

Does Past Performance Matter?

The Persistence Scorecard

Summary of Results

CONTRIBUTOR

Aye M. Soe, CFA
Senior Director
Global Research & Design
aye.soe@spdji.com

- When it comes to the active versus passive debate, the true measurement of successful active management lies in the ability of a manager or a strategy to deliver above-average returns consistently over multiple periods. Demonstrating the ability to outperform repeatedly is the only proven way to differentiate a manager's luck from skill.
- According to the Persistence Scorecard, relatively few funds can consistently stay at the top. Out of 681 funds that were in the top quartile as of September 2012, only 9.84% managed to stay in the top quartile at the end of September 2014. Further, 9.56% of the large-cap funds, 15.63% of the mid-cap funds and 7.33% of the small-cap funds remained in the top quartile.
- For the three-year period that ended in September 2014, persistence figures for funds in the top half are much more favorable. Over three consecutive 12-month periods, 30.08% of large-cap funds, 30.73% of mid-cap funds and 29.33% of small-cap funds maintained a top-half ranking. Random expectations would suggest a rate of 25%.
- An inverse relationship exists between the measurement time horizon and the ability of top-performing funds to maintain their status. It is worth noting that less than 1% of large- and mid-cap funds managed to remain in the top quartile at the end of the five-year measurement period. This figure paints a negative picture regarding the lack of long-term persistence in mutual fund returns.
- Similarly, only 5.84% of large-cap funds, 2.83% of mid-cap funds and 7.95% of small-cap funds maintained top-half performance over five consecutive 12-month periods. Random expectations would suggest a repeat rate of 6.25%.
- The transition matrices track the performance of top- and bottom-quintile performers over subsequent time periods. The data show a stronger likelihood for the best-performing funds to become the worst-performing funds than vice versa. Of 421 funds that were in the bottom quartile, 14.45% moved to the top quartile over the five-year horizon, while 27.08% of the 421 funds that were in the top quartile moved into the bottom quartile during the same period.
- Our research also finds that there is consistency in the death rate of bottom-quartile funds. Across all market cap categories and all periods studied, fourth-quartile funds had a much higher rate of being merged or liquidated. The five-year transition matrix illustrates that 32.68% of large-cap funds, 38.46% of mid-cap funds and 49.00% of small-cap funds in the fourth quartile disappeared.

About the Persistence Scorecard

The phrase “past performance is not an indicator of future outcomes” (or some variation thereof) can be found in the fine print of most mutual fund literature. Yet due to either force of habit or conviction, investors and advisors consider past performance and related metrics to be important factors in fund selection. So does past performance really matter?

To answer this question on a continuous basis, the Persistence Scorecard, released twice per year, tracks the consistency of top performers over yearly consecutive periods and measures performance persistence through transition matrices. As in our widely followed SPIVA[®] Scorecards, the University of Chicago’s Center for Research in Security Prices (CRSP) Survivorship Bias Free Mutual Fund Database serves as our underlying data source.

S&P Dow Jones Indices is one of the world’s leading index providers, maintaining a wide variety of investable and benchmark indices to meet an array of investor needs. Our Global Research & Design team is dedicated to conducting unbiased, in-depth analysis on a broad range of topics and issues facing investors in today’s marketplace. This scorecard highlights performance persistence over three- and five-year consecutive 12-month periods and two non-overlapping three- and five-year periods.

Key features of the Persistence Scorecard include:

- Historical rankings without survivorship bias: For anyone making an investment decision, all funds available at the time of that decision are part of the initial opportunity set. Nevertheless, in their persistence calculations, analysts often limit their sample to funds that continue to exist over the complete time period examined, ranking only the survivors. If that happens, funds that liquidate or merge during a period of study are disregarded, biasing measurements of persistence. Using the University of Chicago’s CRSP Survivorship Bias Free Mutual Fund Database, the Persistence Scorecard ranks all funds available at each point in time and tracks the top-quartile and top-half performers throughout the time period. This approach accounts for all initially available funds.
- Clean universe: The mutual fund universe used in these reports comprises actively managed domestic U.S. equity funds. Index funds, sector funds and index-based dynamic (bull/bear) funds are excluded from the sample. To avoid double-counting multiple share classes, only the largest share class of a fund is used.
- Transition matrices: Transition matrices show the movements between quartiles and halves over two non-overlapping three- and five-year periods. They also track the percentage of funds that have merged or liquidated. In addition, we monitor movements between capitalization levels. This helps us capture, for example, the conversion of some large-cap funds to mid- and small-cap funds.
- Tracking reports of top performers: The tracking reports show the percentages of funds that remain in the top-quartile or top-half rankings over consecutive three- and five-year periods.

