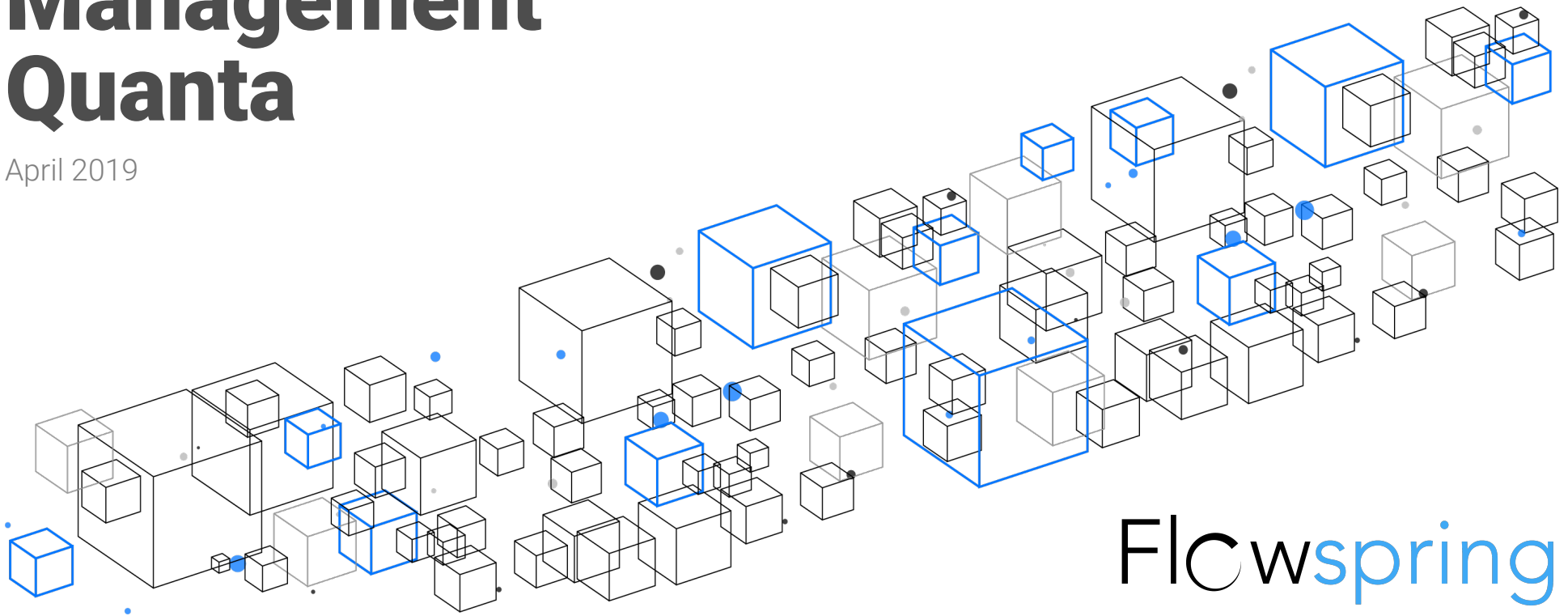


Asset Management Quanta

April 2019



Flowspring

Unparalleled competitive intelligence for asset managers

About This Report

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Description

Flowspring's Asset Management Quanta is a monthly compilation of the most important trends and statistics in the asset management industry. This particular report was compiled as of April 2019 to give an accurate picture of the global open-end and exchange-traded fund landscape. It contains information relating to the distribution of assets, changes in assets, trends in fees and fund launches, and emerging investor preferences. We present this report without commentary so as to provide updated data in a timely manner, and to allow the data to speak for itself.

About Flowspring

Flowspring is dedicated to providing the most insightful competitive intelligence for asset managers. We use rigorous machine learning techniques to draw actionable information from the sea of noisy raw data, and we distill this actionable information into easy-to-consume visualizations, dashboards, and reports available in our web-based application. For additional information regarding Flowspring's research and capabilities visit www.flowspring.com or contact us at research@flowspring.com

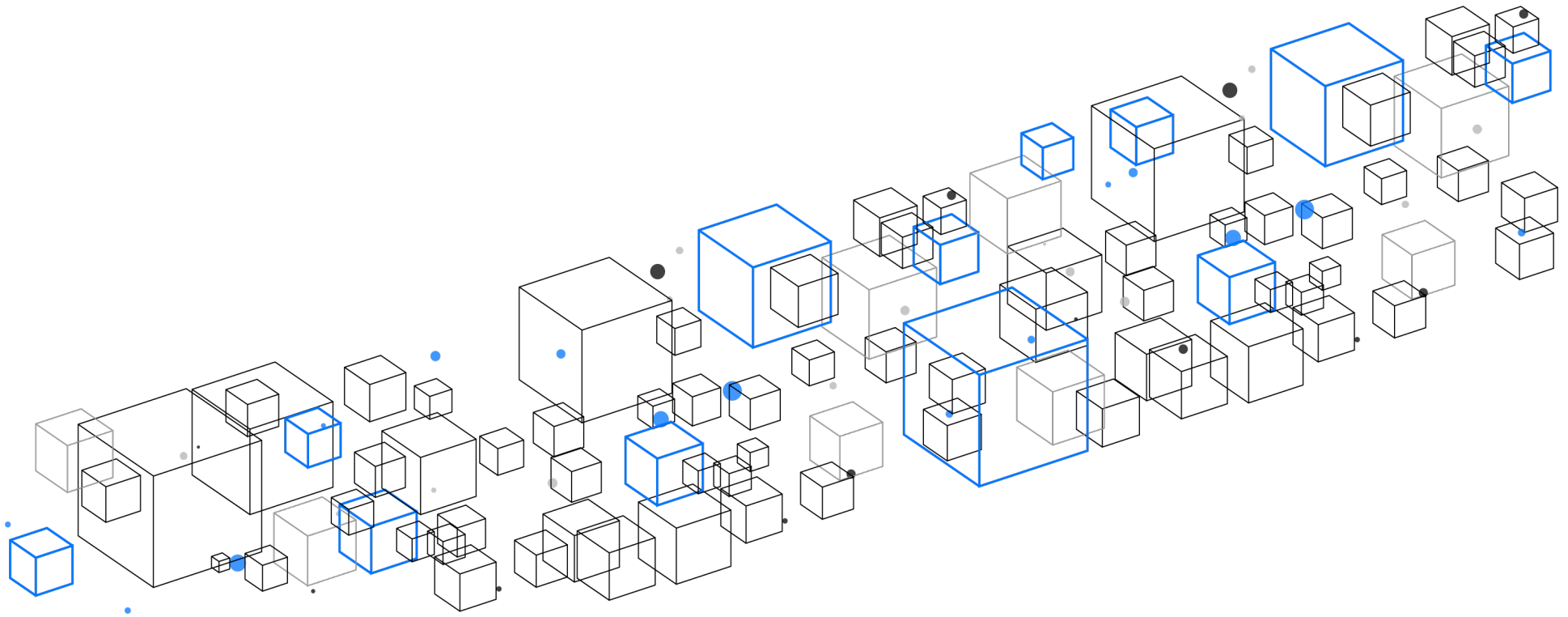
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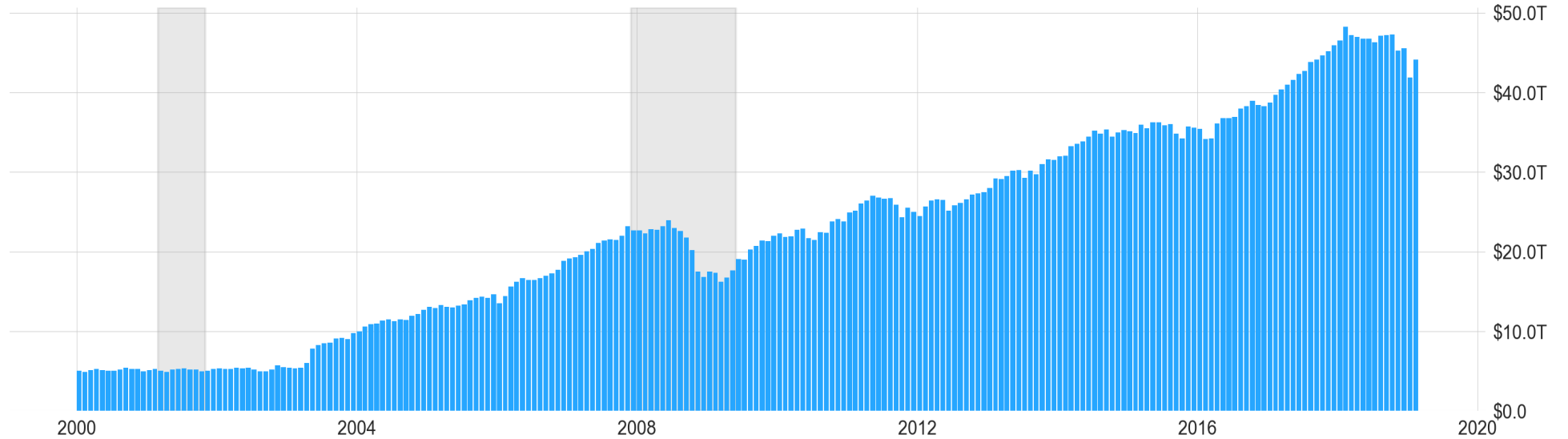
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Global Asset Distribution

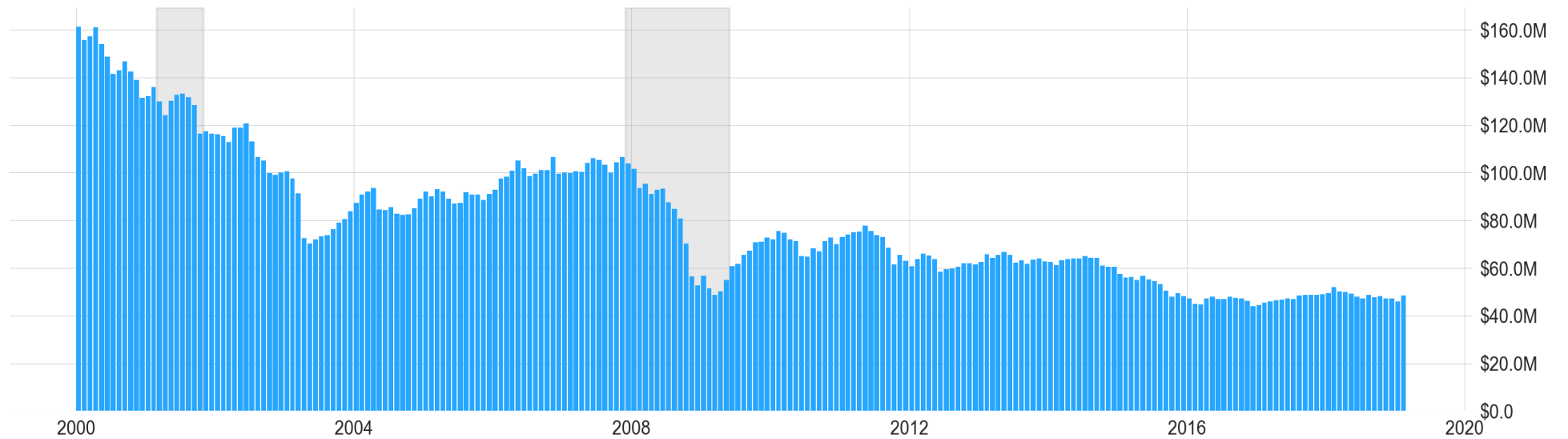


Total Global Assets

Total Global Assets (USD)

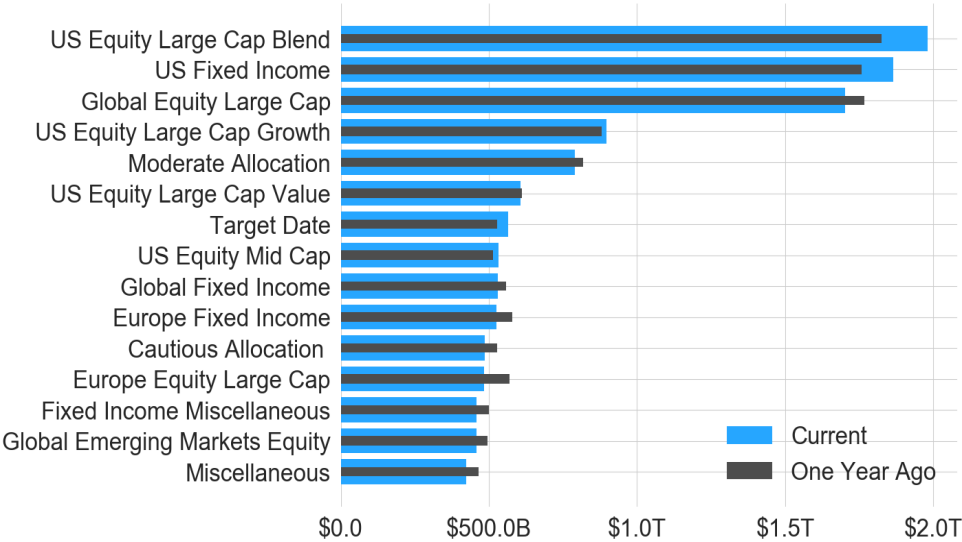


Median Fund Assets (USD)

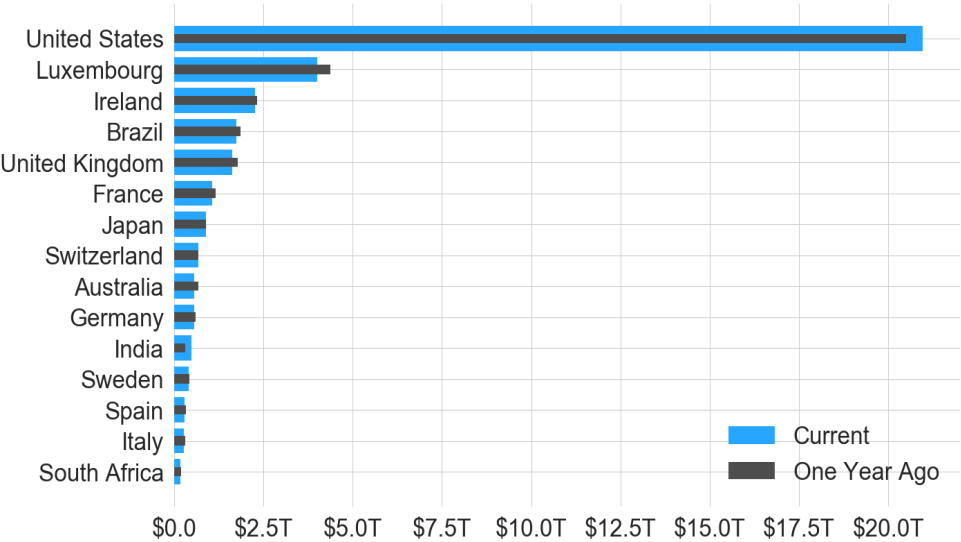


Global Assets Breakdown

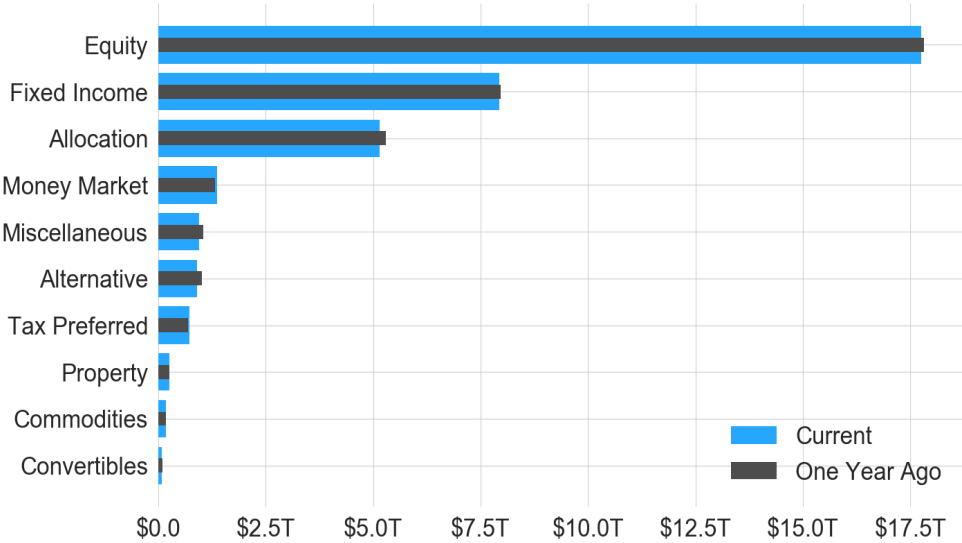
Top 15 Categories by Assets (USD)



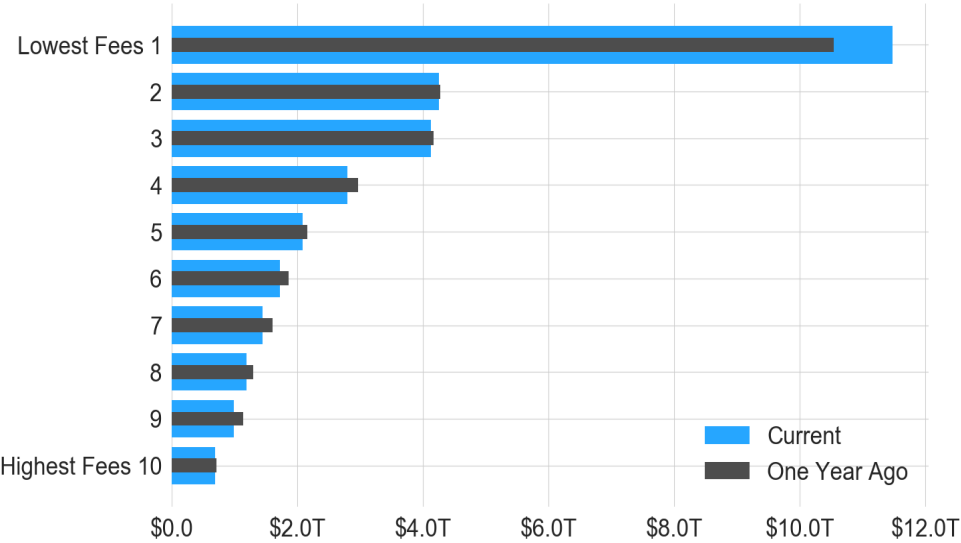
Top 15 Countries by Assets (USD)



