Jennison Associates LLC

Subadviser Since 05/01/1990

Total Net Assets - All Classes \$23,599,139,906

Equity Assets: 97.68% Cash & Other Assets Less Liabilities: 2.32%

Benchmark Name: Russell 1000® Growth Index

Portfolio Managers







McCarragher





Investment Philosophy

The Fund invests primarily in equity securities, specifically U.S. companies with market capitalizations of at least \$1 billion at the time of purchase. Through rigorous research, visits, and meetings with top management, the portfolio manager knows these businesses intimately, and only invests in those that the portfolio manager believes have: strong balance sheets and earnings performance, sales momentum and growth outlook, high profitability history or potential, unique market position and a capable and committed management team. The Fund stays fully invested in stocks and does not try to time the market, but instead works toward steady investment growth.

CHARACTERISTICS & ALLOCATION

As of 06/30/2022

Portfolio Char	acteristics	Economic Sectors			
	Portfolio	Benchmark		Portfolio %	Benchmark %
Number of Holdings	50	520	Information Technology	36.57	43.54
Wtd Avg Market Cap (\$Mil)	650,192.80	730,857.00	Consumer Discretionary	28.21	15.45
Med Cap - # Stocks (\$Mil)	114,567.00	14,183.00	Health Care	12.07	12.35
Price/Book Ratio	11.80	11.68	Communication Services	9.02	8.12
Adjusted Trailing P/E Ratio	29.70	26.80	Consumer Staples	4.04	5.84
% EPS Growth - Past 3 Yr	24.80	23.20	Financials	3.45	2.92
Return on Equity (%)	28.81	32.07	Energy	1.60	1.47
Beta vs. Fund Benchmark	1.14		Real Estate	1.56	1.77
Forecasted P/E Ratio	27.70	24.30	Industrials	1.16	7.04
Proj. Earnings Growth Rate (%)	25.00	16.90	Materials	0.00	1.39
			Utilities	0.00	0.04

Top 10 Holdings						
	Portfolio % Ben	chmark %				
Tesla Inc	7.84	3.24				
Apple Inc.	7.46	11.84				
Microsoft Corporation	6.56	10.89				
Amazon.com Inc.	6.49	5.35				
Alphabet Inc. Class A	3.62	3.23				
Visa Inc. Class A	3.57	1.84				
Alphabet Inc. Class C	3.55	2.96				
Eli Lilly and Company	3.41	1.26				
Salesforce Inc.	2.89	0.19				
NVIDIA Corporation	2.87	2.07				
Total	48.26	42.87				

Top 10 Industries					
	Portfolio %	Benchmark %			
Software	14.77	17.10			
Interactive Media	9.02	6.96			
It Services	8.98	6.71			
Automobiles	7.84	3.29			
Tech Hardware Storage	7.46	12.06			
Internet & Direct Market	7.25	5.51			
Textiles Apparel & Lux	5.42	0.92			
Semiconductors	5.36	6.97			
Pharmaceuticals	4.74	2.30			
Specialty Retail	3.87	2.70			
Total	74.71	64.52			

	Market Capitalization	ı
		Portfolio %
Large	Above 25.0B	98.16
	10.0B - 25.0B	1.84
Mid	5.0B - 10.0B	0.00
	1.0B - 5.0B	0.00
Small	0.0 - 1.0B	0.00





Performance

Share Class	Ticker	CUSIP	3 Months	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.	Since Inception	Inception Date	Net Expense Ratio %	Gross Expense Ratio %
Institutional	HACAX	411511504	-25.49%	-35.62%	-32.12%	8.16%	12.05%	13.64%	11.49%	12/29/87	0.65	0.71
Administrative	HRCAX	411511827	-25.52%	-35.69%	-32.29%	7.89%	11.77%	13.35%	10.28%	11/01/02	0.90	0.96
Investor	HCAIX	411511819	-25.54%	-35.73%	-32.37%	7.77%	11.64%	13.22%	10.12%	11/01/02	1.01	1.07
Retirement	HNACX	411512528	-25.46%	-35.59%	-32.06%	8.25%	12.14%	13.69%	11.51%	03/01/16	0.57	0.63
Russell 1000® Growth Index S&P 500 Index			-20.92% -16.10%	-28.07% -19.96%	-18.77% -10.62%	12.58% 10.60%	14.29% 11.31%	14.80% 12.96%	10.72% 10.60%	12/29/87 12/29/87		

MANAGER COMMENTARY

As of 06/30/2022

"While acknowledging the challenges of today's complex investment landscape, we firmly believe the Fund's holdings continue to embody the superior growth potential that has rewarded our clients during our long history."

