

## The Big Get Bigger

Increasing Concentration of Assets and Fees in the Asset Management Industry

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### Executive Summary

Market and regulatory forces combine in the asset management industry to create significant advantages to scale. These advantages make incremental growth easier for large firms, while stifling growth for small firms and discouraging entry into the market for potential new firms. We examine this phenomenon using 19 years of data for the global open end mutual fund and ETF universe. Our key findings include:

- Assets are more concentrated now than at any period in the last 19 years. Asset concentration across investment products now surpasses global wealth concentration among households. The top 1% of investment products manage 45% of all assets managed, which is 72x greater than the assets managed by the bottom 50% of investment products.
- Asset concentration has been increasing steadily since 2000 with brief departures during the recovery from the two recessions occurring during the period.
- Fee revenue concentration is also trending upwards, albeit not as much as assets due to the increasing demand for lower fee passive investment products.
- Concentration is significantly more pronounced within categories than across them, demonstrating the importance of cementing a category-leading position rather than simply participating in the wealthier categories.
- Conversely, concentration is significantly more pronounced across fund families than it is within fund families, demonstrating the benefits of scale to the firm, not just the product.

## The Importance of Concentration

The concentration of assets in the asset management industry has critical implications for asset managers and investors alike. It's worth noting that asset concentration is not inherently good or bad, but rather has consequences that are both positive and negative. That said, the pace at which concentration has increased since the end of the financial crisis is alarming.

Beneficially, increasing asset concentration has coincided with the largest decline in prices paid by investors for managed investment products. Extraordinary levels of asset concentration have enabled the largest asset managers to lower fees to unprecedented levels while still maintaining high levels of profitability. In addition, competitive pressures applied by investors with an increasing understanding of the impact of fees have given asset managers added incentive to lower fees.

However, asset concentration can have negative side effects as well. As assets become more concentrated, those with the highest share of assets exert more influence on global asset prices. This creates a greater chance for highly volatile events as opinions change, or even worse, creates opportunity for market manipulation. Similarly, the interconnected nature of our financial markets mean that a concentration of assets creates systemic risks for all market participants in the event of a failure of a firm with a large share of global assets.

Whether the costs of asset concentration outweigh its benefits is outside the scope of this paper and is worthy of further study.

## The Five Drivers of Concentration

We believe there are five key drivers of asset concentration today.

**Scale advantages** are a clear driver of asset concentration. Firm's with high fixed and low variable costs, as is common in the asset management industry, have greater incentives to increase revenue. This leads asset management firms to favor mergers and acquisitions as a means of rapid growth. New product launches are another, albeit slower method of achieving growth that has led to a glut of investment products in the market today.

Larger firms, with significantly more profits, can employ a greater number of people and thereby enable more **labor specialization** than smaller firms. For example, a product-focused employee at a small firm may deal with new development, marketing, and product management, while several individuals, or groups of individuals would handle those responsibilities at a large firm. This enables larger firms to have more nuanced and informed product, marketing, and distribution strategies leading to faster asset growth.

As firms grow, their operating leverage grants them greater profitability, and therefore greater **access to technology**. The largest firms employ data scientists and artificial intelligence to determine the best new products to launch, and who to target with such products. The technology and intellectual capital devoted to these groups continues to grow as returns to their efforts have proven successful.

Past research has shown that **performance** is negatively associated with fund size, and therefore one might expect it to be a limiting factor for concentration. However, this research has focused on risk-adjusted performance. Naturally, gross returns are more relevant to the topic of concentration, and we find a positive relationship between fund size and subsequent gross performance.

Finally, **regulation**, which may be a small inconvenience for a large firm, can become unmanageably burdensome for firms below a certain asset threshold. Most estimates of the asset requirements to start a new asset management firm range from \$10 million to \$100

million depending on the type of products offered and the distribution channels pursued. These high requirements are necessary due to ongoing compliance costs faced by each firm.