Assets by Asset Class (USD)

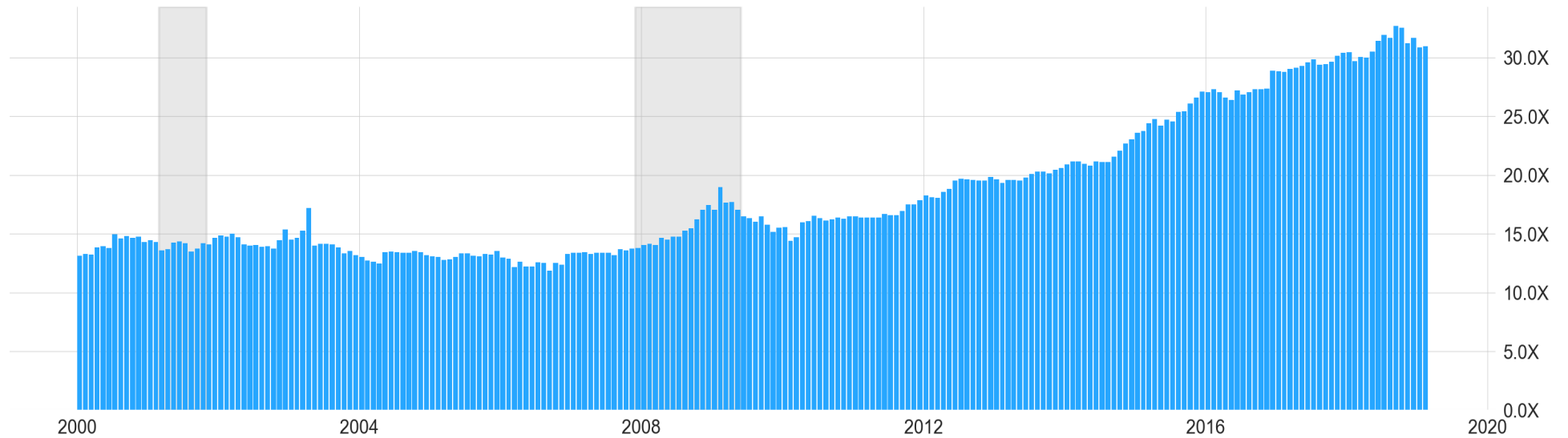


Assets by Fee Decile (USD)

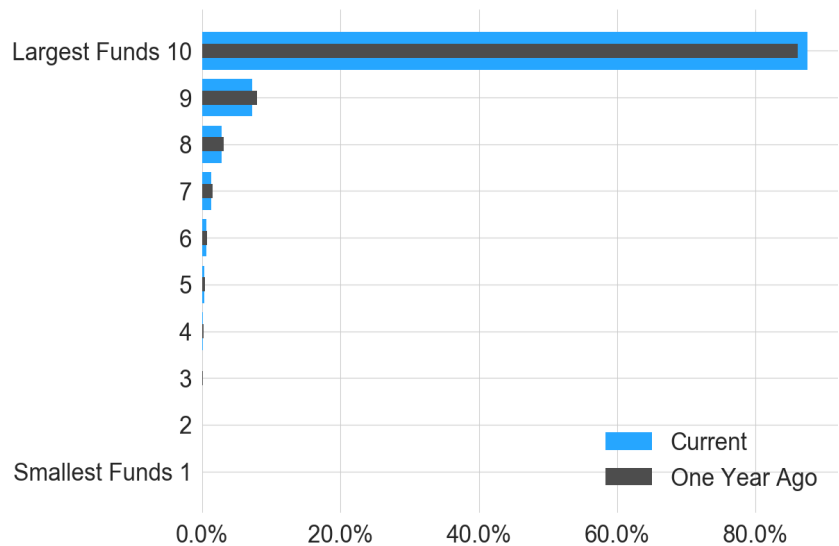


Asset Concentration

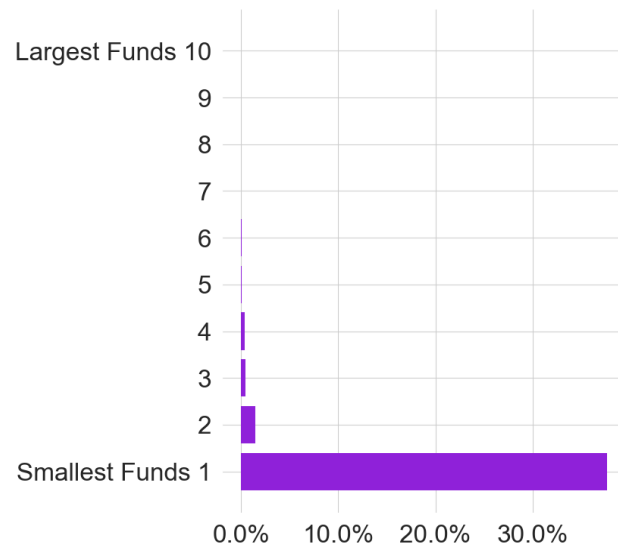
Ratio of Assets in Largest 1% of Funds to Bottom 50% of Funds



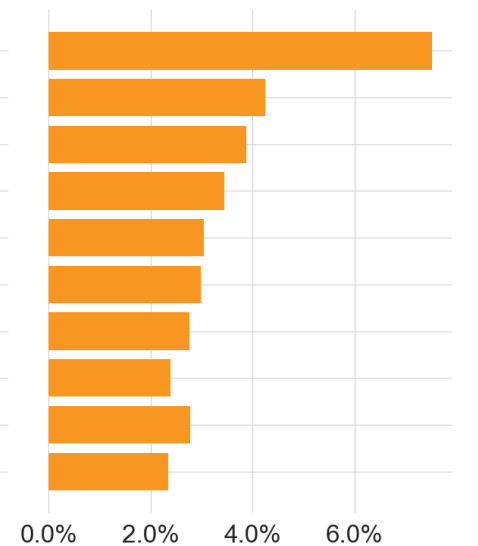
Percent of Assets by AUM Decile



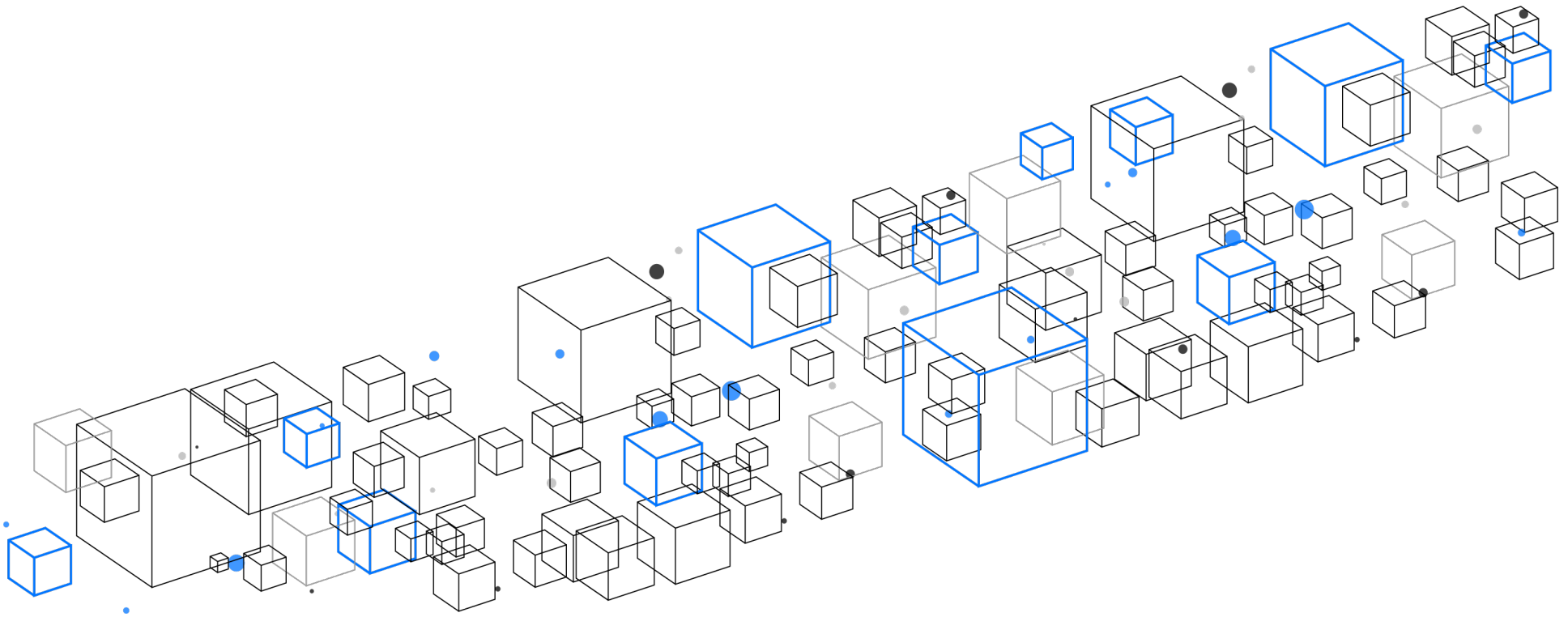
Organic Growth by AUM Decile



Return Growth by AUM Decile

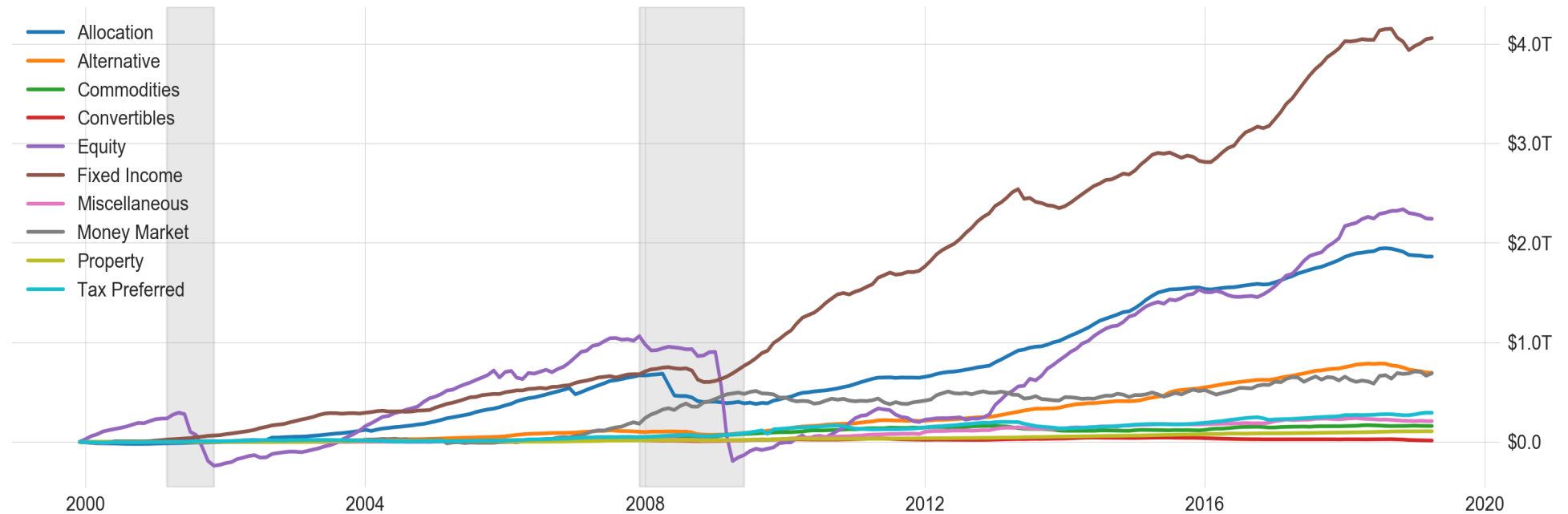


Asset Flows

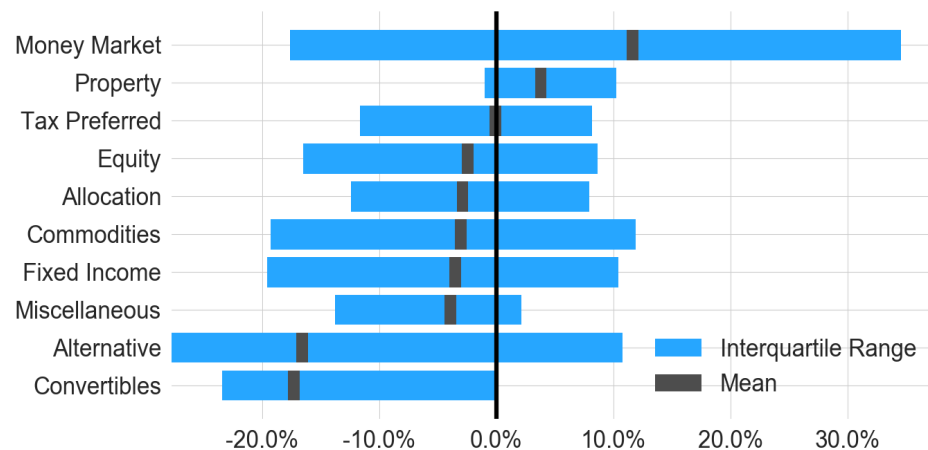


Asset Flows by Asset Class

Cumulative Flows by Asset Class (USD)



Flows to Asset Class TTM

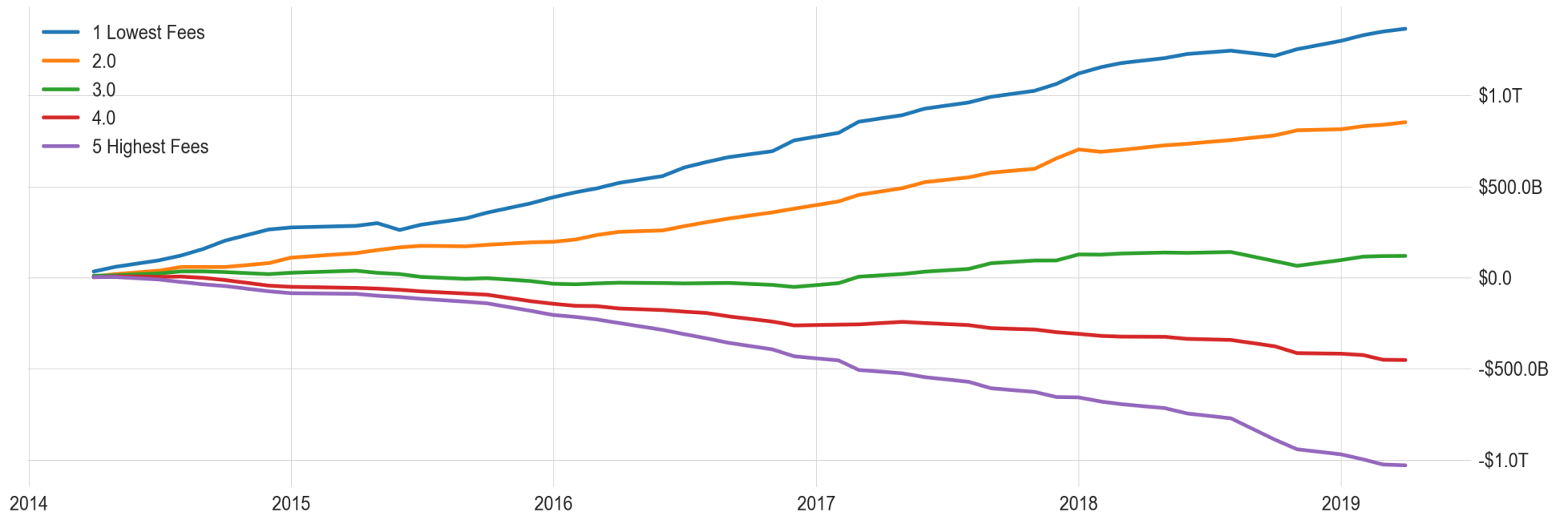


Flows Among Asset Classes TTM

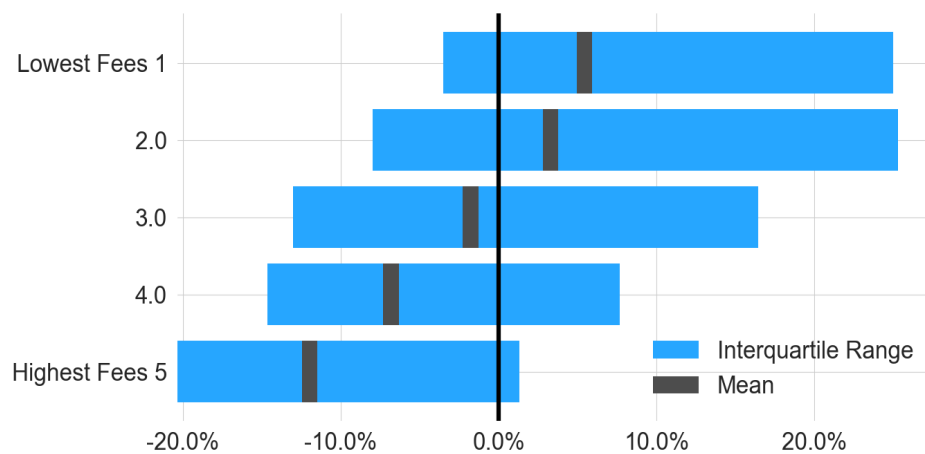
Source Asset Class	Sink Asset Class									
	Allo.	Alte.	Comm.	Conv.	Equi.	Fixe.	Misc.	Mone.	Prop.	Tax .
Allocation	\$0.0	-\$10.8B	\$258.5M	\$316.1M	-\$23.9B	\$4.4B	-\$1.3B	\$9.0B	\$643.2M	\$77.3M
Alternative	\$10.8B	\$0.0	\$923.0M	\$1.2B	\$2.0B	\$11.2B	\$533.8M	\$6.0B	\$69.2M	\$1.5B
Commodities	\$258.5M	\$923.0M	\$0.0	\$513.7M	\$623.9M	\$1.3B	\$72.9M	\$944.7M	\$1.1B	\$81.3M
Convertibles	\$316.1M	-\$1.2B	\$513.7M	\$0.0	-\$1.3B	\$457.0M	\$309.1M	\$10.1B	\$205.0M	\$113.9M
Equity	-\$23.9B	-\$2.0B	\$623.9M	\$1.3B	\$0.0	\$10.7B	\$1.7B	\$4.1B	\$574.0M	\$1.3B
Fixed Income	-\$4.4B	-\$11.2B	-\$1.3B	\$457.0M	-\$10.7B	\$0.0	-\$2.5B	\$18.6B	\$204.0M	\$8.7B
Miscellaneous	\$1.3B	\$533.8M	\$72.9M	\$309.1M	-\$1.7B	\$2.5B	\$0.0	\$4.2B	\$0.6M	
Money Market	-\$9.0B	-\$6.0B	\$944.7M	-\$10.1B	-\$4.1B	-\$18.6B	-\$4.2B	\$0.0	\$645.1M	
Property	\$643.2M	\$69.2M	-\$1.1B	\$205.0M	\$574.0M	\$204.0M	-\$9.8M	\$645.1M	\$0.0	
Tax Preferred	-\$77.3M	-\$1.5B	-\$81.4M	\$113.9M	-\$1.3B	-\$8.7B				\$0.0