Jennison Associates, LLC

Market in Review

Stock prices continued to suffer in the second quarter of 2022 from the war in Ukraine, unexpectedly high inflation, tightening monetary policy, and ongoing COVID-19 lockdowns in China. This has led to one of the largest sell-offs over a three-month period since the global financial crisis nearly fifteen years ago. The accumulation of these events started to weigh on global GDP growth. Lower-income households were hit hardest, with inflation rapidly consuming pandemic-driven savings and wages unable to keep pace. U.S. Federal Reserve (Fed) policy tightening increased markedly, with the unusual move of a 0.75% rate hike announced during the Fed's June meeting, and predictions that an additional 0.75% rate hike could be necessary in July as well.

A U.S. recession is not inevitable in our view, but the prospects for one continue to build. Companies held in the Harbor Capital Appreciation Fund ("Fund") are approaching their planning with the recognition that the intermediate-term outlook poses greater uncertainty today than it did when the year began. Adjustments in hiring plans and greater impacts from foreign currency translation on reported profits are among the shifts that are affecting full-year financial outlooks at this stage.

The advantages of high-quality growth companies tend to attract greater investor attention during periods of slowing growth, given their relative resiliency to economic headwinds. For much of the past 40 years, disinflation was the common theme, and interest rates trended lower, particularly during economic slowdowns. In the current cycle, however, a spike in inflation has forced policymakers and the market to respond with sharply higher interest rates, pushing up the discount rate investors apply to the value of future cash flows for many of the growth companies that make up the Fund. As a result, the overall valuation of this large-cap growth Fund has adjusted significantly over the past several months, returning to pre-pandemic levels.

Retirement Class shares commenced operations on March 1, 2016. The performance attributed to the Retirement Class shares prior to that date is that of the Institutional Class shares. Performance prior to March 1, 2016 has not been adjusted to reflect the lower expenses of Retirement Class shares. During this period, Retirement Class shares would have had returns similar to, but somewhat higher than, Institutional Class shares due to the fact that Retirement Class shares represent interests in the same portfolio as Institutional Class shares but are subject to lower expenses.

Performance data shown represents past performance and is no guarantee of future results. Past performance is net of management fees and expenses and reflects reinvested dividends and distributions. Past performance reflects the beneficial effect of any expense waivers or reimbursements, without which returns would have been lower. Investment returns and principal value will fluctuate and when redeemed may be worth more or less than their original cost. Returns for periods less than one year are not annualized. Current performance may be higher or lower and is available through the most recent month end at harborcapital.com or by calling 800-422-1050.



Portfolio Performance

During the second quarter, the Harbor Capital Appreciation Fund (Institutional Class) returned -25.49%, underperforming the Russell 1000® Growth Index, which returned -20.92%, and the S&P 500 Index, which returned -16.10%. All sectors posted negative returns for the period. Among the benchmark's largest sectors, Consumer Discretionary, Communication Services, and Information Technology underperformed the broad index, while Health Care outperformed the overall benchmark.

Stock selection in the Fund's Information Technology, Communication Services, and Consumer Discretionary sectors, along with an overweight allocation to Consumer Discretionary, detracted the most from relative returns. Stock selection in the Health Care sector modestly benefited relative results.

Contributors & Detractors

Eli Lilly contributed to Fund returns and rose during the quarter, benefiting from the relative defensiveness of the Health Care sector, and the approval of the company's diabetes drug in the United States.

UnitedHealth Group rose slightly during the quarter, as it is a U.S.-centric, quality compounder with limited macroeconomic exposure.

Tesla detracted from Fund returns on lower deliveries due to the temporary shutdown of its Shanghai facility and investor concern about Elon Musk's activities. We continue to expect full-year deliveries for 2022 to be approximately 1.5 million—more than 50% above 2021.

Amazon underperformed during the quarter due to concerns about a tougher consumer environment and the company's focus on operations with respect to inventory, delivery speed, and economics.

Buys & Sells

ASML was added to the Fund during the quarter on the back of its leadership position in the semiconductor equipment space, which we believe offers both growth and defensive characteristics.

We exited the position in Shopify due to concerns about gross margins and the company's longer-term path to profitability.

