The Frontier Line

Thought leadership and insights from Frontier

Issue 188 | **February 2022**

US mega-caps effect on global active management

frontieradvisors.com.au

frontier

About us

Frontier has been at the forefront of institutional investment advice in Australia for over 25 years and provides advice on $600 billion of assets across the superannuation, charity, public sector, insurance and university sectors.

Frontier's purpose is to empower our clients to advance prosperity for their beneficiaries through knowledge sharing, customisation, technology solutions and an alignment and focus unconstrained by product or manager conflict.

AUTHOR

Brad Purkis

Associate

Brad joined Frontier as an Associate in 2021, with his responsibilities including both equities research and client support. Prior to joining Frontier, Brad worked for five years at Intrinsic Investment Management as a Research Analyst before moving into the role of Assistant Equity Analyst covering the industrials sector of the ASX200. Brad graduated from Monash University with a Master of Applied Finance following on from a Bachelor of Commerce from Deakin University majoring in Economics, Finance and Quantitative Business Analysis.

REVIEWER

Fraser Murray

Head of Equities

Fraser joined Frontier in 2012 and is the Head of Equities. He was previously at Ibbotson Associates/ Intech Investments for nearly 15 years where he held a variety of roles including five years as Head of Manager Research and five years as Head of Equities and Property. Fraser started his asset consulting career at Towers Perrin in 1994 as a Research Analyst in its Melbourne and London offices. Fraser holds a Bachelor of Commerce with Honours from the University of Melbourne and a Graduate Diploma of Applied Finance and Investments from Finsia, and is a Fellow of Finsia.

Introduction

This Frontier Line is part of Frontier’s active management analysis and delves into the recent declining profile in excess returns observed in global equities over the past five years. We consider the role of increased market concentration, in particular within US equities, on excess returns generated by fund managers in recent times.

Long-term data on active management in global equity markets

Over the past five years, Frontier has observed a decline in the median excess returns achieved by active global equities managers relative to the long-term experience.

We have also observed this pattern to some extent in other equities asset classes but think global markets has its own distinct explanation.

Table 1 shows the performance of median global markets equities manager excess returns versus the MSCI ACWI Index in five year non-overlapping periods.

Table 1: Global markets equities manager excess return vs MSCI ACWI ex-Aust Index

Areas	5 years to 31 Dec 2021 % p.a.	5 years to 31 Dec 2016 % p.a.	5 years to 31 Dec 2011 % p.a.	5 years to 31 Dec 2006 % p.a.
Upper quartile	+4.6	+2.7	+3.40	+5.4
Median	+0.8	+1.4	+1.2	+2.9
Lower quartile	-2.6	+0.2	-0.8	-0.3
Observations	236	236	215	124
MSCI ACWI ex-Aust index return	+14.4	+17.4	-7.1	+1.4

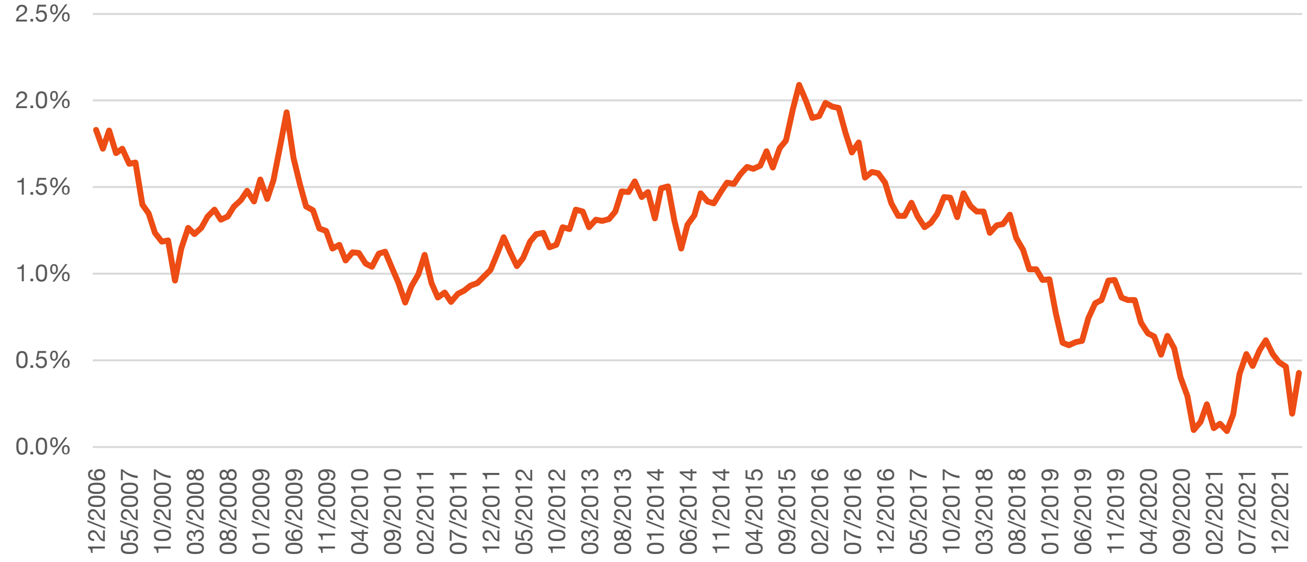
Source: eVestment, Frontier cleansed universe, before fees.

Chart 1 shows the median global equities managers rolling five-year excess returns versus the MSCI ACWI. While the median global equities manager outperformed the MSCI ACWI, the outperformance has declined over time.

Chart 2 shows the eight-year rolling excess return of the median global equities manager.

