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**T**his newsletter applies findings from academic research to identify actively managed equity mutual funds that are likely to outperform their index benchmarks – on average over the next year. It is written for investors and their advisors who are looking for an edge to improve their returns versus passive investing. As explained later in this newsletter, you will need at least \$24,000 to be able to buy the minimum (24) recommended number of funds. While the methodology underlying this newsletter is complex, our goal is to make it easy to implement the strategy. It will however require some time and attention to detail. If you have enough money to invest and the motivation to spend time learning about our service, using these methods will provide significant additional wealth over time relative to passive index investing.

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## UNDERSTANDING TERMINOLOGY - MEASURES OF RISKS AND RETURNS

Most people have heard of the Dow Jones Industrial Average or the S&P 500 index. These are just two of the many indices that measure returns for categories of U.S. stocks. The Dow Jones Average is the oldest index, but it is not usually used as a benchmark for measuring fund performance. Unlike the modern indices, the Dow Jones is relatively narrow with just 30 stocks and it is not weighted by market values of its components. The following table summarizes the benchmark indices which almost all funds use as their benchmarks to measure their performance.

Index Name	Abbreviation	Yahoo Ticker	Google Ticker	Capitalization Size
S&P 500	S5	^GSPC	.INX	Large
S&P 400	S4	^MID		Mid
S&P 600	S6	^SML		Small
Russell 1000	R1	^RUI		Large
Russell 2000	R2	^RUT		Small
Russell 3000	R3	^RUA		Multi
Russell MidCap	RM		RMCC	Mid
S&P 500 Growth	S5G		SP500G	Large
S&P 500 Value	S5V		SP500V	Large
Russell 1000 Growth	R1G		RLG	Large
Russell 1000 Value	R1V		RLV	Large
Russell 2000 Growth	R2G		RUO	Small
Russell 2000 Value	R2V		RUJ	Small
Russell 3000 Growth	R3G		RAG	Multi
Russell 3000 Value	R3V		RAV	Multi
Russell MidCap	RM		RMCC	Mid
Russell MidCap Growth	RMG		RMCCG	Mid
Russell MidCapValue	RMV		RMCCV	Mid

The tables of the current top funds at the end of this newsletter show each fund's benchmark and capitalization size as identified in the previous table. This information is important for using the data to choose a group of funds with an appropriate risk level. For more in depth discussion of market benchmarks and their risk characteristics see our explanation here: <https://kazio.co/what-you-need-to-know-to-evaluate-mutual-funds/>

## **USING ACADEMIC RESEARCH TO PREDICT FUND RETURNS**

Academic studies show that, looking at all equity mutual funds, on average they underperform market indices. This is not surprising since mutual funds in aggregate are a large part of the market. Once fund expenses are taken into account, net returns of all funds together should lag the overall market. This does not, however, mean that individual fund managers don't have the skills to beat the market net of fees. But, over time as successful funds grow into large funds, the amount of money they have to invest gets so large that they are forced to spread it out among more stocks and put more into the more liquid stocks – which are the larger capitalization issues. The result is often that the funds don't differ enough from their benchmark index for the manager to earn enough excess return to cover expenses. So a large portion of mutual funds end up lagging the market.

A couple of academics named Petajisto and Cremers investigated whether they could identify skilled managers before their funds got so large that their skills were diluted. They came up with a measure called active share which measures how different a fund's portfolio is from its benchmark. A few years later, professor Cremers expanded upon this research in another paper titled "Patient Capital Outperformance: The Investment Skill of High Active Share Managers Who Trade Infrequently". In this later work Cremers defined an additional measure which he calls duration. By combining this with active share, he and his new co-author Ankur Pareek created categories of funds that are useful in predicting returns. This newsletter focuses on the category of funds with high active share and high duration which I call "Patient Stock Pickers". In his 2016 paper, Cremers calculated that Patient Stock Pickers had, on average, outperformed their benchmarks by more than 2% annually net of fees. This is, however, a relatively small group – roughly 4% of the funds in our coverage universe as of the date of this newsletter fall into the Patient Stock Picker category. Funds in this category are in the top 20% of both active share and duration (i.e. the intersection of these two sets). As hinted at earlier, these funds tend to be smaller than average in terms of total money under management and they hold fewer stocks than the average fund. For the period covered by this newsletter funds in this category are about 50% the size of the average fund and the number of stocks held by the average mutual fund is more than 3 times the number held by those in the Patient Stock Picker category. In short, these funds tend to be smaller and more focused on their best ideas.

Cremers's paper includes a wealth of analysis about fund returns in relation to fund characteristics. His data cover the period 1990 to 2013. Over this period he finds that, after accounting for active share and duration, smaller funds tended to outperform larger funds.