Outlook

Over the past year, the investment backdrop has transformed from one of stimulus and spending to one of inflation and tightening financial conditions, with the need to control inflation moving aggressively to the forefront. Investors remain concerned about the Fed's willingness to take the measures necessary to combat inflation, despite the recently stepped-up magnitude and pace of rate increases, and language communicating a "whatever it takes" approach. The uncomfortable reality for policymakers is that the primary sources of elevated headline inflation this year are supply driven—tied directly to the war in Ukraine and related sanctions on Russia sanctions—which challenge the effectiveness of monetary policy as a tool for addressing the problem. Meanwhile, an intensifying slowdown in global economic activity and rising concerns about recession in many countries will confront investors and policymakers as the second half of the year unfolds. In that vein, the Fed's task of bringing inflation back to its 2% target, without undermining the robust employment backdrop and precipitating a recession, underscores current uncertainty in the macro outlook.

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Through our bottom-up research and analysis, we continue to hold companies that, in our view, are best positioned to withstand the slowdown through their exposure to unique products and services that address demands from growing markets through innovation and agility. The companies' strong balance sheets and financial flexibility should allow them to gain market share from weaker competitors, while continuing to invest for future growth throughout the period.

We remain optimistic about the prospects for the Fund holdings over our multi-year investment time horizon. While acknowledging the challenges of today's complex investment landscape, we firmly believe the Fund's our holdings continue to embody the superior growth potential that has rewarded our clients over our long history.

QUARTERLY ATTRIBUTION

As of 06/30/2022

Best & Worst Performers

Best Performers	Average Weight %	Return %
Eli Lilly and Company	2.69	13.60
American Tower Corporation	1.09	2.92
UnitedHealth Group Incorporated	1.85	1.08
Novo Nordisk A/S Sponsored ADR Class B	0.88	0.34
Estee Lauder Companies Inc. Class A	1.87	-6.26

Contributors & Detractors

Greatest Contributors	Return %	Contribution to Return %
Eli Lilly and Company	13.60	0.38
UnitedHealth Group Incorporated	1.08	0.04
American Tower Corporation	2.92	0.02
Okta Inc. Class A	6.27	0.00
Novo Nordisk A/S Sponsored ADR Class B	0.34	-0.01
Total		0.44

Worst Performers	Average Weight %	Return %
Snap Inc. Class A	0.79	-63.52
Netflix Inc.	0.46	-53.79
Shopify Inc. Class A	0.41	-49.70
Twilio Inc. Class A	0.36	-49.02
Airbnb Inc. Class A	1.52	-48.14

Greatest Detractors	Return %	Contribution to Return %
Tesla Inc	-37.51	-3.57
Amazon.com Inc.	-34.84	-2.45
NVIDIA Corporation	-44.43	-1.70
Apple Inc.	-21.59	-1.58
Airbnb Inc. Class A	-48.14	-0.89
Total		-10.19

Performance data shown represents past performance and is no guarantee of future results. Past performance is net of management fees and expenses and reflects reinvested dividends and distributions. Past performance reflects the beneficial effect of any expense waivers or reimbursements, without which returns would have been lower. Investment returns and principal value will fluctuate and when redeemed may be worth more or less than their original cost. Returns for periods less than one year are not annualized. Current performance may be higher or lower and is available through the most recent month end at harborcapital.com or by calling 800-422-1050.



Quarterly Attribution:

Harbor Capital Appreciation Fund vs Russell 1000® Growth

Performance

	Portfolio	Benchmark	Active
Return Ex Currency	-25.32	-20.92	-4.40
Currency Contribution	-0.19	0.00	-0.19
Total Return	-25.51	-20.92	-4.59

