Week 2: analysis report on the stock market

Introduction

For this week, I will focus more on analyzing the volume that was made by the 4 big tech companies, which are Apple, Google, Nvidia, and Microsoft. Before I continue, I will explain what volume means in stock market terms:

Trading Volume in the Stock Market

In the financial stock market, trading volume means the total number of shares or contracts made between buyers and sellers in a certain period, typically it is **measured daily,** serving the market activity and liquidity. As the trading volume increases, it shows that people are buying the company's stocks more frequently and shows the outside investors that the particular company is reliable compared to other companies with lower trading volume. I'm adding the volume column in my cleaned and filtered table for all 4 companies that I made for week 1 using R:

```
print(risk_summary)

apple <- apple %>% select(Date, Close, Volume, Return)
microsoft <- microsoft %>% select(Date, Close, Volume, Return)
nvidia <- nvidia %>% select(Date, Close, Volume, Return)
google <- google %>% select(Date, Close, Volume, Return)
```

The R code that I wrote adds one more "volume" column.

From this, I managed to see which company has done a really good job in the stock market, meaning that it has the volume among the 4, and moving to the second one, until the last among these 4 big tech companies. Here are the results:

Early Week 1 code.R* | google

Filter

	Date	Close	Volume	Return
4413	2022-02-28	2701.14	1939400	0.0044436995
4414	2022-03-01	2681.23	1324800	-0.0073709300
4415	2022-03-02	2691.43	1176000	0.0038042063
4416	2022-03-03	2677.99	1230200	-0.0049936065
4417	2022-03-04	2638.13	1521500	-0.0148843376
4418	2022-03-07	2527.57	2255600	-0.0419084048
4419	2022-03-08	2542.09	2021400	0.0057446558
4420	2022-03-09	2668.40	1851300	0.0496873870
4421	2022-03-10	2648.59	1355100	-0.0074238550
4422	2022-03-11	2597.41	1572700	-0.0193235549
4423	2022-03-14	2519.02	1940600	-0.0301800234
4424	2022-03-15	2583.96	1546000	0.0257798431
4425	2022-03-16	2665.61	1778800	0.0315988433
4426	2022-03-17	2676.78	1413200	0.0041903810
4427	2022-03-18	2722.51	2223100	0.0170839518
4428	2022-03-21	2722.03	1341600	-0.0001763009
4429	2022-03-22	2797.36	1774800	0.0276742274
4430	2022-03-23	2765.51	1257700	-0.0113857694
4431	2022-03-24	2831.44	1317900	0.0238400623

Early Week 1 code.R* | google | apple

Filter

	Date	Close	Volume	Return
4653	2022-06-27	141.66	70207900	0.0000000000
4654	2022-06-28	137.44	67083400	-0.0297896504
4655	2022-06-29	139.23	66242400	0.0130238211
4656	2022-06-30	136.72	98964500	-0.0180276885
4657	2022-07-01	138.93	71051600	0.0161643650
4658	2022-07-05	141.56	73353800	0.0189304335
4659	2022-07-06	142.92	74064300	0.0096072338
4660	2022-07-07	146.35	66253700	0.0239994966
4661	2022-07-08	147.04	64547800	0.0047146360
4662	2022-07-11	144.87	63141600	-0.0147578761
4663	2022-07-12	145.86	77588800	0.0068337546
4664	2022-07-13	145.49	71185600	-0.0025366516
4665	2022-07-14	148.47	78140700	0.0204824792
4666	2022-07-15	150.17	76259900	0.0114501043
4667	2022-07-18	147.07	81420900	-0.0206432113
4668	2022-07-19	151.00	82982400	0.0267219203
4669	2022-07-20	153.04	64823400	0.0135098874
4670	2022-07-21	155.35	65086600	0.0150941787
4671	2022-07-22	154.09	66675400	-0.0081107818

Early Week 1 code.R* | microsoft

Filter

	Date	Close	Volume	Return
4638	2022-06-03	270.02	28059000	-0.0166071754
4639	2022-06-06	268.75	22400300	-0.0047033148
4640	2022-06-07	272.50	22860700	0.0139534884
4641	2022-06-08	270.41	17372300	-0.0076697101
4642	2022-06-09	264.79	26439700	-0.0207832363
4643	2022-06-10	252.99	31422800	-0.0445636300
4644	2022-06-13	242.26	46135800	-0.0424127823
4645	2022-06-14	244.49	28651500	0.0092050278
4646	2022-06-15	251.76	33111700	0.0297353260
4647	2022-06-16	244.97	33169200	-0.0269701070
4648	2022-06-17	247.65	43084800	0.0109400865
4649	2022-06-21	253.74	29928300	0.0245912019
4650	2022-06-22	253.13	25939900	-0.0024040356
4651	2022-06-23	258.86	25861400	0.0226365104
4652	2022-06-24	267.70	33923200	0.0341498397
4653	2022-06-27	264.89	24615100	-0.0104968131
4654	2022-06-28	256.48	27295500	-0.0317490412
4655	2022-06-29	260.26	20069800	0.0147379867
4656	2022-06-30	256.83	31730900	-0.0131792164

Showing 4,638 to 4,656 of 5,008 entries, 4 total columns

Early Week 1 code.R* | nvidia

Filter

	Date	Close	Volume	Return
4574	2022-03-03	237.14	36509500	-2.089182e-02
4575	2022-03-04	229.36	43141500	-3.280762e-02
4576	2022-03-07	213.52	45082100	-6.906172e-02
4577	2022-03-08	215.14	55746700	7.587088e-03
4578	2022-03-09	230.14	49274200	6.972204e-02
4579	2022-03-10	226.58	42806600	-1.546883e-02
4580	2022-03-11	221.00	36720900	-2.462707e-02
4581	2022-03-14	213.30	38535400	-3.484162e-02
4582	2022-03-15	229.73	49199600	7.702763e-02
4583	2022-03-16	244.96	67142200	6.629527e-02
4584	2022-03-17	247.66	47194100	1.102220e-02
4585	2022-03-18	264.53	73071900	6.811756e-02
4586	2022-03-21	267.34	59172700	1.062260e-02
4587	2022-03-22	265.24	54700700	-7.855188e-03
4588	2022-03-23	256.34	50212000	-3.355450e-02
4589	2022-03-24	281.50	87737900	9.815091e-02
4590	2022-03-25	276.92	57901600	-1.626994e-02
4591	2022-03-28	282.19	42549400	1.903073e-02
4592	2022-03-29	286.56	48898400	1.548601e-02