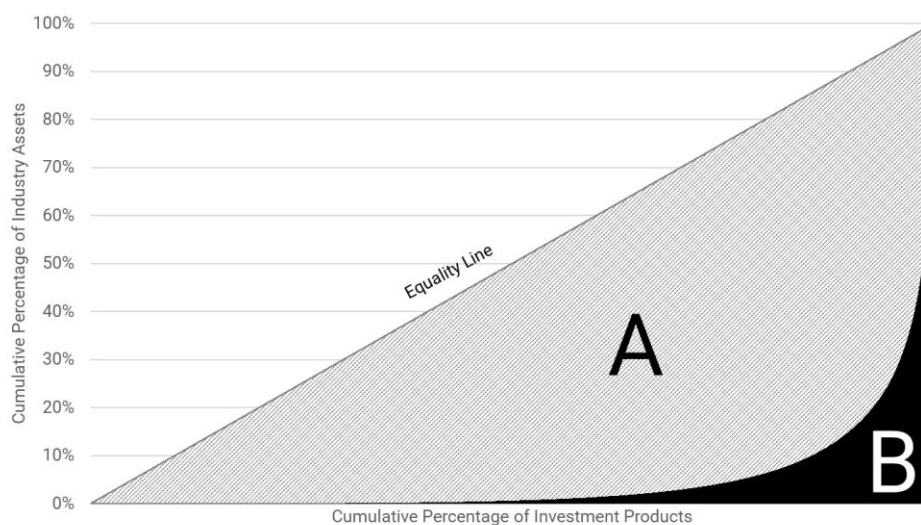
We have no reason to believe that any of these drivers will cease to exist or weaken in strength. On the contrary, we expect technology to strengthen in impact on concentration as data and artificial intelligence grow in relevance. Therefore, we expect the current trend of increasing concentration to continue. If history is a guide, we may even see an acceleration in concentration during the next recession.

Still, there is a theoretical finite upper limit on concentration, and we should expect that we will never fully reach that point. Investors value choice and a diversity of product options, and therefore there will never be perfect concentration in a single investment product or firm.

## Our Measure of Concentration

There are many measures of the concentration or inequality of a distribution. Most come from research into income or wealth inequality across households or individuals.

One of the most common measures of inequality is known as the Gini Coefficient. It measures the ratio of area A to area A+B in the chart below which plots the cumulative percentage of assets (y-axis) after sorting from lowest to highest AUM (x-axis).



**Figure 1. The Lorenz Curve of Assets Distributed Across all Open End Fund and ETF products as of January, 2018. The current Gini Coefficient  $\frac{A}{A+B}$  is 0.9.**

Intuitively, if there's more concentration in the distribution, you will see the curve of area B bend upward very fast at the end and therefore have a larger Gini Coefficient. Conversely, a perfectly equal distribution would be a straight 45-degree line from the lower-left to the upper-right corner. Figure 1 shows that the current distribution of assets across open-end and exchange-traded funds is highly unequal with a Gini Coefficient of 0.9.

While we use the Gini Coefficient as our key measure of inequality, we also find that our measurements are robust to other measures of inequality such as the Hoover Index, which indicates the percent of all assets that would need to be redistributed to arrive at a perfectly equal distribution.

# Assets are More Concentrated Now than Ever Before

We examined 19 years of data from the global open end mutual fund and ETF universe to see how asset concentration has changed through time. Figure 2 shows that assets are now more concentrated across investment products than any time since the year 2000. Likewise, fees have trended upward in concentration rapidly since 2010. The level of concentration in fees is lower than that of assets because assets have flowed toward lower fee investment products over this period.