Asset Flows by Fee Quintile

Cumulative Flows by Fee Decile (USD)



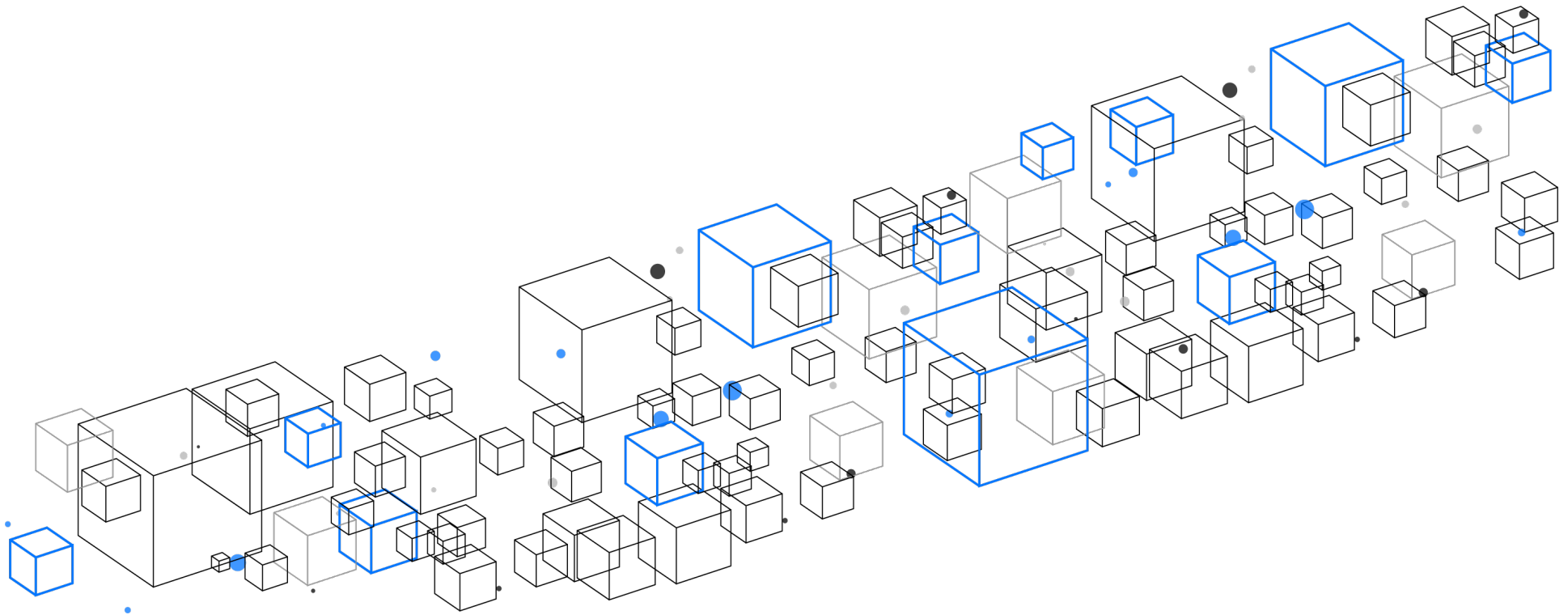
Flows to Fee Quintile TTM



Flows Among Fee Quintiles TTM

	Sink Fee Quintile				
	1	2	3	4	5
1	\$0.0	-\$308.2B	-\$232.9B	-\$156.6B	-\$31.3B
2	\$308.2B	\$0.0	-\$193.2B	-\$131.0B	-\$71.3B
3	\$232.9B	\$193.2B	\$0.0	-\$161.1B	-\$75.0B
4	\$156.6B	\$131.0B	\$161.1B	\$0.0	-\$77.8B
5	\$31.3B	\$71.3B	\$75.0B	\$77.8B	\$0.0

Market Share



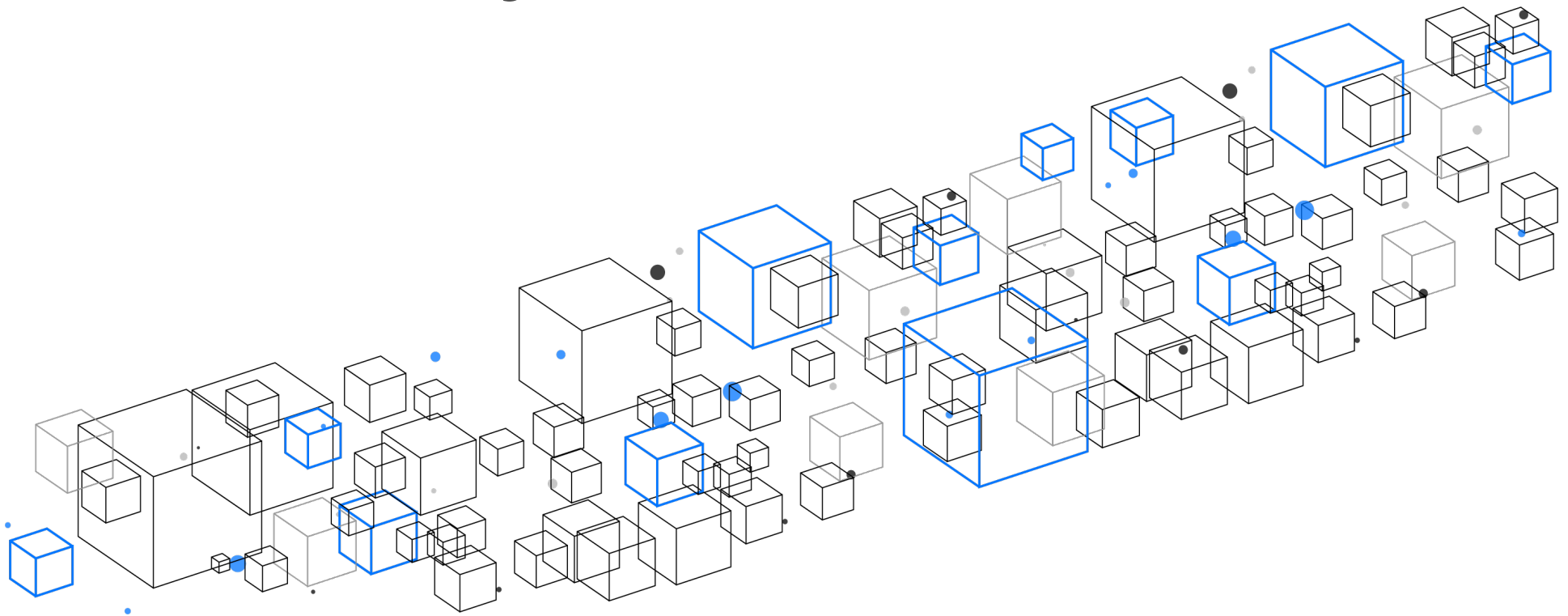
Asset Market Share by Fund Family

	Market Share % (Rank)	Forecast Market Share % (Rank)	(continued)	Market Share % (Rank)	Forecast Market Share % (Rank)
Vanguard	15.2 (1)	17.7 (1)	Columbia Threadneedle Investments	0.4 (42)	0.5 (36)
Fidelity	5.6 (2)	6.5 (2)	Pictet	0.4 (41)	0.5 (37)
iShares	5.6 (3)	6.5 (3)	Legg Mason	0.5 (33)	0.5 (38)
American Funds	5.0 (4)	5.8 (4)	HSBC	0.4 (45)	0.4 (39)
T. Rowe Price	2.3 (6)	2.6 (5)	Nordea	0.4 (46)	0.4 (40)
State Street	2.1 (8)	2.5 (6)	American Century	0.4 (48)	0.4 (41)
BlackRock	2.4 (5)	2.5 (7)	Swisscanto	0.3 (50)	0.4 (42)
JPMorgan	2.2 (7)	2.4 (8)	PGIM Funds	0.3 (56)	0.4 (43)
PIMCO	1.6 (9)	1.8 (9)	Hartford Investments	0.3 (51)	0.4 (44)
Dimensional	1.3 (13)	1.6 (10)	Deka	0.3 (53)	0.4 (45)
Franklin Templeton	1.4 (12)	1.5 (11)	SEI	0.3 (55)	0.3 (46)
Invesco	1.4 (11)	1.4 (12)	Eurizon	0.5 (40)	0.3 (47)
UBS	1.1 (14)	1.2 (13)	Xtrackers	0.3 (60)	0.3 (48)
Amundi	1.5 (10)	1.1 (14)	DoubleLine	0.2 (71)	0.3 (49)
MFS	0.8 (18)	0.9 (15)	Swedbank	0.3 (57)	0.3 (50)
Natixis	0.9 (17)	0.9 (16)	Morgan Stanley	0.3 (62)	0.3 (51)
Schwab	0.7 (25)	0.8 (17)	Nomura	0.7 (22)	0.3 (52)
DWS	0.7 (19)	0.8 (18)	Nuveen	0.2 (70)	0.3 (53)
Credit Suisse	0.7 (20)	0.7 (19)	Legal & General	0.3 (54)	0.3 (54)
AXA	0.7 (21)	0.7 (20)	BNY Mellon	0.3 (59)	0.3 (55)
Jackson National	0.6 (26)	0.7 (21)	Voya	0.3 (64)	0.3 (56)
Dodge & Cox	0.6 (27)	0.7 (22)	Aviva	0.3 (58)	0.3 (57)
Oppenheimer	0.6 (28)	0.6 (23)	Wells Fargo	0.3 (65)	0.3 (58)
TIAA	0.5 (31)	0.6 (24)	First Trust	0.2 (76)	0.3 (59)
Janus Henderson	0.6 (30)	0.6 (25)	M&G	0.3 (63)	0.3 (60)
Allianz Global Investors	0.5 (34)	0.6 (26)	Eaton Vance	0.2 (66)	0.3 (61)
Schroders	0.6 (29)	0.6 (27)	Lyxor	0.2 (68)	0.3 (62)
Union Investment	0.5 (32)	0.6 (28)	Metropolitan West	0.2 (74)	0.3 (63)
Principal	0.5 (38)	0.6 (29)	Federated	0.2 (72)	0.3 (64)
John Hancock	0.5 (36)	0.5 (30)	Bridge Builder	0.2 (85)	0.2 (65)
Goldman Sachs	0.5 (37)	0.5 (31)	GAM	0.2 (73)	0.2 (66)
AllianceBernstein	0.5 (39)	0.5 (32)	Putnam	0.2 (77)	0.2 (67)
Lord Abbett	0.4 (44)	0.5 (33)	USAA	0.2 (78)	0.2 (68)
BNP Paribas	0.7 (23)	0.5 (34)	NN IP	0.2 (67)	0.2 (69)
Aberdeen Asset Management	0.4 (43)	0.5 (35)	Robeco	0.2 (69)	0.2 (70)

Fee Market Share by Fund Family

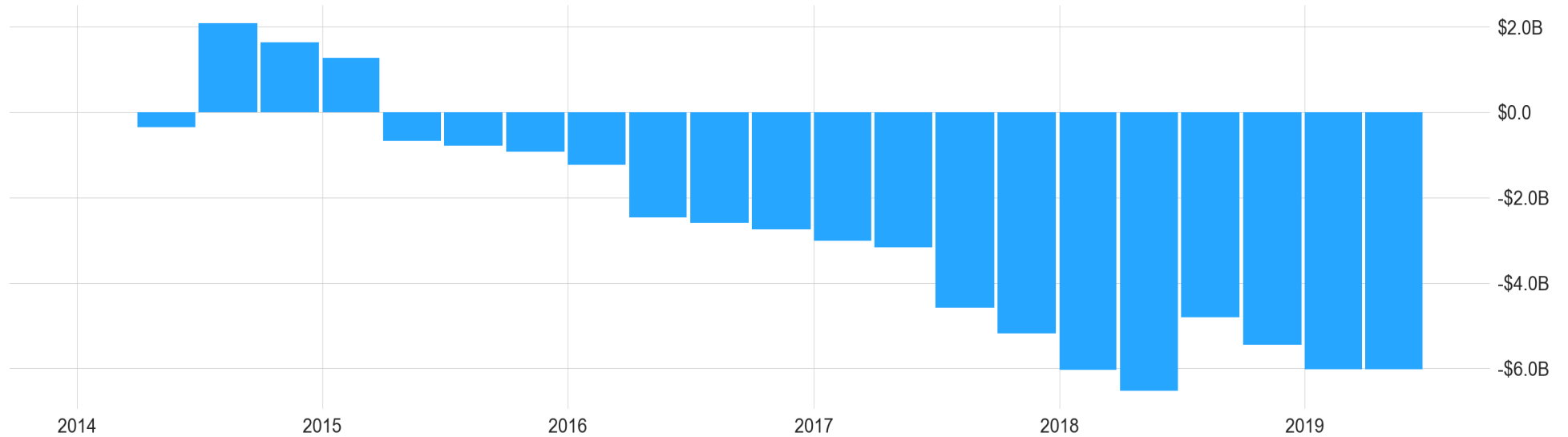
	Market Share % (Rank)	Forecast Market Share % (Rank)	(continued)	Market Share % (Rank)	Forecast Market Share % (Rank)
American Funds	5.7 (1)	5.8 (1)	Lord Abbett	0.5 (39)	0.6 (36)
Fidelity	4.8 (2)	4.9 (2)	Credit Suisse	0.6 (36)	0.5 (37)
T. Rowe Price	2.9 (3)	3.0 (3)	Hartford Investments	0.5 (40)	0.5 (38)
Vanguard	2.8 (4)	3.0 (4)	Investec	0.5 (38)	0.5 (39)
BlackRock	2.7 (5)	2.7 (5)	BNP Paribas	0.5 (37)	0.5 (40)
JPMorgan	2.6 (6)	2.7 (6)	Aberdeen Asset Management	0.5 (41)	0.5 (41)
PIMCO	2.4 (8)	2.5 (7)	BNY Mellon	0.5 (43)	0.5 (42)
Franklin Templeton	2.6 (7)	2.5 (8)	American Century	0.5 (42)	0.5 (43)
iShares	2.3 (9)	2.5 (9)	Swedbank	0.4 (44)	0.4 (44)
Invesco	1.5 (11)	1.4 (10)	PGIM Funds	0.4 (48)	0.4 (45)
Amundi	1.5 (10)	1.4 (11)	Nuveen	0.4 (55)	0.4 (46)
MFS	1.3 (13)	1.4 (12)	Aditya Birla Sun Life	0.4 (51)	0.4 (47)
DWS	1.3 (12)	1.3 (13)	Eaton Vance	0.4 (47)	0.4 (48)
Allianz Global Investors	1.2 (16)	1.2 (14)	Eurizon	0.4 (45)	0.4 (49)
Natixis	1.3 (14)	1.2 (15)	Wells Fargo	0.4 (46)	0.4 (50)
Schroders	1.2 (15)	1.2 (16)	HDFC	0.3 (57)	0.4 (51)
Union Investment	1.1 (18)	1.2 (17)	First Eagle	0.4 (49)	0.4 (52)
AXA	1.2 (17)	1.1 (18)	GAM	0.4 (50)	0.4 (53)
Oppenheimer	1.1 (19)	1.1 (19)	Baillie Gifford	0.3 (59)	0.4 (54)
UBS	1.0 (20)	1.0 (20)	HSBC	0.4 (54)	0.4 (55)
Jackson National	1.0 (22)	1.0 (21)	Voya	0.4 (52)	0.4 (56)
Janus Henderson	1.0 (21)	1.0 (22)	Mediolanum	0.4 (53)	0.3 (57)
Dimensional	0.8 (24)	0.9 (23)	ICICI Prudential	0.3 (63)	0.3 (58)
AllianceBernstein	0.8 (23)	0.9 (24)	State Bank of India	0.3 (73)	0.3 (59)
John Hancock	0.8 (25)	0.7 (25)	Federated	0.3 (62)	0.3 (60)
State Street	0.7 (30)	0.7 (26)	Handelsbanken	0.3 (68)	0.3 (61)
Principal	0.7 (26)	0.7 (27)	Robeco	0.3 (61)	0.3 (62)
Nordea	0.7 (27)	0.7 (28)	SEI	0.3 (58)	0.3 (63)
Pictet	0.7 (28)	0.7 (29)	Putnam	0.3 (65)	0.3 (64)
Goldman Sachs	0.6 (32)	0.7 (30)	Russell Investments	0.3 (64)	0.3 (65)
Columbia Threadneedle Investments	0.7 (29)	0.7 (31)	First Trust	0.3 (82)	0.3 (66)
M&G	0.7 (31)	0.6 (32)	Neuberger Berman	0.3 (72)	0.3 (67)
Deka	0.6 (34)	0.6 (33)	SEB	0.3 (60)	0.3 (68)
Legg Mason	0.6 (33)	0.6 (34)	Vontobel	0.3 (81)	0.3 (69)
Dodge & Cox	0.6 (35)	0.6 (35)	LGT	0.3 (66)	0.3 (70)