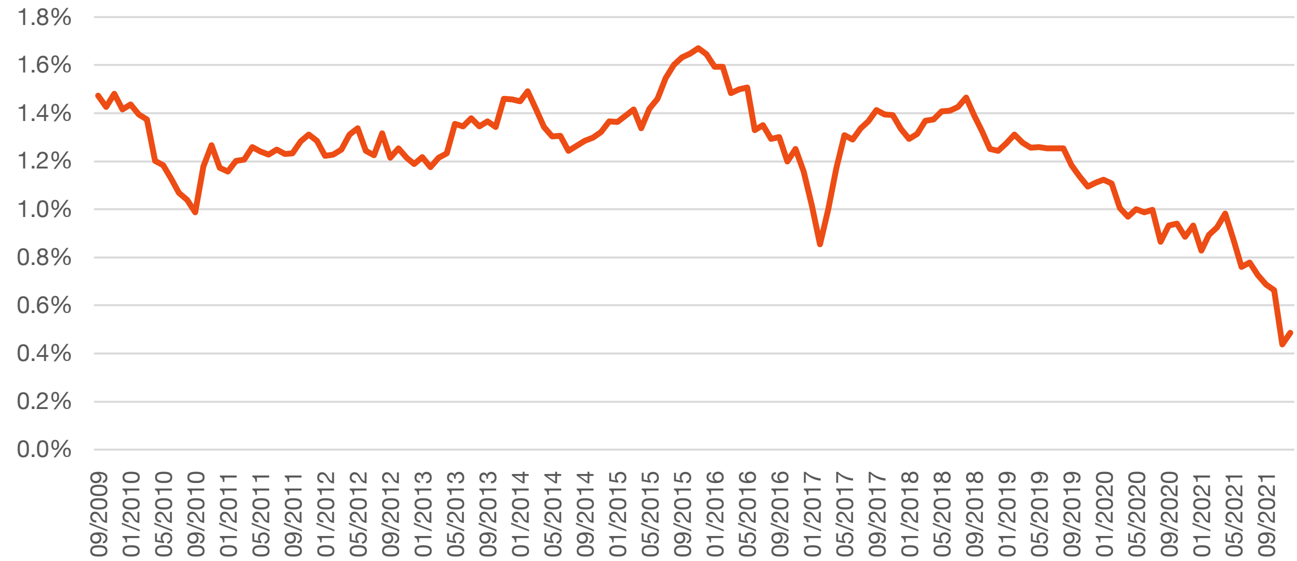
A downward trend similar to Chart 1 can be seen, however, over a longer time frame we can see the decline in excess returns is much more pronounced. As observed from Table 1 and Charts 1 and 2, the typical excess return profile for managers has ranged between +1% and +2% in global equities in the past 20 years with the exception of the unwind of the dot-com bubble in the early 2000s. While Frontier has always observed an element of cyclicality to alpha profiles, the steady decline in the excess returns since 2015 has led us to investigate the cause of such an outcome.

Chart 1: Global equities median rolling five-year excess return



Source: eVestment, Frontier, before fees.

Chart 2: Global equities median rolling eight-year excess return



Source: eVestment, Frontier, before fees.

Key questions for asset owners going forward are:

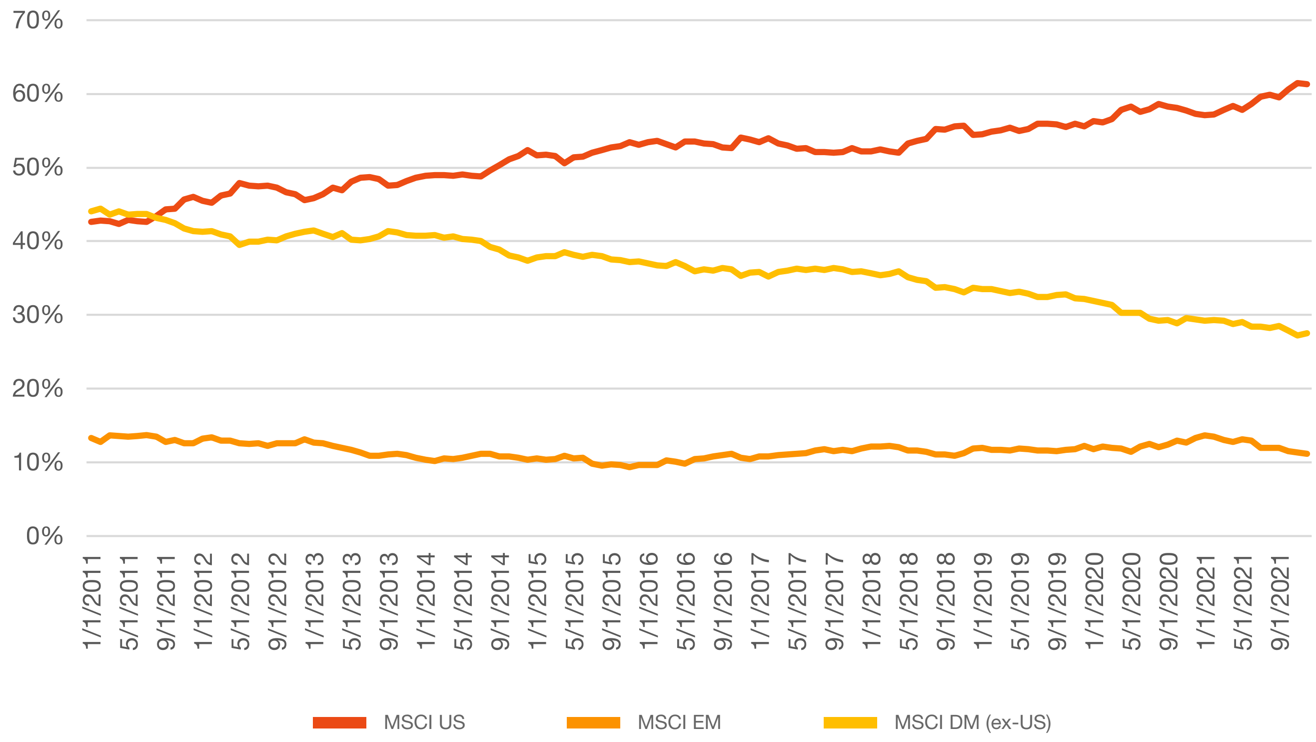
- Is this decline in excess return cyclical or structural?
- What is a reasonable magnitude of outperformance to expect beyond 2022?

