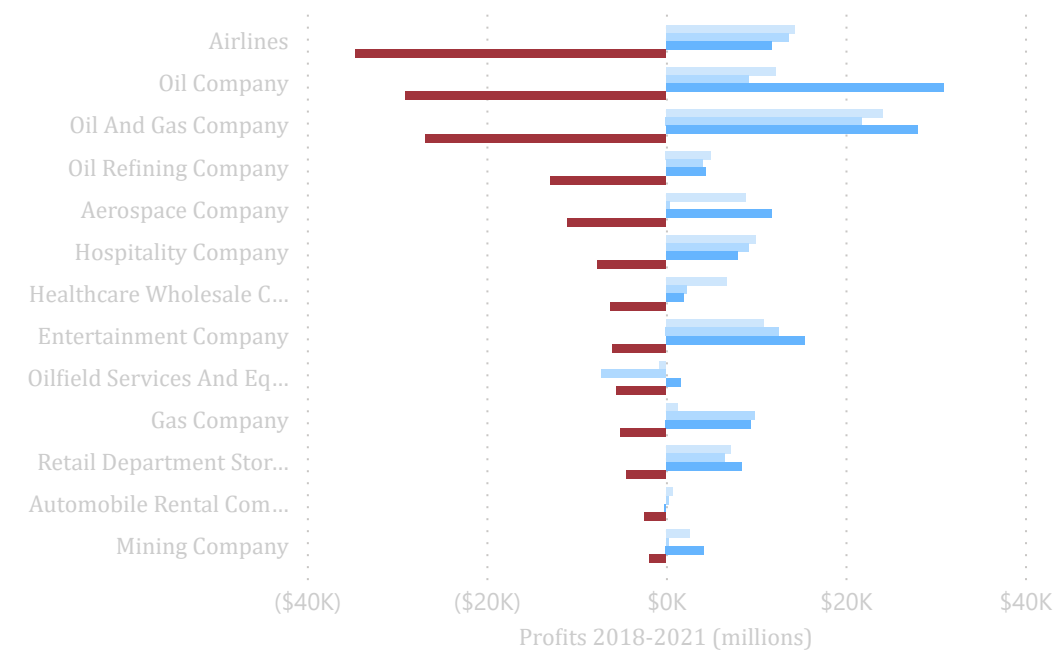
Sum of Headcounts for 2021

The company with headcount of 2.2 million increased by 100K to headcount of 2.3 million

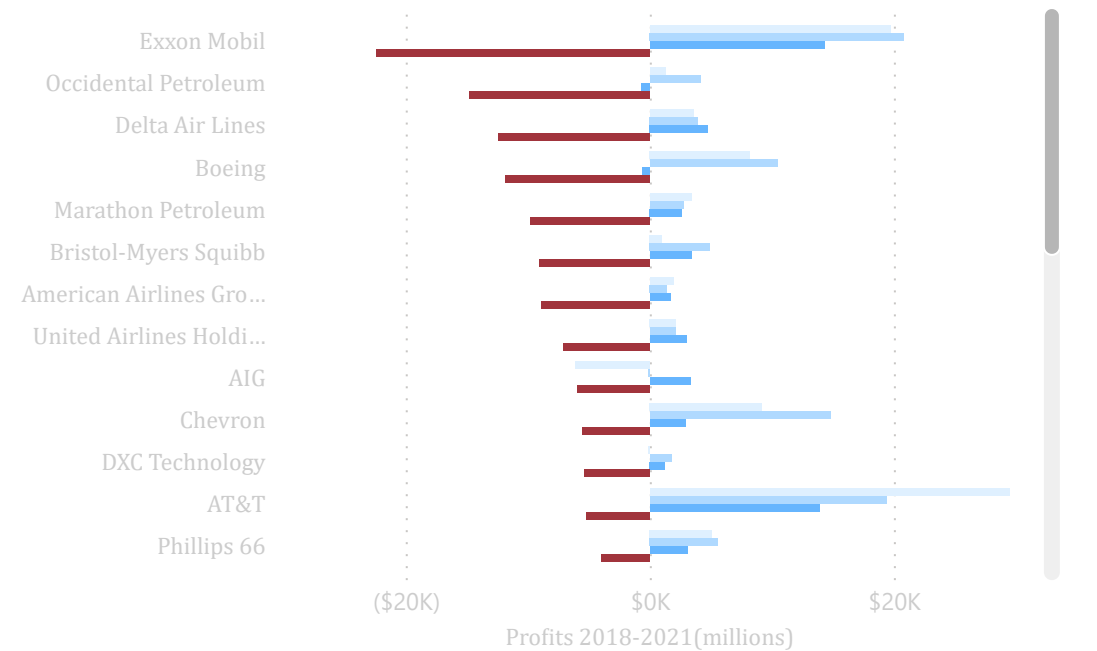
The cumulative headcount of the 820 companies of the fortune 1000 dropped by 30K in year 2021 from year 2020

