

Tech sector risk increasing

Using volatility percentiles to quantify changes in stock specific risk

Tech sector risk increasing – realised volatility up relative to SPX constituents

Table: 1

Name	2015	2016	2017	2018 YTD	Tech risk ranking vs SPX constituents based on average 90 day realised volatility	2017 and 2018 YTD average realised 90d vol (pts)		Change in realised vol (pts)	Change in realised vol (%)
						2017	2018		
Twitter	90	90	90	90	high	42.9	55.6	12.7	29.7%
Micron	90	90	90	90	high	36.2	49.3	13.1	36.0%
Applied Materials	70	70	70	90	increase in 2018	25.8	39.4	13.6	52.7%
Netflix	90	90	80	90	increase in 2018	29.7	38.6	8.9	30.0%
Nvidia	80	80	90	90	high	46.3	38.1	-8.2	-17.7%
Facebook	60	50	30	80	increase in 2018	17.7	32.7	15.0	84.7%
Intel	60	30	20	80	increase in 2018	16.4	32.6	16.2	98.8%
Amazon	80	60	40	70	increase in 2018	20.0	27.9	7.9	39.5%
Alphabet	70	20	20	50	increase in 2018	15.9	24.9	9.0	56.6%
Microsoft	70	40	10	50	increase in 2018	14.7	24.5	9.8	66.7%
Apple	60	40	30	40	increase in 2018	17.6	23.0	5.4	30.7%

 = risk rank percentile vs all SPX constituents

Tech names simple average

25.7	35.1	9.4	36.5%
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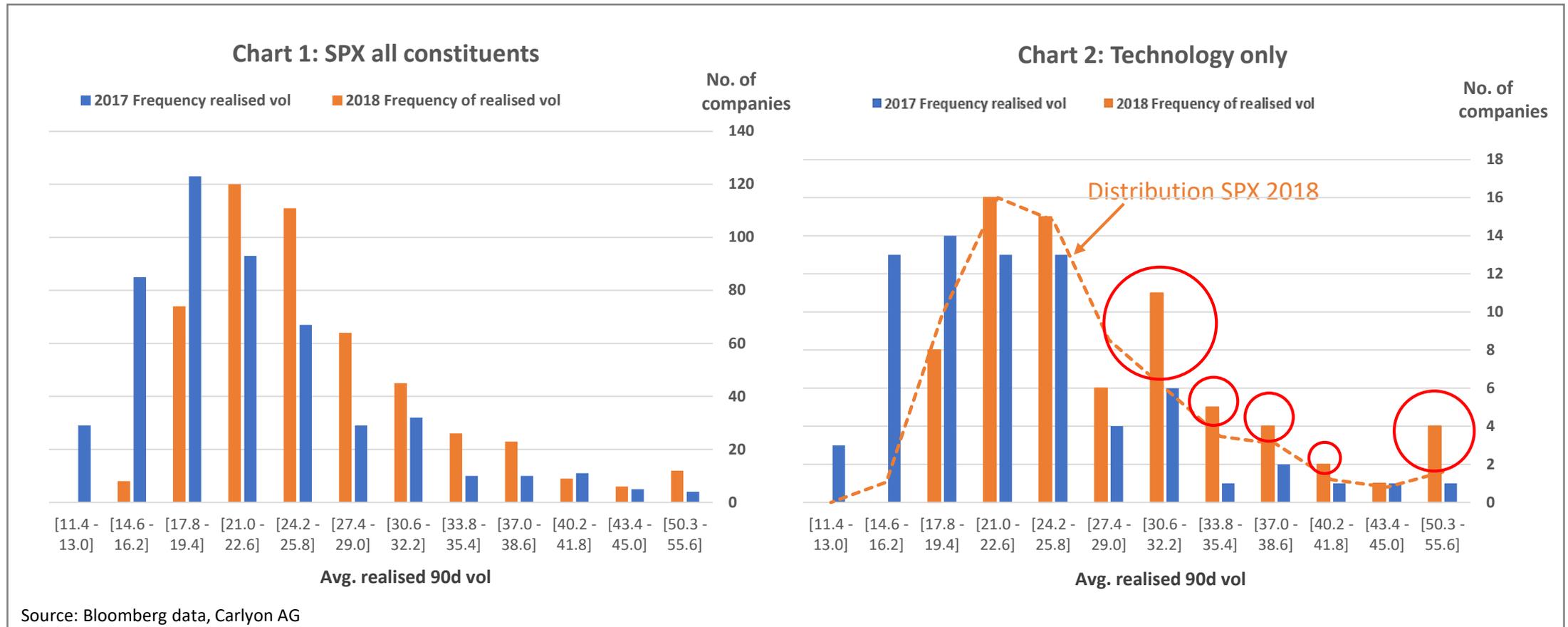
S&P 500 all constituents average

19.9	23.6	3.7	18.6%
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Source: Bloomberg data, Carlyon AG