## **THE CHALLENGE OF RANDOMNESS – HARNESSING PROBABILITIES**

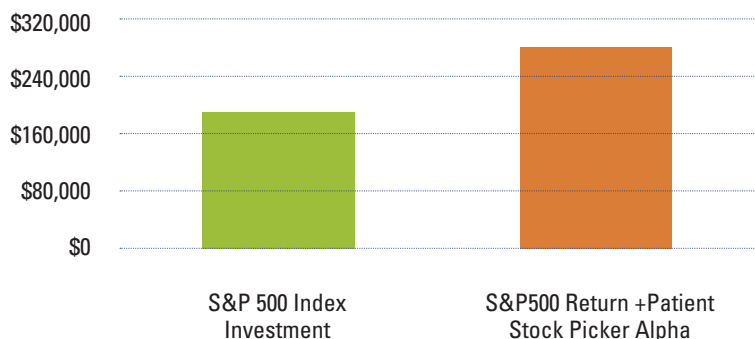
Although the academic research shows an advantage on average for the Patient Stock Pickers category, there is still a lot of volatility for individual fund returns that is essentially unpredictable. We refer to such unexplained variation as "noise". If we think of the predictable portion of returns identified by Cremers as "signal", then our problem is to deal with the relatively small ratio of signal to noise. The

data show that fund manager skill as identified via the Patient Stock Picker categorization explains less than 10% of the variation in one-year alpha across funds and across time. Fortunately statisticians have an answer for this problem. We can make use of a statistical property which implies that when we have a (probabilistic) edge, the more times we take the chance, the more likely we will come out ahead on average. Therefore our strategy is to increase our probability of achieving positive average alpha by spreading our investment across a large number of funds within the Patient Stock Picker category. In fact we can calculate how many funds are needed to reduce our chances of underperforming to a specified level. In this newsletter our goal will be creating a portfolio for which we have 95% confidence of positive average alpha (meaning excess returns relative to the funds' respective benchmarks). Because there are not enough funds tracking any one benchmark index, we cannot achieve this result relative to any particular index but rather it will apply across all the indices on a fund by fund basis.

### WHAT CAN BE ACHIEVED USING THESE METHODS

As mentioned earlier, academic research shows that investing in funds in the Stock Picker category earns on average about 2% more per year than investing in the related index funds. Let's calculate what this would mean over a period of 30 years of investing compared to passive index investing. Over the 30 years ended December 31 2016 the S&P 500 index returned a compounded return of 10.01% annually. We'll compare that rate of return to 12.01% (10.01% + alpha of 2%) to see what this advantage can mean in dollars. The chart below shows the difference for an initial investment of \$10,000. The index investment would grow to \$174,971 whereas the Patient Stock Picker portfolio would grow to \$300,403 – 71% more ending wealth. This will matter!

#### HYPOTHETICAL WEALTH ACCUMULATION OVER 30 YEARS



This is a hypothetical set of returns meant to illustrate the point that even a small return advantage over the index matters when compounded over a long time frame. At the beginning it may not matter much, but if you make a habit of earning a bit extra every year, you can end up significantly better off.

## HOW TO MANAGE A FUND PORTFOLIO USING THIS NEWSLETTER

We recommend that you hold at least 24 funds in your portfolio but preferably 32. The research shows that we can expect higher returns over the year following the month when a fund is found to be in the Patient Stock Picker category. Of course many funds will remain in this category over time but some funds will drop out and others will move in to the group. Therefore, what you want to do is sell funds after 12 months if they are no longer in the Patient Stock Picker group. Time your sales to get capital gains treatment assuming you have gains (i.e. sell after you've held at least 12 months). Because funds are moving in and out all year, it's a good idea to do buying and selling through-out the year so that you don't need to buy all 32 funds at the same time every year. Each fund reports its holdings once per quarter so we need filings from at least 3 months to take into account all funds in the rankings. Because of that, this newsletter covers filings going back to the last quarterly filing for each fund in our coverage so that you can see all funds qualifying at the current point in time. I.e. the newsletter shows filings for a rolling 3 month window (plus an extra month back for funds that have missed their filing deadline in the most recent month). Note that 6 times more funds report their holdings in March, June, September, and December than the other months. There is a 2.5 month delay from the funds' report date to when we can get and process the data for this newsletter. This means that you will have far more fresh funds to choose from in the months listed above. Therefore if you are holding 32 funds and replacing 8 each quarter, most of these should come from the newsletter from the final month of the quarter – March, June, September, and December respectively.

Because we need a large number of funds to maximize our probability of earning alpha, the amount of dollars you have available for the strategy may cause you to choose funds according to the minimum fund investment amounts. For example, in the current quarterly filing period, we found 74 funds in the Patient Stock Picker category, but 2 of these required minimum investments of \$50,000 or more. The following table provides a breakdown by range of initial minimum investment for this month's list.

RANGE OF MINIMUM INVESTMENT		
Low End	High End	Fund Count
1	1,000	33
1,001	2000	14
2,001	2,500	18
2,501	5,000	5
5,001	10,000	2
10,001	500,000	2
Total Patient Stock Pickers		= 74

In order to take advantage of the statistical properties mentioned earlier we want to put equal dollars in each fund. Unless you have at least \$2.4 million to invest

we cannot use the funds in the last category so we should eliminate these from further consideration. The table shows that more than 24 funds have minimum investment requirements of \$1,000 or less. Thus, the strategy could be implemented with as little as \$24,000.

