

## American Funds (Model Portfolio Provider)

333 S Hope Street, 52nd Floor  
Los Angeles, California 90068

Style: Global Multi Asset  
Sub-Style: Global Multi Asset Income  
Firm AUM: \$1,915.7 billion  
Firm Strategy AUM: \$0.0 million<sup>^</sup>

Year Founded: 1931  
GIMA Status: Approved  
Firm Ownership: American Funds (Model Portfolio Provider)  
Professional-Staff: 416

### PRODUCT OVERVIEW

**Morgan Stanley Smith Barney LLC ("Morgan Stanley") is the Manager of this strategy. The American Funds Retire Income Conservative (MAPS) is a Separately Managed Account ("SMA") investment product where (a) American Funds (Model Portfolio Provider) delivers a model portfolio (the "Third Party Model Portfolio") to Morgan Stanley; (b) Morgan Stanley, as investment adviser to the client, serves as portfolio manager for the SMA investment product; and (c) the SMA investment product is based on the Third Party Model Portfolio. These SMA investment products are referred to as "MAPS Third Party Strategies". Although Morgan Stanley generally intends to follow the Third Party Model Portfolios as portfolio manager of the MAPS Third Party Strategies, it has the discretion to deviate from the Third Party Model Portfolios. The Third Party Model Portfolios will include mutual funds and ETFs that are affiliated with the Model Portfolio Provider and which pay fees and other compensation to the Third Party Model Provider and its affiliates. The Third Party Model Portfolios may also include mutual funds and exchange traded products that are not affiliated with the Model Portfolio Provider. The Model Portfolio Providers for the MAPS Third Party Strategies are not acting as a "fiduciary" to the client as defined in Section 3(21)(A) of ERISA, with respect to the assets in a MAPS Third Party Strategy. Since 1931, Capital Group has been singularly focused on delivering superior, consistent results for long-term investors using high-conviction portfolios, rigorous research and individual accountability. The "American Funds Retirement Income Model Portfolio Conservative" is designed for retirees who seek lower volatility. The conservative model focuses on capital appreciation. This model portfolio was created by our Portfolio Oversight Committee, a group of senior portfolio managers with decades of investment experience. In creating the models, the committee followed an objective-based, bottom-up process, which included rigorous analysis of the underlying funds.**

### MANAGER'S INVESTMENT STRATEGY

- Top-down / portfolio structures based on economic trends  
 Bottom-up / portfolio structure based on individual securities

### TARGET PORTFOLIO CHARACTERISTICS

Number of stock holdings:	480 to 507
P/E ratio:	—
Cash level over market cycle:	—
Risk (standard deviation):	—
Average turnover rate:	1 to 3%
Number of bond holdings:	8 to 9
Average maturity:	7.0 to 7.6 years
Use ADRs:	Yes. We specifically seek international equity exposure.
Capitalization:	—

### PORTFOLIO'S EQUITY SECTOR WEIGHTINGS +

Sector	-----09/19-----		03/19
	Cap Grp	Index***	Cap Grp
Energy	0.00	0.00	9.90
Materials	0.00	0.00	4.80
Industrials	0.00	0.00	7.60
Consumer Discretionary	0.00	0.00	7.10
Consumer Staples	0.00	0.00	11.20
Health Care	0.00	0.00	14.10
Financials	0.00	0.00	12.00
Information Technology	0.00	0.00	13.00
Communication Services	0.00	0.00	6.80
Utilities	0.00	0.00	6.50
Real Estate/REITs	0.00	0.00	6.90

### PORTFOLIO STATISTICS

	-----09/19-----		03/19
	Cap Grp	Index***	Cap Grp
Number of stock holdings	—	—	9
Dividend Yield	—	—	3.0%
Distribution Rate	—	—	—
Wtd avg P/E ratio <sup>1</sup>	—	—	15.40x
Wtd avg portfolio beta	—	—	1.00
Mega capitalization +	0.0%	0.0%	0.0%
Large capitalization +	0.0%	0.0%	0.0%
Medium capitalization +	0.0%	0.0%	0.0%
Small capitalization +	0.0%	0.0%	0.0%
Micro capitalization +	0.0%	0.0%	0.0%
Number of bond holdings	—	—	—
Avg maturity	—	—	—

### PORTFOLIO'S TOP FIVE EQUITY HOLDINGS

	%
—	—
—	—
—	—
—	—
—	—

### % PROCESS BASED ON

- 0 Asset allocation
- 0 Industry or sector weighting
- 0 Stock Selection
- 0 Duration Management
- 0 Yield Curve Management
- 0 Sector Selection
- 0 Bond Selection

<sup>^</sup>As of 12/31/2018. Information as of 09/30/2019 is not yet available.