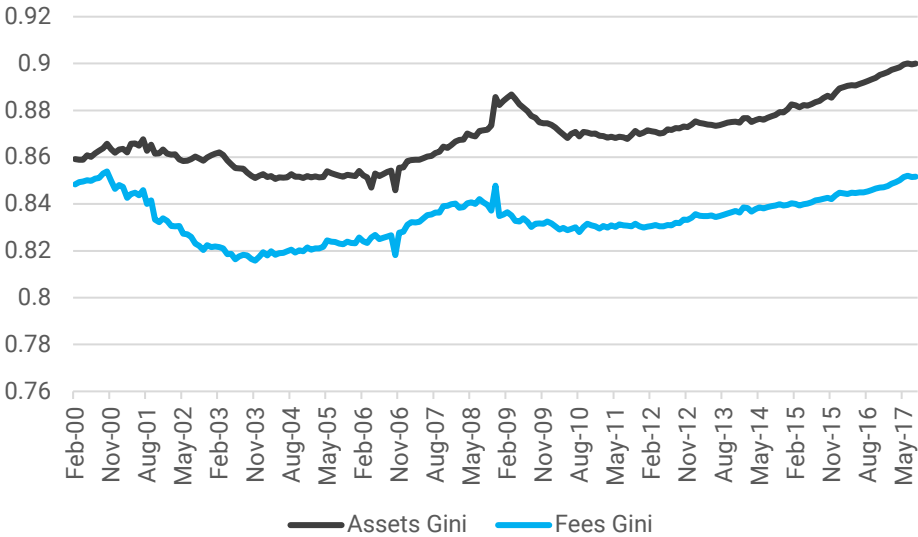


Figure 2. The Gini Coefficient through Time for Assets and Fees.

While the Gini Coefficient may be a robust measure of concentration, we can look to more intuitive measures as well. Figure 2 plots the percentage of all industry assets managed by the top 1% of investment products. Again, we see that there’s been a significant increase, nearly 10 percentage points in this case, since the recovery from the financial crisis.

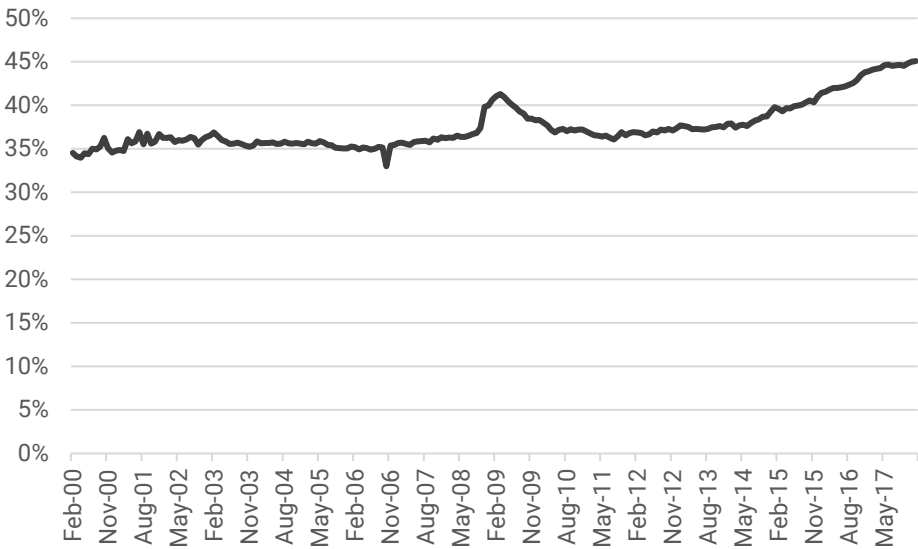


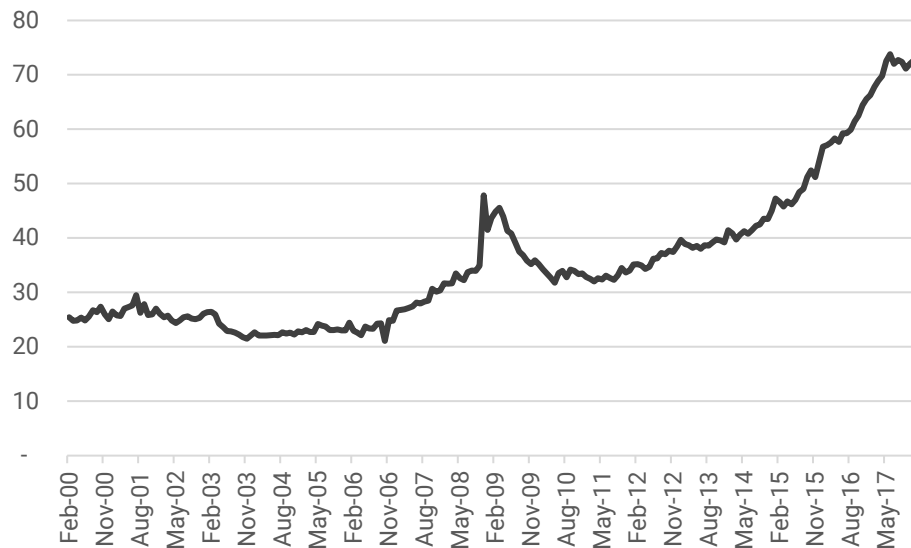
Figure 3. The percentage of assets managed by the top 1% of investment products

The rise in concentration is even more evident when viewing the percent of total industry assets managed by the smallest 50% of investment products. Figure 4 shows that they’ve fallen to slightly more than one-third of their previous high in 2004.