If you are starting the strategy in the current month, you have enough choices of funds to create a portfolio that is only large or only small capitalization but mid cap and multi cap categories are unlikely to have a high enough fund count to buy enough funds. Nor can you choose all value or all growth funds. If you wish to manage your risks by focusing on specific styles or market capitalization categories, you will need to focus on picking these funds as you replace funds each quarter. At the start, get as many as possible of your desired category in your portfolio given the constraints (minimum investment amounts) imposed by the amount available to invest. Then you can rebalance towards the desired mix of funds over time.

## **RANKING FUNDS IN ORDER TO CHOOSE A PORTFOLIO**

All of the funds listed in this newsletter are in the Patient Stock Picker group and so we can expect they will outperform their benchmark indices on average. But most people will not want to buy all of them - so we will provide guidelines for choosing a subset of funds given your situation. Most important is to be able to buy 24 to 32 funds. Therefore if you have less than \$48,000 you should buy the funds in the category that require \$1,000 or less as the minimum investment. Between \$48,000 and \$60,000 you would choose from funds with investment minimums up to \$2,000. Above \$60,000 you could also choose from the category that requires \$2,500 as minimum investment. There is probably no need to go as high as the \$10,000 minimum fund but you could do so if you had \$10,000 to put into 32 funds = \$320,000.

If you have \$80,000 or more to invest then you only need to choose 32 funds from a list of 63 funds. Going forward each quarter you will only need to choose 8 funds to replace each quarter so you'll need a way to rank the funds. Primarily you should choose the funds that fall into the capitalization size and style category that fit the amount of risk you are willing to take. After that, we recommend that you choose funds according to which has the lower fund assets. All things being equal, smaller funds can deliver higher net returns. The table on the next page shows the Patient Stock Picker funds by minimum investment category and then according to size of stocks held in terms of capitalization – which is a proxy for risk because smaller stocks as a group are more volatile than larger stocks. Finally within each category of initial investment and size, funds are listed from lowest to highest fund assets. Following this table is a ranking purely on the basis of fund assets for those of you willing to invest in all sizes and styles of funds. At the end we have two model portfolio's – one called the Conservative portfolio made up of lower volatility funds and the other called the Aggressive portfolio which includes the higher volatility funds.