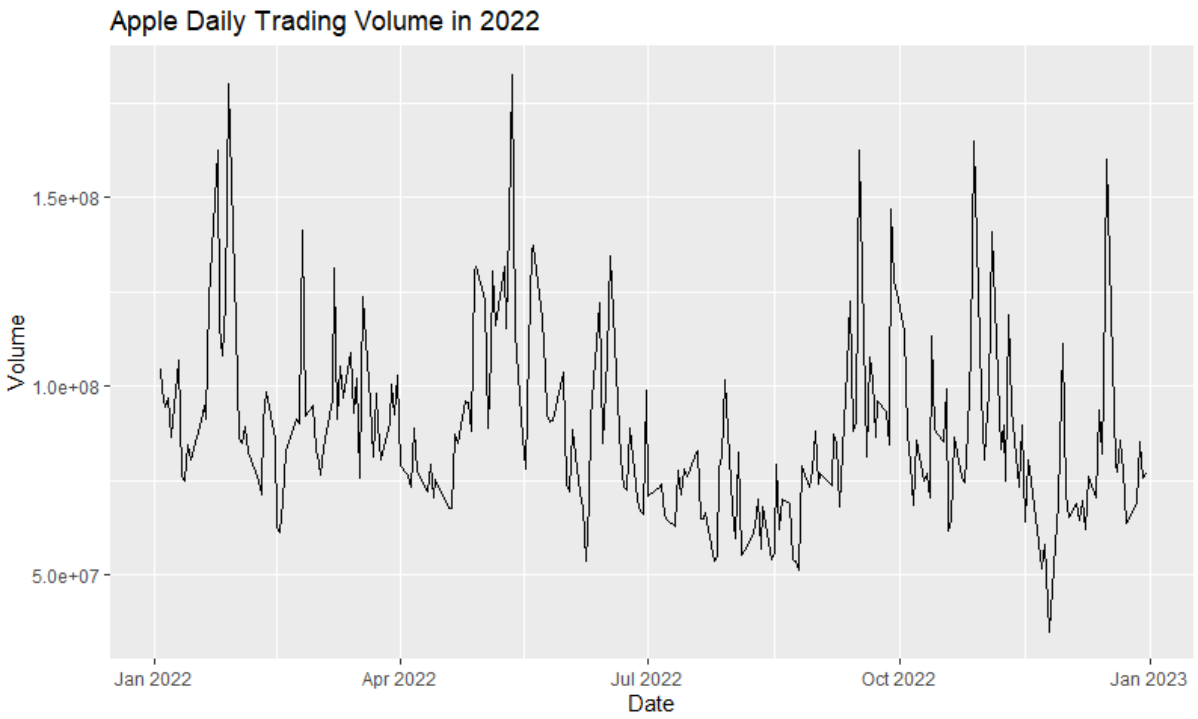
Showing 4,574 to 4,592 of 5,033 entries, 4 total columns

An analysis of trading volume data from 2022 reveals meaningful patterns in investor behavior across four major technology firms: Alphabet (Google), Microsoft, Apple, and Nvidia. Throughout the observed period, Microsoft and Apple consistently exhibited higher trading volumes, frequently surpassing 20 million shares per day. This suggests a higher degree of market liquidity and institutional interest, aligning with their status as widely held, blue-chip stocks. Nvidia also experienced considerable volume activity, often ranging between 30 and 50 million shares, especially around March and April 2022, potentially driven by market reactions to earnings reports or developments in the semiconductor sector. In contrast, Alphabet (Google) consistently recorded the lowest trading volumes, often under 2 million shares per day. This relatively low figure may be attributed to its higher stock price, which can act as a barrier for smaller investors, and a lower share float compared to others. These volume discrepancies are essential for interpreting market sentiment and price reliability—for example, a price movement accompanied by high volume (as seen in Nvidia during volatile weeks) is generally regarded as more trustworthy than a similar movement on low volume (as in Alphabet's case). Therefore, investors and analysts should consider volume as a key contextual factor when making decisions. Future research could explore volume spikes around earnings dates or macroeconomic announcements, enabling a more precise understanding of the catalysts behind investor activity.