<sup>1</sup>High Grade Corporates

<sup>2</sup>The P/E used here is calculated by the harmonic mean.

<sup>\*</sup>Total may not equal 100% due to rounding.

<sup>\*\*\*</sup>Index : 40% S&P 500/60% BC AGG Index

## MANAGER'S INVESTMENT PROCESS

- Our investment process, The Capital System, is designed to enable individual investment professionals to act on their highest convictions, while limiting the risk associated with isolated decision-making. A diverse group of portfolio managers and analysts brings complementary investment approaches, experience levels, backgrounds and areas of focus to each investment offering.
- Our investment approach is a fundamental one guided by thorough, detailed internal research and analysis based on extensive fieldwork and direct company contact. Our investment professionals travel the world to seek the best investment opportunities and gain a comprehensive understanding of companies and markets.
- Model Portfolio Provider and analysts also work closely with our fixed-income and macroeconomic analysts when examining potential investments. The process includes a thorough review of a company's financial strength, as well as an assessment of appropriate valuation for its securities. By coordinating our research effort among equity, fixed-income, and macroeconomic analysts, we maximize the impact of our research for the benefit of all our investors.
- Our model portfolios are 100% actively-managed. All underlying funds-both equities and fixed income-are actively managed. We believe, and our experience has proven, that long-term, active investing done well can provide certain advantages for investors. These advantages can include strong results in up markets and capital preservation in declining markets.

## RISK CONSIDERATIONS

Investing in securities entails risks, including: Equity portfolios are subject to the basic stock market risk that a particular security, or securities in general, may decrease in value. Fixed Income securities may be sensitive to changes in prevailing interest rates. When rates rise the value generally declines. There is no assurance that the private guarantors or insurers will meet their obligations. International investing should be considered one component of a complete and diversified investment program. Investing in foreign markets entails greater risks than those normally associated with domestic markets such as foreign political, currency, economic and market risks. Equity securities' prices may fluctuate in response to specific situations for each company, industry, market conditions and general economic environment. Companies paying dividends can reduce or cut payouts at any time. Growth investing does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations. Value investing does not guarantee a profit or eliminate risk. Not all companies whose stocks are considered to be value stocks are able to turn their business around or successfully employ corrective strategies which would result in stock prices that do not rise as initially expected. Bonds rated below investment grade may have speculative characteristics and present significant risks beyond those of other securities, including greater credit risk and price volatility in the secondary market. Investors should be careful to consider these risks alongside their individual circumstances, objectives and risk tolerance before investing in high-yield bonds. If a strategy expects to hold a concentrated portfolio of a limited number of securities, it should be noted that a decline in the value of these investments would cause the portfolio's overall value to decline to a greater degree than that of a less concentrated portfolio.

## PORTFOLIO'S ALLOCATION HISTORY (%)<sup>+</sup>

	09/19	06/19	03/19	12/18
U.S. Stocks	0	0	0	25
ADRs/Non-U.S. Stocks	0	0	0	12
US Bonds	0	0	0	53
Non US Bonds	0	0	0	6
Cash/Cash Equivalents	0	0	0	4

## FIXED INCOME SECTOR DISTRIBUTION (%)<sup>+</sup>

	09/19	06/19	03/19	12/18
Bonds	0.00	0.00	0.00	29.33
U.S. Agencies	0.00	0.00	0.00	23.40
U.S. Treasury	0.00	0.00	0.00	22.67
Mortgage-Backed Securities	0.00	0.00	0.00	11.18
Cash/Cash Equivalents	0.00	0.00	0.00	4.34
Industrials	0.00	0.00	0.00	4.25
Financials	0.00	0.00	0.00	2.35
Asset-Backed Securities	0.00	0.00	0.00	1.24
Emerging Debt	0.00	0.00	0.00	1.20
Municipals	0.00	0.00	0.00	0.04

<sup>+</sup>As of 12/31/2018. Information as of 09/30/2019 is not yet available.

<sup>1</sup>High Grade Corporates

<sup>2</sup>The P/E used here is calculated by the harmonic mean.