Changes for Industries, Companies that suffered in the pandemic along with headcount changes

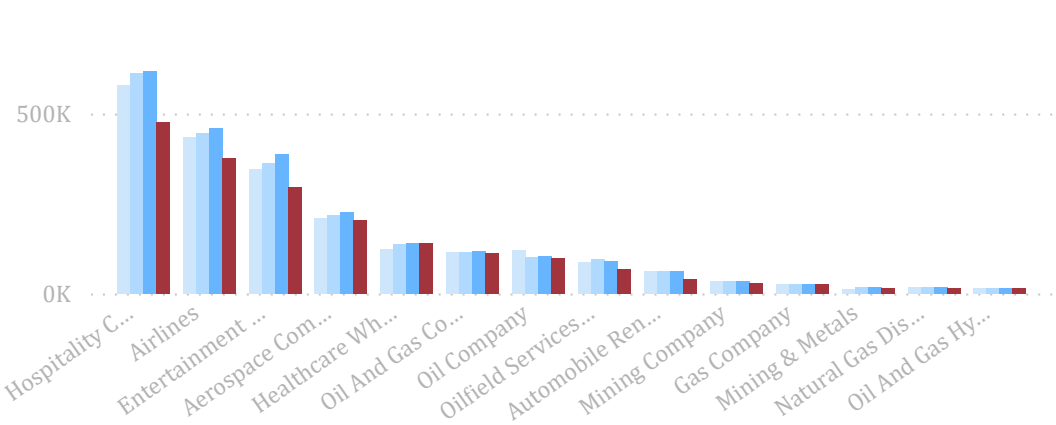
Losses by Type of Industry