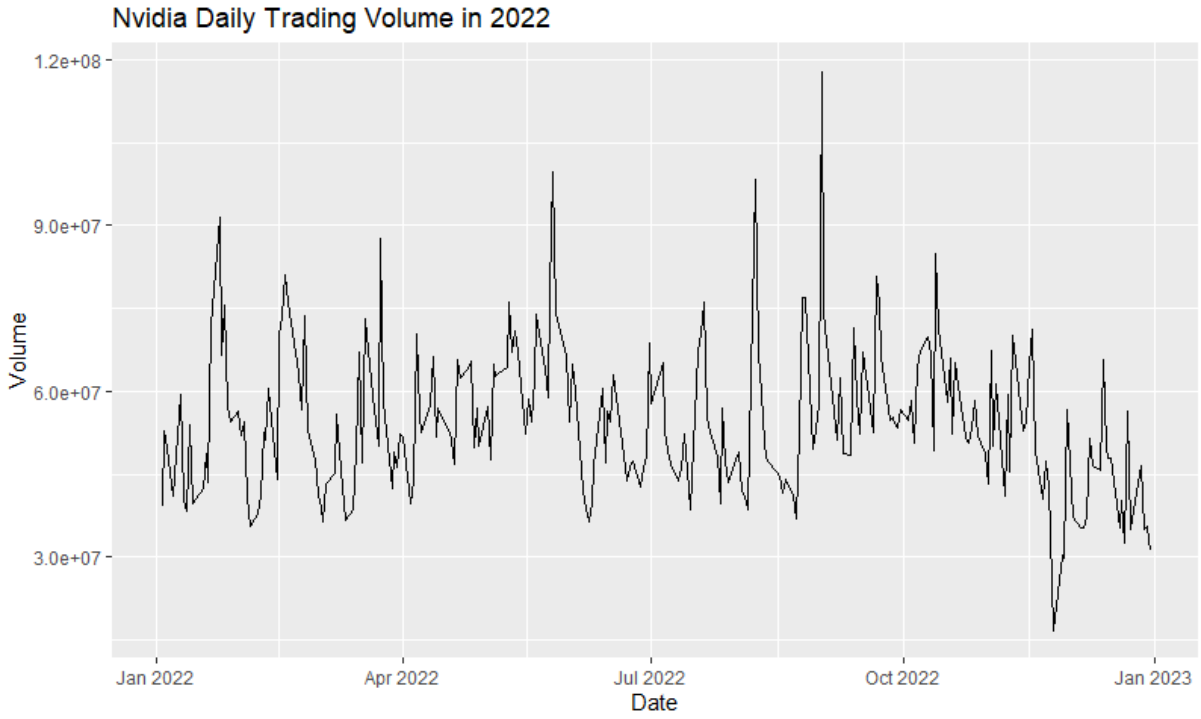
To get a clearer view of how the volume in each stock market varies, I also wrote R code to create a line chart plot in RStudio to help the audience understand how the volume number varies for each big tech company. Here are the codes that I used:

```
# Creating line graph for each 4 big tech companies for volume value in year 2022

Apple_2022 <- apple %>% filter(year(Date) == 2022)
ggplot(apple_2022, aes(x = Date, y = Volume)) +
  geom_line() +
  ggtitle("Apple Daily Trading Volume in 2022")

Nvidia_2022 <- nvidia %>% filter(year(Date) == 2022)
ggplot(Nvidia_2022, aes(x = Date, y = Volume)) +
  geom_line() +
  ggtitle("Nvidia Daily Trading Volume in 2022")

Google_2022 <- google %>% filter(year(Date) == 2022)
ggplot(Google_2022, aes(x = Date, y = Volume)) +
  geom_line() +
  ggtitle("Google Daily Trading Volume in 2022")

Microsoft_2022 <- microsoft %>% filter(year(Date) == 2022)
ggplot(Microsoft_2022, aes(x = Date, y = Volume)) +
  geom_line() +
  ggtitle("Microsoft Daily Trading Volume in 2022")
```

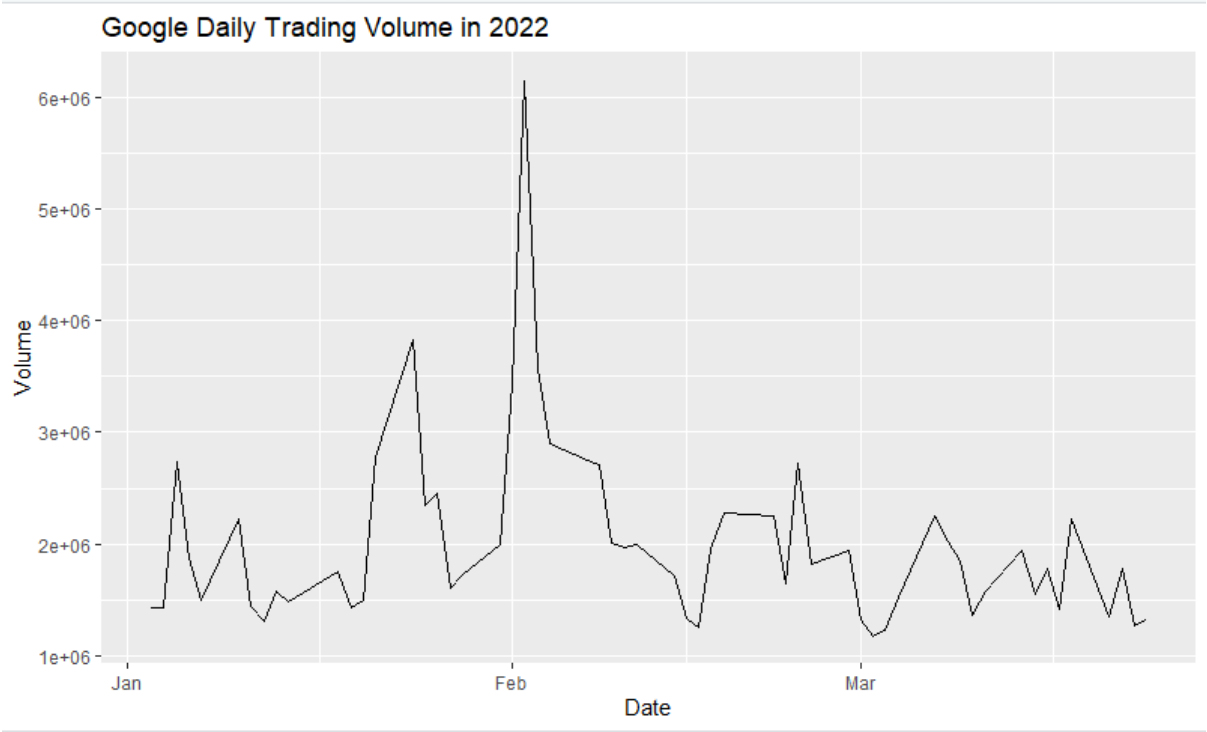
Below are the graphs created from the command:



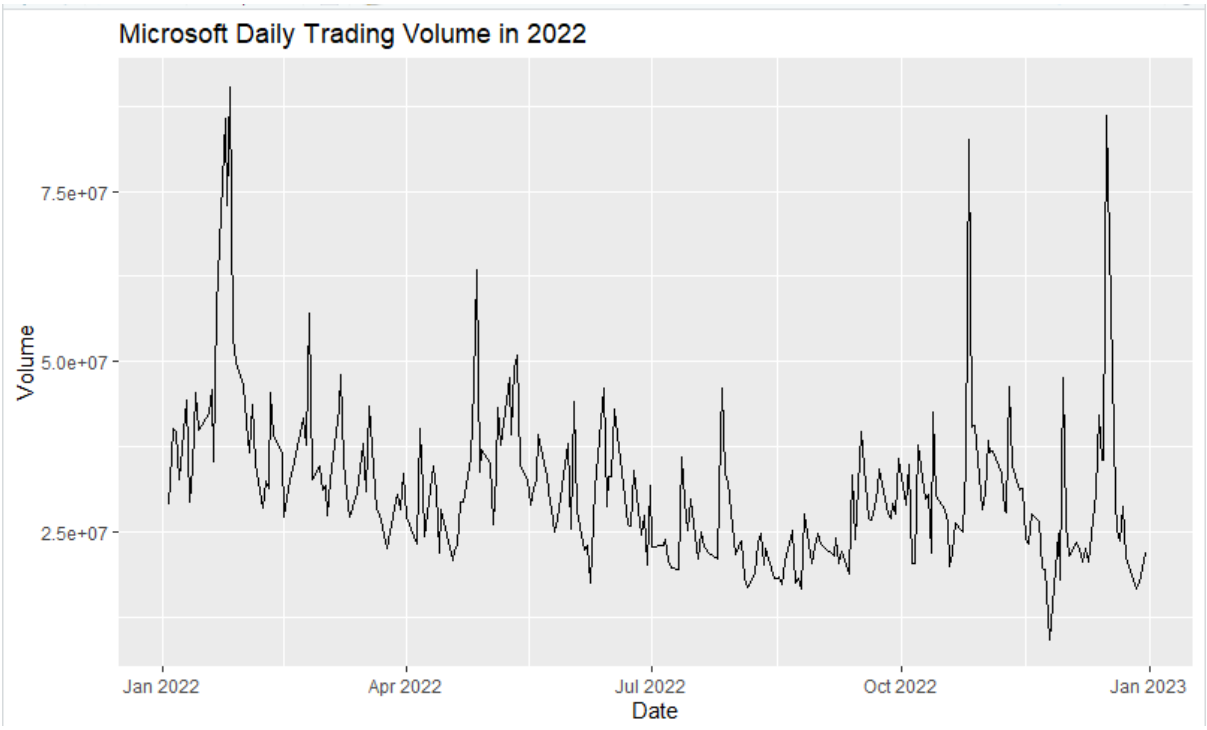
The graph shows the line chart for the volume of the Apple company.



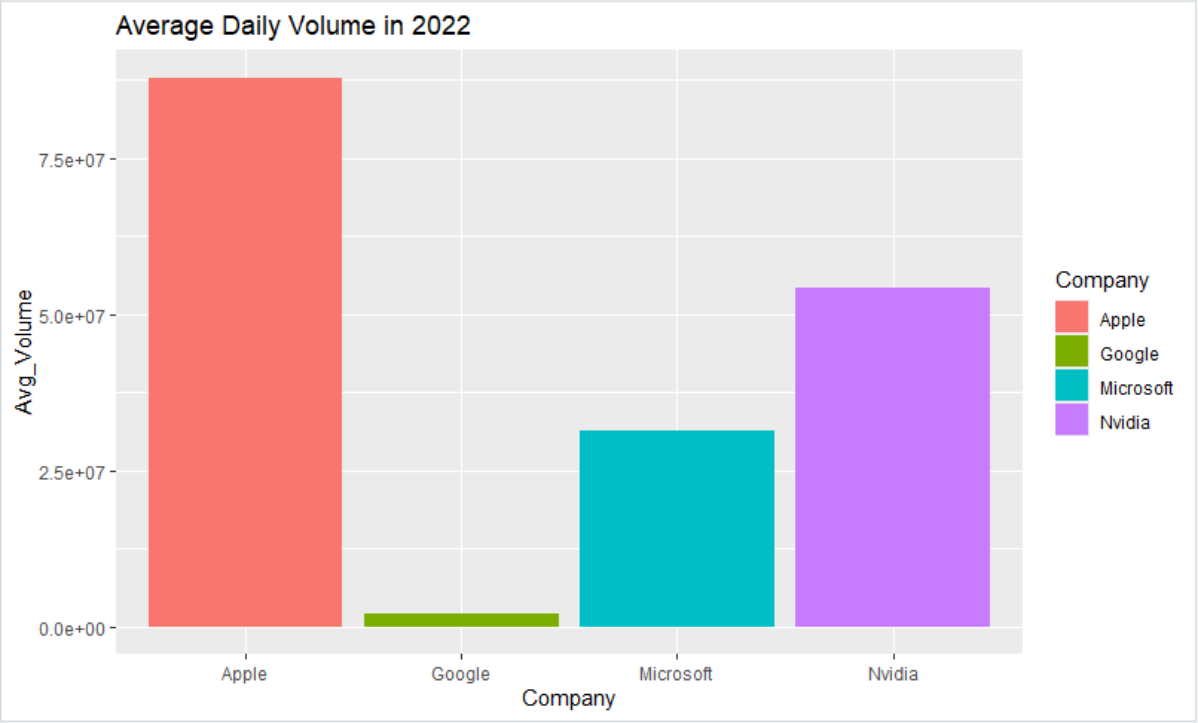
The graph shows the line chart for the volume number for the Nvidia company.



The graph shows the line chart for the volume number for the Google company.



The graph shows the line chart for the volume number for the Microsoft company.



The graph shows the bar chart for the average daily volume for all 4 companies.

The bar chart compares the average daily trading volume in 2022 for Apple, Google, Microsoft, and Nvidia. Apple had the highest average volume, followed by Nvidia and Microsoft. Google had the lowest trading volume by far. This shows that Apple's stock was the most actively traded, while Google's stock had the least trading activity among the four companies.

Total volume conclusion.

Today, I explored the trading volume data for Apple, Microsoft, Nvidia, and Alphabet (Google) during 2022. I found that Microsoft and Apple had the highest daily trading volumes, showing strong investor interest. Nvidia also had high volumes during some months, likely due to news or earnings. In contrast, Google had the lowest volume, probably because of its high stock price. I also created a bar plot to compare the average daily volume for all four companies. This helped me see how much trading activity each stock had and understand how volume reflects market interest.