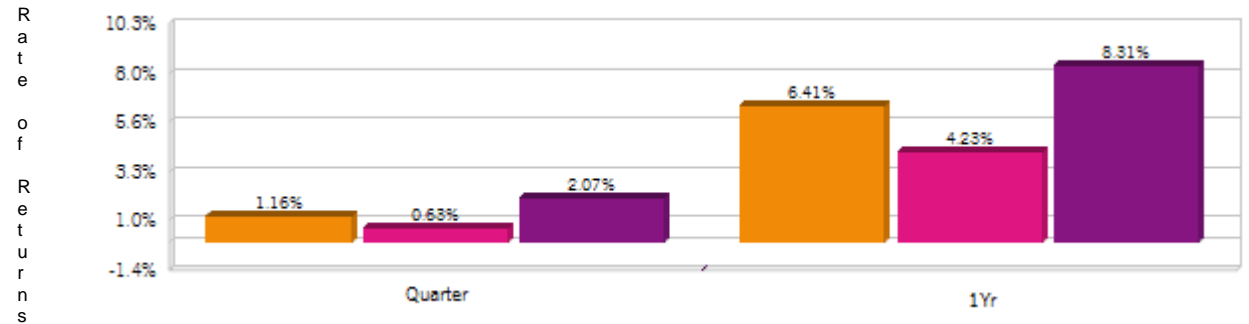
<sup>\*</sup>Total may not equal 100% due to rounding.

<sup>\*\*\*</sup>Index : 40% S&P 500/60% BC AGG Index

**RISK/RETURN ANALYSIS - 3 YEARS ENDING 09/30/19**

Unable to produce graph. Insufficient track record

**AVERAGE ANNUAL TOTAL RETURN (%) - PERIODS ENDING 09/30/19**

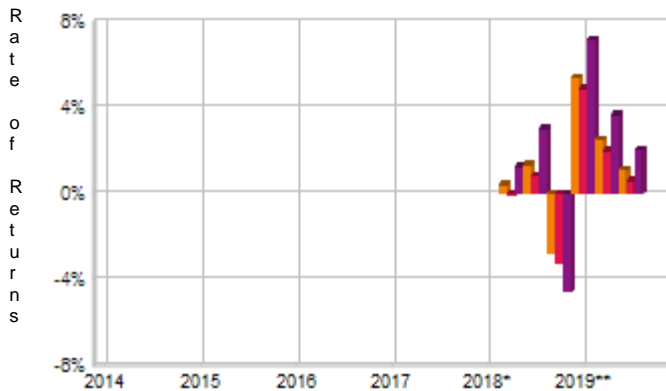


	STD	ROR
Cap Grp (Gross)		
Cap Grp (Net)		
40% S&P 500/60% BC Agg Index		
90-Day T-Bills		

INVESTMENT RESULTS	Annual Rates of Return (%)			
	1 Year - Ending 09/30/19	2018*	Annual	Std. Dev.
Cap Grp (Gross)	-0.97	6.41	0.00	
Cap Grp (Net)	-2.51	4.23	0.00	
40% S&P 500/60% BC Agg Index	-0.37	8.31	0.00	

\*04/01/2018-12/31/2018

**RISK VOLATILITY (%)**



\*04/01/2018-12/31/2018 \*\*01/01/19-09/30/19

**PORTFOLIO'S QUARTERLY RETURNS (%)**

	Quarter1		Quarter2		Quarter3		Quarter4	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
2018			0.44	-0.08	1.35	0.83	-2.72	-3.23
2019	5.44	4.91	2.55	2.03	1.16	0.63		

Legend:  Related  Select UMA

**PORTFOLIO'S RISK STATISTICS - □ PERIODS ENDING 09/30/19 <sup>1 2</sup>**

	3 Year	5 Year
Standard Deviation	N/A	N/A
Standard Deviation of Primary Benchmark	N/A	N/A
Sharpe Ratio	N/A	N/A
Sharpe Ratio of Primary Benchmark	N/A	N/A
Alpha	N/A	N/A
Beta	N/A	N/A
Downside Risk	N/A	N/A
R-Squared	N/A	N/A
Tracking Error	N/A	N/A
Information Ratio	N/A	N/A

	Number Of	Up Qtrs.	Down
Cap Grp (Gross)	5	1	
Cap Grp (Net)	4	2	
40% S&P 500/60% BC Agg Index	5	1	

**PORTFOLIO DIVERSIFICATION - R<sup>2</sup>(INCEPTION THROUGH 12/14)+**

Cap Grp vs. 40% S&P 500/60% BC Agg Index	R <sup>2</sup> N/A
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+Statistics are calculated using gross of fee performance only.