TABLE 1: LISTING BY MINIMUM INVESTMENT, THEN CAPITALIZATION SIZE, AND THEN FUND ASSETS PAGE 1 OF 2

Minimum Initial \$ Investment	Size: Cap Type	Expense Ratio	Index. Abbrev	Fund Ticker	Fund Name	Fund Assets \$Millions	Active Share: %-tile	Duration %-tile	Latest Report Date
1000	large	1.09	s5	NYSAX	NYSA Fund	2	87.9%	80.8%	03/31/17
1000	large	1.21	s5	VLIFX	Value Line Mid Cap Focused Fund Inc	141	96.2%	93.1%	03/31/17
1000	large	1.19	s5	EVUAX	Wells Fargo Utility and Telecommunications Fund	390	84.9%	93.5%	03/31/17
1000	large	1.42	s5	GABVX	Gabelli Value 25 Fund Inc	470	80.9%	95.8%	03/31/17
1000	large	1.01	s5	IENYX	Invesco Energy Fund	905	83.6%	81.0%	01/31/17
0	large	0.98	s5	VRREX	Virtus Real Estate Securities Fund	1017	96.0%	81.5%	03/31/17
0	large	0.92	s5	PYSYX	Putnam Equity Spectrum Fund	1297	94.4%	97.3%	04/30/17
0	large	0.78	s5	PJNQX	Prudential Jennison Natural Resources Fund	1725	92.5%	82.6%	04/30/17
1000	large	1.27	s5	FRBAX	John Hancock Regional Bank Fund	1747	82.3%	82.8%	04/30/17
1000	large	1.13	r1v	GHAYX	Van Eck Global Hard Assets Fund	2288	89.0%	83.0%	03/31/17
1000	large	1.06	s5	ARGFX	Ariel Fund	2374	98.8%	84.2%	03/31/17
1000	large	0.98	s5	GTSYX	Invesco Small Cap Growth Fund	2481	99.5%	83.6%	03/31/17
0	large	1.1	r1	PVSYX	Putnam Capital Spectrum Fund	3996	92.5%	93.0%	04/30/17
0	large	0.18	s5	DFREX	DFA Real Estate Securities Portfolio	8080	94.4%	94.9%	01/31/17
1000	multi	1.45	r3	KMVAX	Kirr Marbach Partners Value Fund	73	95.0%	93.9%	03/31/17
1000	multi	1.2	r3	BOPAX	Sterling Capital Special Opportunities Fund	1144	83.6%	84.2%	03/31/17
1000	mid	1.39	rmv	PWREX	Pioneer Real Estate Shares	133	82.6%	97.0%	03/31/17
0	mid	0.96	rmv	PUTYX	Putnam Global Utilities Fund	166	89.0%	92.1%	02/28/17
500	mid	1.25	rm	FAMEX	FAM Equity Income Fund	211	88.5%	86.9%	03/31/17
500	mid	1.15	rm	TMFGX	Motley Fool Great America Fund	226	90.2%	81.6%	04/30/17
500	mid	1.17	rm	FAMVX	FAM Value Fund	1134	87.4%	93.2%	03/31/17
1000	mid	1.15	rmv	CAAPX	Ariel Appreciation Fund	1783	86.2%	85.5%	03/31/17
1000	small	1.5	r2	WESCX	TETON Westwood Small Cap Equity Fund	34	81.7%	82.9%	03/31/17
1000	small	1.33	r2	TETAX	Rbc Enterprise Fund	85	92.9%	94.4%	03/31/17
1000	small	1.51	r2	MASVX	Madison Small Cap Fund	108	85.7%	84.0%	04/30/17
1000	small	1.32	r2	BERWX	Berwyn Fund	128	96.7%	87.9%	01/31/17
1000	small	1.15	r2	TEEAX	Rbc Small Cap Core Fund	281	81.7%	86.5%	03/31/17
1000	small	1.25	r2	PRCGX	Perritt MicroCap Opportunities Fund	283	97.8%	92.4%	01/31/17
0	small	0.99	r2g	IBGIX	VY Baron Growth Portfolio	729	90.7%	99.8%	03/31/17
1000	small	1.14	r2	FMIMX	FMI Common Stock Fund	1034	97.9%	83.3%	03/31/17
0	small	0.93	r2v	SMVRX	Wells Fargo Small Cap Value Fund	1051	80.4%	83.7%	03/31/17
500	small	0.86	r2	HSCSX	Homestead Small Company Stock Fund	1228	91.7%	90.2%	03/31/17
0	small	1.87	r2	RPRRX	Royce Premier Fund	2323	93.2%	86.7%	03/31/17
2000	large	1.98	s5	ALTEX	Firsthand Alternative Energy Fund	5	96.2%	84.9%	03/31/17
2500	large	2.25	s5	PDFDX	Perkins Discovery Fund	6	99.8%	83.4%	03/31/17
2000	large	1.25	s5	RCKSX	Rock Oak Core Growth Fund	8	86.2%	85.7%	01/31/17
2500	large	1.39	s5	MEDRX	Kinetics Medical Fund	21	80.4%	97.4%	03/31/17
2500	large	1.5	s5	LSHAX	Horizon Spin-Off and Corporate Restructuring Fund	24	98.8%	90.3%	01/31/17
2500	large	1.64	s5	KMKNX	Kinetics Market Opportunities Fund	43	96.2%	90.4%	03/31/17
2000	large	1.95	s5	NEAGX	Needham Aggressive Growth Fund	61	85.6%	93.4%	03/31/17
2000	large	1.85	s5	NEEGX	Needham Growth Fund	117	84.5%	96.6%	03/31/17
2000	large	1.48	s5	VICEX	USA Mutuals Vice Fund	230	86.6%	85.3%	03/31/17
2500	large	1.64	s5	WWNPX	Kinetics Paradigm Fund	770	98.9%	89.0%	03/31/17
2500	large	0.79	s5	FRESX	Fidelity Real Estate Investment Portfolio	4386	97.0%	90.6%	04/30/17
2000	large	1.34	s5	AKREX	AKRE Focus Fund	5852	91.1%	87.4%	04/30/17
2500	multi	1.47	r3	HFCSX	Hennessy Focus Fund	2514	92.0%	93.7%	01/31/17

Annotations: **Red font** = Very high expenses  
**Green** = Lowest minimum investment group (Minimum Investment 0-1999)  
**Blue** = 2nd lowest minimum investment group (Minimum Investment 2000-4999)  
**Orange** = 2nd highest minimum investment group (Minimum Investment 5000-10000)