Identifying the top trading volume days helps reveal when unusual investor activity occurred, which often signals important market events like earnings releases, major announcements, or economic shifts. High volume shows that many investors were active on a particular day, which usually means there was strong interest or reaction to something important. These days often come with larger price movements and can provide insights into market sentiment, volatility, and how investors respond to news. Analyzing these spikes helps us understand what drives market behavior and improves our ability to interpret trends and risk.

Since identifying the top volume days is important, I wrote some R code and the output table to show the top volume days for each company, starting with Apple:

```
# Top 10 volume spikes value for each companies to identify which year produce the highest value of

top_volume_apple <- apple %>% arrange(desc(Volume)) %>% slice_head(n = 10)
top_volume_microsoft <- microsoft %>% arrange(desc(Volume)) %>% slice_head(n = 10)
top_volume_nvidia <- nvidia %>% arrange(desc(Volume)) %>% slice_head(n = 10)
top_volume_google <- google %>% arrange(desc(Volume)) %>% slice_head(n = 10)
```

Results:

	Date	Open	High	Low	Close	Adj Close	Volume	Return
1	2008-01-23	4.863929	5.000000	4.505000	4.966786	4.210244	3372969600	-0.10646351
2	2007-01-09	3.087500	3.320714	3.041071	3.306071	2.802490	3349298400	0.08306994
3	2005-01-13	1.316250	1.328929	1.245179	1.246429	1.056573	3164716800	0.06630001
4	2007-01-10	3.383929	3.492857	3.337500	3.464286	2.936605	2952880000	0.04785590
5	2004-10-14	0.771250	0.816964	0.759821	0.803214	0.680868	2768427200	0.13157261
6	2005-04-14	1.386071	1.412857	1.315714	1.330714	1.128019	2753192400	-0.09210528
7	2005-10-12	1.737500	1.796429	1.709643	1.758929	1.491008	2697486400	-0.04535739
8	2006-04-06	2.439286	2.573214	2.435714	2.544286	2.156739	2663768800	0.05996150
9	2008-09-29	4.272143	4.274286	3.592500	3.759286	3.186670	2622057200	-0.17919520
10	2005-01-11	1.218750	1.234821	1.145357	1.152857	0.977253	2611627200	-0.06380555

The table shows the top 10 volume days for the Apple company.

Filter

	Date	Open	High	Low	Close	Adj Close	Volume	Return
1	2006-01-20	219.56957	220.23523	197.56757	199.92993	199.92993	82151167	-0.084751936
2	2006-02-28	196.79680	198.96896	169.42442	181.49149	181.49149	78796325	-0.071110255
3	2005-02-14	91.51652	96.63663	90.59059	96.59159	96.59159	77047276	0.029829245
4	2004-10-22	85.35535	90.17518	82.12212	86.30130	86.30130	73710016	0.154304468
5	2006-03-31	194.56456	196.13113	192.20721	195.19519	195.19519	72969757	0.004016045
6	2005-06-01	141.74175	146.59160	141.15115	144.14415	144.14415	70313017	0.038698789
7	2005-04-22	111.56156	112.11211	107.23724	108.01302	108.01302	66343790	0.056752553
8	2005-02-02	107.88288	108.50851	101.93193	103.08308	103.08308	65533001	0.073267370
9	2004-10-25	88.28828	97.31231	86.36136	93.79379	93.79379	65462872	0.086817846
10	2005-05-24	128.60861	132.85286	126.87688	128.12813	128.12813	58028114	0.002153069

The table shows the top 10 volume days for the Google company.

Filter

	Date	Open	High	Low	Close	Adj Close	Volume	Return
1	2006-04-28	24.23	24.50	24.00	24.15	17.14835	591052200	-0.11376147
2	2011-04-29	26.55	26.64	25.36	25.92	20.18785	319317900	-0.02957690
3	2008-02-01	31.06	33.25	30.25	30.45	22.15758	291138900	-0.06595083
4	2007-10-26	36.01	36.03	34.56	35.03	25.40631	288121200	0.09502967
5	2009-10-23	29.20	29.35	27.88	28.02	21.15905	281761000	0.05377962
6	2004-04-23	27.40	27.72	27.34	27.54	17.22479	258269000	0.06127167
7	2013-07-19	32.40	32.67	31.02	31.40	26.05794	248428500	-0.11399546
8	2008-10-10	21.79	22.35	20.65	21.50	15.82640	228467500	-0.03587440
9	2013-08-23	35.17	35.20	34.00	34.75	29.04121	225493800	0.07286203
10	2009-01-22	18.05	18.18	17.07	17.11	12.68020	222436600	-0.11713097

The table shows the top 10 volume days for the Microsoft company.

	Date	Open	High	Low	Close	Adj Close	Volume	Return
1	2004-08-06	0.842500	0.850000	0.775000	0.785833	0.720846	508894800	-0.35233526
2	2004-11-05	1.483333	1.564167	1.453333	1.470000	1.348434	384901200	0.14471093
3	2017-06-09	41.185001	42.125000	35.687500	37.400002	36.946281	369292800	-0.06464922
4	2011-01-06	4.355000	4.835000	4.342500	4.832500	4.432863	349331200	0.13839812
5	2011-02-17	5.680000	6.502500	5.652500	6.420000	5.889081	347009600	0.09837468
6	2011-01-12	5.080000	5.842500	5.062500	5.837500	5.354751	343189600	0.14967996
7	2011-08-12	3.710000	3.715000	3.167500	3.220000	2.953714	319578400	-0.03952274
8	2005-02-18	2.289167	2.358333	2.225833	2.355833	2.161011	313212000	0.10819288
9	2008-07-03	3.245000	3.282500	3.100000	3.122500	2.864276	298752000	-0.30726567
10	2009-05-08	2.625000	2.625000	2.277500	2.312500	2.121262	293056400	-0.13793103

The table shows the top 10 volume days for the Nvidia company.