Fund Activity

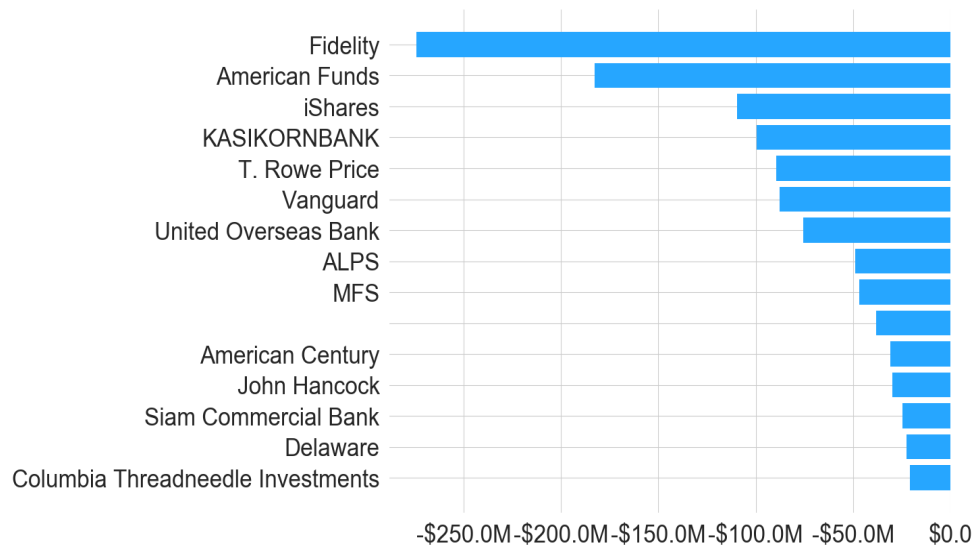


Fund Pricing Changes

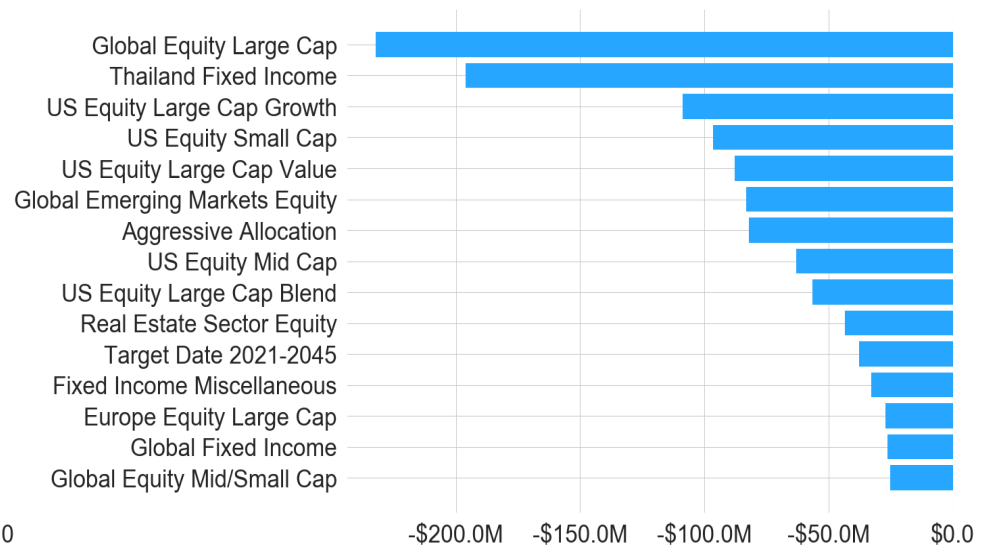
Cumulative Fee Changes (USD)



Top 15 Fund Families by Fee Cuts TTM

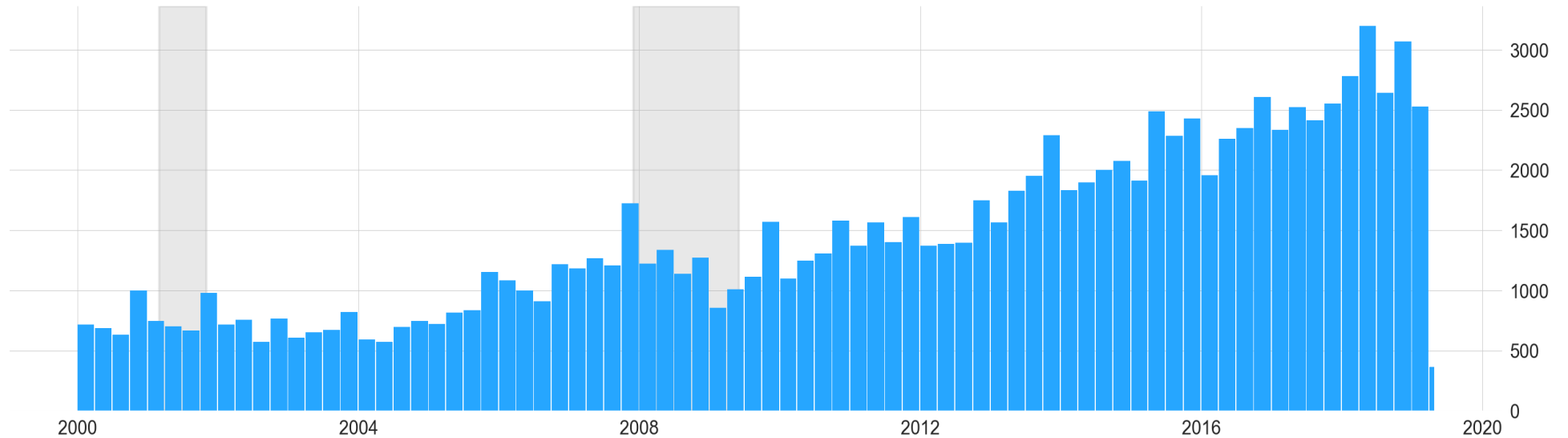


Top 15 Categories by Fee Cuts TTM

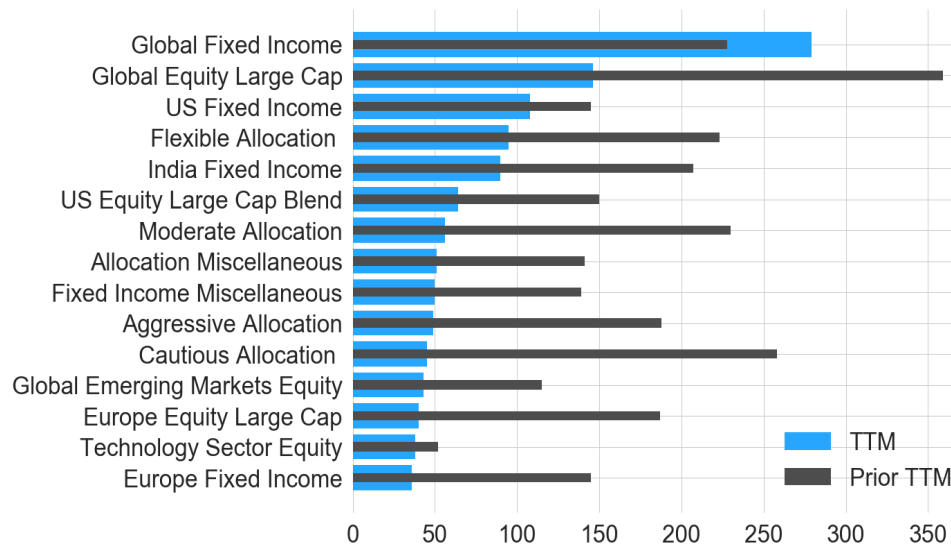


Fund Launches

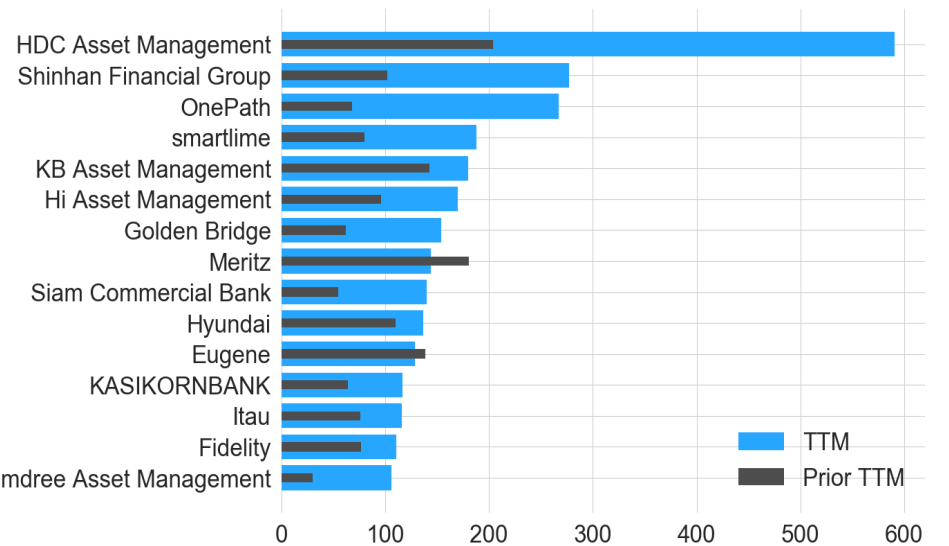
Funds Launched Per Quarter



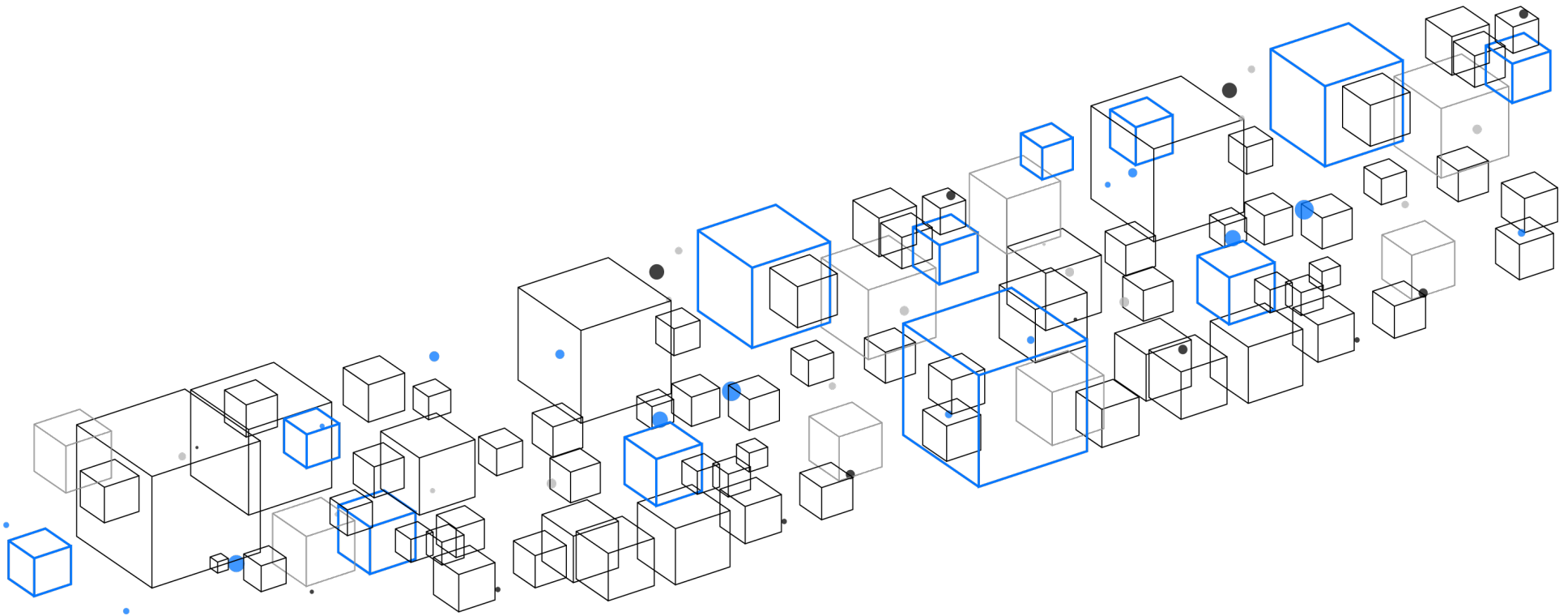
Top 15 Categories by Fund Launches



Top 15 Fund Families by Fund Launches

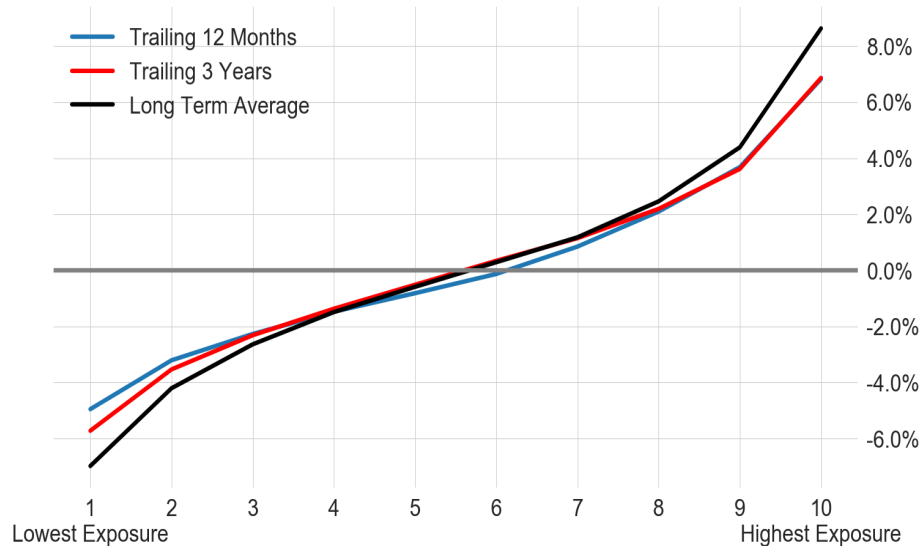


Investor Preferences

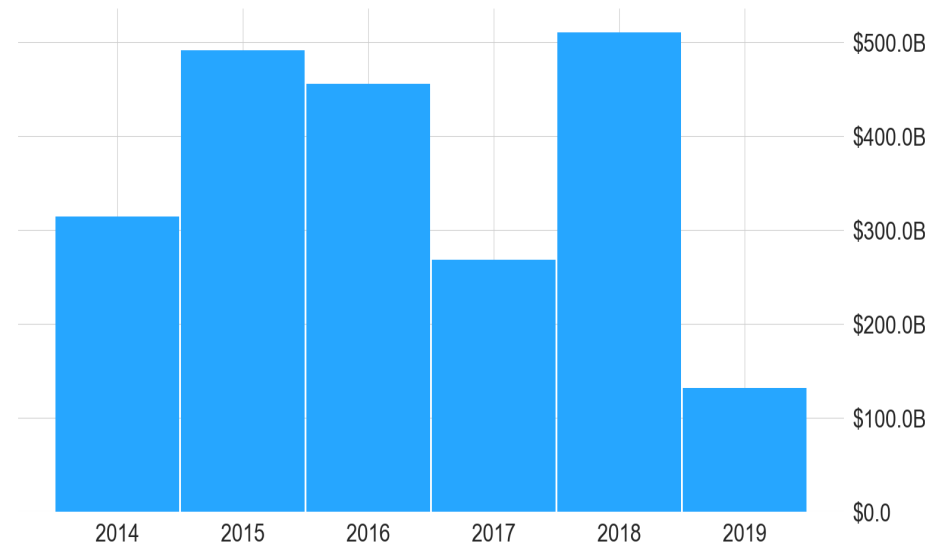


Alpha to Category

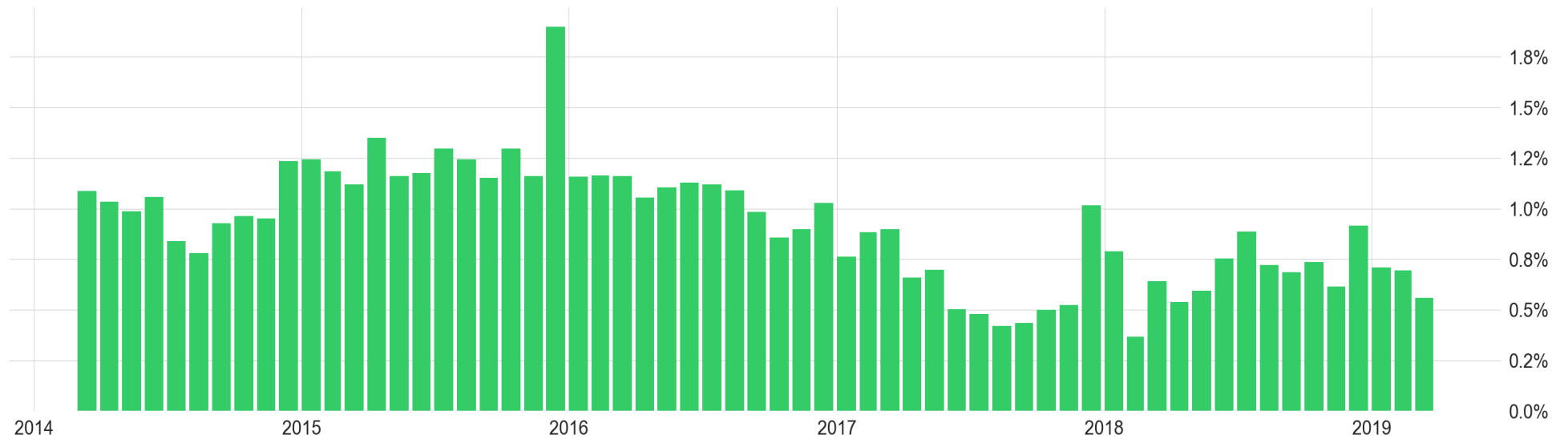
Alpha to Category (TTM) Relationship to Organic Growth