**Figure 4. The percentage of assets managed by the bottom 50% of investment products**

Pulling these trends together, we see the most striking evidence yet of the increasing concentration. The ratio of the assets managed by the top 1% to the assets managed by the bottom 50% as shown in Figure 5. The top 1% now manages 72x more assets than the bottom 50%, up from roughly 25x in the year 2000.



**Figure 5. The ratio of the percentage assets managed by the top 1% of investment products to the percentage of assets managed by the bottom 50% investment products**

The rapid increase in concentration of assets is a significant shift in the structure of financial markets, and is deserving of additional study. We use the remainder of this paper to break down the concentration phenomenon into subsegments of the market to identify pockets of high concentration worthy of attention.

## The Category Lens

Naturally, concentration can vary greatly by fund categories. The more concentrated categories tend to be large in terms of collective assets, and as Figure 6 shows, their concentration has been relatively high over the last 15 years.

	Today	5 Years Ago	10 Years Ago	15 Years Ago
Large Blend	<b>0.93</b>	0.90	0.88	0.86
Foreign Large Blend	<b>0.91</b>	0.88	0.86	0.82
Target-Date Retirement	<b>0.91</b>	0.89	0.88	0.80
Bear Market	<b>0.91</b>	0.90	0.75	0.65
Target-Date 2060+	<b>0.91</b>	NA	NA	NA
World Large Stock	<b>0.91</b>	0.90	0.89	0.88
Emerging Markets Bond	<b>0.91</b>	0.82	0.75	0.68
Target-Date 2020	<b>0.91</b>	0.89	0.90	0.82
Diversified Emerging Mkts	<b>0.90</b>	0.89	0.81	0.89
Allocation--30% to 50% Equity	<b>0.90</b>	0.90	0.92	0.88

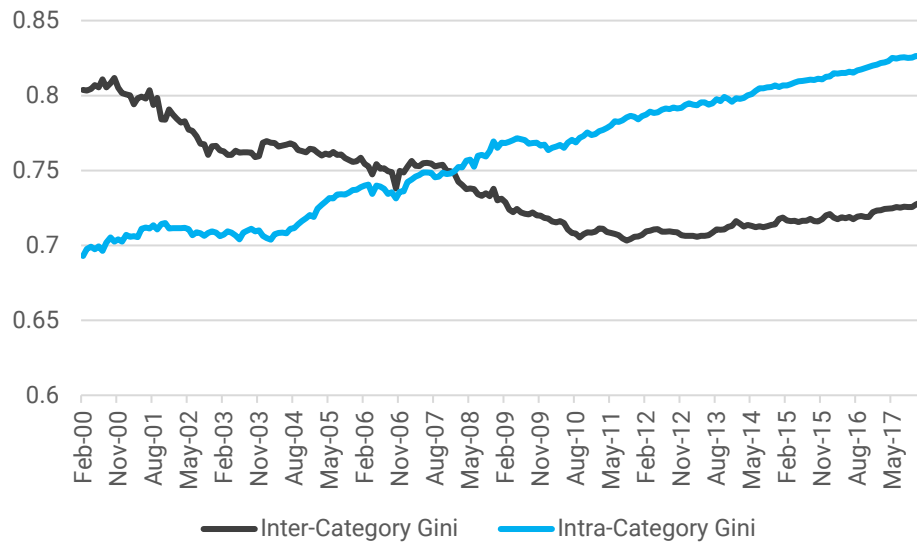
**Figure 6. The most concentrated categories of funds**

In contrast, the least concentrated categories tend to be smaller with niche focuses. Several of these categories were not in existence 15 years ago.