From the top volume days of Apple, Microsoft, Nvidia, and Google, we can see that Apple and Microsoft had the highest number of shares traded, often going over 70–90 million shares in a single day. This shows strong investor interest and high market activity. Nvidia also had big volume spikes, especially during times related to AI or earnings announcements. Google, on the other hand, had the lowest top volume days among the four, usually staying under 10 million shares. Overall, these top volume days often match with important events and show how much attention investors gave to each company at different times.

The lowest 10-day volume value for each company.

Other than the top 10 highest volume values, the lowest volume days are also important because they show when there was very little trading activity. This can mean that investors were uncertain, not paying much attention, or waiting for news. These quiet days often come before or after big events and can help us understand when the market was calm or inactive. Studying them gives a clearer picture of how interest in a stock changes over time. I wrote R code for that as well:

```
# Lowest 10 volume spikes value for each company

lowest_volume_apple <- apple %>% arrange(Volume) %>% slice_head(n = 10)
lowest_volume_microsoft <- microsoft %>% arrange(Volume) %>% slice_head(n = 10)
lowest_volume_google <- google %>% arrange(Volume) %>% slice_head(n = 10)
lowest_volume_nvidia <- nvidia %>% arrange(Volume) %>% slice_head(n = 10)
```

Results:

Filter

	Date	Open	High	Low	Close	Adj Close	Volume	Return	Volume_Change
1	2023-11-24	190.87	190.90	189.25	189.97	189.9700	24048300	-0.007004323	-0.39299101
2	2023-07-03	193.78	193.88	191.76	192.46	191.9476	31458200	-0.007784678	-0.63020633
3	2023-08-01	196.24	196.73	195.28	195.61	195.0892	35175100	-0.004275877	-0.09398801
4	2022-11-25	148.31	148.88	147.12	148.11	147.2867	35195900	-0.019593605	-0.39631124
5	2023-05-15	173.16	173.21	171.47	172.07	171.6119	37266700	-0.002897375	-0.18091204
6	2023-07-25	193.33	194.44	192.92	193.62	193.1045	37283200	0.004513593	-0.17838238
7	2023-11-21	191.41	191.52	189.74	190.64	190.6400	38134500	-0.004230859	-0.17999316
8	2023-11-28	189.78	191.08	189.40	190.40	190.4000	38415400	0.003214084	-0.05270192
9	2023-07-31	196.06	196.49	195.26	196.45	195.9270	38824100	0.003165986	-0.19604526
10	2023-11-22	191.49	192.93	190.83	191.31	191.3100	39617700	0.003514472	0.03889391

The table shows the lowest 10 volume days for the Apple company.

	Date	Open	High	Low	Close	Adj Close	Volume	Return	Volume_Change
1	2017-11-24	83.01	83.43	82.78	83.26	77.71807	7425600	0.0018048490	-0.6387114
2	2016-11-25	60.30	60.53	60.13	60.53	55.26698	8409600	0.0021522681	-0.6151019
3	2019-12-24	157.48	157.71	157.12	157.38	151.65735	8989200	-0.0001905787	-0.4926573
4	2015-11-27	53.80	54.08	53.79	53.93	47.92576	9009100	0.0044701249	-0.5710994
5	2022-11-25	247.31	248.70	246.73	247.49	245.31482	9200800	-0.0003635067	-0.5283697
6	2015-12-24	55.86	55.96	55.43	55.67	49.47202	9558500	-0.0026872447	-0.6496125
7	2017-12-26	85.31	85.53	85.03	85.40	79.71561	9891200	-0.0012863992	-0.3007677
8	2016-12-29	62.86	63.20	62.73	62.90	57.43090	10250600	-0.0014287982	-0.3004579
9	2020-12-24	221.42	223.61	221.20	222.75	216.92432	10550600	0.0078273277	-0.4357847
10	2017-12-28	85.90	85.93	85.55	85.72	80.01431	10594300	0.0001166958	-0.2782191

The table shows the lowest 10 volume days for the Microsoft company.

	Date	Open	High	Low	Close	Adj Close	Volume	Return	Volume_Change
1	2020-12-24	1729.00	1742.41	1724.35	1734.16	1734.16	465600	0.003431288	-0.5946722
2	2015-12-24	768.52	769.20	764.39	765.84	765.84	520600	-0.003474233	-0.6596718
3	2016-11-25	782.61	782.90	778.19	780.23	780.23	613500	0.001578922	-0.5327494
4	2019-11-29	1306.60	1309.95	1303.23	1304.09	1304.09	640100	-0.006127471	-0.3193322
5	2019-10-10	1198.60	1215.62	1197.86	1209.47	1209.47	642100	0.005879863	-0.1947580
6	2019-10-14	1213.89	1225.88	1211.88	1217.77	1217.77	664800	0.001694532	-0.4045678
7	2019-12-24	1350.21	1352.01	1344.17	1344.43	1344.43	673400	-0.004590414	-0.3244382
8	2019-08-21	1195.82	1200.56	1187.92	1191.58	1191.58	707600	0.006801625	-0.2996140
9	2018-11-23	1033.50	1043.00	1028.52	1030.10	1030.10	708900	-0.012775248	-0.5225941
10	2021-07-22	2556.88	2569.66	2549.98	2568.43	2568.43	715100	0.006840490	-0.3106141

The table shows the lowest 10 volume days for the Google company.

	Date	Open	High	Low	Close	Adj Close	Volume	Return	Volume_Change
1	2014-12-24	5.1750	5.1825	5.1375	5.1425	4.938208	4564400	-0.0038740920	-0.5823206
2	2015-12-24	8.2400	8.3125	8.2275	8.2925	8.095148	5244800	0.0033272837	-0.5719369
3	2014-12-26	5.1425	5.1750	5.1300	5.1475	4.943010	5263600	0.0009722897	0.1531855
4	2013-12-24	3.9675	3.9675	3.9150	3.9550	3.731113	7960000	0.0025348542	-0.5277870
5	2014-12-29	5.1325	5.1750	5.1075	5.1400	4.935809	8294400	-0.0014570180	0.5758036
6	2015-11-27	7.7975	7.8725	7.7575	7.8475	7.660737	8699600	0.0083520720	-0.3709617
7	2020-12-24	130.3725	131.3250	129.3875	129.9375	129.639221	9788400	-0.0011914522	-0.4536016
8	2007-12-24	8.8550	8.9875	8.7900	8.9450	8.205264	10400800	0.0176336746	-0.7600229
9	2014-12-23	5.2350	5.2600	5.1575	5.1625	4.957414	10928000	-0.0062560154	-0.2664590
10	2014-12-30	5.1050	5.1300	5.0850	5.0925	4.890193	11212000	-0.0092412451	0.3517554

The table shows the lowest 10 volume days for the Nvidia company.