Assets Flows due to Differences in Alpha to Category (TTM)

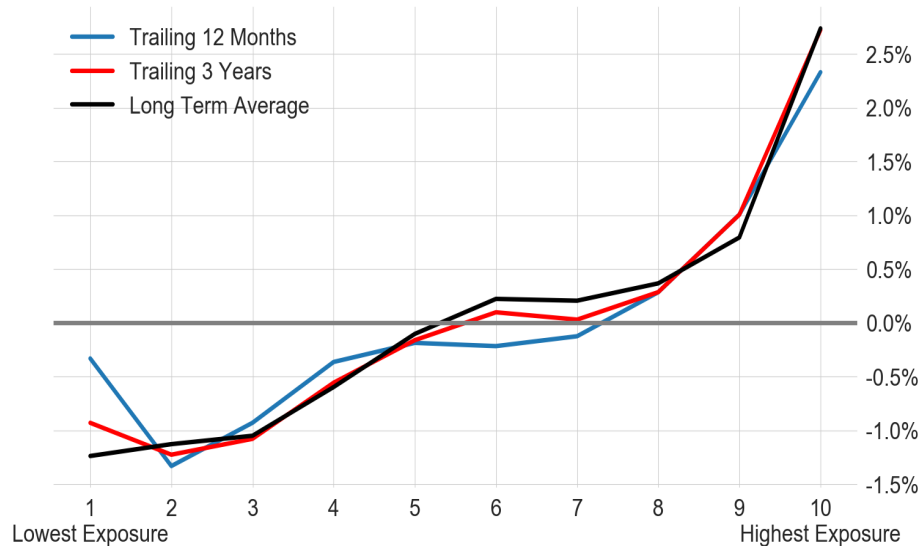


Organic Growth Differential Between Funds in the Top and Bottom Quartile of Alpha to Category (TTM)

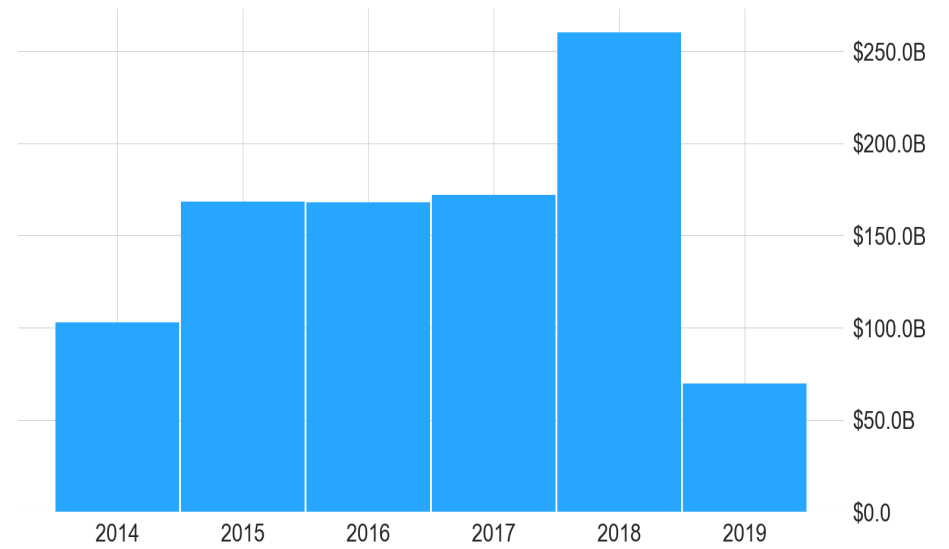


Return Volatility

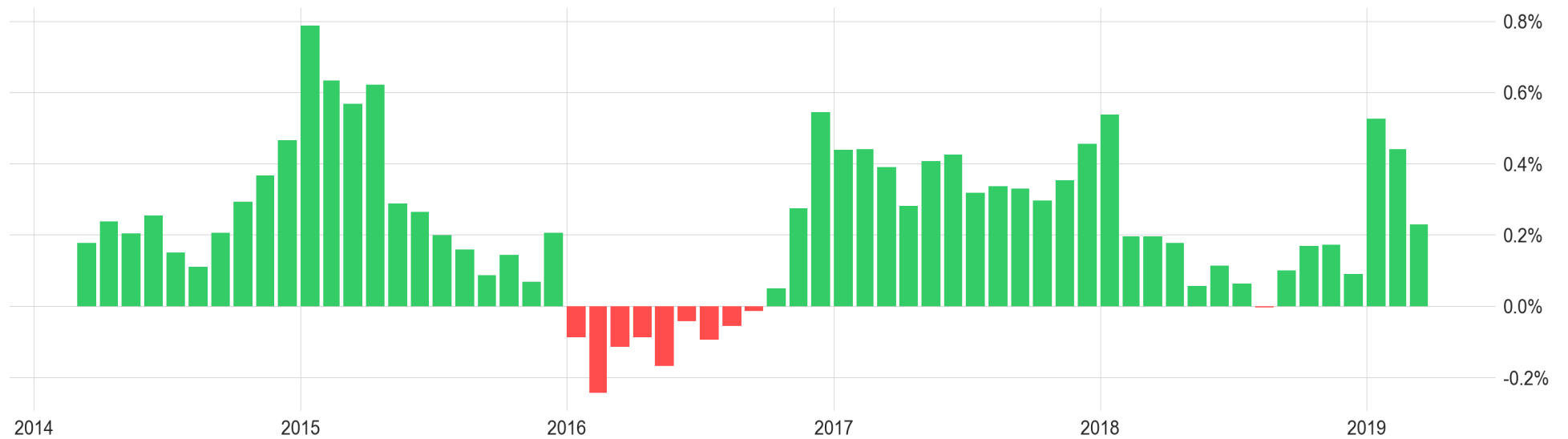
Volatility (TTM) Relationship to Organic Growth



Assets Flows due to Differences in Volatility (TTM)

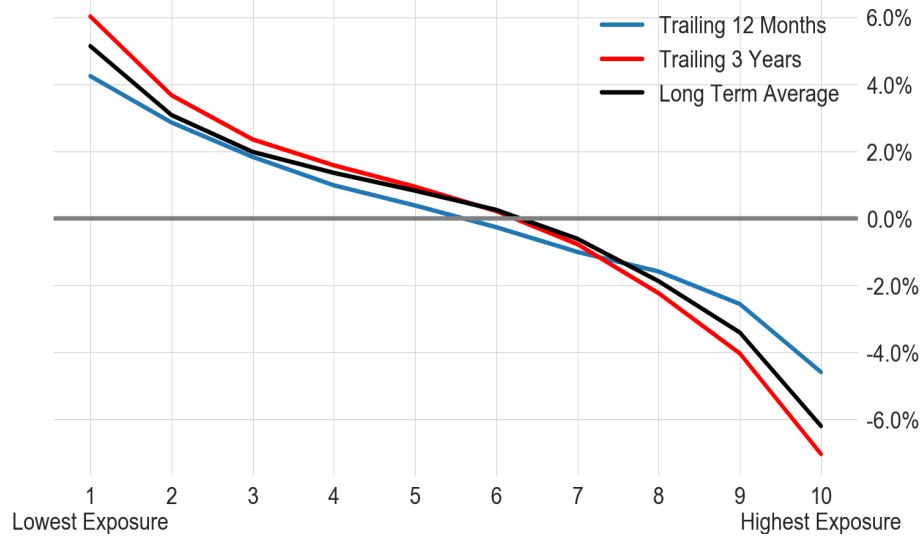


Organic Growth Differential Between Funds in the Top and Bottom Quartile of Volatility (TTM)

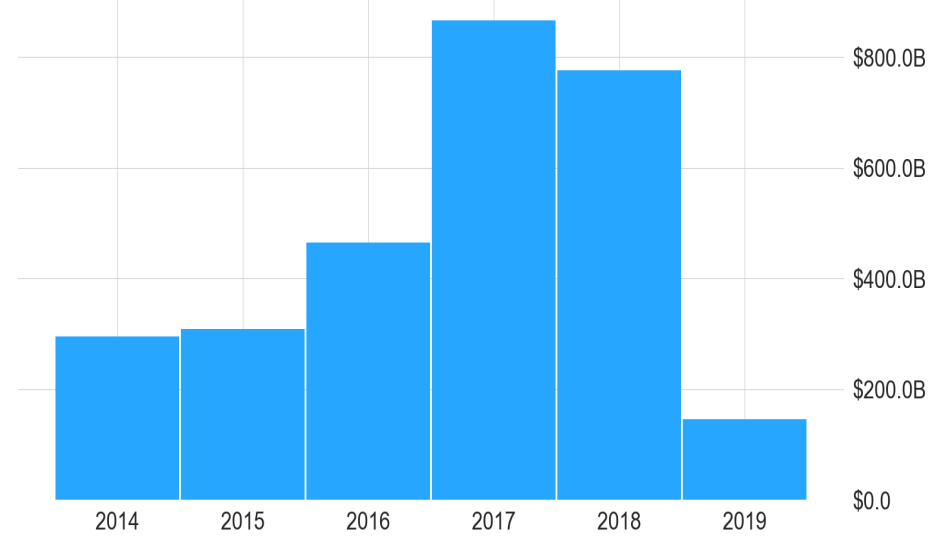


Net Expense Ratio

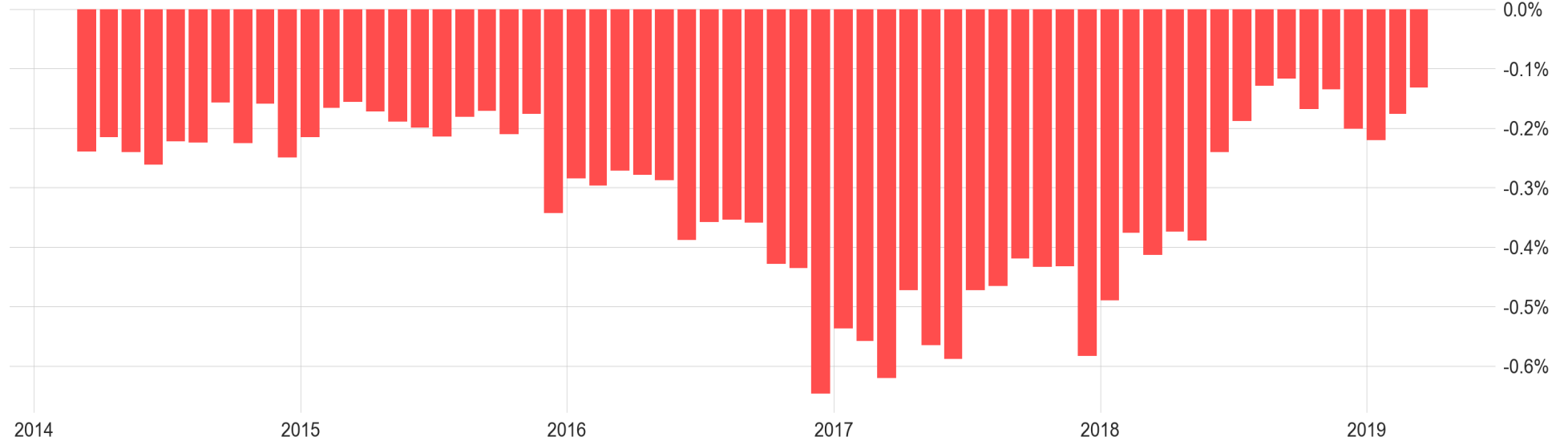
Net Expense Ratio Relationship to Organic Growth



Assets Flows due to Differences in Net Expense Ratio

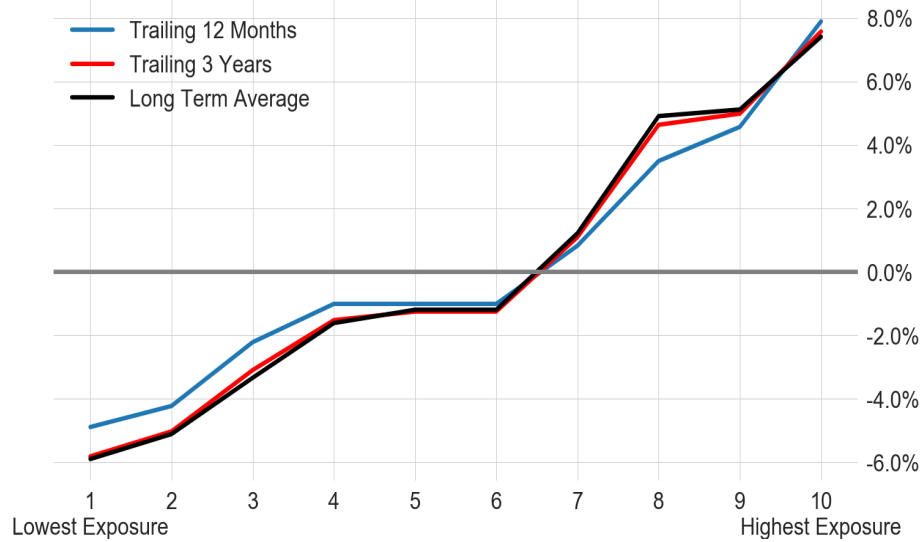


Organic Growth Differential Between Funds in the Top and Bottom Quartile of Net Expense Ratio

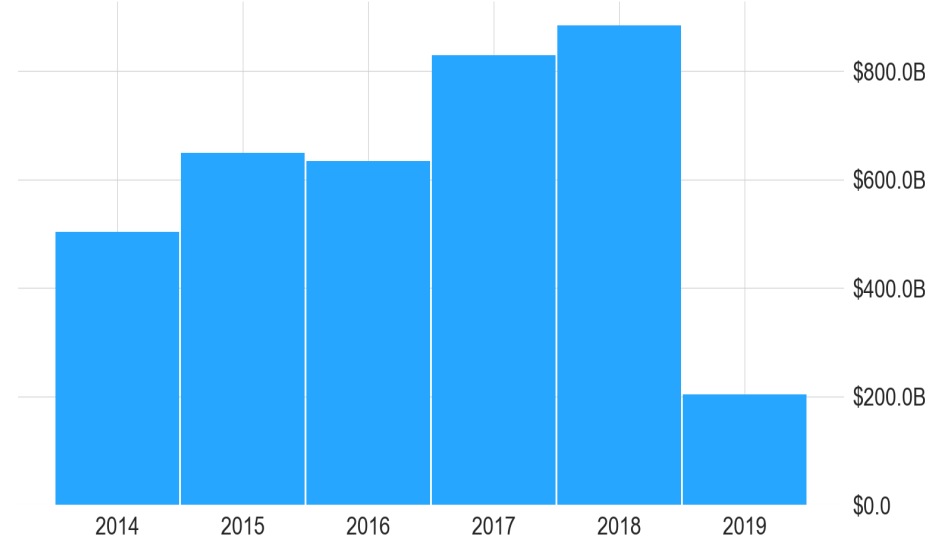


Morningstar Star Rating

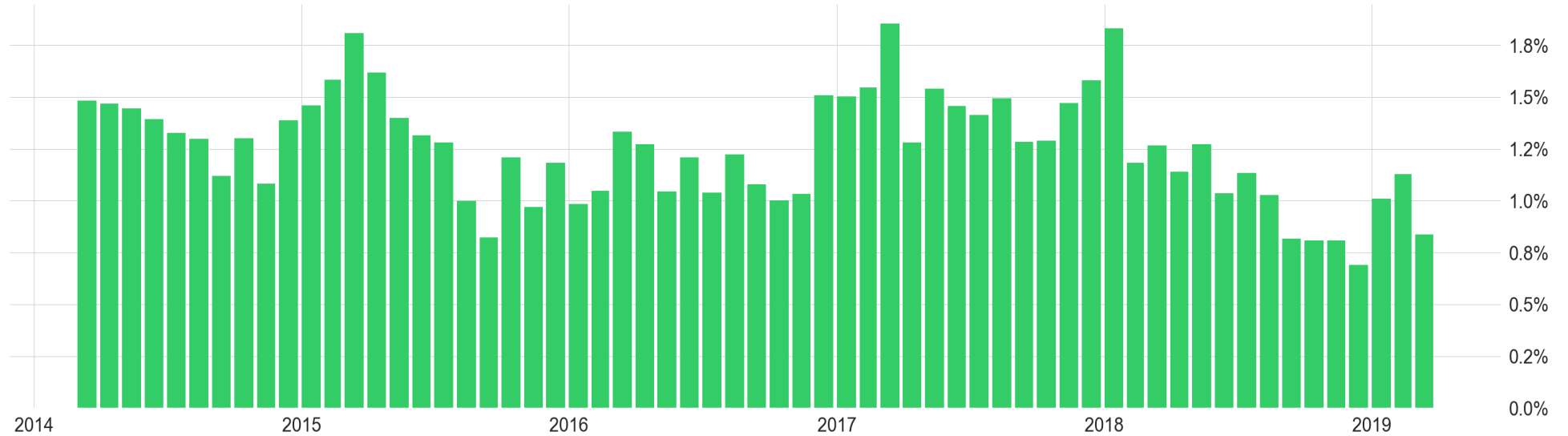
Morningstar Rating Relationship to Organic Growth