Increased representation of US markets in global indices

Since 2011 and following the GFC, we have witnessed outperformance of US markets relative to their global peers.

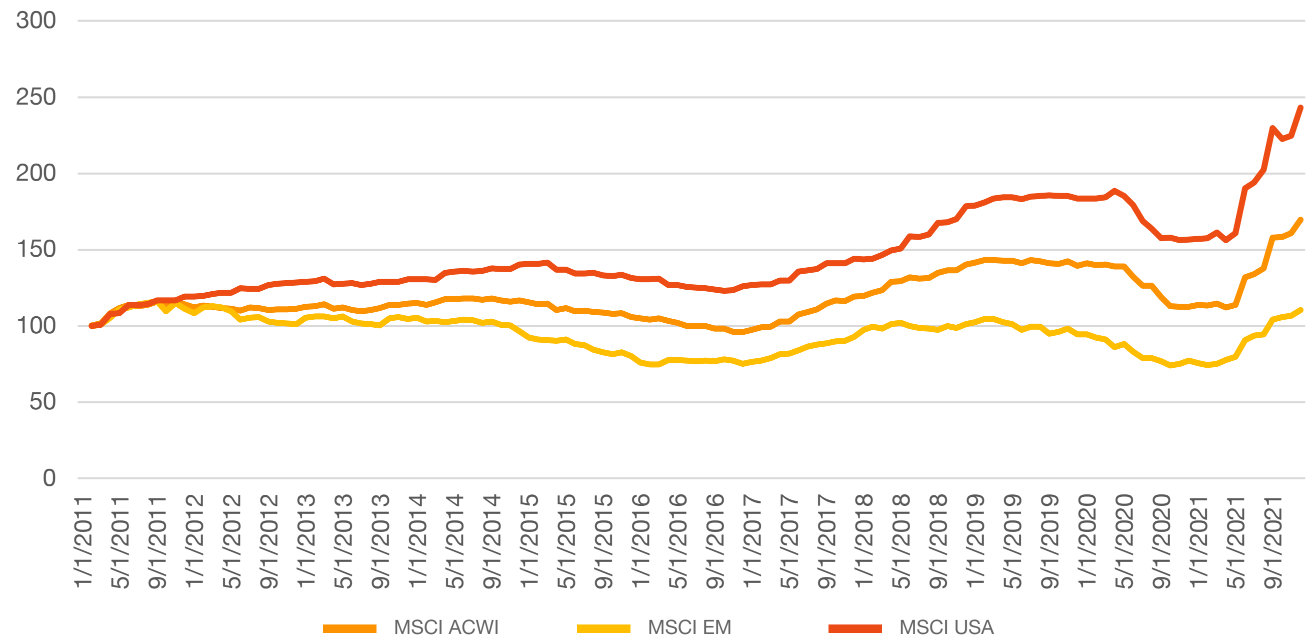
Over the past 10 years to 31 December 2021, the MSCI USA Index has outperformed the MSCI ACWI Index by 3.0% p.a. Through a combination of steadily declining interest rates and stronger earnings growth relative to other developed markets (DM) and emerging markets (EM), this outperformance has led to an increased representation in global indices over time. At the beginning of 2011, the US shared a relatively equal part of the overall index with other developed markets at 42% and 44% respectively, with emerging markets the balance at 14%. Since then, US markets have grown their share of the overall index to 60% with both other developed markets and emerging markets losing share. Chart 3 illustrates this trend.

Chart 3: MSCI ACWI index weights over time



Source: Bloomberg, Frontier.

Chart 4: Index earnings growth since 2011



Source: Bloomberg, Frontier.

Table 2: Index return composition since 2011

	MSCI ACWI (%)	MSCI EM (%)	MSCI US (%)
Total returns	200.8	44.7	375.5
EPS growth	70.3	11.8	142.2
P/E multiple expansion	130.5	32.9	233.3

Source: Bloomberg, Frontier.

While multiple expansion is certainly part of the story of outperformance of the US markets against other DM and EM countries, since 2011 the MSCI US has been able to grow earnings far stronger than other markets.

Since 2011, MSCI US earnings have grown at double the pace of the broader MSCI ACWI index. Given that the overall share of US markets within ACWI has averaged around 50% over that time, it is reasonable to infer the majority of the earnings growth achieved by MSCI ACWI can be attributed to the US. When assessing market returns through the lens of multiple expansion and earnings growth, it is important to note the starting point from which the multiple expands. Historically, we have seen investors pay a premium for the US market due to its superior earnings growth projections. Ordinarily we see expensive companies, and indeed expensive markets, grow into their higher multiples over time through superior earnings growth. However, since 2011 we have observed both increased earnings and P/E expansion within US markets. This can lead to increasing risk in markets associated with high valuations, especially if earnings growth does not continue to meet or exceed investor expectations.