1. Statistics are calculated using gross of fee performance only.  
2. 40% S&P 500/60% BC Agg Index was used as the primary benchmark and the 90-Day T-Bills Index as the risk-free benchmark.

See important notes and disclosures pages for a discussion of the sources of the performance data used to calculate the performance results and related analyses shown above.

**IMPORTANT NOTES AND DISCLOSURES****COMPOSITE DISCLOSURES**

**The disclosures provided below apply to performance information in this profile, if any. Past performance is not a guarantee of future results. Actual individual account results may differ from the performance shown in this profile. There is no guarantee that this investment strategy will achieve its intended results under all market conditions. Do not rely upon this profile as the sole basis for your investment decisions.**

Performance results in this profile are calculated assuming reinvestment of dividends and income. Returns for more than one calendar year are annualized and based on quarterly data. Returns for periods of less than a calendar year show the total return for the period and are not annualized. No representation is being made that any portfolio will or is likely to achieve profits or losses similar to those shown. Returns will fluctuate and an investment upon redemption may be worth more or less than its original value. Performance shown does not reflect the impact of fees and expenses of the underlying mutual fund and ETFs, as applicable.

**Sources of Performance Results and Other Data:** The performance data and certain other information for this strategy (including the data on page 1 of this profile) may include one or more of the following: (i) the performance results of a composite of Morgan Stanley accounts managed by the third party investment manager, (ii) the performance results for accounts and investment products managed by the third party investment manager, in the same or a substantially similar investment strategy outside of the applicable Morgan Stanley program, and/or (iii) in the case of Model Portfolio Strategies, the Model Portfolio Provider's results in managing accounts outside of the Morgan Stanley Select UMA program prior to Model Portfolio Strategy's inception in the Morgan Stanley Select UMA program. For periods through June 2012, the Fiduciary Services program operated through two channels – the Morgan Stanley channel and the Smith Barney channel and any performance and other data relating to Fiduciary Services accounts shown here for these periods is calculated using accounts in only one of the these channels.) Please note that the Fiduciary Services program was closed on January 2, 2018. Although the Fiduciary Services and Select UMA programs are both Morgan Stanley managed account programs, the performance results and other features of similar investment strategies in the two programs may differ due to investment and operational differences. Performance in one program is not indicative of potential performance in the other. For example, the individual investment strategies in Select UMA program accounts may contain fewer securities, which would lead to a more concentrated portfolio. The automatic rebalancing, wash sale loss and tax harvesting features of the Select UMA program, which are not available in Fiduciary Services, also could cause differences in performance. In addition, any performance results included in this profile that are based on a third party investment manager's accounts that are not part of the Morgan Stanley program accounts or institutional accounts that are part of the Model Portfolio strategy may differ due to investment and operational differences as well. As such, performance results of the third party investment manager's composites and the third party Model Portfolio Strategies may differ from those of Select UMA accounts managed in the same or a substantially similar investment strategy. For example, in the case of Model Portfolio Strategies, Morgan Stanley, as the investment manager, may deviate from the Third Party Model Portfolios.

**Related Performance:**

For periods prior to the inception of the strategy in the Morgan Stanley Select UMA program, the performance shown reflects the performance of accounts managed by the Model Portfolio Provider outside of the program ("Related Performance"). Such Related Performance is provided for illustrative purposes to show the basis on which sponsor has engaged the Model Portfolio Provider. Related Performance is provided in connection with "MAPS Third Party Strategies," which is an SMA investment product where (a) the Model Portfolio Provider delivers a model portfolio (the "Third Party Model Portfolio") to Morgan Stanley; (b) Morgan Stanley, as investment adviser to the client, serves as portfolio manager for the SMA investment product; and (c) the SMA investment product is based on the Third Party Model Portfolio. Although Morgan Stanley generally intends to follow the Third Party Model Portfolios, as portfolio manager of the MAPS Third Party Strategies, it has the discretion to deviate from the Third Party Model Portfolios. In addition, Morgan Stanley, not the Model Portfolio Provider, is responsible for trading program accounts. As a result, the performance of Morgan Stanley in managing program accounts will differ from the Related Performance of the Model Portfolio Provider. The Third Party Model Portfolios may include mutual funds and/or exchange traded products that are affiliated with the Model Portfolio Provider, which pay fees and other compensation to the Third Party Model Provider and its affiliates, as well as mutual funds and exchange traded products that are not affiliated with the Model Portfolio Provider.