Assets Flows due to Differences in Morningstar Rating

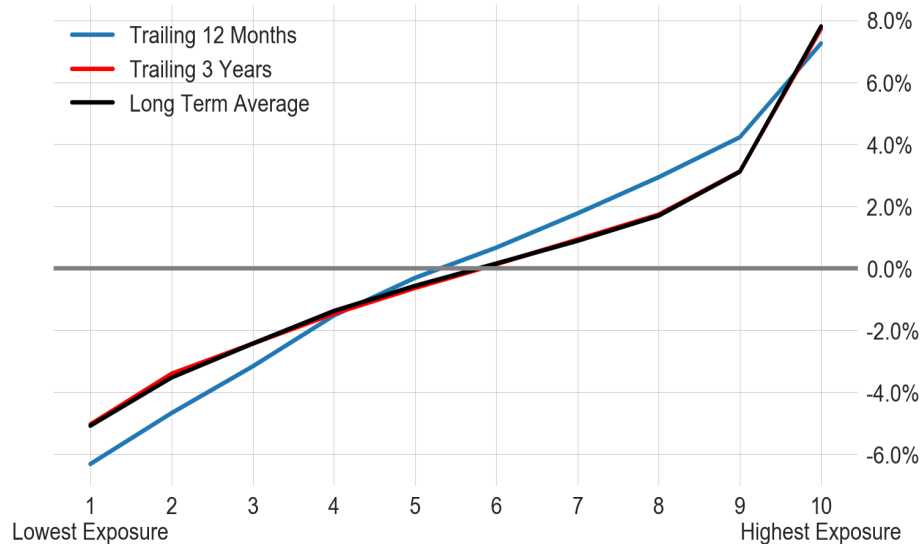


Organic Growth Differential Between Funds in the Top and Bottom Quartile of Morningstar Rating

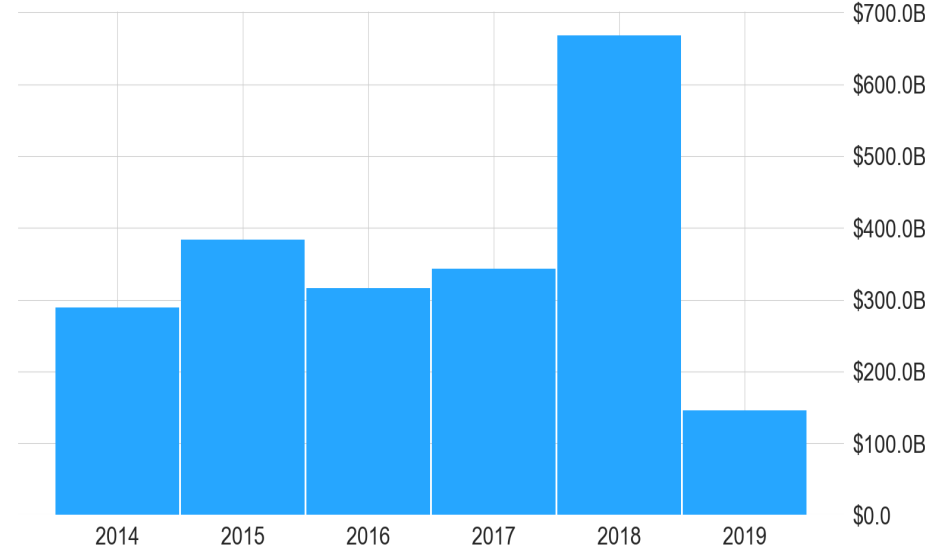


Total Return

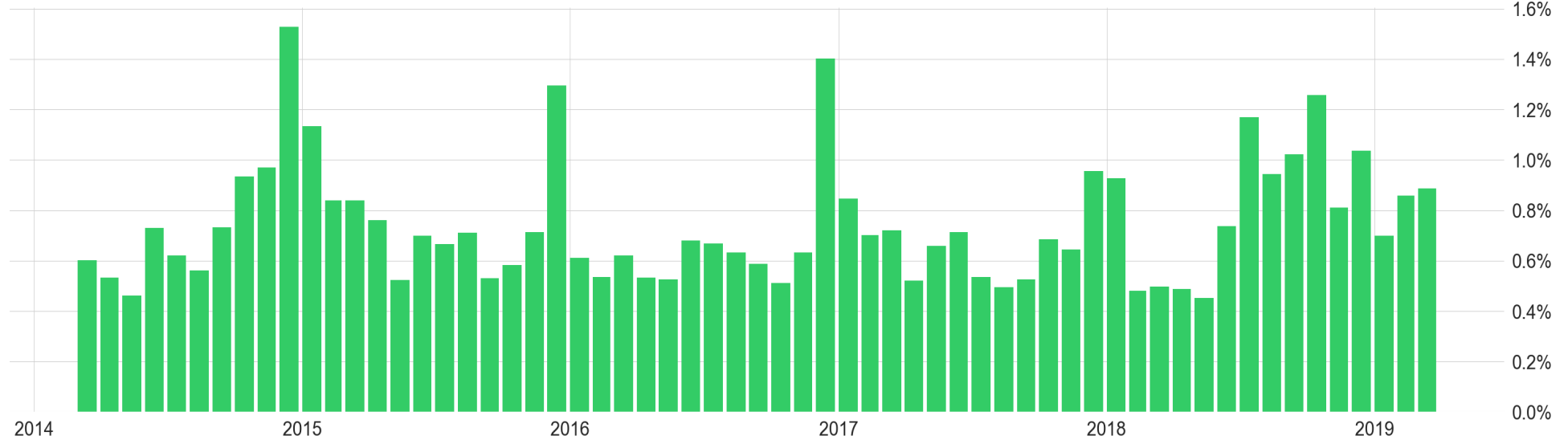
Total Return (TTM) Relationship to Organic Growth



Assets Flows due to Differences in Total Return (TTM)

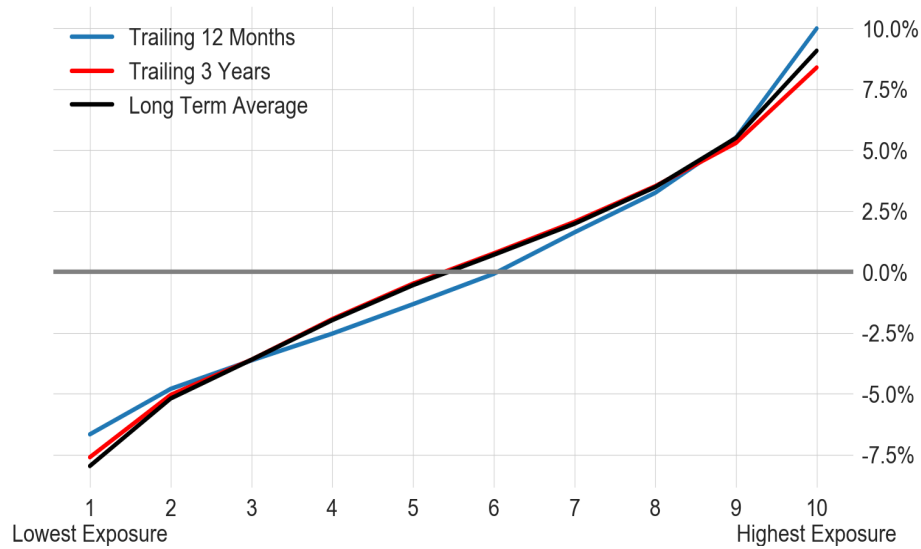


Organic Growth Differential Between Funds in the Top and Bottom Quartile of Total Return (TTM)

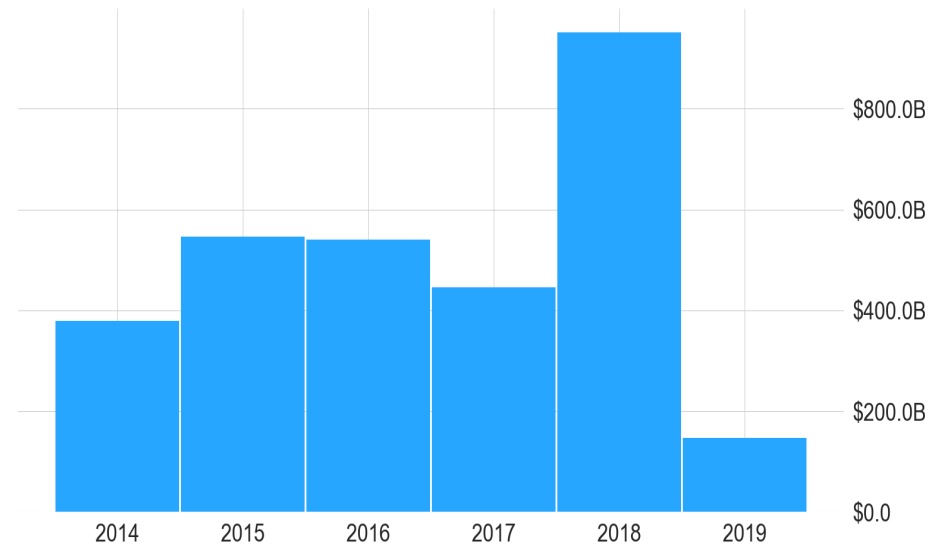


Sharpe Ratio (TTM)

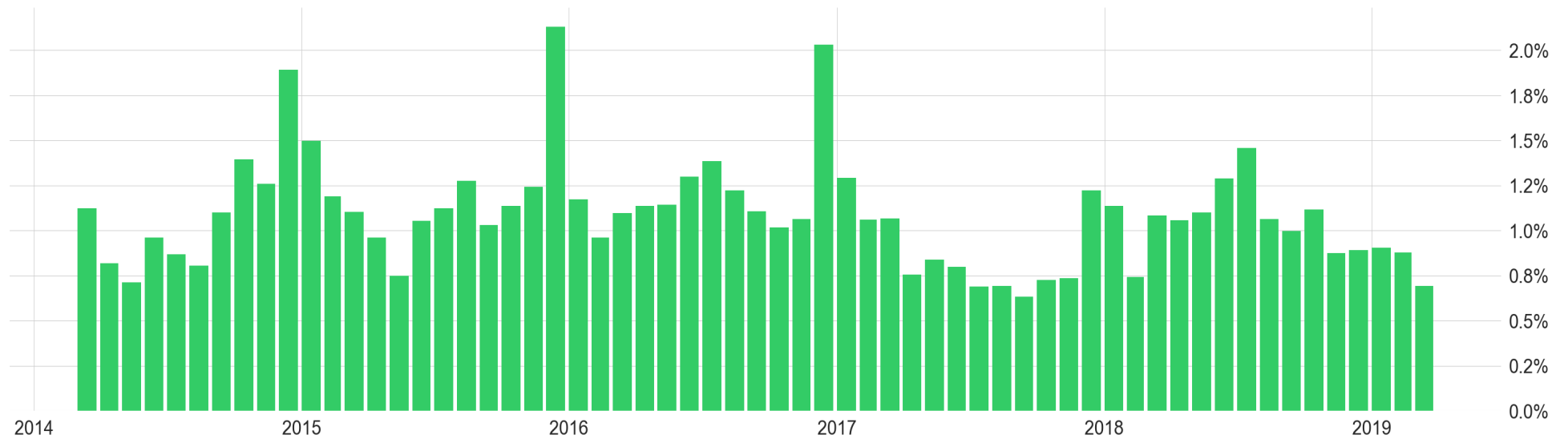
Sharpe Ratio (TTM) Relationship to Organic Growth



Assets Flows due to Differences in Sharpe Ratio (TTM)

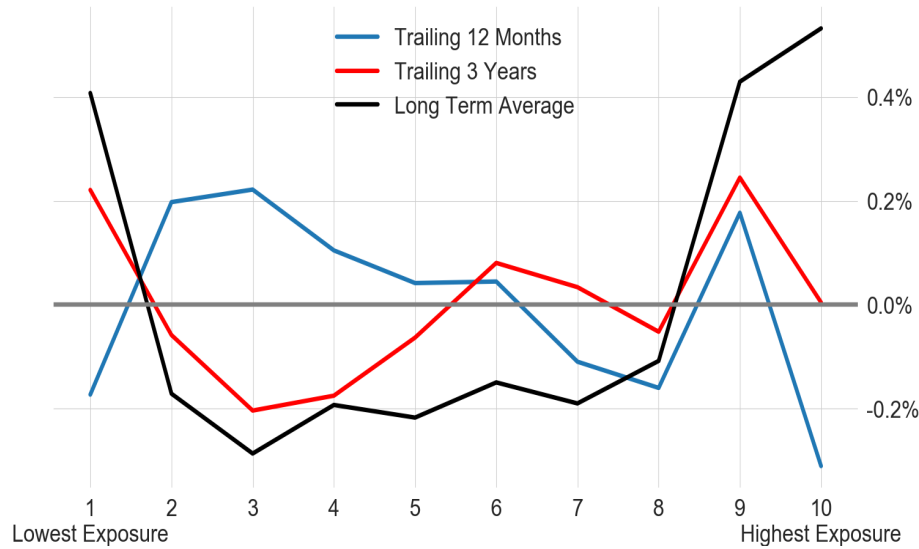


Organic Growth Differential Between Funds in the Top and Bottom Quartile of Sharpe Ratio (TTM)

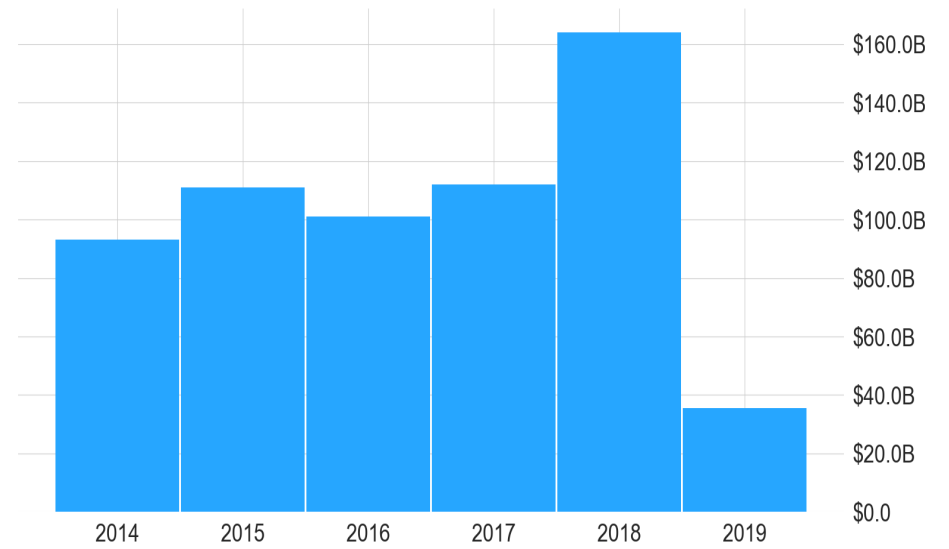


Turnover Ratio (TTM)

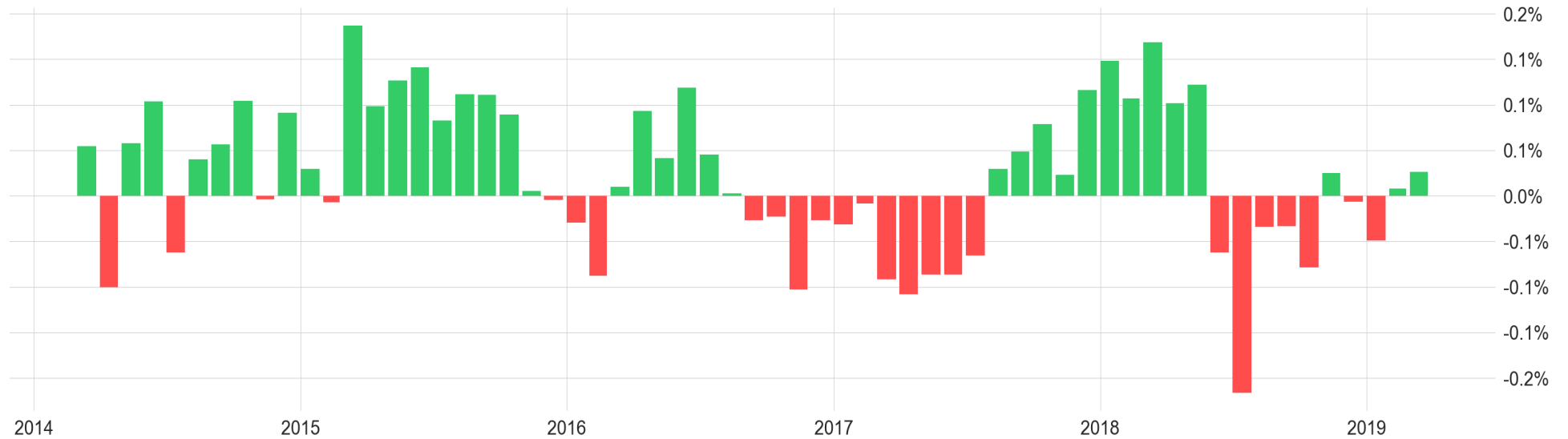
Turnover Ratio (TTM) Relationship to Organic Growth

