

A new age of dispersion or just the normal madness of equity markets?

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- The strong rebound of equity market segments that already outperformed pre Covid has caused fear of irrational exuberance in some corners paired with exaggeratedly negative sentiment in other parts of the market.
- 'Winner takes it all' economics combined with algorithm driven financial markets seem to facilitate ever growing performance differentials.
- However, a closer look at longer-term stock performances fails to confirm this notion.
- During recent years, dispersion has not been particularly elevated. Vast and prolonged performance differentials between stocks and indices are more normal than many investors probably assume.
- We advice against the timing of regional or sector investments and focus on factor exposure instead. A well constructed portfolio plays factors that deliver superior risk-adjusted performance across cycles (our European High Conviction portfolio for instance has a higher correlation with the S&P 500 than with the STOXX 600).

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For investors who hoped that the pandemic induced market crash would result in a broad regional, sector or style rotation, the second half of 2020 has been rather awful so far. Totally disappointing the hopes of contrarians, Covid19 has struck a blow for winning investments and battered already underperforming strategies. While some market participants now draw comparisons to the Dot-com bubble, others see the dawn of a new era in which 'winner takes it all economics' produce an ever wider dispersion within equity markets.

1 The counterintuitive mathematics of winning streaks

Asked about the likelihood of winning when betting on red in roulette, most people immediately know the correct answer. Accounting for the probability of getting zero, for European roulette it is exactly 48.65%. This probability does not depend on the outcome of previous game. Regardless of how often the ball hit black before, the likelihood for red will still be 48.65% for the next game. While this seems logic in theory, studies has shown that humans (and monkeys) have problems to deal with this concept in practice. Researchers have observed two behavioral biases, namely the 'hot hand' and 'gamblers fallacy' (see Xu, 2017

for instance). While the first describes the believe in winning streaks to continue, the latter means the irrational expectation for loosing streaks to reverse. Thus said, gamblers who 'feel lucky' consider the likelihood for black to be elevated after successfully betting on it several times, while speculators who consecutively lost betting on red are likely to expect it to 'catch up' eventually. Obviously, in financial markets the odds are not as well defined as in roulette. Realized performance is the outcome of complex interactions between ex ante expectations (expressed in asset valuations) and subsequent macroeconomic and micro economic developments (surprise). Nevertheless market participants frequently use rather simple statistics to assess past outcomes and derive odds for future bets, a process prone to all kind of biases.

2 Unprecedented or Déjà-vu?

As the global pandemic brought lots of businesses at the brink of bankruptcy (airlines, oil exploration, retail), while others are thriving (information technology, health care), it seems that there is an ever growing dispersion between winning businesses and investments on the one hand and market segments on the other. In this context, tech bulls quote monopoly rents as the cornerstone of a new era in which some corporations reap ever larger profits and can sustain elevated valuation multiples, while others just get cheaper and cheaper on

the back of falling revenues and margins. On the other hand, contrarians, desperately hoping for a comeback of European large caps or value stocks, compare the FANG's outperformance to the Dot-com bubble. Taking a closer look at the statistics, we advocate for a more balanced view.

2.1 It's all about the FANGs or isn't it?

The post Covid crash recovery in the US has often been criticised as being primarily driven by a handful of mega caps from the technology sector, accounting for a record high share of the S&P 500. This comes alongside the fear that once these corporations stop carrying the index, the broad market will collapse. Indeed, as Figure 1 shows, since 2017, the market cap weighted S&P 500 has outperformed the equal weighted S&P 500 and even more so the Russel 2000 substantially. However, as this chart also shows the relative performance differential between the S&P 500 and the S&P 500 Equal Weight (blue line) is although clearly elevated not unprecedented and far from the highs during the Dot-com bubble. In fact even without the additional boost from the likes of Facebook, Amazon and Google, the S&P 500 has been far from weak. Admittedly the dispersion looks more extreme compared to the US small cap index (red line). Interestingly, however, this pronounced small-cap weakness seems to be a US specific problem. On the other side of the Atlantic, performance differentials look much different. As Figure 2 shows, Europe has been quite a good place for smaller corporations.

2.2 Dispersion is far from outstanding

While performance differentials of more than a 100% within few years look dramatic, they are not a rare phenomenon at all. Figure 3 shows the indexed performances of major equity indices in the developed world in 5 year subsets, Figure 4 repeats the same exercise for 1 year stretches.