On the state of the state of		Average Weight			Total Return		Contributio	n to Return	А	ttribution Analysi	S
Sector Attribution								Bench.			
			Variation in Avg.	Port. Total	Bench. Total	Variation in Total	Port. Contribution	Contribution To			
	Port. Avg. Wgt.	Bench. Avg. Wgt.	Wgt.	Return	Return	Return	To Return	Return	Allocation Effect	Selection Effect	Total Effect
Health Care	10.11	9.45	0.66	-8.78	-11.55	2.77	-0.69	-0.94	-0.02	0.23	0.22
Financials	3.17	2.55	0.62	-15.54	-19.43	3.89	-0.45	-0.50	0.00	0.11	0.11
Utilities	0.00	0.03	-0.03	0.00	-5.34	5.34	0.00	0.00	0.00	0.00	0.00
Real Estate	1.09	1.88	-0.79	2.92	-9.39	12.31	0.02	-0.17	-0.12	0.11	-0.01
Materials	0.00	1.05	-1.05	0.00	-15.89	15.89	0.00	-0.19	-0.05	0.00	-0.05
Energy	1.41	0.60	0.81	-13.11	-4.70	-8.41	-0.31	-0.03	0.03	-0.12	-0.09
Consumer Staples	3.63	4.82	-1.19	-11.58	-4.25	-7.33	-0.37	-0.21	-0.16	-0.24	-0.40
Industrials	1.32	6.38	-5.06	-42.66	-17.64	-25.02	-0.66	-1.13	-0.17	-0.37	-0.53
Communication Services	10.57	9.94	0.63	-33.09	-25.68	-7.41	-3.88	-2.54	-0.13	-0.90	-1.03
Information Technology	36.82	45.70	-8.88	-25.61	-21.80	-3.81	-9.33	-9.86	0.07	-1.45	-1.38
Consumer Discretionary	29.98	17.59	12.39	-30.85	-28.70	-2.15	-9.86	-5.35	-1.01	-0.66	-1.67
-		-		-	-	-					
Total	100.00	100.00	0.00	-25.51	-20.92	-4.59	-25.51	-20.92	-1.31	-3.28	-4.59

Trailing 1 Year Attribution:

Harbor Capital Appreciation Fund vs Russell 1000® Growth

Performance

	Portfolio	Benchmark	Active
Return Ex Currency	-31.34	-18.77	-12.57
Currency Contribution	-0.41	0.00	-0.41
Total Return	-31.75	-18.77	-12.98

	Average Weight			Total Return			Contribution to Return		Attribution Analysis		
Sector Attribution								Bench.			
			Variation in Avg.	Port. Total	Bench. Total	Variation in Total	Port. Contribution	Contribution To			
	Port. Avg. Wgt.	Bench. Avg. Wgt.	Wgt.	Return	Return	Return	To Return	Return	Allocation Effect	Selection Effect	Total Effect
Health Care	6.62	9.03	-2.41	-0.59	-10.16	9.57	-0.25	-0.75	0.03	0.53	0.56
Real Estate	0.27	1.78	-1.51	7.42	-12.03	19.45	0.03	-0.20	-0.02	0.10	0.08
Materials	0.00	1.01	-1.01	0.00	-19.78	19.78	0.00	-0.24	0.00	0.00	0.00
Utilities	0.00	0.03	-0.03	0.00	-5.58	5.58	0.00	0.00	0.00	0.00	0.00
Financials	2.27	2.47	-0.20	-22.00	-13.37	-8.63	-0.66	-0.35	-0.04	-0.16	-0.20
Energy	0.40	0.41	-0.01	-15.66	40.98	-56.64	-0.33	0.08	-0.09	-0.15	-0.24
Consumer Staples	3.36	4.17	-0.81	-4.10	8.30	-12.40	-0.26	0.12	-0.19	-0.34	-0.53
Industrials	1.61	6.10	-4.49	-57.48	-17.73	-39.75	-1.07	-1.13	-0.06	-0.82	-0.88
Consumer Discretionary	28.55	18.18	10.37	-27.77	-27.74	-0.03	-9.41	-5.19	-1.07	0.07	-1.00
Communication Services	14.46	11.44	3.02	-47.84	-35.56	-12.28	-6.55	-3.74	-0.61	-2.16	-2.77
Information Technology	41.71	45.38	-3.67	-35.12	-16.01	-19.11	-13.26	-7.38	0.00	-8.22	-8.22
Total	100.00	100.00	0.00	-31.75	-18.77	-12.98	-31.75	-18.77	-1.82	-11.16	-12.98



Trailing 3 Year Attribution: Harbor Capital Appreciation Fund vs Russell 1000® Growth

Performance

	Portfolio	Benchmark	Active	
Return Ex Currency	29.76	42.70	-12.94	
Currency Contribution	-0.68	0.00	-0.68	
Total Return	29.08	42.70	-13.62	

