

**Penn Capital Management Co., Inc.**

1200 Intrepid Avenue, Suite 400  
Philadelphia, Pennsylvania 19112

Style: US Small Cap  
Sub-Style: Value-oriented  
Firm AUM: \$2.7 billion  
Firm Strategy AUM: \$148.1 million

Year Founded: 1987  
GIMA Status: Approved  
Firm Ownership: Employee-Owned  
Professional-Staff: 47

**PRODUCT OVERVIEW**

Penn Capital Management ("PENN") Small to Mid Cap Equity strategy seeks to achieve capital appreciation from investments primarily in small to mid capitalization equity securities. PENN seeks to accomplish this objective by investing in the common stock of what they believe are undervalued small to mid capitalization U.S. companies identified by the fundamental, bottom-up, value-driven investment research. PENN will purchase securities within the market capitalization range of the Russell 2500 benchmark.

**TARGET PORTFOLIO CHARACTERISTICS**

Number of stock holdings:	50 to 80
P/E ratio:	Similar to/Above the S&P 500
Cash level over market cycle:	0 to 5%
Risk (standard deviation):	Above the S&P 500
Average turnover rate:	75 to 100%
Use ADRs:	0 to 10%
Capitalization:	Medium, Small and Micro companies

**PORTFOLIO'S EQUITY SECTOR WEIGHTINGS +**

	-----06/20-----		12/19
Sector	PENN	Index***	PENN
Energy	0.00	2.42	3.87
Materials	6.80	5.21	7.05
Industrials	13.50	14.83	16.71
Consumer Discretionary	10.00	11.83	8.40
Consumer Staples	3.90	3.32	1.76
Health Care	13.90	15.93	10.95
Financials	17.10	14.45	15.94
Information Technology	21.60	17.05	12.73
Communication Services	1.90	2.98	6.08
Utilities	4.60	3.19	3.37
Miscellaneous	0.00	0.00	0.00
Real Estate/REITs	4.00	8.79	10.14
Cash/Cash Equivalents	2.80	0.00	3.00

**MANAGER'S INVESTMENT STRATEGY**

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

**PORTFOLIO STATISTICS**

	-----06/20-----		12/19
	PENN	Index***	PENN
Number of stock holdings	60	2,500	60
Dividend Yield	1.3%	1.5%	1.0%
Distribution Rate	—	—	—
Wtd avg P/E ratio <sup>1</sup>	19.96x	16.60x	21.00x
Wtd avg portfolio beta	0.94	—	0.90
Mega capitalization +	0.0%	0.0%	0.0%
Large capitalization +	0.0%	4.9%	0.0%
Medium capitalization +	0.0%	66.9%	0.0%
Small capitalization +	0.0%	23.9%	0.0%
Micro capitalization +	0.0%	3.7%	0.0%

**PORTFOLIO'S TOP FIVE EQUITY HOLDINGS**

	%
GoDaddy, Inc. Class A	2.5
Sun Communities, Inc.	2.5
Teradyne, Inc.	2.4
Masco Corporation	2.4
TransUnion	2.4

**% PROCESS BASED ON**

- 5 Asset allocation - cash vs. stock
- 30 Industry or sector weighting
- 65 Stock Selection

<sup>1</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 : Russell 2500

**MANAGER'S INVESTMENT PROCESS**

- PENN draws equity ideas from the universe of securities with a market capitalization up to \$7.0 billion.
- New ideas are first put through a rigorous test of fundamental financial analysis including financial ratios. (EV/cash flow, Price/Earnings, Price/Book, etc.) relative to competitors, Free cash flow analysis and private market analysis, bank loan facility & covenant analysis, equity liquidity analysis, and 50% return potential in 12 to 18 months.
- Once an idea meets PENN's initial fundamental financial screens, PENN's qualitative analysis determines the ability of a company to execute its business plan and maintain stable cash flow on a forward basis
- Macro-Economic analysis overlays PENN's standard grass roots analysis of a company's entire capital structure, and is used to confirm PENN's assumptions on industry themes.
- PENN employs a team approach to portfolio management in which each member is equally responsible for analytics and is required to thoroughly understand the entire capital structure of every company they follow. At PENN, the investment team covers companies, not components of the capital structure.