	Today	5 Years Ago	10 Years Ago	15 Years Ago
Single Currency	<b>0.43</b>	0.42	0.40	NA
Trading--Leveraged Commodities	<b>0.58</b>	0.49	NA	NA
Miscellaneous Sector	<b>0.60</b>	0.57	0.60	NA
Long-Term Bond	<b>0.61</b>	0.63	0.62	0.46
Trading--Leveraged Debt	<b>0.63</b>	0.73	0.25	0.33
Muni Single State Short	<b>0.66</b>	0.68	0.76	0.68
Muni Minnesota	<b>0.68</b>	0.69	0.68	0.61
Long Government	<b>0.70</b>	0.67	0.65	0.48
Trading--Inverse Commodities	<b>0.71</b>	0.59	NA	NA
Muni New Jersey	<b>0.71</b>	0.69	0.66	0.62

**Figure 7. The least concentrated categories of funds**

Interestingly, while intra-category concentration dominates inter-category concentration today, that wasn't always the case. As we see in Figure 8, 2007 marked the year when the two series crossed paths after long-term trend of increasing intra-category concentration and decreasing inter-category concentration. In other words, it's now more advantageous to be a large fund in an average category than an average fund in a large category.



**Figure 8. Inter-category concentration vs Intra-category concentration**

## The Fund Family Lens

There is significant variance in concentration across fund families as well. Like categories, the highest concentration fund families tend to be large established firms. Notably, every single firm in Figure 9 has a current concentration greater than or equal to its concentration 5, 10 or 15 years ago.

	Today	5 Years Ago	10 Years Ago	15 Years Ago
Morgan Stanley	<b>0.93</b>	0.90	0.78	0.70
Goldman Sachs	<b>0.93</b>	0.90	0.87	0.86
Aberdeen	<b>0.92</b>	0.88	0.90	0.84
Harbor	<b>0.91</b>	0.89	0.85	0.88
ALPS	<b>0.90</b>	0.89	0.72	NA
BlackRock	<b>0.89</b>	0.88	0.86	0.89
Pimco	<b>0.88</b>	0.88	0.87	0.87
Catalyst Mutual Funds	<b>0.88</b>	0.69	NA	NA
TCW	<b>0.88</b>	0.79	0.65	0.62
MFS	<b>0.88</b>	0.84	0.83	0.83

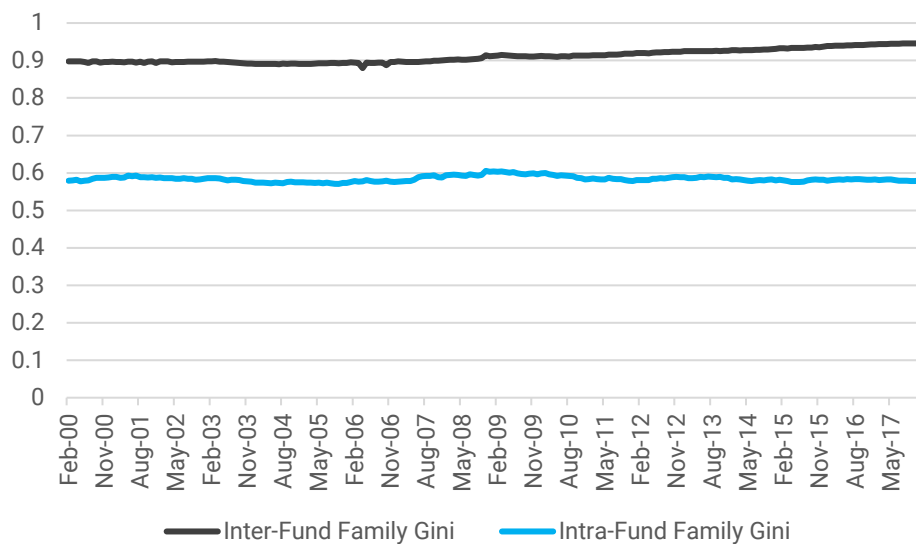
**Figure 9. Most concentrated fund families**

The least concentrated fund families, like categories, tend to be small with a niche focus. Most did not exist even 5 years ago, let alone 10 or 15 years ago.