On the state of the state of	Average Weight			Total Return			Contribution to Return		Attribution Analysis		
Sector Attribution								Bench.			
			Variation in Avg.	Port. Total	Bench. Total	Variation in Total	Port. Contribution	Contribution To			
	Port. Avg. Wgt.	Bench. Avg. Wgt.	Wgt.	Return	Return	Return	To Return	Return	Allocation Effect	Selection Effect	Total Effect
Consumer Discretionary	25.18	16.31	8.87	76.88	31.95	44.93	10.87	5.42	-1.76	10.15	8.39
Real Estate	0.49	1.99	-1.50	26.62	22.21	4.41	0.20	0.35	0.30	0.22	0.51
Consumer Staples	3.54	4.47	-0.93	52.64	39.24	13.40	0.99	1.30	0.10	0.32	0.42
Materials	0.00	1.05	-1.05	0.00	8.62	-8.62	0.00	-0.01	0.42	0.00	0.42
Utilities	0.00	0.01	-0.01	0.00	24.65	-24.65	0.00	0.00	0.00	0.00	0.00
Financials	2.01	2.50	-0.49	15.49	20.42	-4.93	0.11	0.37	0.00	-0.04	-0.04
Energy	0.13	0.24	-0.11	-15.66	61.72	-77.38	-0.33	-0.02	0.03	-0.29	-0.26
Health Care	7.55	12.41	-4.86	18.71	36.54	-17.83	1.34	5.85	0.91	-1.61	-0.69
Industrials	3.45	6.52	-3.07	-58.66	5.48	-64.14	-3.29	-0.91	1.47	-4.28	-2.81
Communication Services	14.90	11.56	3.34	-6.17	24.00	-30.17	1.93	4.41	-0.40	-6.14	-6.54
Information Technology	42.15	42.93	-0.78	36.13	70.85	-34.72	17.24	25.92	0.35	-13.63	-13.28
	-					-		-	-		
Total	100.00	100.00	0.00	29.08	42.70	-13.62	29.08	42.70	1.69	-15.31	-13.62

Trailing 5 Year Attribution:

Harbor Capital Appreciation Fund vs Russell 1000® Growth

Performance

	Portfolio	Benchmark	Active
Return Ex Currency	83.35	95.03	-11.68
Currency Contribution	-0.92	0.00	-0.92
Total Return	82.43	95.03	-12.60

Sector Attribution		Average Weight			Total Return			Contribution to Return		Attribution Analysis		
								Bench.				
			Variation in Avg.	Port. Total	Bench. Total	Variation in Total	Port. Contribution	Contribution To				
	Port. Avg. Wgt.	Bench. Avg. Wgt.	Wgt.	Return	Return	Return	To Return	Return	Allocation Effect	Selection Effect	Total Effect	
Consumer Discretionary	23.21	15.72	7.49	135.43	91.82	43.61	19.83	14.38	-2.08	10.85	8.77	
Consumer Staples	3.71	5.16	-1.45	146.11	64.47	81.64	3.58	2.65	1.05	2.66	3.71	
Real Estate	0.63	2.15	-1.52	65.31	62.40	2.91	0.86	1.46	0.58	0.51	1.09	
Materials	0.32	1.71	-1.39	-22.03	26.46	-48.49	-0.31	0.84	1.32	-0.58	0.74	
Utilities	0.00	0.01	-0.01	0.00	125.58	-125.58	0.00	0.02	-0.01	0.00	-0.01	
Energy	0.45	0.48	-0.03	-25.93	41.39	-67.32	-0.56	-0.19	-0.06	-0.32	-0.38	
Financials	2.68	3.14	-0.46	36.66	64.39	-27.73	0.53	2.38	-0.18	-1.54	-1.73	
Industrials	4.61	8.71	-4.10	-38.06	34.21	-72.27	0.29	4.11	2.49	-4.29	-1.80	
Health Care	9.04	12.73	-3.69	32.70	64.60	-31.90	2.12	10.04	1.21	-4.20	-2.99	
Communication Services	15.87	12.15	3.72	23.30	49.17	-25.87	10.65	9.20	-1.79	-5.11	-6.89	
Information Technology	38.86	38.06	0.80	137.86	177.01	-39.15	45.40	50.14	1.45	-14.27	-12.83	
Total	100.00	100.00	0.00	82.43	95.03	-12.60	82.43	95.03	3.71	-16.30	-12.59	

Risks

There is no guarantee that the investment objective of the Fund will be achieved. Stock markets are volatile and equity values can decline significantly in response to adverse issuer, political, regulatory, market and economic conditions. At times, a growth investing style may be out of favor with investors which could cause growth securities to underperform value or other equity securities. Since the Fund may hold foreign securities, it may be subject to greater risks than funds invested only in the U.S. These risks are more severe for securities of issuers in emerging market regions.

Disclosures

The Russell 1000° Growth Index is an unmanaged index generally representative of the U.S. market for larger capitalization growth stocks. The Standard & Poor's 500 Index is an unmanaged index generally representative of the U.S. market for large capitalization equities. These unmanaged indices do not reflect fees and expenses and are not available for direct investment. The Russell 1000° Growth Index and Russell° are trademarks of Frank Russell Company.