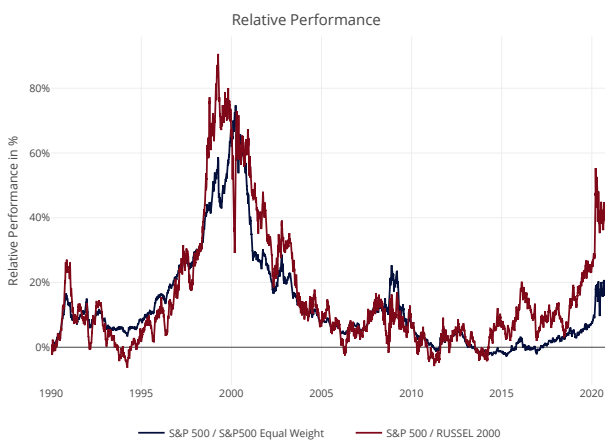


Figure 1: Relative Performance S&P500/S&P500 Equal Weight, S&P 500/Russel 2000
Source: Bloomberg, Amadeus Quantamental

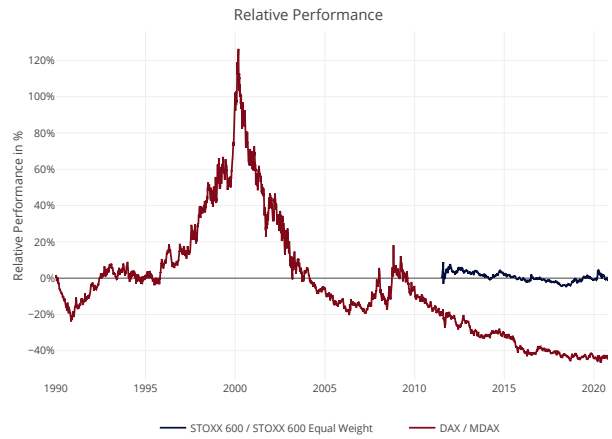


Figure 2: Relative Performance STOXX 600/STOXX 600 Equal Weight, DAX/MDAX
Source: Bloomberg, Amadeus Quantamental

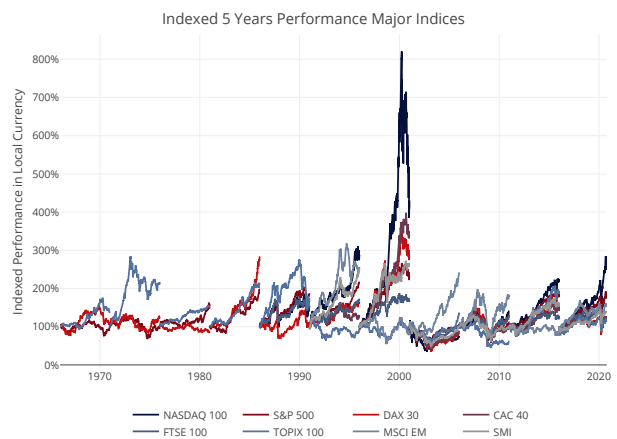


Figure 3: 5 years indexed performances
Source: Bloomberg, Amadeus Quantamental

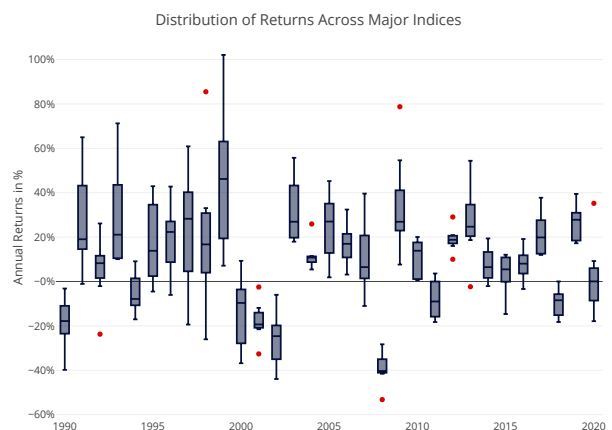


Figure 4: Major indices cross sectional 1 year performance distributions - horizontal boxplot lines display from bottom to top: min, quartile 1, median, quartile 3, max - outliers $>/< \pm 1.5$ times the interquartile range are shown as red dots
Source: Bloomberg, Amadeus Quantamental

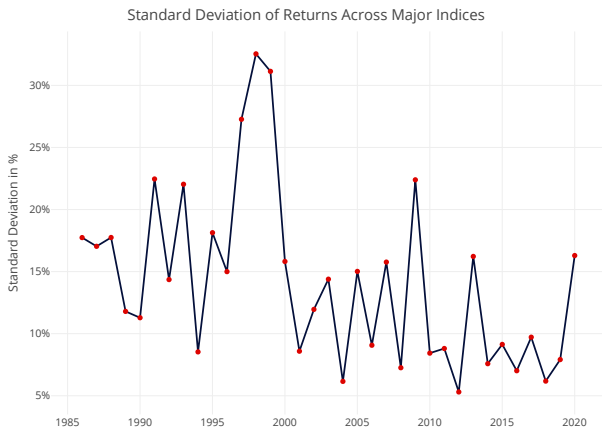


Figure 5: Standard deviation of 1 year returns across indices
Source: Bloomberg, Amadeus Quantamental

Neither of the charts suggests that the time we live in is particularly outstanding. In fact the distribution of 1 year returns across the regions displayed seems narrower than during the 20 years preceding the Financial Crisis.