	Today	5 Years Ago	10 Years Ago	15 Years Ago
Castlemaine	0.04	NA	NA	NA
Alpha Architect	0.08	NA	NA	NA
SunAmerica	0.11	0.19	0.17	NA
Rockefeller & Co.	0.15	NA	NA	NA
Gurtin	0.15	NA	NA	NA
Portfolio Strategies	0.16	0.21	NA	NA
Penn Capital Management	0.16	NA	NA	NA
Alambic	0.17	NA	NA	NA
STAAR Investment Trust	0.17	0.11	0.17	0.21
CornerCap	0.18	NA	NA	NA

**Figure 10. Least concentrated fund families**

Unlike the category lens, when we compare intra-fund family concentration to inter-fund family concentration, it becomes clear that inter-fund family concentration is dominant and has been for a long time. In other words, as a fund manager, it's advantageous to be an average fund in a large fund family than it would be to be a large fund within an average fund family.

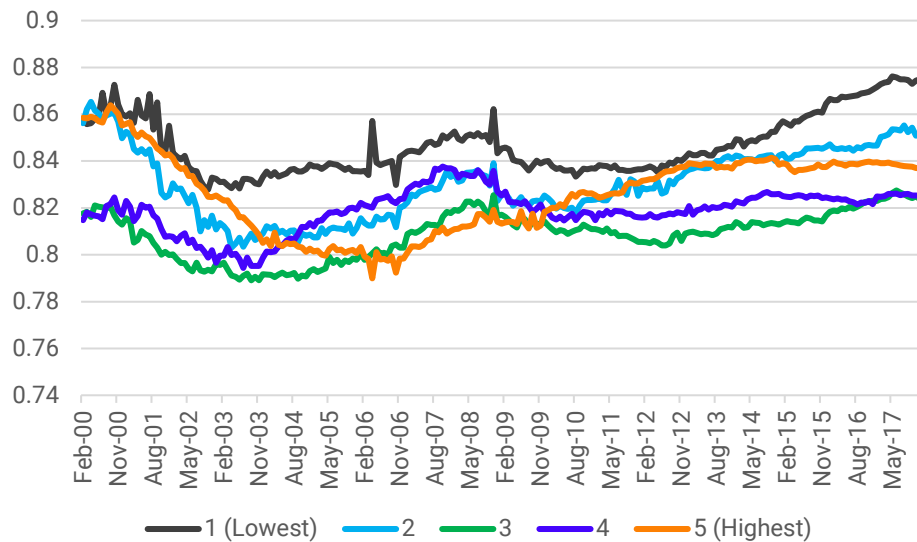


**Figure 11. Inter-fund family concentration vs Intra-fund family concentration**

## The Fee Lens

Fees are always a useful way to break down a fund analysis, and our concentration data is no exception. We find that each fee quintile exhibits varying behavior through time. For example, a large gap in concentration occurred between the 1<sup>st</sup> and 5<sup>th</sup> quintile from 2003 to 2011. This could be the result of the traction gained during that period for much lower fee passive investment products winning over low fee active products.



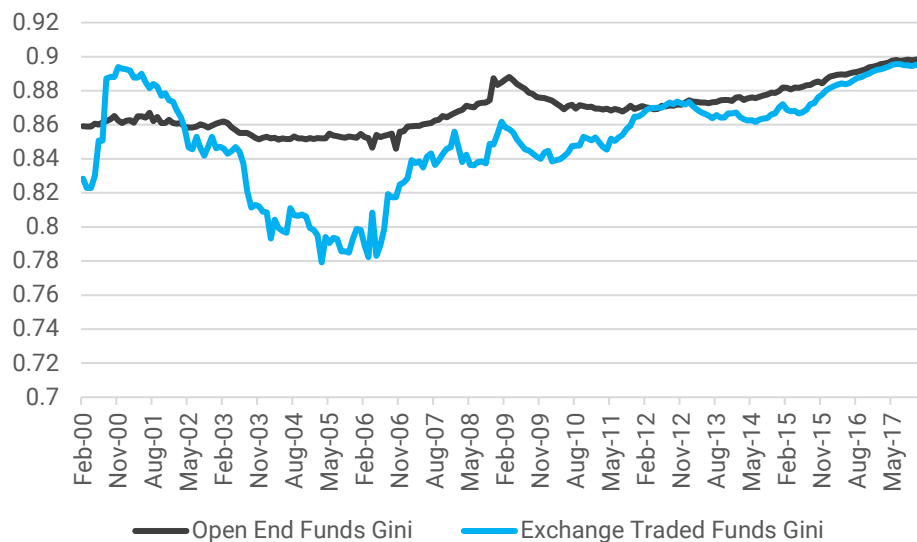


**Figure 12. Concentration over time by fee quintile**

Notably, the largest increases in concentration over the last 5 years have come from the lowest fee quintile, indicating that there are significant separation among winning and losing funds at the low end of the market.