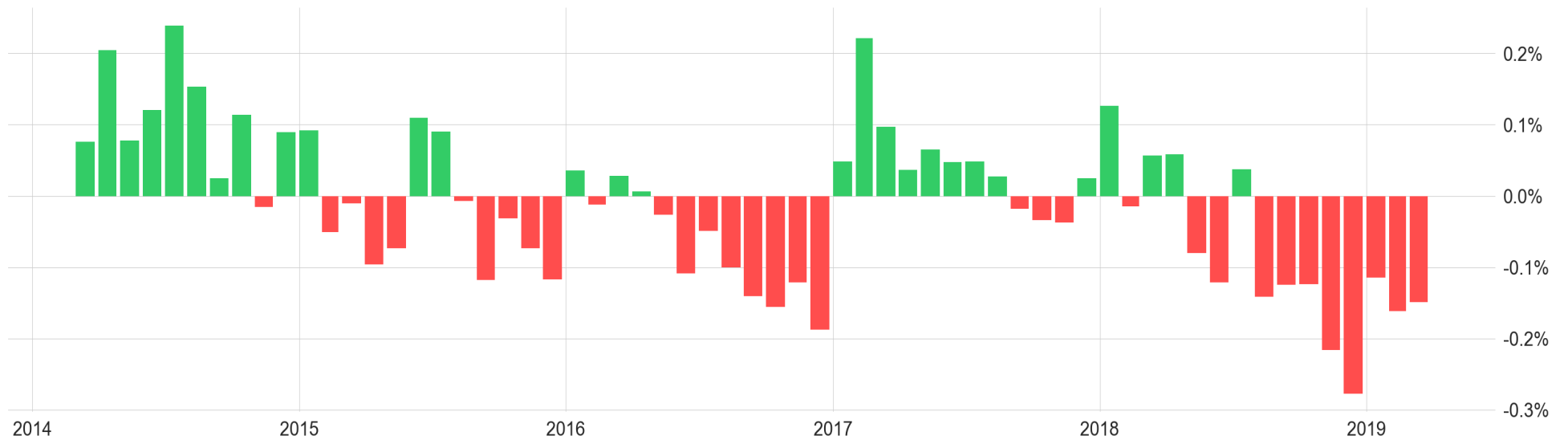
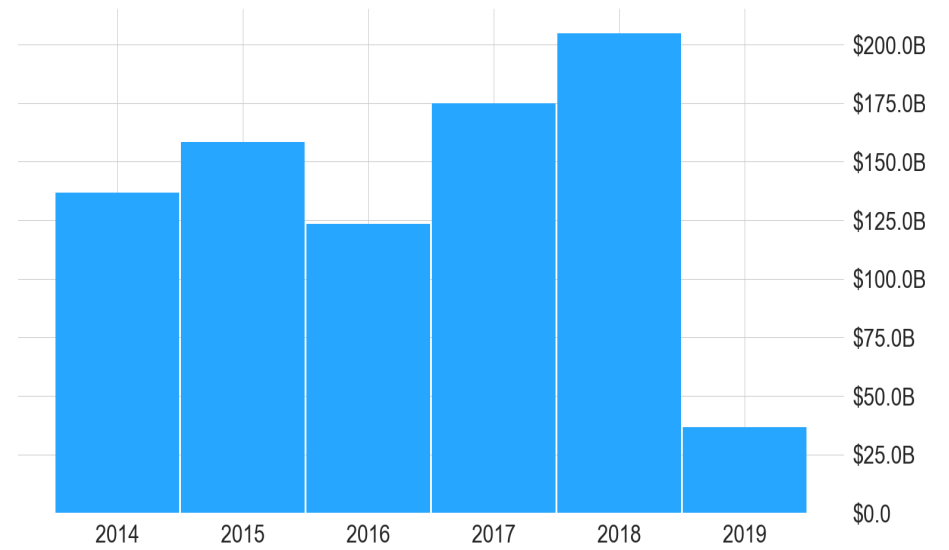
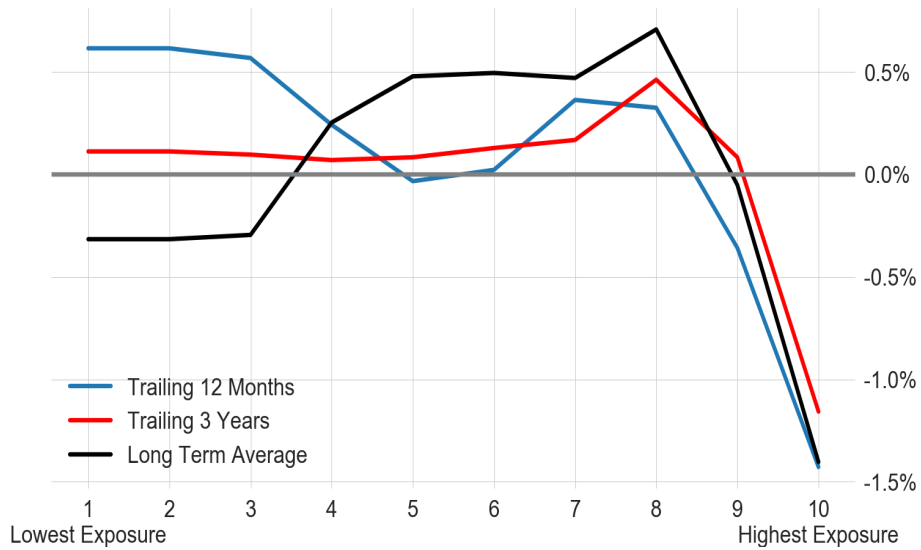


Assets Flows due to Differences in Turnover Ratio (TTM)



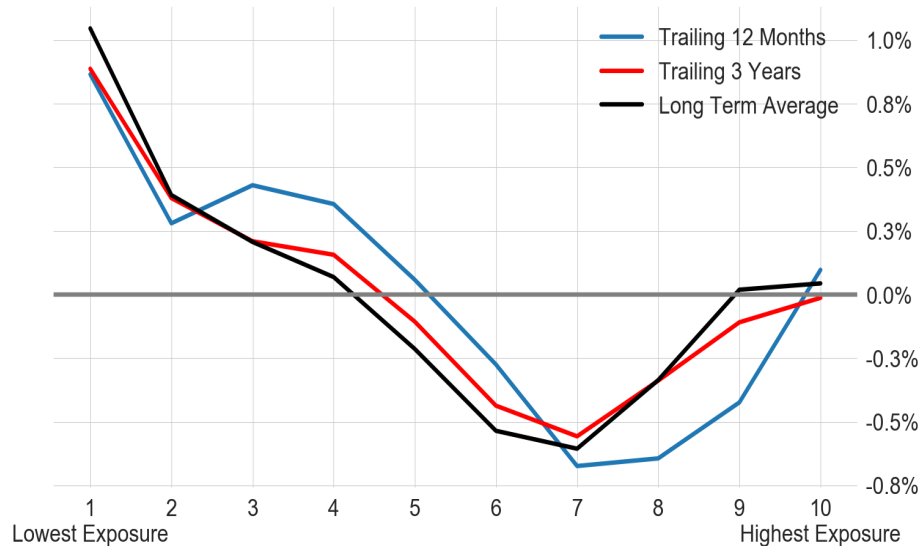
Organic Growth Differential Between Funds in the Top and Bottom Quartile of Turnover Ratio (TTM)



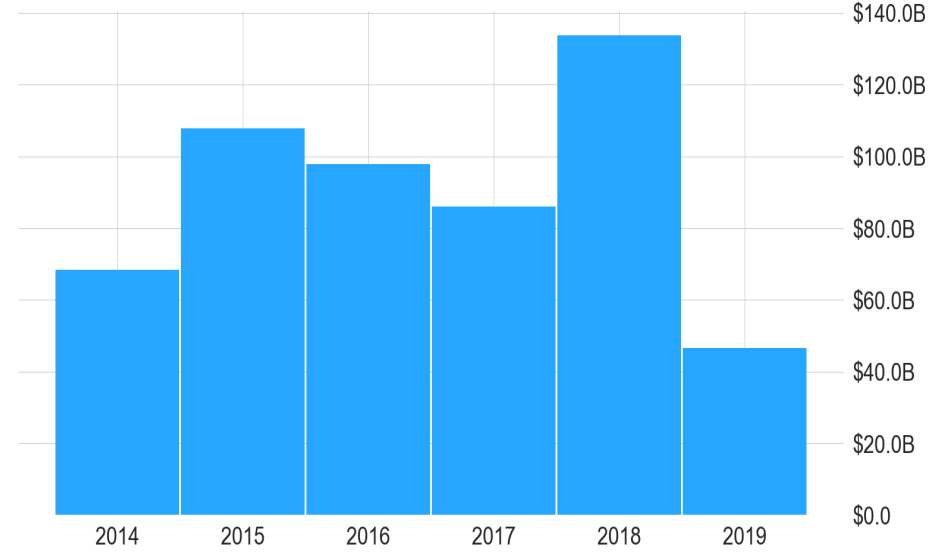


Portfolio Concentration

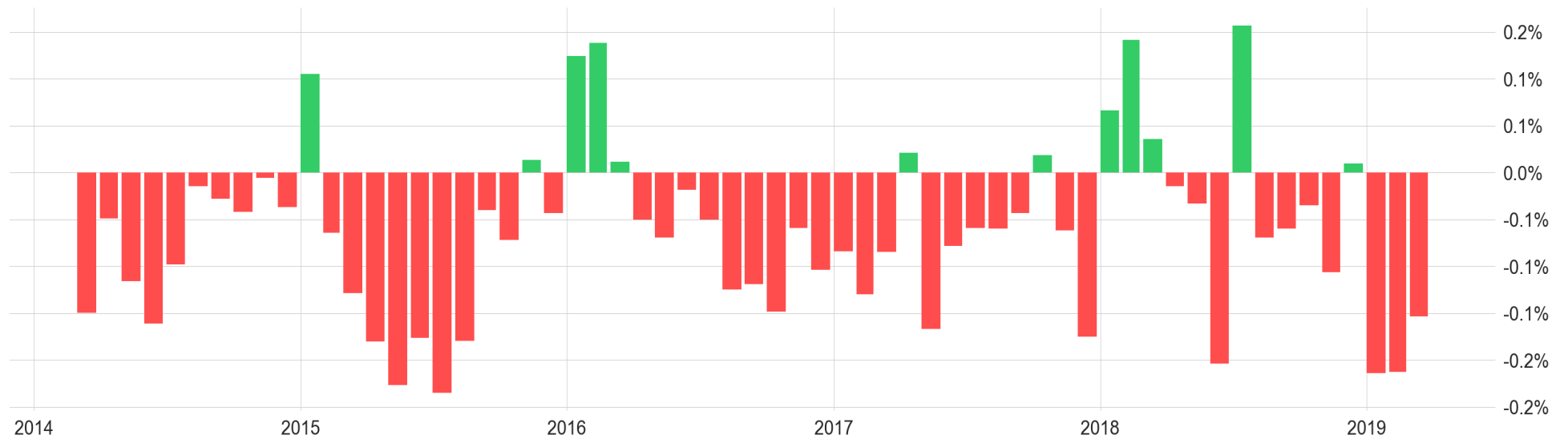
Portfolio Concentration Relationship to Organic Growth



Assets Flows due to Differences in Portfolio Concentration

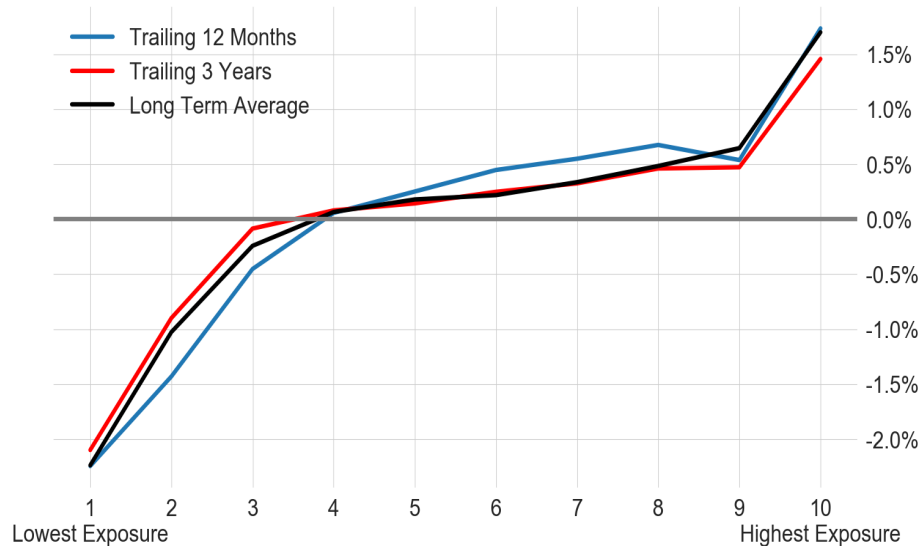


Organic Growth Differential Between Funds in the Top and Bottom Quartile of Portfolio Concentration

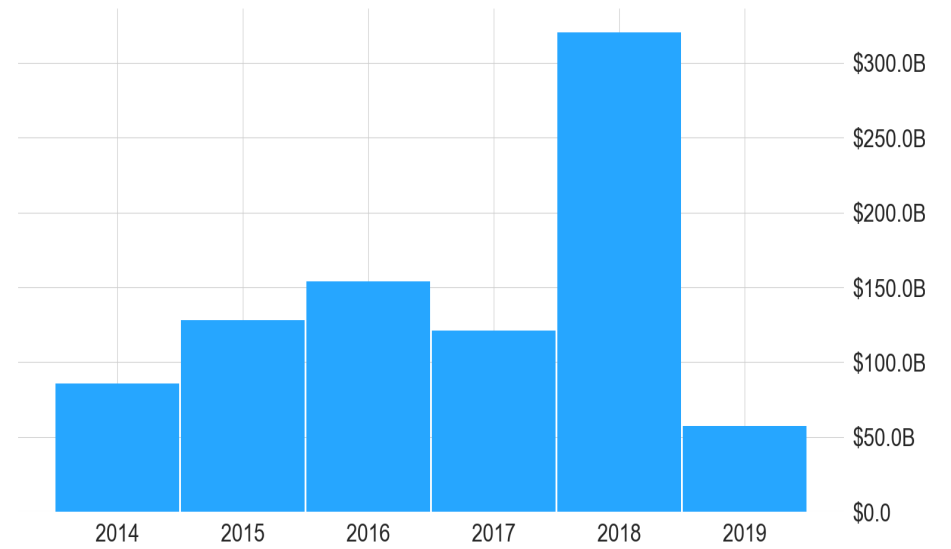


Degree of Passiveness

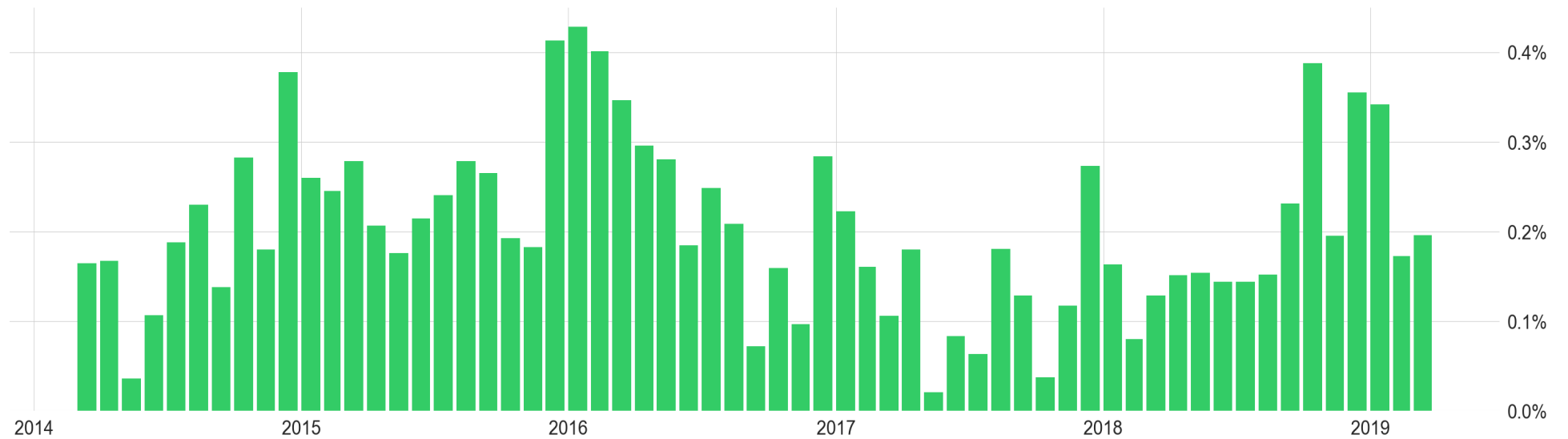
Degree of Passiveness Relationship to Organic Growth