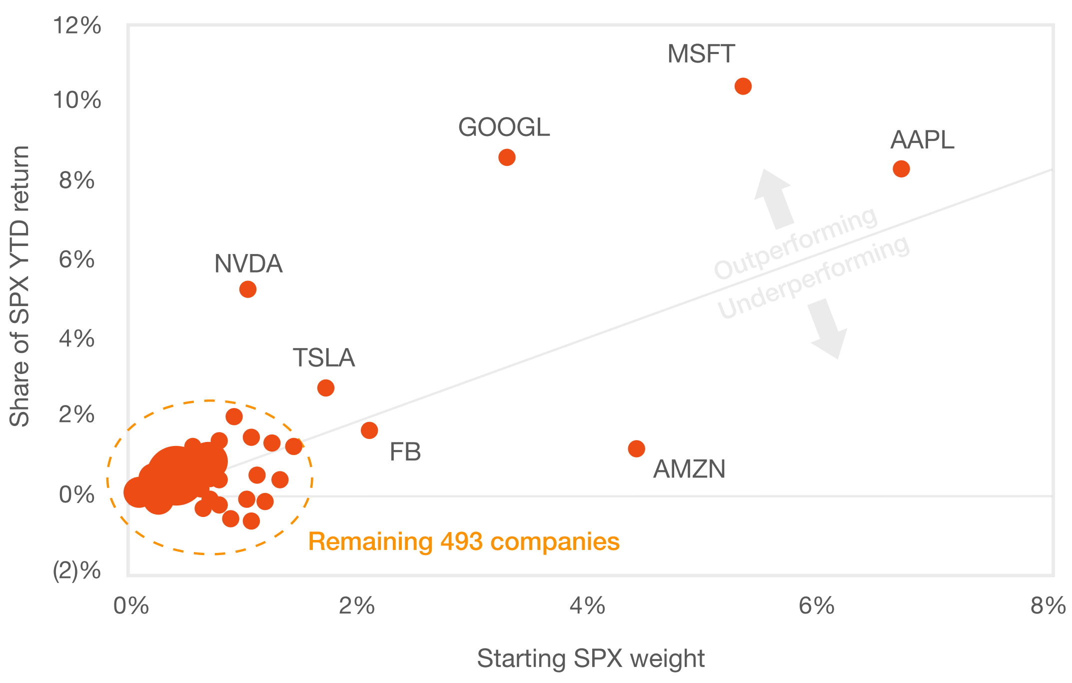
Bringing this together, while many global active managers pride themselves on being able to assess opportunities from wherever they may arise, and having a globally diversified portfolio, the increased weight of US markets within the MSCI ACWI Index creates benchmark risk for managers looking elsewhere for opportunities. Alpha outcomes for active managers are being increasingly driven by US markets and as we will discuss in the next section, driven by a smaller concentration of mega-cap US technology companies.

The rise of mega cap US technology companies

In recent years, Frontier has observed an increasingly narrow breadth in the drivers of equity market returns, particularly those in the US.

While the last five years has seen increasingly narrow breadth in markets, there have been shorter periods where this trend has become even more extreme. For example, for the calendar year period to 9 December 2021, 35% of the S&P 500's return had come from five stocks (Apple, Microsoft, Google, Nvidia and Telsa). Change the starting date to 1 May 2021 and those same five stocks accounted for more than half (51%) of returns for the Index. More broadly, those same stocks accounted for more than a quarter of the return generated by the MSCI ACWI Index in 2021 (in USD terms).

Chart 5: S&P 500 return drivers from 1 May 2021 to 9 December 2021



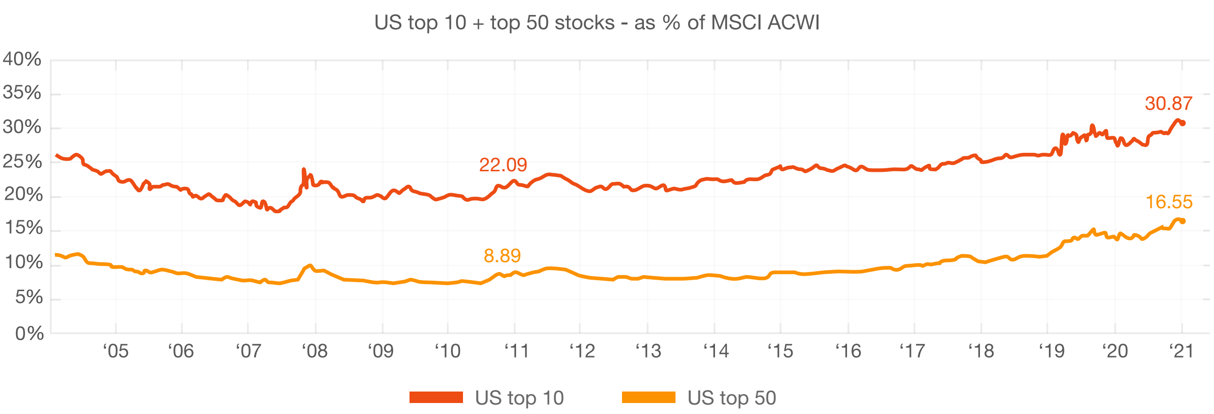
Source: Goldman Sachs.

Chart 6 illustrates the increasing concentration of the S&P 500 as evidenced by the weight the top ten stocks hold. Since 2011, where that weight stood at less than 20%, market concentration has steadily increased to 30.5% as at 31 December 2021. Similarly, Chart 7 shows the top ten US stocks have almost doubled their weight within the MSCI ACWI Index since 2011 from 9% to 16%.

Chart 6: Weight of the top ten stocks in the S&P 500

Source: JP Morgan Asset Management.