## Exchange Traded vs Open End Lens

The last 20 years has seen an explosion of exchange-traded products. While ETFs began with relatively less concentration than open-end funds, that gap has closed today to the points where ETFs are nearly as concentrated as open-end funds.

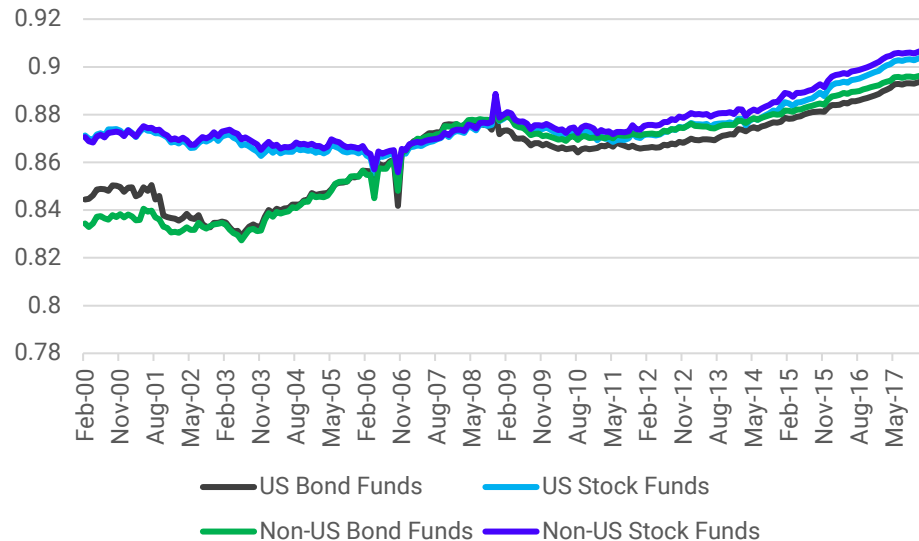


**Figure 13. Concentration over time for open end funds vs. exchange traded funds**

The smoother path of the Gini Coefficient for open end funds is due to the larger number of open-end funds than ETFs.

## Asset Class Lens

In the 2008 financial crisis, we saw a convergence in concentration among asset classes. While US and Non-US stocks have always been similar in concentration, and US and Non-US bonds have always been similar in concentration, it wasn't until the crisis that stock and bond asset classes converged.

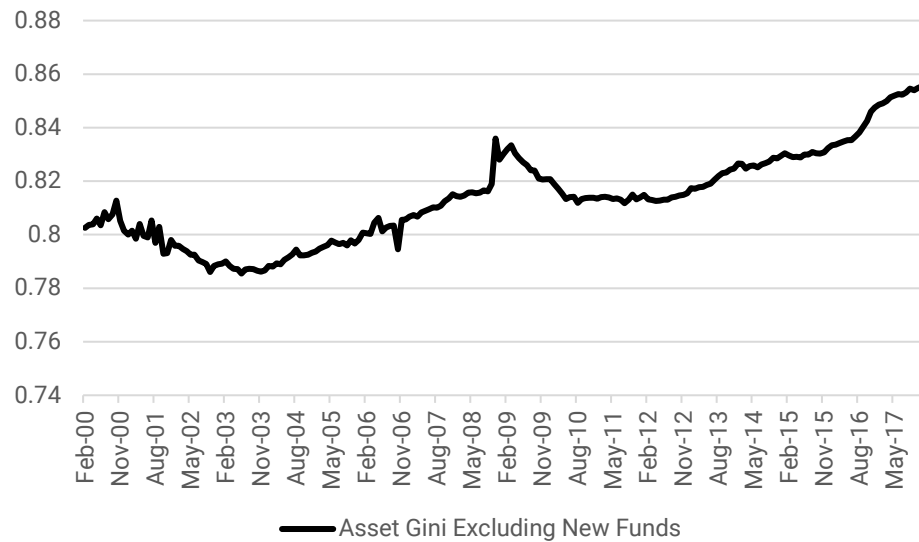


**Figure 14. Concentration over time by asset class**

Since the financial crisis, all four asset classes have moved in relative lockstep in an upward march toward greater concentration.