Depending upon the particular MAPS Third Party Strategy displayed, Related Performance may consist of either (i) the performance results of a composite of accounts managed by the Model Portfolio Provider prior to the inception of the Morgan Stanley Select UMA Program, (ii) the performance results for a hypothetical model portfolio ("Hypothetical Model Performance") managed by the Model Portfolio Provider according to the strategy on which the Third Party Model Portfolios are based, and (iii) the performance results of a mutual fund that is invested in a similar strategy ("Fund Performance"). Mutual funds are subject to extensive regulation, including diversification, restrictions on fees and expenses, tax, governance, liquidity and a number of other legal requirements that are not applicable to program accounts in the Morgan Stanley Select UMA Program. Consequently, the Fund Performance for a given investment strategy will differ from, and will not necessarily be representative of, the performance of that strategy as a Third Party Model Portfolio in the Morgan Stanley Select UMA Program. Further, the Hypothetical Model Performance results shown are not actual, but are simulated results. Such simulated performance results have inherent limitations since they are hypothetical and do not represent actual trading or any actual account, and thus may not reflect material economic and market factors, such as liquidity constraints or client imposed restrictions, which may have had an impact on the Model Portfolio Provider's decision making.

Related Performance is calculated by and obtained from the Model Portfolio Provider, is not reviewed or guaranteed by Morgan Stanley, and reflects the performance of accounts managed by Model Portfolio Provider outside of the Morgan Stanley Select UMA program prior to the applicable MAPS Third Party Strategy's inception in the Morgan Stanley Select UMA program. Related Performance does not include or reflect the performance of any actual Morgan Stanley program accounts. No representation is being made that any program account will or has achieved results similar to the Related Performance, and the performance of program accounts will differ from the Related Performance due to differences in account size and characteristics of the program accounts, timing and execution of transactions and market conditions prevailing at the time of investment, among other things. The Model Portfolio Providers for the MAPS Third Party Strategies are not acting as a "fiduciary" to the client as defined in Section 3(21)(A) of ERISA, with respect to the assets in a MAPS Third Party Strategy.

**Morgan Stanley Performance:**



**Gross Performance:** Cap Grp's gross performance results do not reflect the deduction of any investment advisory fees or program fees charged by the Cap Grp or Morgan Stanley. In the case of Fund Performance, the gross results also do not reflect the deduction of any fees and expenses internal to the mutual fund responsible for generating the performance, commissions charged on securities transactions, and other expenses attributable to such mutual funds. The deduction of such fees and expenses, and the compounding effect of such fees over time, will reduce returns over time.

**Net Performance for all Periods:** Net performance results reflect a deduction of 0.5175% quarterly. This consists of three components: 0.5% maximum quarterly MS Advisory Fee and 0.0175% maximum quarterly Program Overlay Fee (which, together cover the services provided by Morgan Stanley), plus 0.00% quarterly SMA Manager Fees (being the fee currently charged by Cap Grp to new clients for managing their assets in the Select UMA program). The Model Portfolio Provider does not charge a fee for delivering the Third Party Model Portfolio to Morgan Stanley. The SMA Manager Fees may differ from manager to manager, and managers may change their fee to new clients from time to time. If you select this manager for your account, check the SMA Manager Fees specified in the written client agreement, in case these have changed since you received this profile. Historical net fees reflect the Advisory Fee Schedule as of October 1, 2018. Morgan Stanley program fees are usually deducted quarterly, and have a compounding effect on performance. The Morgan Stanley program fee, which differs among programs and clients, is described in the applicable Morgan Stanley ADV brochure, which is available at [www.morganstanley.com/ADV](http://www.morganstanley.com/ADV) or on request from your Financial Advisor or Private Wealth Advisor. Document approval date 02/2018. #CRC 2005293

#### Focus List, Approved List, and Watch Status:

Global Investment Manager Analysis ("GIMA") uses two methods to evaluate investment products in applicable advisory programs. In general, strategies that have passed a more thorough evaluation may be placed on the "Focus List", while strategies that have passed through a different and less comprehensive evaluation process may be placed on the "Approved List". Sometimes an investment product may be evaluated using the Focus List process but then placed on the Approved List instead of the Focus List.