Chart 7: Weight of the top ten US stocks within MSCI ACWI



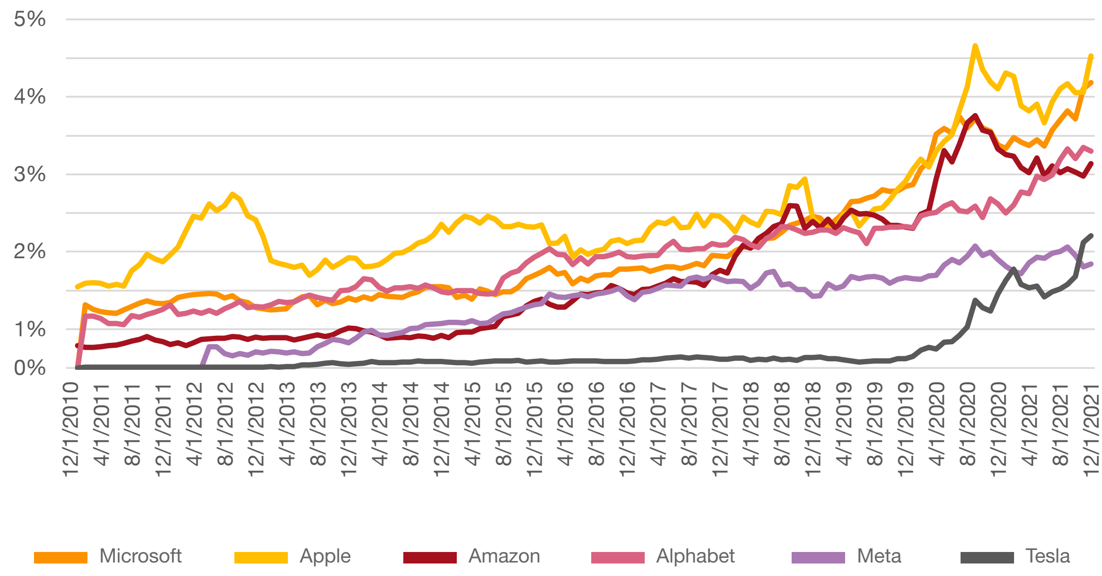
Source: Vinva Investment Management.

frontier

Through our conversations with global equities managers, we often find managers look away from mega-cap companies and toward the large and mid-cap space to generate alpha. This decision by managers is one made in the process of active management, but never before have active management results been so heavily influenced by the returns of so few stocks. Interestingly concentration in the S&P 500 did reach ~26% in 2000 during the dot.com boom of 2000, for the following five years it unwound to ~20%. This corresponds with a very strong period of active returns for global equities managers as evidenced in Table 1, where the median excess manager delivered 2.9% excess return p.a. over five years to 31 December 2006. We will delve further into this point later in the implications for asset owners.

Our analysis in this report specifically focuses on six mega-cap US companies. While all of them may not necessarily be in the information technology sector, each company has utilised technology in various ways to increase their respective market share. Those companies are Microsoft, Apple, Amazon, Alphabet (both share classes), Meta Platforms (formally Facebook) and Tesla. Each company has seen a large increase in their overall market weight in the MSCI ACWI Index. Chart 8 illustrates this rise.

Chart 8: The increasing share of Microsoft, Apple, Amazon, Alphabet, Facebook and Tesla with MSCI ACWI since 2011



Source: Bloomberg, Frontier.

As evidenced above, all companies grew their index weightings over the period, in particular in the period following 2018. As at 31 December 2021, the share of these six companies within the Index stood at 14.6%, up from 4.4% in May of 2012 when Meta (at the time Facebook) went public.

We noted in the beginning of this paper the declining profile of active returns for global equities managers, with particular focus on the past five years. The rapid rise in market concentration in the last five years, and in particular the last three, has correlated with this poor performance of global equities managers. In the following section we look to unpack this further by estimating the overall impact of these six stocks on global equities median excess returns profile.

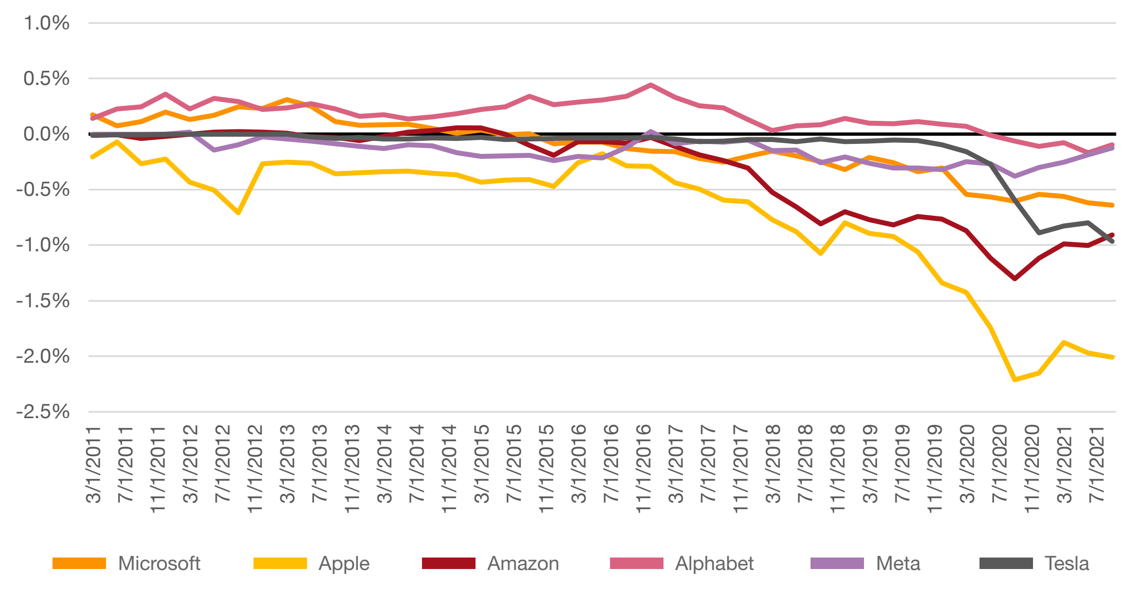
Quantifying the impact on active returns

To quantify the effect on excess returns, we have obtained the historical portfolio holdings from a Frontier cleansed universe of global equities managers.