Exhibits

Exhibit 1: Performance Persistence Over Three Consecutive 12-Month Periods

Mutual Fund Category	Fund Count at Start	Funds Remaining (%)		
	September 2012	September 2013	September 2014	
Top Quartile				
All Domestic Funds	681	33.33	9.84	
Large-Cap Funds	251	31.47	9.56	
Mid-Cap Funds	96	40.63	15.63	
Small-Cap Funds	150	34.67	7.33	
Multi-Cap Funds	184	30.98	9.24	
Top Half				
All Domestic Funds	1362	56.17	32.01	
Large-Cap Funds	502	54.38	30.08	
Mid-Cap Funds	192	55.73	30.73	
Small-Cap Funds	300	58.67	29.33	
Multi-Cap Funds	368	56.79	37.50	

Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2014. Charts and tables are provided for illustrative purposes. Past performance is no guarantee of future results.

Exhibit 2: Performance Persistence Over Five Consecutive 12-Month Periods

Mutual Fund Category	Fund Count at Start	Funds Remaining (%)			
	September 2010	September 2011	September 2012	September 2013	September 2014
Top Quartile					
All Domestic Funds	706	37.68	10.34	4.67	1.27
Large-Cap Funds	257	41.25	9.34	5.06	0.39
Mid-Cap Funds	106	29.25	9.43	4.72	0.94
Small-Cap Funds	151	34.44	9.93	3.97	1.32
Multi-Cap Funds	192	40.1	12.5	4.69	2.60
Top Half					
All Domestic Funds	1412	52.2	24.01	12.89	6.87
Large-Cap Funds	514	57.59	23.74	11.28	5.84
Mid-Cap Funds	212	48.58	15.09	5.19	2.83
Small-Cap Funds	302	52.32	29.47	18.54	7.95
Multi-Cap Funds	384	46.88	25	14.84	9.64

Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2014. Charts and tables are provided for illustrative purposes. Past performance is no guarantee of future results.

Exhibit 3: Three-Year Transition Matrix—Performance Over Two Non-Overlapping Three-Year Periods (Based on Quartiles)

Mutual Fund Category	Fund Count at Start (September 2011)	Funds Remaining at Three Years						
		1st Quartile (%)	2nd Quartile (%)	3rd Quartile (%)	4th Quartile (%)	Merged/Liquidated (%)	Style Changed (%)	Total (%)
All Domestic Funds								
1st Quartile	634	20.5	20.98	19.87	28.55	10.09	0	100
2nd Quartile	634	19.87	18.45	23.97	25.08	12.62	0	100
3rd Quartile	633	22.59	22.75	24.33	15.64	14.69	0	100
4th Quartile	634	21.77	22.56	16.56	15.46	23.66	0	100
Large-Cap Funds								
1st Quartile	244	18.44	14.34	17.21	25.41	10.25	14.34	100
2nd Quartile	244	18.85	18.85	20.08	20.08	15.57	6.56	100
3rd Quartile	243	19.34	21.81	18.93	15.64	16.87	7.41	100
4th Quartile	244	15.57	17.62	15.98	11.07	25.41	14.34	100
Mid-Cap Funds								
1st Quartile	89	7.87	20.22	15.73	29.21	12.36	14.61	100
2nd Quartile	90	18.89	14.44	17.78	15.56	12.22	21.11	100
3rd Quartile	89	23.6	11.24	21.35	8.99	14.61	20.22	100
4th Quartile	89	16.85	21.35	11.24	13.48	17.98	19.1	100
Small-Cap Funds								
1st Quartile	134	22.39	17.91	17.91	29.85	6.72	5.22	100
2nd Quartile	134	17.16	18.66	26.12	28.36	6.72	2.98	100
3rd Quartile	134	20.15	26.87	24.63	9.7	14.93	3.73	100
4th Quartile	134	24.63	20.9	15.67	16.42	20.9	1.49	100
Multi-Cap Funds								
1st Quartile	167	20.36	20.96	16.17	14.97	10.18	17.36	100
2nd Quartile	167	13.17	12.57	16.77	25.15	13.17	19.17	100
3rd Quartile	166	19.28	16.27	24.1	16.27	12.65	11.45	100
4th Quartile	167	14.37	17.37	9.58	10.78	26.35	21.55	100

Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2014. Charts and tables are provided for illustrative purposes. Past performance is no guarantee of future results.