The lowest volume days showed when investors were least active. Google had the quietest days, while Apple and Microsoft still had steady activity. These calm days often happened when there was no major news or events.

What Events Lead to High / Low Volume Value for these 4 big tech companies?

On 23 January 2008, the U.S. economy was on the edge of the 2008 financial crisis, and the investors reacted to the global recession, causing selloffs and extreme volatility. Other than that, there are also massive sell-offs across tech stocks where there were huge spikes in trading activity and attracting investors to either dump or buy positions during that crisis. This incident encouraged Apple to improve its stock market standing and produced the highest volume in the range of the year 2000 – 2023.

For the Google company, since the year 2000 – 2023, the date 20 January 2006 was recorded as the highest volume stock market value because there was a legal battle between the U.S. Department of Justice (DOJ) against Google. Since Google became defensive towards the DOJ request to search data involving online pornography cases.

Microsoft was having their highest volume day on 28 April 2006 because they made their earnings announcement, and their achievement missed analyst expectations. Other than that, the Microsoft company gave weak guidance about their stock market value and caused a panic selling the next day and produced a high volume on that day.

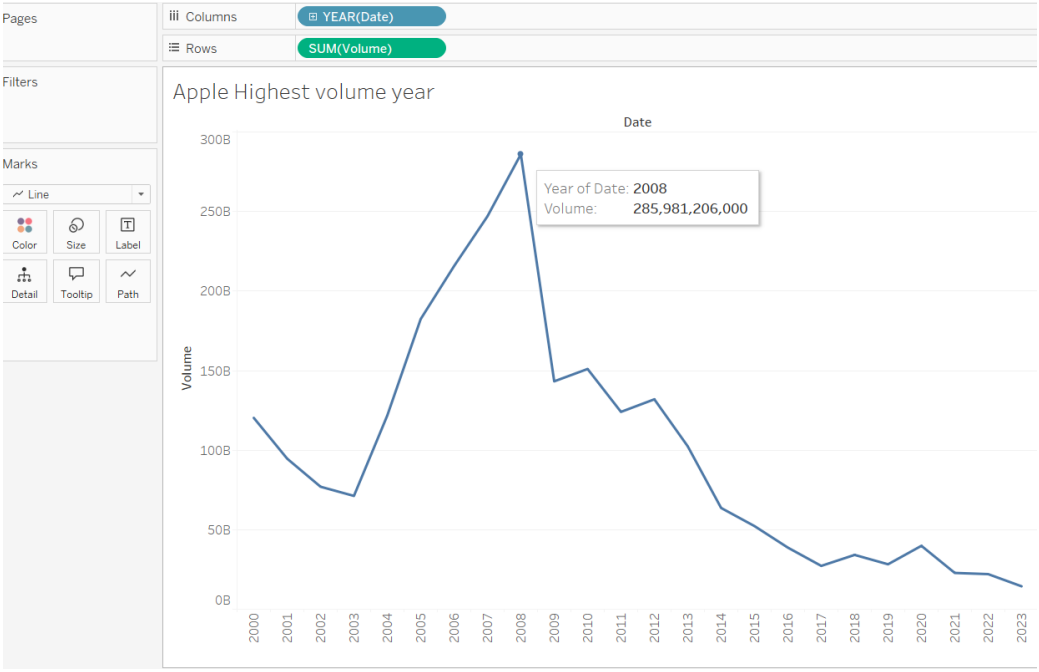
Nvidia made their Q2 earnings announcement, and they did very good on their market because they have a lot of demand on their graphing processing units (GPUs) and also a strong sales of GeForce product lines, The market reacted positively towards this face and produced a surge of buying activity, contributing to an increase of stock market volume value.

Other than that, Apple recorded its lowest volume value on 24 November 2023. This happened because of market unavailability. 24 November was the black Friday event and U.S. Stock Market closed early which naturally results in lower trading activity. Because of the upcoming holiday during that time, investors and traders took their time off the market to spend their holiday with the loved ones, resulting in lower trading activity.

The same thing happened for the other 3 companies (Microsoft, Google, and Nvidia) as all three of them are experiencing the same thing, on the same date as Apple (24 November). This can be a pattern on how the investors can predict the companies, low volume days.

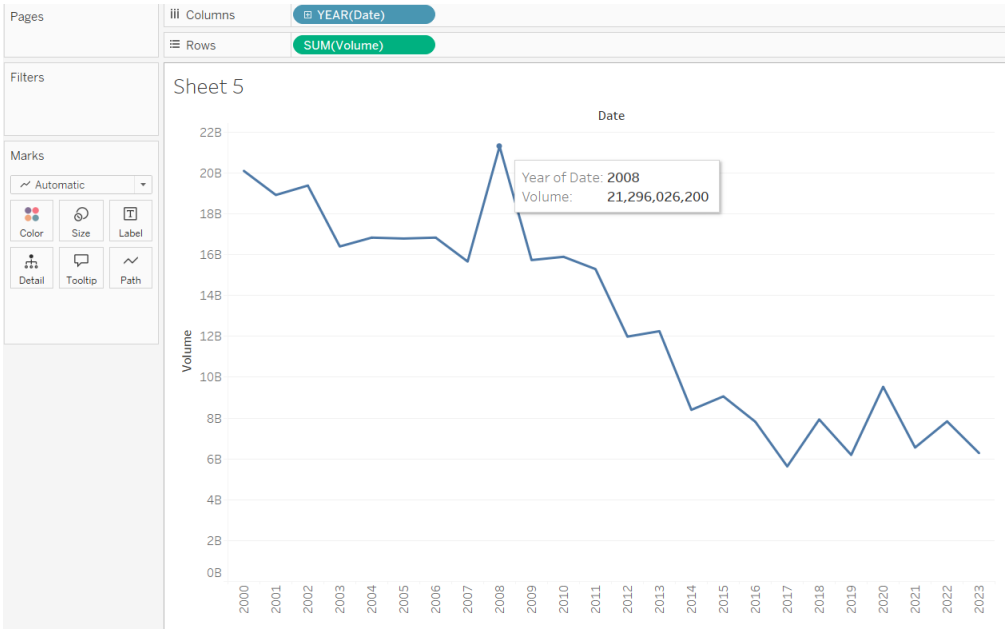
From these incidents, it can be summarized that something that is accidental and can't be predicted can cause changes in the volatility in volume of a company's stock market value.