The cleansed universe represents institutional products available to asset owners and has been maintained at Frontier over many years. The universe includes 270 funds with just under A$2 trillion in assets under management. In the analysis we aggregated the holdings data and calculated the average weighting of each of the six stocks on a quarterly basis. We then compared it to the index weightings (MSCI ACWI) over time which Chart 9 demonstrates. The main takeaway from this chart is the decline in active positions over time in all six companies. Until 2016 fund managers were relatively neutral on these stocks with an overweight position in Alphabet and underweight position in Apple and neutral positions across the other four companies. Since then we have seen a decline across all six stocks to a point currently where managers hold large underweight positions in all except Meta and Alphabet. Linking this back to Chart 8, we can see that as these stocks increased their index weight, managers fell behind in their active positioning creating increased active risk for themselves in the process.

Another striking takeaway here is the substantial underweight position active managers have in Apple. Chart 9 shows global fund managers have long been underweight the iPhone maker, and this underweight position has only grown over time as the company's weight in the MSCI ACWI Index has grown. Quantitative research from investment bank UBS has confirmed this position over multiple time periods spanning back to 2017 but offers no explanation as to why[1,2].

Chart 9: Global equity manager's active position over time



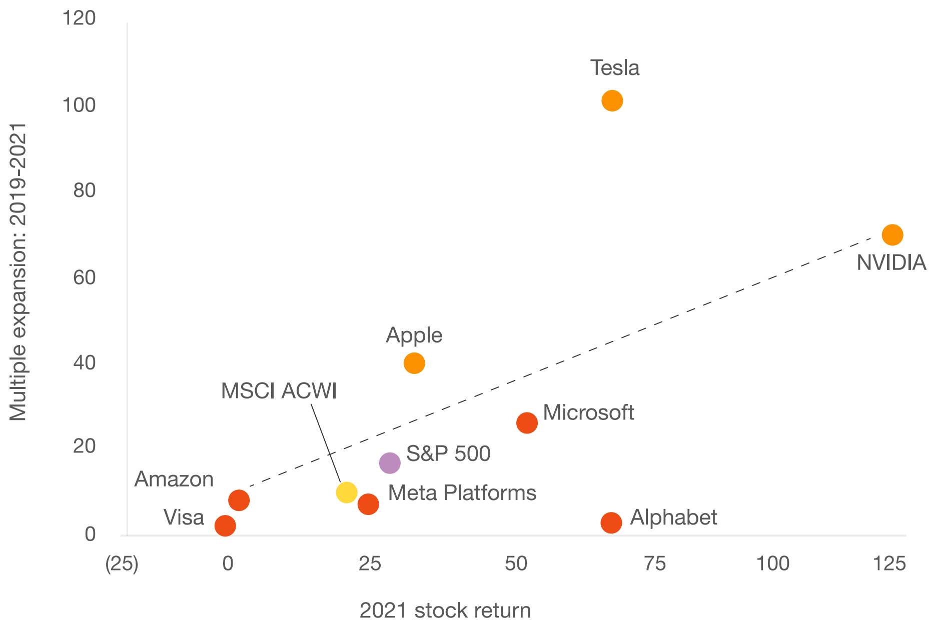
Source: Bloomberg, MSCI, Frontier.

1: Yahoo finance citing UBS research, 2018
2: Reuters citing UBS research 2017

Why are global managers underweight?

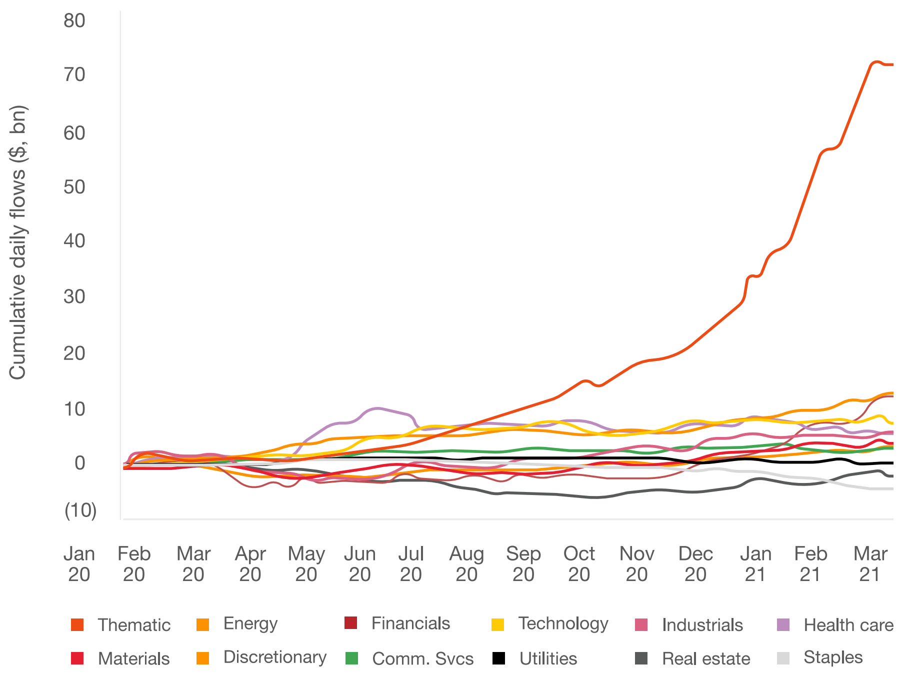
Early in the history of these companies it could be reasonable to assume many global active managers under appreciated the strength of these businesses. Given the humble beginnings of many of these businesses, it is hard to blame them. As these businesses grew into the mega-cap companies we know today, growth managers were the most likely group to have held positions in the six stocks at differing points in time. Frontier has observed a couple of value managers over the years owning stocks such as Apple and Alphabet owing to the latent value they believed was contained within each business. However, as the earnings multiples continued to expand for each of these stocks, valuation sensitivity of active managers came to the fore. We can see from Chart 10 that from 2019-2021 Tesla, Apple and Microsoft enjoyed a far greater multiple expansion than the MSCI ACWI Index as referenced by the yellow dot in Chart 10. During the same period, Amazon and Meta grew multiples largely in line with the benchmark with Alphabet lagging the benchmark, but still growing its multiple overall. While many managers continue to hold some of these stocks (we suspect mostly the growth/high growth cohort), active positioning has fallen away. While more mature companies such as Alphabet and Microsoft have enjoyed the favour of global equity managers over time, Tesla remains largely out of favour with all but a select few institutional investors. So, if global active managers are largely underweight this cohort of stocks due to valuation sensitivity, who is picking up the slack?