TABLE 1: LISTING BY MINIMUM INVESTMENT, THEN CAPITALIZATION SIZE, AND THEN FUND ASSETS PAGE 2 OF 2

Minimum Initial \$ Investment	Size: Cap Type	Expense Ratio	Index. Abbrev	Fund Ticker	Fund Name	Fund Assets \$millions	Active Share: %-tile	Duration %-tile	Latest Report Date
2500	mid	1.56	rm	BWNYX	Bullfinch Greater Western New York Series Fund	2	97.0%	95.1%	04/30/17
2500	mid	1.5	rmg	BUNRX	Bullfinch Unrestricted Series Fund	9	93.2%	92.7%	04/30/17
2500	mid	1.36	rmv	NRFX	Natixis AEW Real Estate Fund	174	82.3%	91.7%	04/30/17
2000	mid	1.35	rmg	BFGFX	Baron Focused Growth Fund	187	96.2%	97.9%	03/31/17
2500	mid	1.41	rmv	FMIVX	Virtus Contrarian Value Fund	193	86.9%	90.6%	03/31/17
2500	mid	0.99	rm	TMCPX	Touchstone Mid Cap Fund	724	86.2%	85.6%	03/31/17
2000	mid	0.72	s4	TMSIX	Thrivent Mid Cap Stock Fund	1588	84.5%	86.8%	04/30/17
2500	small	1.25	r2	PFOPX	Paradigm Opportunity Fund	7	95.5%	90.5%	03/31/17
2000	small	1.35	r2g	RIVSX	River Oak Discovery Fund	14	97.5%	82.7%	01/31/17
2500	small	1.64	r2	KSCOX	Kinetics Small Cap Opportunities Fund	194	99.3%	86.4%	03/31/17
2000	small	1.19	r2	RDVIX	Royce Dividend Value Fund	213	94.0%	89.4%	03/31/17
2000	small	1.2	r2	SSSFX	AMG SouthernSun Small Cap Fund	344	98.5%	87.6%	03/31/17
2500	small	1.13	r2	TSFYX	Touchstone Small Cap Fund	510	97.7%	85.9%	03/31/17
2500	small	1.04	r2v	HISVX	Harbor Small Cap Value Fund	872	81.7%	92.6%	01/31/17
2500	small	1.1	r2	CCASX	Conestoga Small Cap Fund	994	91.4%	87.5%	03/31/17
2000	small	1.2	r2	WGROX	Wasatch Core Growth Fund	1460	90.7%	82.1%	03/31/17
2000	small	1.32	r2g	BSCFX	Baron Small Cap Fund	3374	84.9%	95.3%	03/31/17
2500	small	1	r2	FSCRX	Fidelity Small Cap Discovery Fund	5633	90.2%	91.3%	04/30/17
2000	small	1.31	r2g	BGRFX	Baron Growth Fund	5903	88.5%	98.7%	03/31/17
5000	large	1	s5	BCIFX	Blue Chip Investor Fund	34	87.4%	96.2%	03/31/17
5000	multi	1.6	w5	ANCIX	Ancora MicroCap Fund	17	98.1%	89.2%	03/31/17
5000	mid	1.5	rmv	PHREX	Phocas Real Estate Fund	12	87.9%	89.3%	03/31/17
5000	small	1.61	r2	HUSIX	Huber Capital Small Cap Value Fund	107	97.0%	83.8%	01/31/17
5000	small	1.26	r2	BCSIX	Brown Capital Management Small Company Fund	3583	95.5%	96.8%	03/31/17
10000	mid	4.46	rm	PMVCX	Pacific Advisors Mid Cap Value Fund	6	93.8%	92.1%	03/31/17
10000	small	3.88	r2	PGSCX	Pacific Advisors Small Cap Value Fund	27	98.5%	87.1%	03/31/17

Count: 72

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TABLE 2: LISTING BY FUND ASSETS PAGE 1 OF 2

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1000	large	1.09	s5	NYSAX	NYSA Fund	2	87.9%	80.8%	03/31/17
2500	mid	1.56	rm	BWNYX	Bullfinch Greater Western New York Series Fund	2	97.0%	95.1%	04/30/17
2000	large	1.98	s5	ALTEX	Firsthand Alternative Energy Fund	5	96.2%	84.9%	03/31/17
10000	mid	4.46	rm	PMVCX	Pacific Advisors Mid Cap Value Fund	6	93.8%	92.1%	03/31/17
2500	large	2.25	s5	PDFDX	Perkins Discovery Fund	6	99.8%	83.4%	03/31/17
2500	small	1.25	r2	PFOPX	Paradigm Opportunity Fund	7	95.5%	90.5%	03/31/17
2000	large	1.25	s5	RCKSX	Rock Oak Core Growth Fund	8	86.2%	85.7%	01/31/17
2500	mid	1.5	rmg	BUNRX	Bullfinch Unrestricted Series Fund	9	93.2%	92.7%	04/30/17
5000	mid	1.5	rmv	PHREX	Phocas Real Estate Fund	12	87.9%	89.3%	03/31/17
2000	small	1.35	r2g	RIVSX	River Oak Discovery Fund	14	97.5%	82.7%	01/31/17
5000	multi	1.6	w5	ANCIX	Ancora MicroCap Fund	17	98.1%	89.2%	03/31/17
2500	large	1.39	s5	MEDRX	Kinetics Medical Fund	21	80.4%	97.4%	03/31/17
2500	large	1.5	s5	LSHAX	Horizon Spin-Off and Corporate Restructuring Fund	24	98.8%	90.3%	01/31/17
10000	small	3.88	r2	PGSCX	Pacific Advisors Small Cap Value Fund	27	98.5%	87.1%	03/31/17
1000	small	1.5	r2	WESCX	TETON Westwood Small Cap Equity Fund	34	81.7%	82.9%	03/31/17
5000	large	1	s5	BCIFX	Blue Chip Investor Fund	34	87.4%	96.2%	03/31/17
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2000	large	1.95	s5	NEAGX	Needham Aggressive Growth Fund	61	85.6%	93.4%	03/31/17
1000	multi	1.45	r3	KMVAX	Kirr Marbach Partners Value Fund	73	95.0%	93.9%	03/31/17
1000	small	1.33	r2	TETAX	Rbc Enterprise Fund	85	92.9%	94.4%	03/31/17
5000	small	1.61	r2	HUSIX	Huber Capital Small Cap Value Fund	107	97.0%	83.8%	01/31/17
1000	small	1.51	r2	MASVX	Madison Small Cap Fund	108	85.7%	84.0%	04/30/17
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500	mid	1.25	rm	FAMEX	FAM Equity Income Fund	211	88.5%	86.9%	03/31/17
2000	small	1.19	r2	RDVIX	Royce Dividend Value Fund	213	94.0%	89.4%	03/31/17
500	mid	1.15	rm	TMFGX	Motley Fool Great America Fund	226	90.2%	81.6%	04/30/17
2000	large	1.48	s5	VICEX	USA Mutuals Vice Fund	230	86.6%	85.3%	03/31/17
1000	small	1.15	r2	TEEAX	Rbc Small Cap Core Fund	281	81.7%	86.5%	03/31/17
1000	small	1.25	r2	PRCGX	Perritt MicroCap Opportunities Fund	283	97.8%	92.4%	01/31/17
2000	small	1.2	r2	SSSFX	AMG SouthernSun Small Cap Fund	344	98.5%	87.6%	03/31/17
1000	large	1.19	s5	EVUAX	Wells Fargo Utility and Telecommunications Fund	390	84.9%	93.5%	03/31/17
1000	large	1.42	s5	GABVX	Gabelli Value 25 Fund Inc	470	80.9%	95.8%	03/31/17
2500	small	1.13	r2	TSFYX	Touchstone Small Cap Fund	510	97.7%	85.9%	03/31/17
2500	mid	0.99	rm	TMCPX	Touchstone Mid Cap Fund	724	86.2%	85.6%	03/31/17
0	small	0.99	r2g	IBGIX	VY Baron Growth Portfolio	729	90.7%	99.8%	03/31/17
2500	large	1.64	s5	WWNPX	Kinetics Paradigm Fund	770	98.9%	89.0%	03/31/17
2500	small	1.04	r2v	HISVX	Harbor Small Cap Value Fund	872	81.7%	92.6%	01/31/17