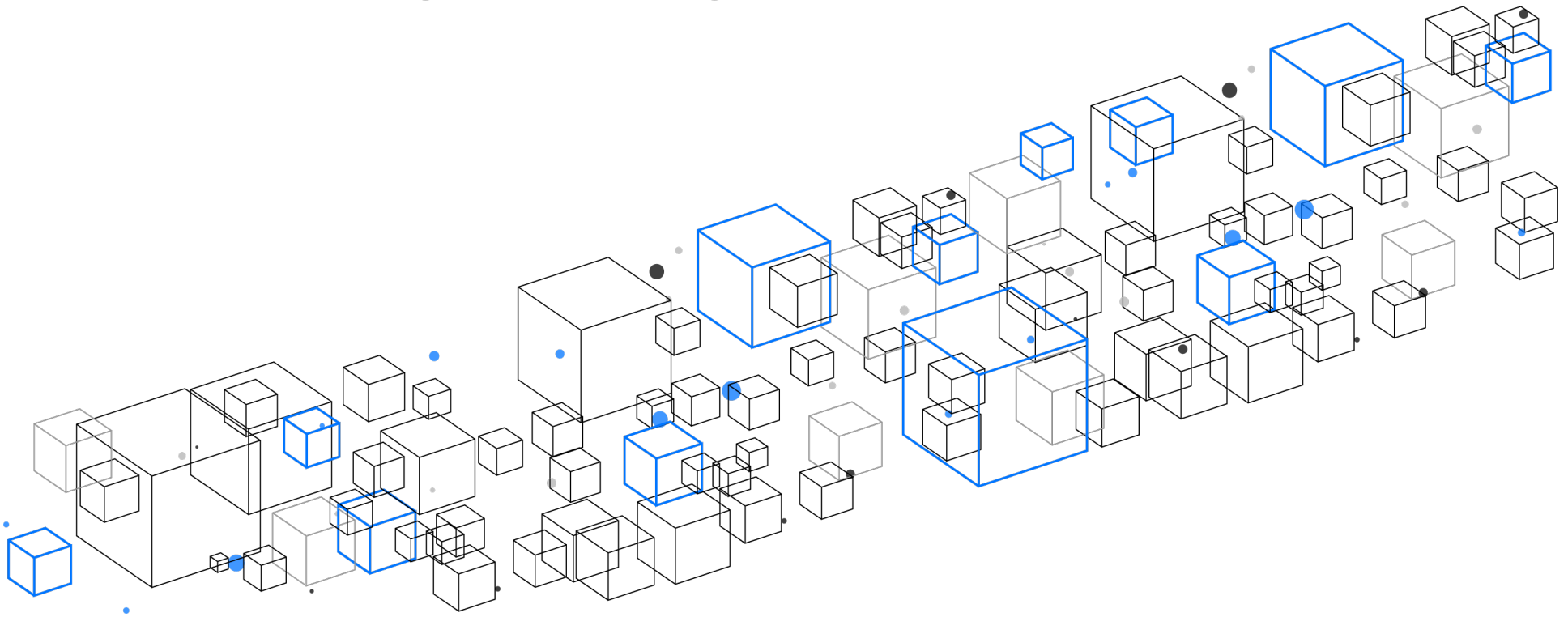
Assets Flows due to Differences in Degree of Passiveness



Organic Growth Differential Between Funds in the Top and Bottom Quartile of Degree of Passiveness

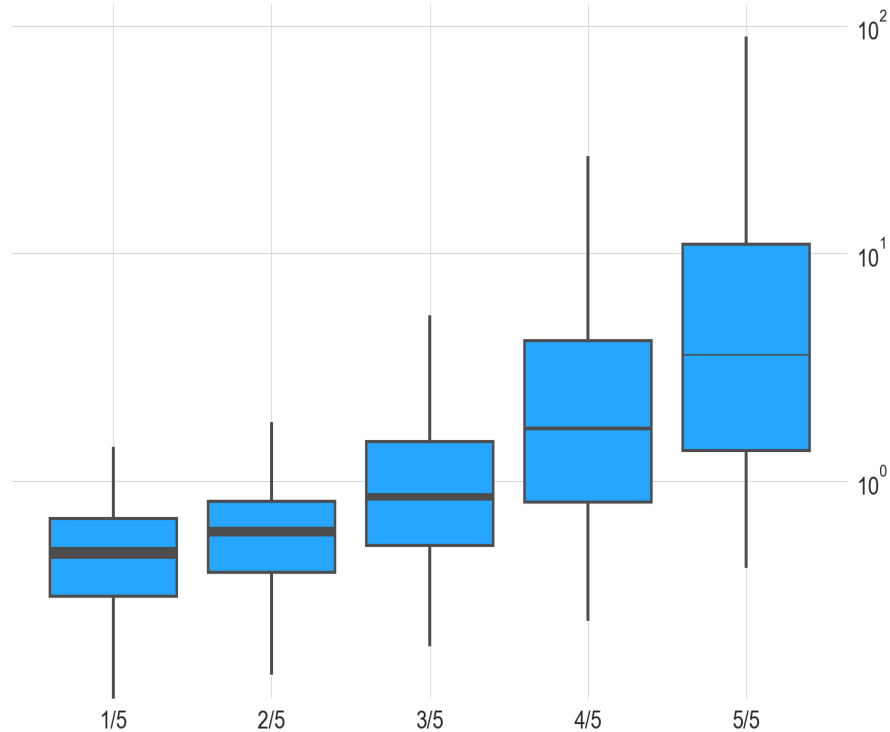


Flowspring Ratings



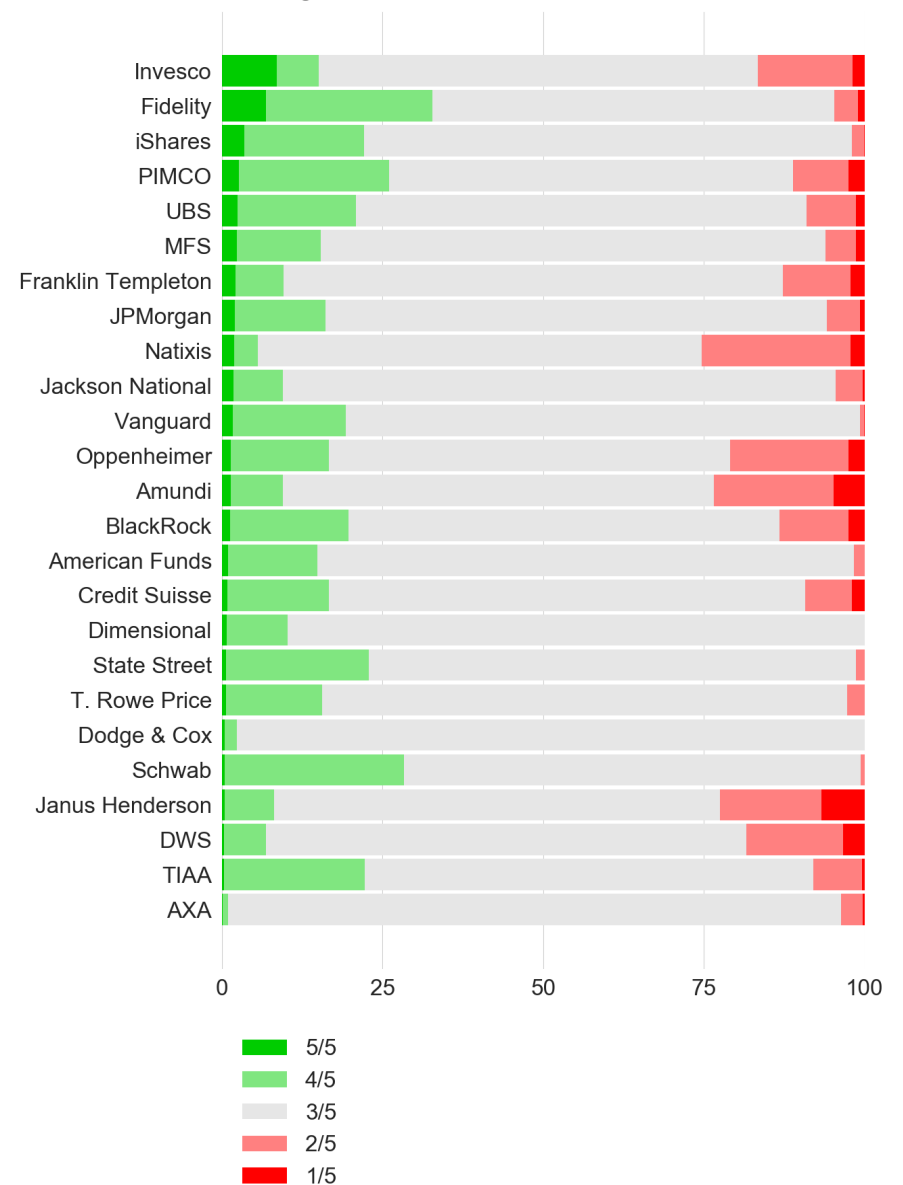
Flowspring Flow Rating

Subsequent 3-Year Organic Growth Multiple of Funds Grouped by Flowspring Flow Rating



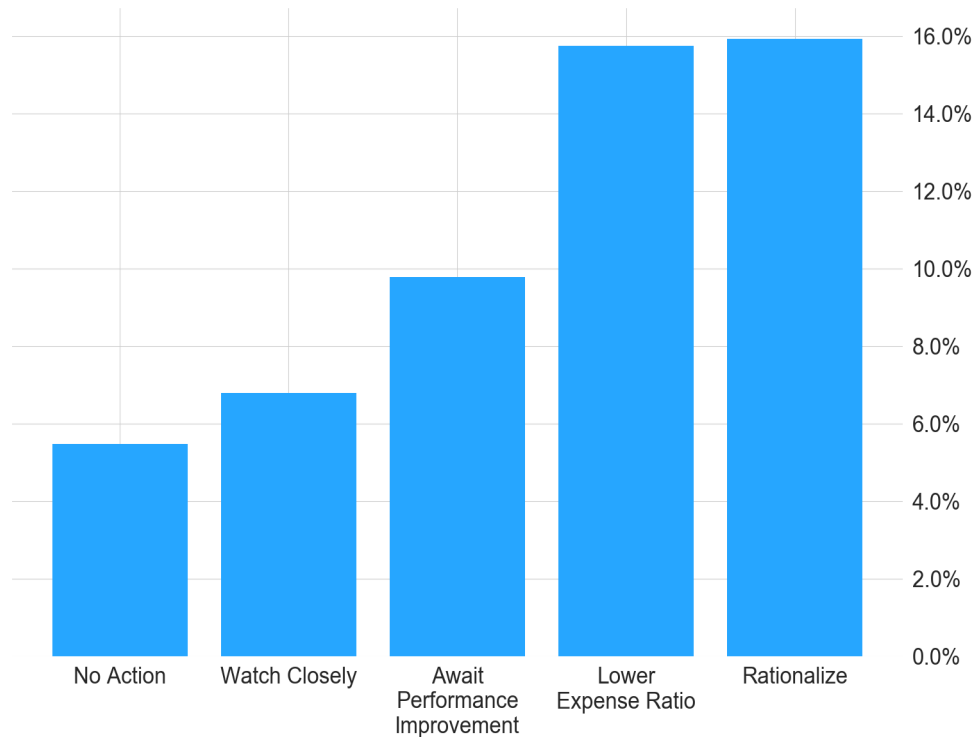
The Flowspring Flow Rating summarizes Flowspring's expectations for future organic growth from a particular fund shareclass. The rating can range from 1 (lowest expected growth) to 5 (highest expected growth). The rating has no subjective inputs, and is generated algorithmically for hundreds of thousands of shareclasses on a weekly basis. The inputs to the Flowspring Flow Rating are comprehensive including product characteristics like category, fees, and the makeup of the management team, investment performance history, parent strength, and distribution skill. Shareclasses with a Rating of 5 are in the top 10% of expected organic growth in our entire universe.

Asset Distribution by Flow Ratings
25 Largest Fund Families



Flowspring Rationalization Recommendation

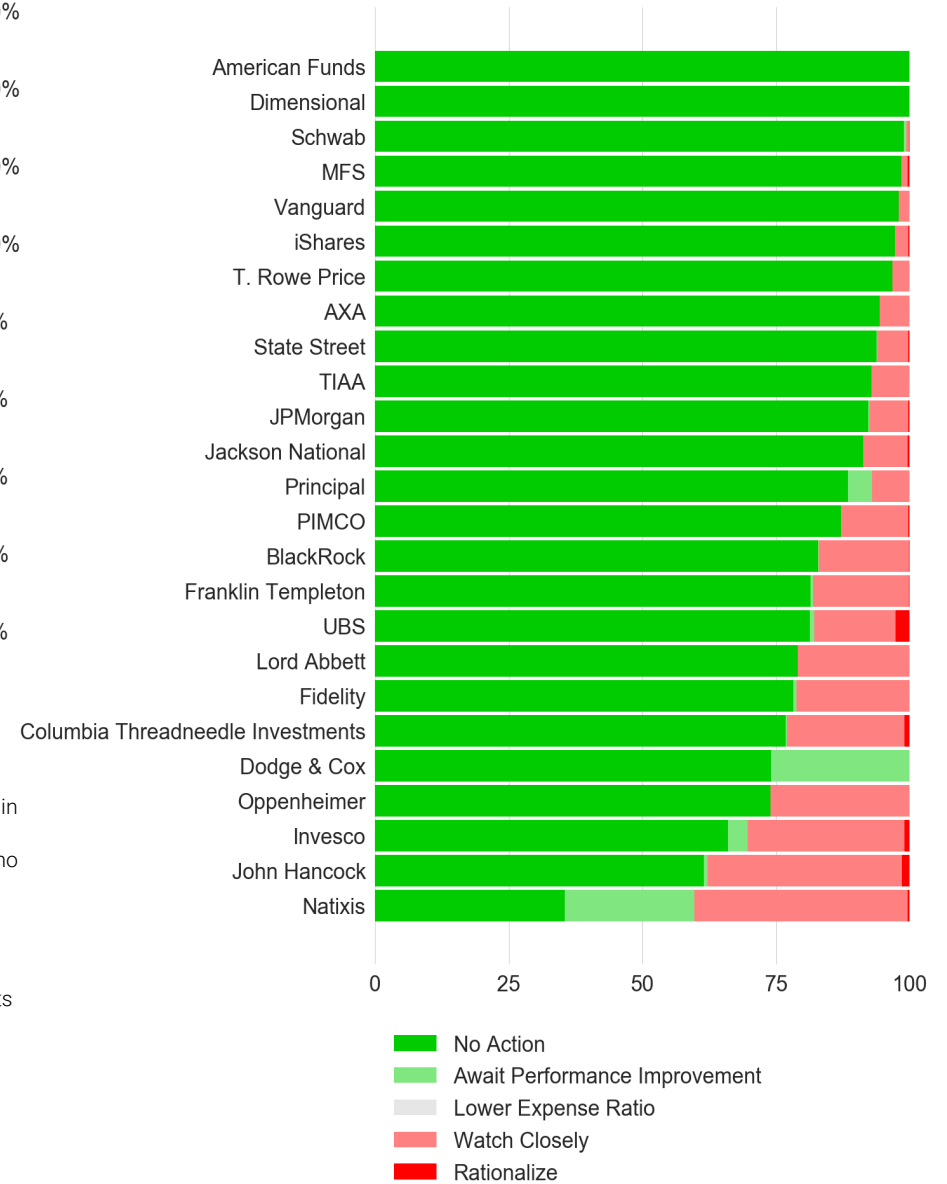
Frequency of Fees Falling Below \$5M per Year by Rationalization Recommendation



The Flowspring Rationalization Recommendation describes the optimal course of action for all funds in our universe regarding whether or not to rationalize (e.g. liquidate or merge) the fund in question. Rationalization is usually considered when a fund is not profitable for the asset manager, and shows no signs of reaching a profitable level of fees. We arrive at our recommendation using an objective, data-driven algorithm which takes into account current fee revenue, expected fee growth, short- and long-term investment performance, and net expense ratios to arrive at one of five recommendations:

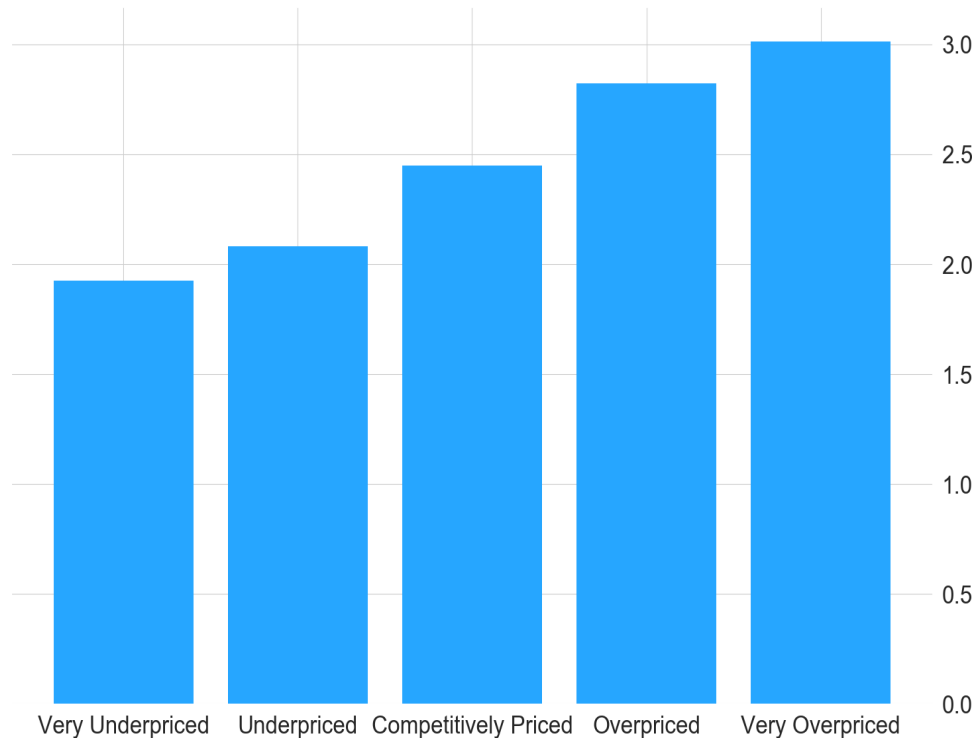
- Rationalize: this fund should be liquidated or merged with a like fund because it is not viable on its own
- Watch Closely: this fund meets some, but not all of the criteria for rationalization and should be closely watched for signs of further trouble
- Await Performance Improvement: this fund is suffering mostly from outflows due to short-term performance fluctuations which we expect to abate in the long-term
- Lower Expense Ratio: this fund is suffering outflows mostly due to its price - we expect these flows to reverse if the price is lowered
- No Action: this fund is healthy and no action is needed

Asset Distribution of Rationalization Recommendation
25 Largest Fund Families



Flowspring Overpricing Rating

Ratio of Price Cuts to Price Increases by Overpricing Rating (3Y Time Horizon)



The Flowspring Overpricing Rating describes how far above or below a shareclass's current fees are than the competitive level. We determine the competitive level of fees for a particular shareclass with a factor model which accounts for product, investment performance, parent, and distribution characteristics. The Rating can range from 'Very Overpriced' to 'Very Underpriced', which represents the top 10% and bottom 10% of the scale respectively.

Asset Distribution of Overpricing Ratings
25 Largest Fund Families