Tableau Visualization on stock market Volume change.



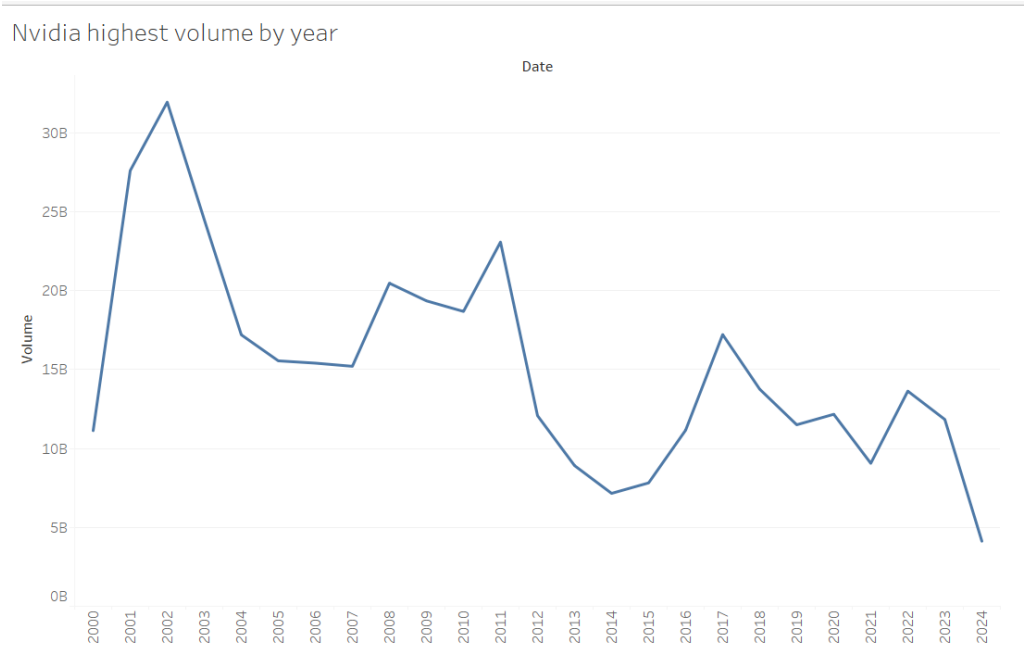
The graph shows a line chart of volume value by year.

From the graph, we can see that the highest volume value was recorded in the year 2008 as mentioned earlier about the 2008 financial crisis that happened around that time that bring Apple to create their highest volume value.

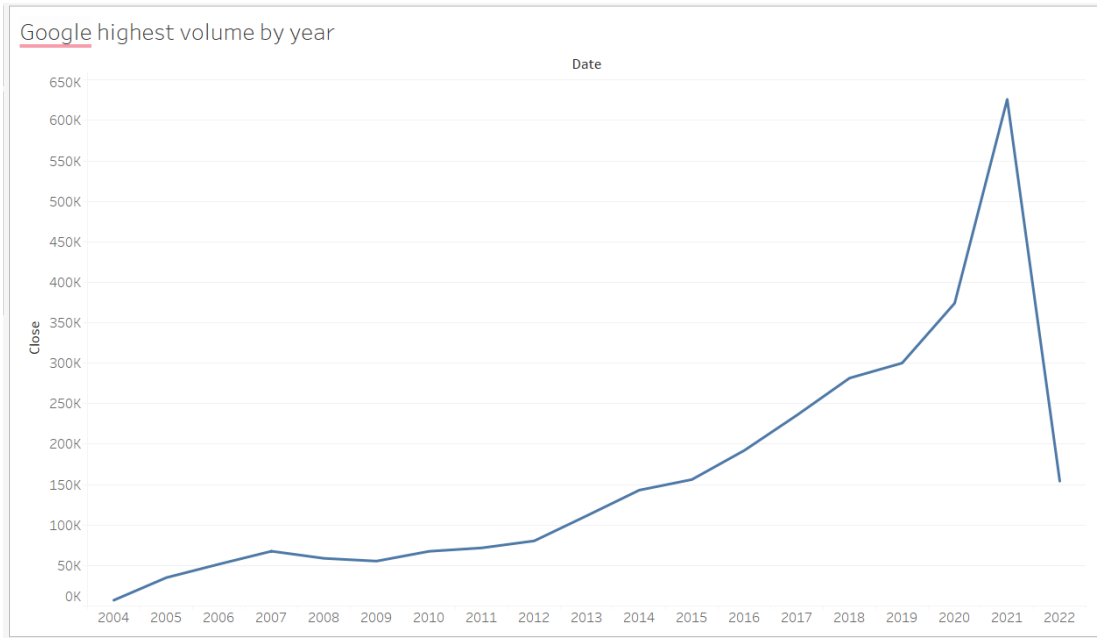


The graph shows a line chart of the volume value for the Microsoft company.

Microsoft had its highest volume in 2008 because of its earnings announcements. Panic selling from the investors in the year 2008 created the peak of the volume value for Microsoft company.



The graph shows the highest volume line chart for the Nvidia company.



The graph shows a volume line chart for the Google company.