Annotations: **Red font** = Very high expenses  
**Green** = Lowest minimum investment group (Minimum Investment 0-1999)  
**Blue** = 2nd lowest minimum investment group (Minimum Investment 2000-4999)  
**Orange** = 2nd highest minimum investment group (Minimum Investment 5000-10000)



TABLE 2: LISTING BY FUND ASSETS PAGE 2 OF 2

Minimum Initial \$ Investment	Size: Cap Type	Expense Ratio	Index. Abbrev	Fund Ticker	Fund Name	Fund Assets \$millions	Active Share: %-tile	Duration %-tile	Latest Report Date
1000	large	1.01	s5	IENYX	Invesco Energy Fund	905	83.6%	81.0%	01/31/17
2500	small	1.1	r2	CCASX	Conestoga Small Cap Fund	994	91.4%	87.5%	03/31/17
0	large	0.98	s5	VRREX	Virtus Real Estate Securities Fund	1017	96.0%	81.5%	03/31/17
1000	small	1.14	r2	FMIMX	FMI Common Stock Fund	1034	97.9%	83.3%	03/31/17
0	small	0.93	r2v	SMVRX	Wells Fargo Small Cap Value Fund	1051	80.4%	83.7%	03/31/17
500	mid	1.17	rm	FAMVX	FAM Value Fund	1134	87.4%	93.2%	03/31/17
1000	multi	1.2	r3	BOPAX	Sterling Capital Special Opportunities Fund	1144	83.6%	84.2%	03/31/17
500	small	0.86	r2	HSCSX	Homestead Small Company Stock Fund	1228	91.7%	90.2%	03/31/17
0	large	0.92	s5	PYSYX	Putnam Equity Spectrum Fund	1297	94.4%	97.3%	04/30/17
2000	small	1.2	r2	WGROX	Wasatch Core Growth Fund	1460	90.7%	82.1%	03/31/17
2000	mid	0.72	s4	TMSIX	Thrivent Mid Cap Stock Fund	1588	84.5%	86.8%	04/30/17
0	large	0.78	s5	PJNQX	Prudential Jennison Natural Resources Fund	1725	92.5%	82.6%	04/30/17
1000	large	1.27	s5	FRBAX	John Hancock Regional Bank Fund	1747	82.3%	82.8%	04/30/17
1000	mid	1.15	rmv	CAAPX	Ariel Appreciation Fund	1783	86.2%	85.5%	03/31/17
1000	large	1.13	r1v	GHAYX	Van Eck Global Hard Assets Fund	2288	89.0%	83.0%	03/31/17
0	small	1.87	r2	RPRRX	Royce Premier Fund	2323	93.2%	86.7%	03/31/17
1000	large	1.06	s5	ARGFX	Ariel Fund	2374	98.8%	84.2%	03/31/17
1000	large	0.98	s5	GTSYX	Invesco Small Cap Growth Fund	2481	99.5%	83.6%	03/31/17
2500	multi	1.47	r3	HFCSX	Hennessy Focus Fund	2514	92.0%	93.7%	01/31/17
2000	small	1.32	r2g	BSCFX	Baron Small Cap Fund	3374	84.9%	95.3%	03/31/17
5000	small	1.26	r2	BCSIX	Brown Capital Management Small Company Fund	3583	95.5%	96.8%	03/31/17
0	large	1.1	r1	PVSYX	Putnam Capital Spectrum Fund	3996	92.5%	93.0%	04/30/17
2500	large	0.79	s5	FRESX	Fidelity Real Estate Investment Portfolio	4386	97.0%	90.6%	04/30/17
2500	small	1	r2	FSCRX	Fidelity Small Cap Discovery Fund	5633	90.2%	91.3%	04/30/17
2000	large	1.34	s5	AKREX	AKRE Focus Fund	5852	91.1%	87.4%	04/30/17
2000	small	1.31	r2g	BGRFX	Baron Growth Fund	5903	88.5%	98.7%	03/31/17
0	large	0.18	s5	DFREX	DFA Real Estate Securities Portfolio	8080	94.4%	94.9%	01/31/17