Investment products may move from the Focus List to the Approved List, or vice versa. GIMA may also determine that an investment product no longer meets the criteria under either evaluation process and will no longer be recommended in investment advisory programs (in which case the investment product is given a "Not Approved" status).

GIMA has a "Watch" policy and may describe a Focus List or Approved List investment product as being on "Watch" if GIMA identifies specific areas that (a) merit further evaluation by GIMA and (b) may, but are not certain to, result in the investment product becoming "Not Approved". The Watch period depends on the length of time needed for GIMA to conduct its evaluation and for the investment manager to address any concerns. GIMA may, but is not obligated to, note the Watch status in this report with a "W" or "Watch" on the cover page.

For more information on the Focus List, Approved List, and Watch processes, please see the applicable Morgan Stanley ADV brochure ([www.ms.com/adv](http://www.ms.com/adv)). Your Financial Advisor or Private Wealth Advisor can provide on request a copy of a paper entitled "GIMA: At A Glance".

#### ADDITIONAL DISCLOSURES

The information about a representative account is for illustrative purposes only. Actual account holdings, performance and other data will vary depending on the size of an account, cash flows within an account, and restrictions on an account. Holdings are subject to change daily. The information in this profile is not a recommendation to buy, hold or sell securities.

Actual portfolio statistics may vary from target portfolio characteristics.

The Model Portfolio Provider or Investment Manager may use the same or substantially similar investment strategies, and may hold similar portfolios of investments, in other portfolios or products it manages (including mutual funds). These may be available at Morgan Stanley or elsewhere, and may cost an investor more or less than this strategy in Morgan Stanley's Select UMA program.

The portfolio may, at times, invest in exchange-traded funds (ETFs), which are a form of equity security in seeking to maintain continued full exposure to the broad equity market.

Morgan Stanley investment advisory programs may require a minimum asset level and, depending on your specific investment objectives and financial position, may not be suitable for you. Investment advisory program accounts are opened pursuant to a written client agreement.

The investment manager acts independently of, and is not an affiliate of, Morgan Stanley Smith Barney LLC.

Diversification does not guarantee a profit or protect against a loss.

#### No obligation to notify

Morgan Stanley has no obligation to notify you when information in this profile changes.

#### Sources of information

Material in this profile has been obtained from sources that we believe to be reliable, but we do not guarantee its accuracy, completeness or timeliness. Third party data providers make no warranties or representations relating to the accuracy, completeness or timeliness of the data they provide and are not liable for any damages relating to this data.

#### No tax advice

Morgan Stanley and its affiliates do not render advice on legal, tax and/or tax accounting matters to clients. Each client should consult his/her personal tax and/or legal advisor to learn about any potential tax or other implications that may result from acting on a particular recommendation.

#### Not an ERISA fiduciary

Morgan Stanley is not acting as a fiduciary under either the Employee Retirement Income Security Act of 1974, as amended, or under section 4975 of the Internal Revenue Code of 1986, as amended, in providing the information in this profile.

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#### INDEX DESCRIPTIONS

40% S&P 500/60% BC Agg Index

40% S&P 500 Index, 60% BC Aggregate Bond Index

**90-Day T-Bills**

The 90-Day Treasury Bill is a short-term obligation issued by the United States government. T-bills are purchased at a discount to the full face value, and the investor receives the full value when they mature. The difference of discount is the interest earned. T-bills are issued in denominations of \$10,000 auction and \$1,000 increments thereafter.

**S&P 500**

The S&P 500 Total Return has been widely regarded as the best single gauge of the large cap U.S. equities market since the index was first published in 1957. The index has over \$5.58 trillion benchmarked, with index assets comprising approximately \$1.31 trillion of this total. The index includes 500 leading companies in leading industries of the U.S. economy, capturing 75% coverage of U.S. equities. This index includes dividend reinvestment.

**Indices are unmanaged and have no expenses. You cannot invest directly in an index.**

**GLOSSARY OF TERMS**

**Alpha** is a mathematical estimate of risk-adjusted return expected from a portfolio above and beyond the benchmark return at any point in time.