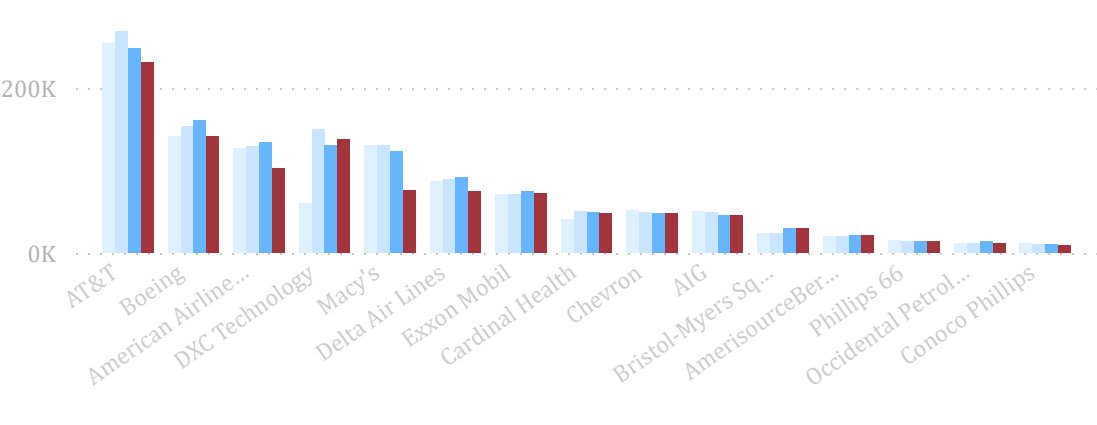
Losses by Company



Headcount 2018-2021 by Industry

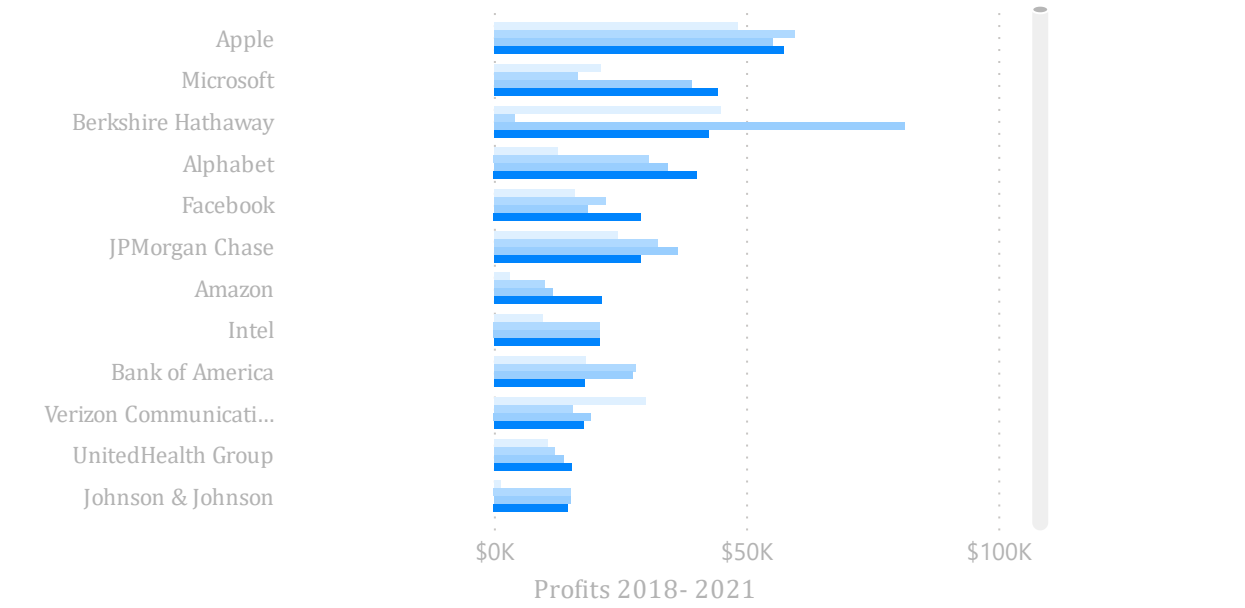
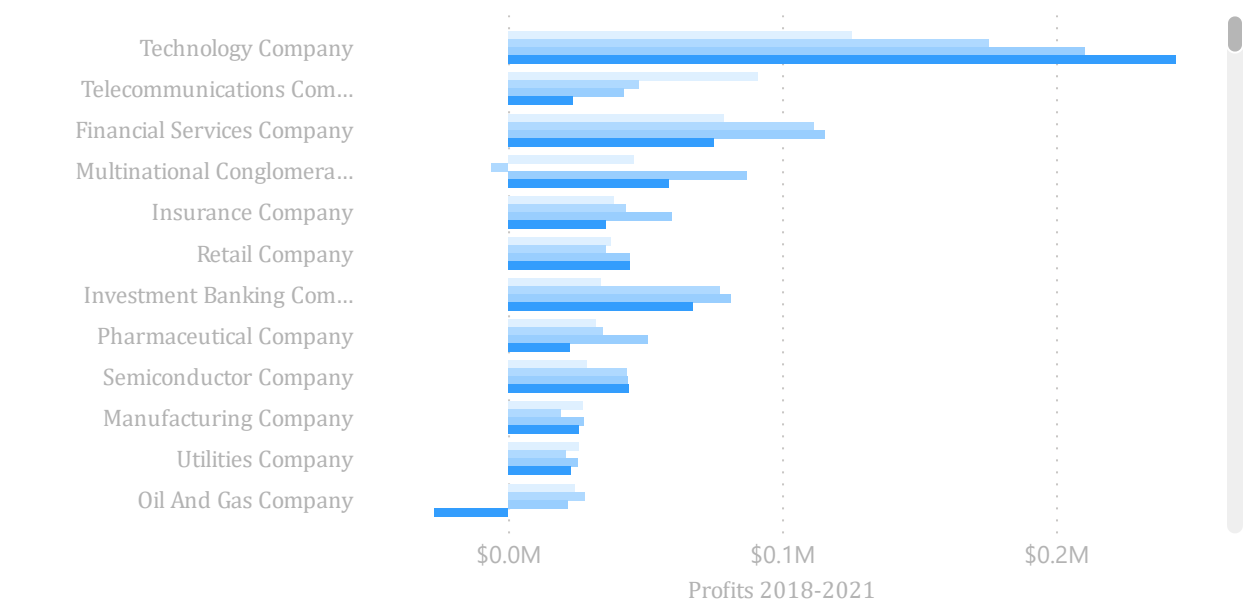