Count: 72

TABLE 3: CONSERVATIVE PORTFOLIO - LOWER VOLATILITY FUNDS

Minimum Initial \$ Investment	Size: Cap Type	Expense Ratio	Index. Abbrev	Fund Ticker	Fund Name	Fund Assets \$Millions	Active Share: %-tile	Duration %-tile	Latest Report Date
1000	large	1.09	s5	NYSAX	NYSA Fund	2	87.9%	80.8%	03/31/17
1000	large	1.21	s5	VLIFX	Value Line Mid Cap Focused Fund Inc	141	96.2%	93.1%	03/31/17
1000	large	1.19	s5	EVUAX	Wells Fargo Utility and Telecommunications Fund	390	84.9%	93.5%	03/31/17
1000	large	1.42	s5	GABVX	Gabelli Value 25 Fund Inc	470	80.9%	95.8%	03/31/17
1000	large	1.01	s5	IENYX	Invesco Energy Fund	905	83.6%	81.0%	01/31/17
0	large	0.98	s5	VRREX	Virtus Real Estate Securities Fund	1017	96.0%	81.5%	03/31/17
0	large	0.92	s5	PYSYX	Putnam Equity Spectrum Fund	1297	94.4%	97.3%	04/30/17
0	large	0.78	s5	PJNQX	Prudential Jennison Natural Resources Fund	1725	92.5%	82.6%	04/30/17
1000	large	1.27	s5	FRBAX	John Hancock Regional Bank Fund	1747	82.3%	82.8%	04/30/17
1000	large	1.13	r1v	GHAYX	Van Eck Global Hard Assets Fund	2288	89.0%	83.0%	03/31/17
1000	large	1.06	s5	ARGFX	Ariel Fund	2374	98.8%	84.2%	03/31/17
1000	large	0.98	s5	GTSYX	Invesco Small Cap Growth Fund	2481	99.5%	83.6%	03/31/17
0	large	1.1	r1	PVSYX	Putnam Capital Spectrum Fund	3996	92.5%	93.0%	04/30/17
0	large	0.18	s5	DFREX	DFA Real Estate Securities Portfolio	8080	94.4%	94.9%	01/31/17
2000	large	1.98	s5	ALTEX	Firsthand Alternative Energy Fund	5	96.2%	84.9%	03/31/17
2500	large	2.25	s5	PDFDX	Perkins Discovery Fund	6	99.8%	83.4%	03/31/17
2000	large	1.25	s5	RCKSX	Rock Oak Core Growth Fund	8	86.2%	85.7%	01/31/17
2500	large	1.39	s5	MEDRX	Kinetics Medical Fund	21	80.4%	97.4%	03/31/17
2500	large	1.5	s5	LSHAX	Horizon Spin-Off and Corporate Restructuring Fund	24	98.8%	90.3%	01/31/17
2500	large	1.64	s5	KMKNX	Kinetics Market Opportunities Fund	43	96.2%	90.4%	03/31/17
2000	large	1.95	s5	NEAGX	Needham Aggressive Growth Fund	61	85.6%	93.4%	03/31/17
2000	large	1.85	s5	NEEGX	Needham Growth Fund	117	84.5%	96.6%	03/31/17
2000	large	1.48	s5	VICEX	USA Mutuals Vice Fund	230	86.6%	85.3%	03/31/17
2500	large	1.64	s5	WWNPX	Kinetics Paradigm Fund	770	98.9%	89.0%	03/31/17
2500	large	0.79	s5	FRESX	Fidelity Real Estate Investment Portfolio	4386	97.0%	90.6%	04/30/17
2000	large	1.34	s5	AKREX	AKRE Focus Fund	5852	91.1%	87.4%	04/30/17
1000	multi	1.45	r3	KMVAX	Kirr Marbach Partners Value Fund	73	95.0%	93.9%	03/31/17
1000	multi	1.2	r3	BOPAX	Sterling Capital Special Opportunities Fund	1144	83.6%	84.2%	03/31/17
2500	multi	1.47	r3	HFCSX	Hennessy Focus Fund	2514	92.0%	93.7%	01/31/17
1000	mid	1.39	rmv	PWREX	Pioneer Real Estate Shares	133	82.6%	97.0%	03/31/17
0	mid	0.96	rmv	PUTYX	Putnam Global Utilities Fund	166	89.0%	92.1%	02/28/17
500	mid	1.25	rm	FAMEX	FAM Equity Income Fund	211	88.5%	86.9%	03/31/17