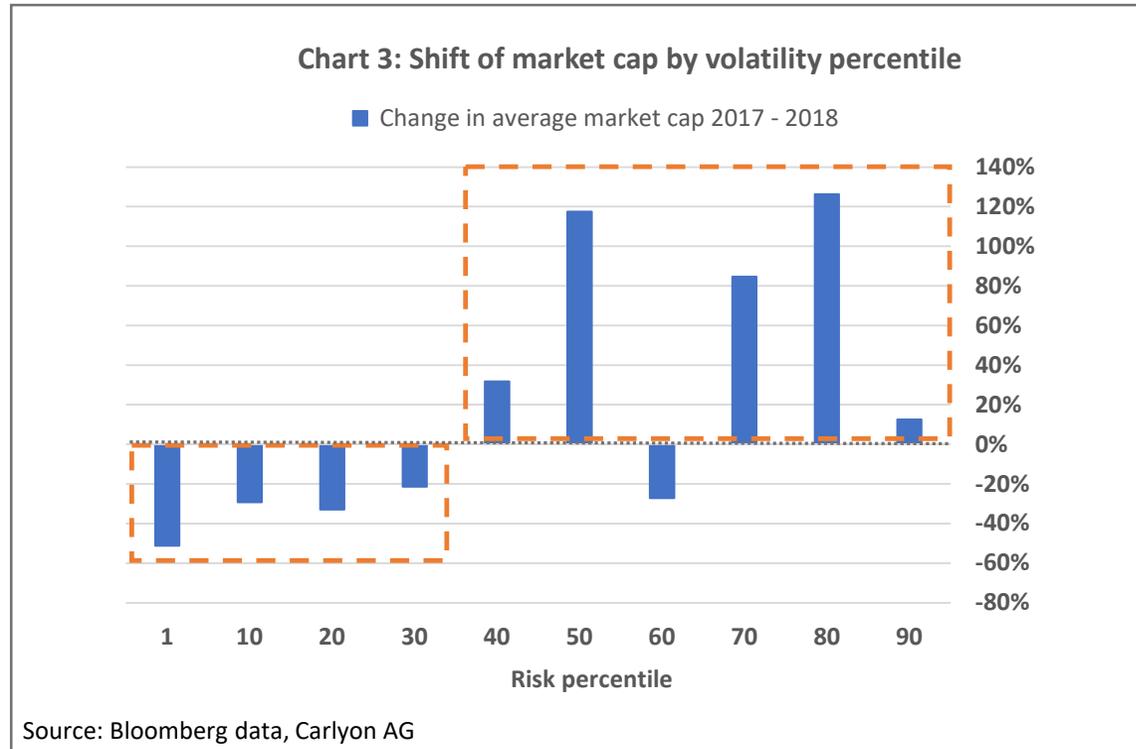
- *Relative to SPX constituents*, tech leaders climbed the risk ranking based on average realised volatility percentiles.
- Eight out of eleven tech leaders exhibited higher realised volatility relative to other SPX constituents in 2018 compared to 2017.
- *Absolute level* of realised vol for tech leaders increased +36.5% vs +18.6% for average realised vol of S&P all constituents, in 2018 vs 2017.

SPX and Tech: change in distribution of realized 90 day volatility 2017 - 2018



- Chart 1 highlights increased risk profile for the majority of SPX constituents in 2018.
- Chart 2 indicates tech only frequency distributions with fat tail characteristics in 2018 compared to SPX distribution.

Does size explain tech leader volatility increase relative to SPX constituents?



S&P500 constituents demonstrate a measurable size effect over the period 2017-2018.

In the percentiles 40-90, the average market capitalization of the constituents has increased significantly and vice versa for the lowest risk buckets.

In order to simplify the analysis and exclude the overall increase in the market capitalization of the S&P500, a single point in time was selected mid way through the 21 month observation period. Different volatility patterns from 2017 and 2018 were then applied in order to derive the shift of average market capitalization per risk percentile as shown in chart 3.

Performance divergence post 2Q results

Table 2

Name	Change EPS estimates Jan. 2018 to date	Valuation		Price performance	
		PE	EV / EBITDA	Ytd	2018 High to date
Microsoft	13%	32	15	30%	-1%
Apple	2%	20	11	29%	-4%
Amazon	62%	197	26	66%	-5%
Alphabet	-2%	30	13	12%	-9%
Netflix	-6%	153	64	81%	-17%
Facebook	-15%	23	12	-7%	-24%
Baidu	7%	27	15	-9%	-25%
Alibaba	-2%	50	18	-9%	-26%
Twitter	46%	98	18	25%	-35%
Tencent	4%	32	26	-24%	-36%

Source: Bloomberg data as per 11.09.2018, Carlyon AG

- Tech leaders diverge after 2Q results with weakness for FB, TWTR and NFLX due to cost concerns and disappointing subscriber growth; whilst MSFT, AAPL, AMZN and GOOGL maintained strong top line and bottom line.
- Congressional hearing for FB and TWTR may lead to higher cost of compliance and potentially lower subscriber growth. Anti-trust and privacy questions now on the radar including Alphabet.
- Based on earlier observation in table 1, the biggest increase of volatility amongst tech leaders in 2018 was the largest names. These names shown in blue on table 2 above, exhibited better price performance since the high and more consistent earnings expectations based on analyst consensus from January to September 2018.

States Loom as a Regulatory Threat to Tech Giants

Attorneys general weigh confronting internet companies over antitrust, privacy issues



State officials are raising risks for companies such as [Facebook Inc.](#), [Twitter Inc.](#) and [Alphabet Inc.](#)'s Google as the states begin piecing together a coordinated legal strategy for confronting the firms over alleged antitrust violations and data-privacy abuses, and over what some Republicans say is a suppression of conservative speech.

Tensions have been simmering for months, but they surfaced publicly last week when the Justice Department said U.S. Attorney General Jeff Sessions [would meet with several state attorneys general](#) later this month to discuss a "growing concern" that the companies are hurting competition and "stifling the free exchange of ideas" on their platforms.

Source: WSJ, 09.09.2018

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