Expense ratio information is as of the Fund's current prospectus, as supplemented. Gross expenses are the Fund's total annual operating expenses. The net expense ratios for this fund are subject to a contractual management fee waiver and/or expense limitation agreement, excluding interest expense and acquired fund fees and expenses (if any), through 02/28/2023.

All holdings-related data is provided by FactSet. Because FactSet relies on external sources for its data, that data may differ slightly from actual values maintained by Harbor Funds.

Due to the security valuation procedures of the Fund and intra-day trading activity not included in the FactSet calculations, the actual returns may vary. From time to time the cash return in the portfolio may appear distorted based on the way FactSet's attribution calculation methodology addresses delayed settlements.

Beta is a rolling three year, unless the Fund has a track record of less than three years, in which case it is a rolling one year.

The mean/median long term growth rate for Projected Earnings Growth Rate is the expected growth over the next 3-5 years calculated by FactSet from data provided by brokers. The Adjusted Trailing P/E (Price/Earnings) Ratio is the closing stock price divided by the sum of the next 4 quarters estimated EPS. All P/E, ROE and P/B statistics are calculated as weighted medians.

Best and Worst Performers sections reflect stocks in the portfolio for the quarter with an average weight of 0.25% or greater.

Views expressed herein are drawn from commentary provided to Harbor by the subadviser and may not be reflective of their current opinions or future actions, are subject to change without prior notice, and should not be considered investment advice.

The views expressed herein may not be reflective of current opinions, are subject to change without prior notice, and should not be considered investment advice.

This information should not be considered as a recommendation to purchase or sell a particular security. The weightings, holdings, industries, sectors, countries, and returns mentioned may change at any time and may not represent current or future investments.

As a result of changing market conditions, total net asset levels, expenses and other statistics may change at any time and may differ from those shown.

The total amount shown for sector, industries, or country holdings may be greater than 100% because of the inclusion of derivatives and the collateral securities supporting those instruments.

Sector allocations are determined using the Global Industry Classification Standard (GICS), which is a service of Morgan Stanley Capital International (MSCI) and Standard & Poor's (S&P).

Investors should carefully consider the investment objectives, risks, charges and expenses of a fund before investing. To obtain a summary prospectus or prospectus for this and other information, visit harborcapital.com or call 800-422-1050. Read it carefully before investing.

Jennison Associates LLC is an independent subadviser to the Harbor Capital Appreciation Fund and CIT.

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Attribution Disclosures

Linked Performance by Sectors data is produced from FactSet using data supplied by State Street Bank and Trust Company.

Active Currency Contribution is the Currency Contribution of the portfolio minus the Currency Contribution of the benchmark.

Allocation Effect is the portion of portfolio excess return that is attributable to taking different group bets from the benchmark. (If either the portfolio or the benchmark has no position in a given group, allocation effect is the lone effect.) A group's allocation effect equals the average percent capitalization of the portfolio's group minus the average percent cap of the benchmark's group times the total return of the benchmark group minus the total return of the benchmark.

Average Weight is the dollar value (price times the shares held) of the security or group, divided by the total dollar value of the entire portfolio displayed as a percentage. It is calculated as the simple arithmetic average of daily values.

Contribution to Return is the contribution of a security or group to the overall portfolio return. It is calculated as the security weight multiplied by the daily security return linked daily across the reporting period. Currency Contribution is Total Return in USD subtracting out the Local Returns.

Local Returns are the Total Return of the portfolio or benchmark using the local currency.

Selection Effect is the portion of portfolio excess return attributable to choosing different securities within groups from the benchmark. A group's security selection effect equals the average weight of the benchmark's group times the total return of the portfolio's group minus the total return of the benchmark's group.

Total Effect is the sum of Allocation Effect and Selection Effect. The total effect represents the opportunity cost of what was done in a group relative to the overall portfolio. It is not just the difference between percent contribution in the portfolio and benchmark. At the overall portfolio level, the two numbers are equal. At the group level, they can be different.

Total Return is the price change of a security or group including dividends accrued over the report period (or the in-portfolio return) which includes only the time period that each security was in the portfolio.

Definitions

Beta is a measure of systematic risk, or the sensitivity of a fund to movements in the benchmark. A beta of 1 implies that the expected movement of a fund's return would match that of the benchmark used to measure beta.