Exhibit 4: Three-Year Transition Matrix—Performance Over Two Non-Overlapping Three-Year Periods (Based on Halves)

Mutual Fund Category	Fund Count at Start (September 2011)	Funds Remaining at Three Years				
		Top Half (%)	Bottom Half (%)	Merged/Liquidated (%)	Style Changed (%)	Total (%)
All Domestic Funds						
Top Half	1268	39.91	48.74	11.36	0	100
Bottom Half	1267	44.83	35.99	19.18	0	100
Large-Cap Funds						
Top Half	488	35.25	41.39	12.91	10.45	100
Bottom Half	487	37.17	30.8	21.15	10.88	100
Mid-Cap Funds						
Top Half	179	30.73	39.11	12.29	17.88	100
Bottom Half	178	36.52	27.53	16.29	19.67	100
Small-Cap Funds						
Top Half	268	38.06	51.12	6.72	4.10	100
Bottom Half	268	46.27	33.21	17.91	2.61	100
Multi-Cap Funds						
Top Half	334	33.53	36.53	11.68	18.26	100
Bottom Half	333	33.63	30.33	19.52	16.52	100

Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2014. Charts and tables are provided for illustrative purposes. Past performance is no guarantee of future results.

Exhibit 5: Five-Year Transition Matrix—Performance Over Two Non-Overlapping Five-Year Periods (Based on Quartiles)

Mutual Fund Category	Fund Count at Start (September 2009)	Funds Remaining at Five Years						Total (%)
		1st Quartile (%)	2nd Quartile (%)	3rd Quartile (%)	4th Quartile (%)	Merged/Liquidated (%)	Style Changed (%)	
All Domestic Funds								
1st Quartile	421	20.43	19.95	22.33	27.08	10.21	0	100
2nd Quartile	422	21.56	19.19	20.14	21.09	18.01	0	100
3rd Quartile	421	18.29	20.43	19.48	14.25	27.55	0	100
4th Quartile	421	16.63	17.34	14.96	14.49	36.58	0	100
Large-Cap Funds								
1st Quartile	153	11.11	18.95	16.99	18.95	16.99	17	100
2nd Quartile	153	15.03	15.03	13.07	18.3	24.18	14.38	100
3rd Quartile	152	17.76	9.87	15.13	8.55	31.58	17.1	100
4th Quartile	153	14.38	13.73	13.07	11.76	32.68	14.38	100
Mid-Cap Funds								
1st Quartile	65	10.77	9.23	12.31	12.31	10.77	44.61	100
2nd Quartile	66	7.58	16.67	10.61	13.64	18.18	33.34	100
3rd Quartile	65	10.77	12.31	12.31	10.77	23.08	30.77	100
4th Quartile	65	15.38	4.62	9.23	6.15	38.46	26.16	100
Small-Cap Funds								
1st Quartile	100	18.00	9.00	17.00	37.00	4.00	15.00	100
2nd Quartile	101	16.83	22.77	27.72	15.84	9.90	6.93	100
3rd Quartile	100	22.00	25.00	15.00	13.00	21.00	4.00	100
4th Quartile	100	15.00	15.00	12.00	6.00	49.00	3.00	100
Multi-Cap Funds								
1st Quartile	103	15.53	12.62	22.33	13.59	9.71	26.21	100
2nd Quartile	103	9.71	15.53	11.65	21.36	14.56	27.19	100
3rd Quartile	103	12.62	11.65	7.77	10.68	26.21	31.07	100
4th Quartile	103	14.56	12.62	9.71	6.8	32.04	24.27	100

Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2014. Charts and tables are provided for illustrative purposes. Past performance is no guarantee of future results.