Headcount 2018-2021 by Company

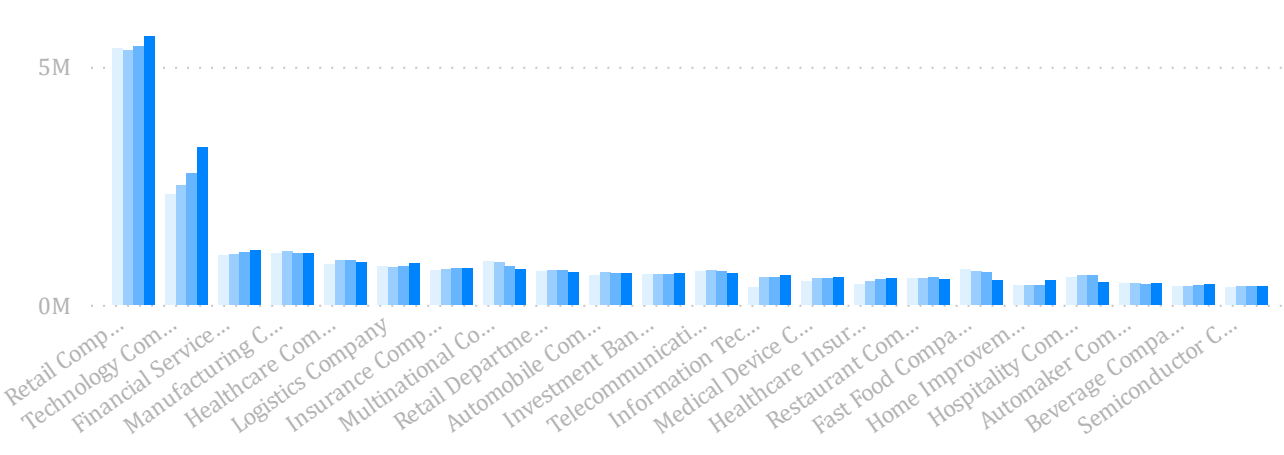


Despite the Airlines, Oil And Gas Company and Oil Company loosing - \$35 billion (353%), \$26.8 billion (222.5%), \$29 billion (415%) from year 2020 - 2021, the largest of which are Delta Airlines, Exxon Mobil, Occidental Petroleum which lost - \$12.4 billion, \$22.4 billion, \$14.8 billion respectively, the headcount loss/layoffs are - Airlines - 82482 or 17.9% , Oil And Gas Companies - 5633 or 4.75%, Oil Companies - 5646 or 2%, Hospitality - 141205 or 22.9%

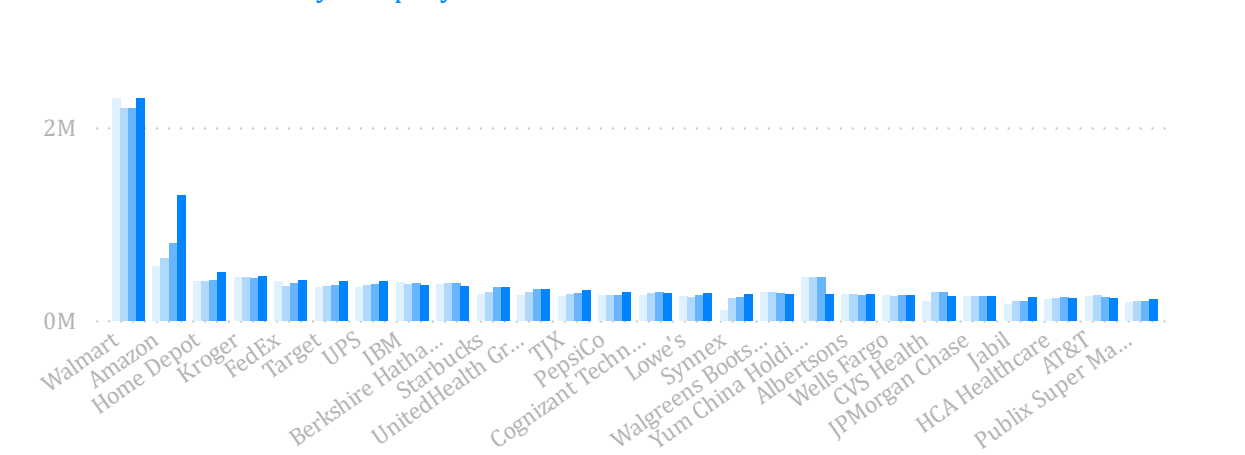
Changes for Industries, Companies that were resilient in the pandemic along with headcount changes