Chart 10: Multiple expansion vs stock returns

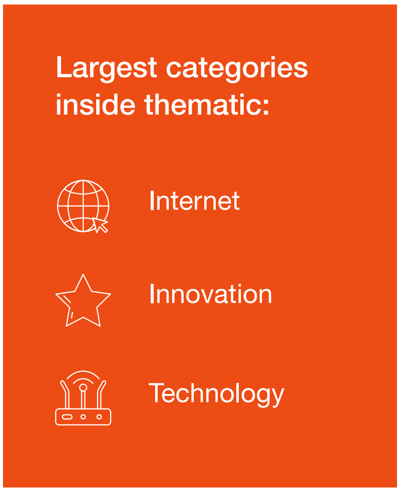


Source: AllianceBernstein asset management.

Chart 11: ETF inflows to thematic ETFs



Source: Factset, Goldman Sachs.



When looking for a common factor into the under-representation of global active managers in these stocks, we investigated the role of exchange traded funds (ETFs) and thematic investing. ETFs have been in markets since before 2000, however recent years have seen a large increase in their prominence. Research by Goldman Sachs suggests total global AUM for exchange traded products has increased to over US$10 trillion as at 17 November 2021 and now represents 15% of all fund assets globally[3]. Within ETFs however, a large proportion of this money is being invested into thematic ETFs. Chart 11 illustrates cumulative FUM flows into ETFs since January 2020 to March 2021, we can see thematic ETFs have raked in more than 6x the next highest sector-based ETF. Within the thematic bucket, Goldman's research suggests the three highest categories were internet, innovation and technology.

The key point that needs to be made at this juncture is that ETFs are largely constructed without any reference to the price of the underlying security. Given the high portion of retail investors within ETFs we can assume there is far less valuation sensitivity when compared to the institutional investment landscape of global active managers.

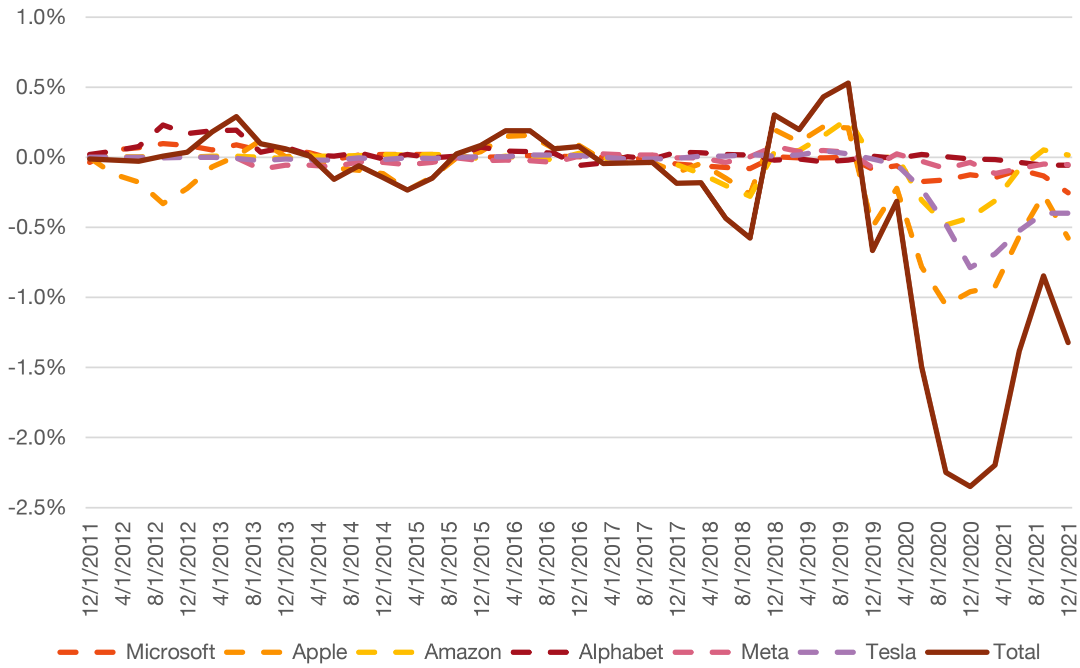
While not the sole reason for the under-ownership amongst global equities managers, we believe a significant portion of this can be attributed to the increase in ETFs FUM and in particular thematic ETFs where the group of six mega-cap US stocks feature prominently. This increase in popularity, especially in the past three years, is likely to have contributed to the increasing index weight of these companies in global indices.

Impact on performance

When calculating the impact on global active manager excess returns of these six stocks, we have assumed the portfolio weights are held constant over the quarter and using the quarterly active returns data of each stock we were able to estimate the quarterly attribution. In practice, we know some managers alter positioning frequently within quarters. However, given the large number of managers in the sample we are confident this analysis gives a strong indication of the aggregate impact on attribution of global equities managers.

3: https://etfstream.com/news/global-etfs-soar-pass-10trn-assets/

Chart 12: Rolling one year attribution of Microsoft, Apple, Amazon, Alphabet, Meta and Tesla for global active management



Source: Bloomberg, eVestment, Frontier.