Exhibit 6: Five-Year Transition Matrix—Performance Over Two Non-Overlapping Five-Year Periods (Based on Halves)

Mutual Fund Category	Fund Count at Start (September 2009)	Funds Remaining at Five Years				Total (%)
		Top Half (%)	Bottom Half (%)	Merged/Liquidated (%)	Style Changed (%)	
All Domestic Funds						
Top Half	843	40.57	45.31	14.12	0	100
Bottom Half	842	36.34	31.59	32.07	0	100
Large-Cap Funds						
Top Half	306	30.07	33.66	20.59	15.68	100
Bottom Half	305	27.87	24.26	32.13	15.74	100
Mid-Cap Funds						
Top Half	131	22.14	24.43	14.5	38.94	100
Bottom Half	130	21.54	19.23	30.77	28.46	100
Small-Cap Funds						
Top Half	201	33.33	48.76	6.97	10.94	100
Bottom Half	200	38.5	23	35	3.5	100
Multi-Cap Funds						
Top Half	206	26.7	34.47	12.14	26.69	100
Bottom Half	206	25.73	17.48	29.13	27.67	100

Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2014. Charts and tables are provided for illustrative purposes. Past performance is no guarantee of future results.

INDEX RESEARCH & DESIGN CONTACT INFORMATION

Global Head

Keith Loggie	keith.loggie@spdji.com
--------------	------------------------

New York

Vishal Arora	vishal.arora@spdji.com
Phillip Brzenk	phillip.brzenk@spdji.com
Qing Li	qing.li@spdji.com
Berlinda Liu	berlinda.liu@spdji.com
Aye Soe	aye.soe@spdji.com
Peter Tsui	peter.tsui@spdji.com
Hong Xie	hong.xie@spdji.com

Beijing

Liyu Zeng	liyu.zeng@spdji.com
-----------	---------------------

Hong Kong

Priscilla Luk	priscilla.luk@spdji.com
---------------	-------------------------

London

Sunjiv Mainie	sunjiv.mainie@spdji.com
Daniel Ung	daniel.ung@spdji.com

ABOUT S&P DOW JONES INDICES

S&P Dow Jones Indices LLC, a part of McGraw Hill Financial, Inc., is the world's largest, global resource for index-based concepts, data and research. Home to iconic financial market indicators, such as the S&P 500[®] and the Dow Jones Industrial Average[™], S&P Dow Jones Indices LLC has over 115 years of experience constructing innovative and transparent solutions that fulfill the needs of institutional and retail investors. More assets are invested in products based upon our indices than any other provider in the world. With over 1,000,000 indices covering a wide range of assets classes across the globe, S&P Dow Jones Indices LLC defines the way investors measure and trade the markets. To learn more about our company, please visit www.spdji.com.

GENERAL DISCLAIMER

© 2014 by S&P Dow Jones Indices LLC, a part of McGraw Hill Financial, Inc. All rights reserved. Standard & Poor's® and S&P® are registered trademarks of Standard & Poor's Financial Services LLC ("S&P"), a subsidiary of McGraw Hill Financial. Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC ("Dow Jones"). Trademarks have been licensed to S&P Dow Jones Indices LLC. Redistribution, reproduction and/or photocopying in whole or in part are prohibited without written permission. This document does not constitute an offer of services in jurisdictions where S&P Dow Jones Indices LLC, Dow Jones, S&P or their respective affiliates (collectively "S&P Dow Jones Indices") do not have the necessary licenses. All information provided by S&P Dow Jones Indices is impersonal and not tailored to the needs of any person, entity or group of persons. S&P Dow Jones Indices receives compensation in connection with licensing its indices to third parties. Past performance of an index is not a guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index is available through investable instruments based on that index. S&P Dow Jones Indices does not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. S&P Dow Jones Indices makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. S&P Dow Jones Indices LLC is not an investment advisor, and S&P Dow Jones Indices makes no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. Prospective investors are advised to make an investment in any such fund or other vehicle only after carefully considering the risks associated with investing in such funds, as detailed in an offering memorandum or similar document that is prepared by or on behalf of the issuer of the investment fund or other vehicle. Inclusion of a security within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security, nor is it considered to be investment advice.

These materials have been prepared solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. No content contained in these materials (including index data, ratings, credit-related analyses and data, research, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse-engineered, reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of S&P Dow Jones Indices. The Content shall not be used for any unlawful or unauthorized purposes. S&P Dow Jones Indices and its third-party data providers and licensors (collectively "S&P Dow Jones Indices Parties") do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Dow Jones Indices Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON AN "AS IS" BASIS. S&P DOW JONES INDICES PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Dow Jones Indices Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

S&P Dow Jones Indices keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P Dow Jones Indices may have information that is not available to other business units. S&P Dow Jones Indices has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

In addition, S&P Dow Jones Indices provides a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in model portfolios, evaluate or otherwise address.