Headcount 2018-2021 by Industry



Headcount 2018-2021 by Company



- Technology Companies Profits in 2021 increased by \$243.6 billion or a 15.7 % from the earlier year
- Apple, Microsoft, Alphabet, Facebook and Amazon showed \$57.4 billion or a 3.9%, \$44.3 billion or a 12.8 %, \$40.3billion or a 17.3%, \$29billion or a 57.7% and \$21.3 billion or a 45.7% increase in profits in 2021
- Amazon hired 500,000 more employees 62.7% in 2021 than 2020,

OBSERVATIONS -

From the data from the Profits by Industry, Individual companies and respective headcounts the observations are -

- **Airline Companies** average Profits in 2021 declined to **-\$35 billion** or a decline of **353 %** from the year 2020.
- **Delta Airlines, American Airlines and United Airlines** had the most losses to the tune of **-\$12.4 billion** or **359.8%** , **-\$8.8 billion** or **627%** , **-\$7.0 billion** or **335%** as compared to 2020 profits.
- **Oil and Gas Companies** average Profits in 2021 declined by **222.5 %** from the earlier year 2020
- **Exxon Mobil** had the most losses of **\$22.4 billion** or **256.6 %**
- **Oil Companies** average Profits in 2021 declined by **-\$29 billion** or decline of **415 %** from the year 2020
- **Occidental Petroleum** had the most losses of **-\$7.6 billion** or decline of **182.7%**
- **Hospitality Companies** average Profits in 2021 declined by **-\$7.6 billion** or decline of **182.7%** from the earlier year 2020
- Headcount loss/layoffs were - **Airlines - 9164** or **17.9%** , **Oil And Gas Companies - 509** or **5%**, **Oil Companies - 348** or **2%**, **Hospitality - 15689** or **22.8%**
- **Technology Companies** showed a **\$160.6 billion** or a **13.1 %** increase in average Profits in 2021
- **Apple, Microsoft and Amazon** showed **\$57.4 billion** or a **3.8%**, **\$44.3 billion** or a **12.8 %** and **\$21.3 billion** or a **45.68%** increase in profits in 2021

KEY TAKEAWAYS -

Airline Companies and **Hospitality Companies** saw declines of **353%** and **182.7%** in profits but saw a headcount loss of **17.9%** and **22.8%** respectively while industries such as **Oil and Gas** and **Oil Companies** saw declines in profits of **222.5%** and **415%** but a headcount loss of **5%** and **2%**. This displayed that despite all four industries decline ~182-415% there is a wide range in percentage of layoffs within these four industries. This highlights the second takeaway that the percentage loss in companies profits is not proportional to the percentage headcount loss.

Unlike the level of percentage losses seen in the companies that suffered from the pandemic such as **Airlines, Oil, Gas Companies, Petroleum Companies** and **Oil Companies** which saw losses of **~100-400%**, the **Technology Companies** did not see profits in that range. This showed that they were resilient. Exceptions to this were however **Amazon, Microsoft** which unlike Apple saw profits in 2021 higher than all four years of **12.8 %** and **45.7%**, further highlighted by Amazon's hiring spree of **500000** or **66.3%** increased headcount in 2021 from 2020, showing that customers were even more dependent on Amazon and Microsoft during the pandemic years thus highlighting the increasing digital adoption during a time of isolation

CONCLUSION -

The data in this project assists us in three findings - **First**, due to the isolation of the pandemic the usual transportation was disrupted and this can be seen in the drawdown of transportation related industries such as - **Airlines, Gas Companies, Petroleum Companies** and **Oil Companies** which were the most affected due to people staying home and eliminating or minimizing travel for work or holiday. **Second**, the discrepancy in percentage loss in companies profits not being proportional to the percentage headcount loss seen in **Airline, Hospitality, Oil and Oil and Gas companies** could be due to the fact that Oil companies had a lower baseline headcount through the years and are not too labor dependent in comparison to the entire airline staff in **Airline companies** and the seasonal nature of **Hospitality companies**. This displayed that layoffs do happen due to company and industry losses, however there is no direct association between this and headcount s which could differ due to the nuances of the industry. **Third and last**, the data displays the people's sudden rise in the adoption of technology highlighted by the increased profits in **Technology companies** such as **Amazon, Facebook** and **Microsoft** which had more profits in 2021 than any year pre-pandemic. These findings demonstrate the change in peoples daily habits such as a energy consumption drawdown and digital adoption in a period of disruption and allows companies to predict patterns and hence strategize for increased resiliency for similar situation presented in the future