**RISK CONSIDERATIONS**

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. Strategies that invest a large percentage of assets in only one industry sector (or in only a few sectors) are more vulnerable to price fluctuation than portfolios that diversify among a broad range of sectors. Investing in securities entails risks, including: Small-cap stocks may be subject to a higher degree of risk than more established companies' securities, including higher volatility. The illiquidity of the small-cap market may adversely affect the value of these investments. 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 : "The returns on a portfolio consisting primarily of Environmental, Social and Governance ("ESG") aware investments may be lower or higher than a portfolio that is more diversified or where decisions are based solely on investment considerations. Because ESG criteria exclude some investments, investors may not be able to take advantage of the same opportunities or market trends as investors that do not use such criteria.". 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>**

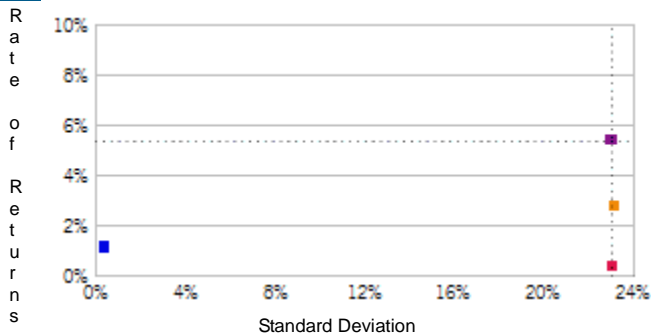
	06/20	03/20	12/19	09/19
U.S. Stocks	95	93	94	94
ADRs	2	2	3	2
Cash/Cash Equivalents	3	5	3	4

<sup>1</sup>The P/E used here is calculated by the harmonic mean.

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

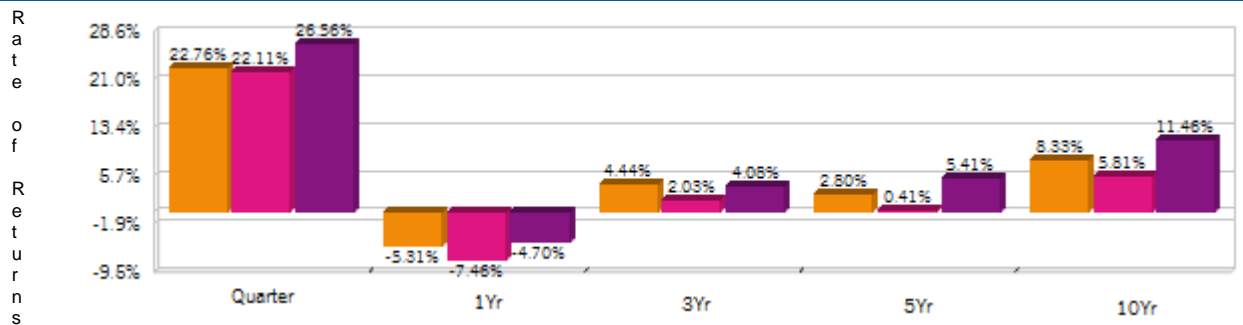
<sup>\*\*\*</sup>Index : Russell 2500

RISK/RETURN ANALYSIS - 5 YEARS ENDING 06/30/20



	STD	ROR
PENN (Gross)	23.19	2.80
PENN (Net)	23.10	0.41
Russell 2500	23.02	5.41
90-Day T-Bills	0.43	1.15

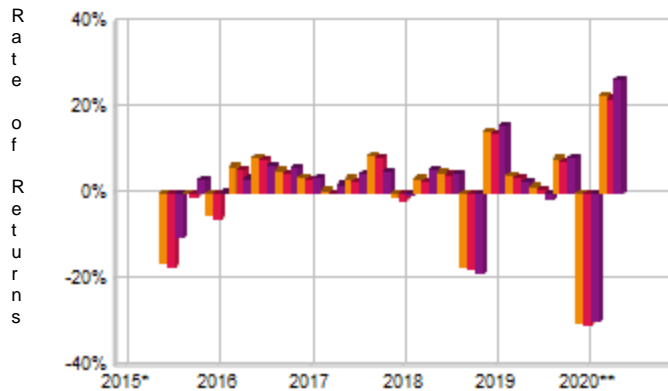
AVERAGE ANNUAL TOTAL RETURN (%) - PERIODS ENDING 06/30/20



INVESTMENT RESULTS

	Annual Rates of Return (%)										10 Year - Ending 06/30/20	
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Annual	Std. Dev.
PENN (Gross)	35.66	-16.75	15.68	38.28	0.36	-9.35	15.27	18.06	-10.81	31.55	8.33	22.09
PENN (Net)	32.59	-18.65	12.99	35.15	-2.06	-11.50	12.51	15.30	-12.94	28.60	5.81	22.01
Russell 2500	26.71	-2.51	17.87	36.81	7.07	-2.90	17.58	16.81	-10.00	27.77	11.46	20.13

RISK VOLATILITY (%)



\*07/01/15-12/31/15      \*\*01/01/20-06/30/20

	Number Of	Up Qtrs.	Down Qtrs.
PENN (Gross)	14	6	6
PENN (Net)	14	6	6
Russell 2500	15	5	5