## New Product Launches are not a Factor

One possible explanation for the increasing concentration we're seeing would be the proliferation of investment product launches that dilute the small end of the market. This could increase some measures of concentration without the phenomenon of big firms growing faster than small firms. However, this does not explain the concentration growth we've seen since the year 2000. Figure 15 shows the Gini Coefficient time series is relatively unchanged even when excluding funds launched before 1995.

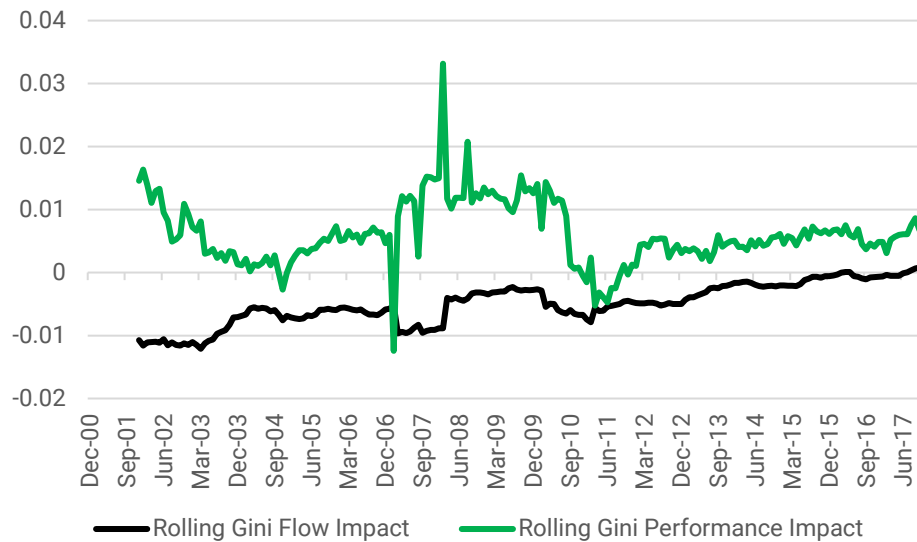


**Figure 15. The Gini Coefficient through time for assets excluding funds launched after December 1994.**

## Performance is the Driving Force of Concentration

There are two ways funds grow – positive net flows to the fund, and positive investment returns. We decompose the changes in the aggregate Gini Coefficient through time to find that performance, not flows, is the driving force of continuing concentration. This result suggests that large funds earn higher absolute gross returns than smaller funds, at least over the period examined.

Maintenance of a given level of concentration is dependent upon all sizes of funds growing at the same rate. It seems unlikely that large funds would experience flow-based growth that small funds regularly experience (sometimes growing multiples in size in short periods of time). It follows that performance would be the driver of increasing concentration, and this result is borne out empirically as well.



**Figure 16: Rolling 1-year impacts of flows and performance on aggregate gini ratio**

While this conclusion may seem contradictory to prior research which concludes that fund size is negatively correlated to performance, it is not. Prior research focused on risk-adjusted returns, and naturally risk-adjusted returns suffer once a fund gets too large to effectively trade its positions given their liquidity. Our results show that larger funds exhibit higher absolute gross returns – unadjusted for risk. Gross returns are more relevant for the question of concentration.

While performance has clearly been the driving force behind continuing concentration trends, flows have begun to make an unprecedented positive impact in just the last few months after trending upward for nearly the entire period since 2000.

## Conclusion

Assets are concentrated across investment products and across asset management firms at levels unseen in recent history. We see no reason for these increases to cease or revert in the near term. If history is a guide, levels may increase at an even faster pace when we experience our next recession.

The question remains, how should investors and asset managers respond to this phenomenon? We can reason that increased concentration leads to increasing risk in financial markets. We can also reason that the most intertwined asset management firms are both the source of such risk as well as being the most exposed to it. Asset managers and investors alike would be wise to mitigate exposure to systemic risks by diversifying, or reducing asset manager and investment product concentration in their own portfolios.

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