Count: 32

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**Orange** = 2nd highest minimum investment group (Minimum Investment 5000-10000)

TABLE 4: AGGRESSIVE PORTFOLIO - HIGHER VOLATILITY FUNDS

Minimum Initial \$ Investment	Size: Cap Type	Expense Ratio	Index. Abbrev	Fund Ticker	Fund Name	Fund Assets \$Millions	Active Share: %-tile	Duration %-tile	Latest Report Date
1000	small	1.5	r2	WESCX	TETON Westwood Small Cap Equity Fund	34	81.7%	82.9%	03/31/17
1000	small	1.33	r2	TETAX	Rbc Enterprise Fund	85	92.9%	94.4%	03/31/17
1000	small	1.51	r2	MASVX	Madison Small Cap Fund	108	85.7%	84.0%	04/30/17
1000	small	1.32	r2	BERWX	Berwyn Fund	128	96.7%	87.9%	01/31/17
1000	small	1.15	r2	TEEAX	Rbc Small Cap Core Fund	281	81.7%	86.5%	03/31/17
1000	small	1.25	r2	PRCGX	Perritt MicroCap Opportunities Fund	283	97.8%	92.4%	01/31/17
0	small	0.99	r2g	IBGIX	VY Baron Growth Portfolio	729	90.7%	99.8%	03/31/17
1000	small	1.14	r2	FMIMX	FMI Common Stock Fund	1034	97.9%	83.3%	03/31/17
0	small	0.93	r2v	SMVRX	Wells Fargo Small Cap Value Fund	1051	80.4%	83.7%	03/31/17
500	small	0.86	r2	HSCSX	Homestead Small Company Stock Fund	1228	91.7%	90.2%	03/31/17
0	small	1.87	r2	RPRRX	Royce Premier Fund	2323	93.2%	86.7%	03/31/17
2500	small	1.25	r2	PFOPX	Paradigm Opportunity Fund	7	95.5%	90.5%	03/31/17
2000	small	1.35	r2g	RIVSX	River Oak Discovery Fund	14	97.5%	82.7%	01/31/17
2500	small	1.64	r2	KSCOX	Kinetics Small Cap Opportunities Fund	194	99.3%	86.4%	03/31/17
2000	small	1.19	r2	RDVIX	Royce Dividend Value Fund	213	94.0%	89.4%	03/31/17
2000	small	1.2	r2	SSSFX	AMG SouthernSun Small Cap Fund	344	98.5%	87.6%	03/31/17
2500	small	1.13	r2	TSFYX	Touchstone Small Cap Fund	510	97.7%	85.9%	03/31/17
2500	small	1.04	r2v	HISVX	Harbor Small Cap Value Fund	872	81.7%	92.6%	01/31/17
2500	small	1.1	r2	CCASX	Conestoga Small Cap Fund	994	91.4%	87.5%	03/31/17
2000	small	1.2	r2	WGROX	Wasatch Core Growth Fund	1460	90.7%	82.1%	03/31/17
2000	small	1.32	r2g	BSCFX	Baron Small Cap Fund	3374	84.9%	95.3%	03/31/17
2500	small	1	r2	FSCRX	Fidelity Small Cap Discovery Fund	5633	90.2%	91.3%	04/30/17
2000	small	1.31	r2g	BGRFX	Baron Growth Fund	5903	88.5%	98.7%	03/31/17
1000	mid	1.39	rmv	PWREX	Pioneer Real Estate Shares	133	82.6%	97.0%	03/31/17
0	mid	0.96	rmv	PUTYX	Putnam Global Utilities Fund	166	89.0%	92.1%	02/28/17
500	mid	1.25	rm	FAMEX	FAM Equity Income Fund	211	88.5%	86.9%	03/31/17
500	mid	1.15	rm	TMFGX	Motley Fool Great America Fund	226	90.2%	81.6%	04/30/17
500	mid	1.17	rm	FAMVX	FAM Value Fund	1134	87.4%	93.2%	03/31/17
1000	mid	1.15	rmv	CAAPX	Ariel Appreciation Fund	1783	86.2%	85.5%	03/31/17
2500	mid	1.56	rm	BWNYX	Bullfinch Greater Western New York Series Fund	2	97.0%	95.1%	04/30/17
2500	mid	1.5	rmg	BUNRX	Bullfinch Unrestricted Series Fund	9	93.2%	92.7%	04/30/17
2500	mid	1.36	rmv	NRFAX	Natixis AEW Real Estate Fund	174	82.3%	91.7%	04/30/17

Countt: 32

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