As is consistent with the active management data at the start of this paper (Table 1, Charts 1 and 2), we can see the attribution in Chart 12 is relatively neutral until 2017. Since 2017, the combination of underweight positions in Microsoft, Apple, Amazon, Alphabet, Meta and Tesla has detracted from global equity manager's relative returns against the MSCI ACWI Index. Of note is how strong this effect was during 2020, with the rolling 12-month total effect peaking at just below -2%. 2020 was a year of considerable volatility in markets and at the time Frontier observed a considerable spread of active management outcomes.

In calendar year 2020, the median active manager was only able to generate 0.1% of excess returns before fees. During that same year, the top quartile of managers delivered 7.2% excess returns, while the bottom quartile delivered -7.5% against the benchmark. The spread of outcomes between the top and bottom quartiles of 14.7% was the largest we've observed since 2006. Equally the -7.5% excess return delivered by the bottom quartile of managers is the worst result we've observed over the same period.

Table 3: Attribution analysis by stock to 31 December 2021

	Microsoft (%)	Apple (%)	Amazon (%)	Alphabet (%)	Meta (%)	Tesla (%)	Total (%)
1 year	-0.25%	-0.58%	0.01%	-0.06%	-0.05%	-0.40%	-1.32%
3 years p.a.	-0.15%	-0.68%	-0.14%	-0.02%	-0.05%	-0.40%	-1.44%
5 years p.a.	-0.10%	-0.39%	-0.09%	-0.01%	-0.02%	-0.24%	-0.85%

Source: Bloomberg, eVestment, Frontier.

Apart from Tesla, these stocks have been a large part of global indices for many years. However, as evidenced by Chart 9, we have observed that as the MSCI ACWI Index has become more concentrated, global active managers have not kept up in their active positioning. This is having an outsized effect on active management alpha. While there have been periods where this has benefitted active managers, such as 2019, the overriding effect to date has been negative for active management excess returns. In Table 3 we estimate the total effect over a one-year period is -1.32%. Over three- and five-year periods, this effect is -1.44% and -0.85% respectively.

From our analysis we can conclude that global equities managers' underweight position in the MSCI ACWI Index's largest stock, Apple has been the biggest detractor over all time periods. In the three- and five-year period, Apple is responsible for ~50% of the total effects or 0.68% and 0.39% respectively. Tesla is the other stock that stands out as a large detractor, specifically over shorter time periods. It should be noted that over a five-year period, each of the six stocks in our analysis detracted from global equities manager's performance. That is to say that the six largest constituents in the MSCI ACWI Index (as of 31 December 2021) have all contributed to the decline in active management excess returns we have observed over the past five years.

The final word

At the beginning of this paper, we stated two key questions for asset owners with respect to the global equities' asset class.

They were:

- Is this decline in excess returns cyclical or structural?
- What is a reasonable magnitude of outperformance to expect beyond 2022?

For asset owners, expecting a certain level of excess return from global active managers is key to the trade-off between active management and passive management. To continue paying an active fee, investors must be confident that going forward they can expect excess returns generated to be above global active management fees. At 0.7%, the excess return generated in the five years to 31 December 2021 by the median global manager is nearing the average level of fees Frontier has observed in the market i.e. even at the median global manager level there is outperformance and this on average covers the fees charged. However, over the same five-year period, the top quartile of Frontier's rated global equities managers has delivered 2.9% excess returns vs the MSCI ACWI Index, illustrating how asset owners can still benefit from active management in global equities.

In the past, Frontier has observed a degree of cyclicality to the excess return profile of global equities and we believe the most recent period of lower active excess returns is again cyclical rather than structural. We believe this is the case due to the increased representation of the US markets in global equities indices, and in particular increased concentration towards US mega-cap technology stocks which has brought about an environment that is less conducive for active management than in the past.

Global active managers holding underweight positions in these stocks is an active management choice. However, we have shown the combination of elevated market concentration and the increasing popularity of passive investing/thematic ETFs has led to this choice becoming increasingly influential on active management outcomes. While the prevalence of passive investing and popularity of ETFs is something that may continue to grow, we do not expect it to continue in such a narrow breadth as it has done recently.

While it is difficult to attribute specific drivers to overall excess returns trends and infer future outcomes with certainty, we believe the global equities universe can continue to deliver an alpha profile in-line with historical outcomes of around 1-2% before fees over a long period of time. This figure is the historical median excess return for active managers and, through superior manager selection, asset owners can achieve stronger outcomes. We believe a potential unwinding of market concentration could provide a more conducive environment for active management as it did in the five-year period to 31 December 2006 following the dot.com bust. In this period, we saw alpha outcomes far in excess of historical norms for active managers.

In addition, we cite more common reasons as to why we continue to support active management allocations within global equities going forward:

- Considerable opportunity for active global managers to trade off-benchmark positions in small caps and less efficient areas of the market.
- Meaningful secular trends such as disruption, climate change and demographics are likely to be impactful on individual company outcomes.

As always, manager selection plays a crucial role in alpha outcomes for asset owners. While the most recent period for global active management has been below historical norms, we continue to see the long-term merit of active management within global equities. Manager selection advice is one of the key pillars of Frontier's support for clients and is something we continue to believe can provide attractive outcomes for asset owners in a global equities' context.

Want to learn more?

If you want to learn more about global active management, Frontier can help. Please reach out to your consultant or a member of the Equities Team.

Frontier

Level 17, 130 Lonsdale Street, Melbourne, Victoria 3000

Tel +61 3 8648 4300

Frontier is one of Australia's leading asset consultants. We offer a range of services and solutions to some of the nation's largest institutional investors including superannuation funds, charities, government / sovereign wealth funds and universities. Our services range from asset allocation and portfolio configuration advice, through to fund manager research and rating, investment auditing and assurance, quantitative modelling and analysis and general investment consulting advice. We have been providing investment advice to clients since 1994. Our advice is fully independent of product, manager, or broker conflicts which means our focus is firmly on tailoring optimal solutions and opportunities for our clients.

Frontier Advisors Pty Ltd ABN 21 074 287 406 AFS Licence No. 241266