2.3 What's true across indices also applies within (at least in Europe)

We have also analyzed the annual performance of all European stocks with a market cap of more than 1 billion EUR since 2000 to check within market dispersion. The results broadly mirror what can be observed across the major regions displayed previously. While

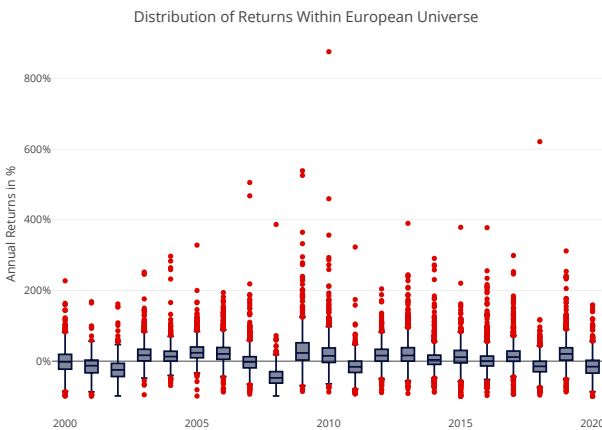


Figure 6: 1 year cross sectional performance distributions European single stocks - horizontal boxplot lines display from bottom to top: min, quartile 1, median, quartile 3, max - outliers $>/< \pm 1.5$ times the interquartile range are shown as red dots
Source: Factset, Amadeus Quantamental

dispersion between single stocks was clearly elevated during major crisis (Dot-com bubble, Great Financial Crisis), return distributions were not particularly wide over the past couple of years. As the comparison of the STOXX 600 Market Cap Weight and the STOXX

600 Equal Weight shows, Within the benchmark index, larger members did neither out- nor underperform their smaller cousins significantly.

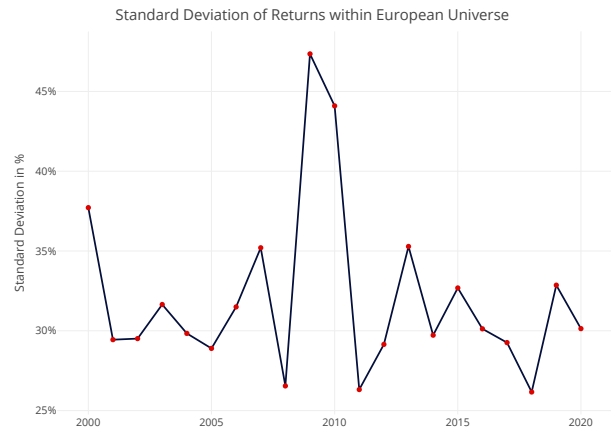


Figure 7: Standard deviation of 1 year returns within Europe
Source: Factset, Amadeus Quantamental

3 What history can teach investors

Markets and media dedicate a lot of attention to the performance of single equity market segments or stocks and investors are prone to deriving premature conclusions on the outlook for these segments as well as the broad market. Looking at relative performance differentials across major equity market indices as well as within the European equity market we derive the following conclusions:

- Recent performance dispersion does not (yet) mirror the developments observed during the Dot-com bubble, neither in the US nor in Europe.
- Generally, over the past 3 decades even pronounced performance dispersion between major equity markets has been quite common and recent return distributions are far from abnormal. Drawing conclusions about potential paradigm shifts seems as premature as contrarian bubble fears.
- In the absence of reliable timing models, we advice investors against chasing some regions and sectors or bottom fishing for others
- At Amadeus, we rather focus on constructing equity factor portfolios that create value across cycles instead of chasing hyped stocks or catching falling knives. Controlling for average valuation and market beta when developing respective portfolios helps to avoid crowded market corners and achieve attractive risk-adjusted performance in the long-term.

References

Xu, Juemin (2017). "A STUDY ON COGNITIVE BIASES IN GAMBLING: HOT HAND AND GAMBLERS' FALLACY". In: *Thesis submitted to UCL for the degree of Doctor of Philosophy in Experimental Psychology*.