**American Depositary Receipts (ADRs)** are receipts for shares of a foreign-based corporation held in the vault of a U.S. bank.

**Average Portfolio Beta** is a measure of the sensitivity of a benchmark or portfolio's rates of return to changes against a market return. The market return is the S&P 500 Index. It is the coefficient measuring a stock or a portfolio's relative volatility.

**Beta** is a measure of the sensitivity of a portfolio's rates of return to changes in the market return. It is the coefficient measuring a stock or a portfolio's relative volatility.

**Bottom-Up Stock Selection** Emphasis primarily on individual stock selection. Considerations of economic and industry factors are of secondary importance in the investment decision-making process.

**Capitalization** is defined as the following: Mega (Above \$100 billion), Large (\$12 to \$100 billion), Medium (\$2.5 - \$12 billion), Small (\$.50 - \$2.5 billion) and Micro (below \$.50 billion).

**Distribution Rate** is defined as the most recent distribution paid, annualized, and then divided by the current market price. Distribution rate may consist of investment income, short-term capital gains, long-term capital gains, and /or returns of capital.

**Dividend** a portion of a company's profit paid to common and preferred shareholders.

**Dividend Yield** annual dividend per share divided by price per share. Dividend Yield for the portfolio is a weighted average of the results for the individual stocks in the portfolio.

**Downside Risk** is a measure of the risk associated with achieving a specific target return. This statistic separates portfolio volatility into downside risk and upside uncertainty. The downside considers all returns below the target return, while the upside considers all returns equal to or above the target return.

**Duration** is a measure of price sensitivity expressed in years.

**High Grade Corporate Bonds** corporate bonds from issuers with credit ratings of AA or AAA.

**Information Ratio** is a measure of the investment manager's skill to add active value against a given benchmark relative to how stable that active return has been. Essentially, the information ratio explains how significant a manager's alpha is. Therefore, the higher the information ratio, the more significant the alpha.

**Investment Grade Bonds** are those rated by Standard & Poor's AAA (highest rated), AA, A or BBB (or equivalent rating by other rating agencies or, in the case of securities not rated, by the investment manager).

**Price/Book Ratio (P/B)** weighted average of the stocks' price divided by book value per share. Book value per share is defined as common equity, including intangibles, divided by shares outstanding times the adjustment factor.

**Price/Cash Flow Ratio** a ratio used to compare a company's market value to its cash flow. It is calculated by dividing the company's market cap by the company' operating cash flow in the most recent fiscal year (or the most recent four fiscal quarters); or, equivalently, divide the per-share stock price by the per-share operating cash flow.

**Price/Earnings Ratio (P/E Ratio)** shows the multiple of earnings at which a stock sells. Determined by dividing current stock price by current earnings per share (adjusted for stock splits). Earnings per share for the P/E ratio are determined by dividing earnings for past 12 months by the number of common shares outstanding. The P/E ratio shown here is calculated by the harmonic mean.

**Price/Sales Ratio** determined by dividing current stock price by revenue per share (adjusted for stock splits). Revenue per share for the P/S ratio is determined by dividing revenue for past 12 months by number of shares outstanding.

**R2 (R-Squared)/Portfolio Diversification** indicates the proportion of a security's total variance that is benchmark-related or is explained by variations in the benchmark.

**Sharpe Ratio** measures the efficiency, or excess return per unit of volatility, of a manager's returns. It evaluates managers' performance on a volatility-adjusted basis.

**Standard Deviation** is a statistical measure of historical variability or spread of returns around a mathematical average return that was produced by the investment manager over a given measurement period. The higher the standard deviation, the greater the variability in the investment manager's returns relative to its average return.

**Top-Down/Economic Analysis** Emphasis primarily on macroeconomic trends as opposed to bottom-up stock selection.

**Tracking Error** represents the standard deviation of the difference between the performance of the investment strategy and the benchmark. This provides a historical measure of the variability of the investment strategy's returns relative to its benchmark.

**U.S. Treasury Bonds** a marketable, fixed interest U.S. government debt security with a maturity of more than 10 years. Treasury bonds make interest payments semi-annually and the income that holders receive is only taxed at the federal level.

**Volatility** a measure of risk based on the standard deviation of the asset return. Volatility is a variable that appears in option pricing formulas, where it denotes the volatility of the underlying asset return from now to the expiration of the option. There are volatility indexes. Such as a scale of 1-9; a higher rating means higher risk.