PORTFOLIO'S QUARTERLY RETURNS (%)

	Quarter1		Quarter2		Quarter3		Quarter4	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
2010	14.97	14.28	-11.81	-12.31	12.91	12.29	18.49	17.82
2011	5.92	5.30	-2.67	-3.23	-29.21	-29.65	14.07	13.48
2012	15.26	14.63	-9.48	-10.03	4.38	3.75	6.23	5.60
2013	13.85	13.22	2.53	1.92	10.03	9.42	7.66	7.03
2014	-0.20	-0.82	3.10	2.47	-5.60	-6.20	3.34	2.74
2015	7.59	6.93	0.78	0.18	-16.36	-16.86	-0.05	-0.62
2016	-5.14	-5.76	6.34	5.74	8.46	7.85	5.35	4.69
2017	3.84	3.24	0.72	0.12	3.55	2.94	9.00	8.36
2018	-0.91	-1.48	3.50	2.89	5.04	4.43	-17.20	-17.75
2019	14.61	13.99	4.28	3.69	1.70	1.12	8.23	7.60
2020	-29.93	-30.35	22.76	22.11				

Related      Select UMA

PORTFOLIO'S RISK STATISTICS -€¹ PERIODS ENDING 06/30/20 ¹ ²

	3 Year	5 Year
Standard Deviation	27.59%	23.19%
Standard Deviation of Primary Benchmark	29.04%	23.02%
Sharpe Ratio	0.10	0.07
Sharpe Ratio of Primary Benchmark	0.08	0.19
Alpha	0.42%	-2.29%
Beta	0.94	0.98
Downside Risk	2.88%	4.68%
R-Squared	0.98	0.95
Tracking Error	4.24%	5.32%
Information Ratio	0.09	-0.49

PORTFOLIO DIVERSIFICATION - R²(INCEPTION THROUGH 12/14)+

	R²
PENN vs. Russell 2500	0.94

1. Statistics are calculated using gross of fee performance only.  
2. Russell 2500 was used as the primary benchmark and the 90-Day T-Bills Index as the risk-free benchmark.

+Statistics are calculated using gross of fee performance only.

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.

With respect to those accounts that are subject to the Employee Retirement Income Security Act of 1974 and/or Section 4975 of the Internal Revenue Code of 1986, as amended, and are invested in an investment strategy managed by a Sub-Manager that is an affiliate of MSSB, the Sub-Manager fees will be reduced to 0.00%

**Related Performance:**

Penn Capital Management's ("PENN") Small to Mid Cap Equity performance represents a composite of all fully discretionary, fee-paying Small to Mid Cap Equity separately managed accounts under management by PENN. The composite was created 12/31/2002. The composite is asset-weighted and consists of 2 fee-paying (not in Morgan Stanley Fiduciary Services program) accounts with a market value of \$23.8 million as of 06/30/20.

**Morgan Stanley Performance:**

The composite consists of **83** account(s) with a market value of **\$21.0 million** as of **06/30/2020**. In this profile, the performance from August 1, 2004 through June 30, 2012 consists of accounts managed by the investment manager in this strategy in either the Morgan Stanley or the Smith Barney form of the Fiduciary Services program. From July 1, 2012 through December 31, 2015, performance consists of all Fiduciary Services (FS) accounts managed by the investment manager in this strategy, subject to any other limitations stated in this profile. From January 1, 2016, performance consists of the performance of all FS accounts (as described in the previous sentence) as well as the performance of all single style Select UMA accounts managed by the investment manager in this strategy, subject to any other limitations stated in this profile. Performance composites calculated by Morgan Stanley include all fee-paying portfolios with no investment restrictions. New accounts are included beginning with the second full calendar month of performance. Terminated accounts are removed in the month in which they terminate (but prior performance of terminated accounts is retained). Performance is calculated on a total return basis and by asset weighting the individual portfolio returns using the beginning of period values.

**Gross Performance:** PENN's gross results do not reflect a deduction of any investment advisory fees or program fees, charged by PENN or Morgan Stanley, but are net of commissions charged on securities transactions.

**Net Performance for all Periods:** Net performance results reflect a deduction of 0.5925% 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 0.075% quarterly SMA Manager Fees (being the fee currently charged by PENN to new clients for managing their assets in the Select UMA program). 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 February 2013.

**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.

Overlay Managers or Executing Sub-Managers ("managers") in some of Morgan Stanley's Separately Managed Account ("SMA") programs may affect transactions through broker-dealers other than Morgan Stanley or our affiliates. If your manager trades with another firm, you may be assessed costs by the other firm in addition to Morgan Stanley's fees. Those costs will be included in the net price of the security, not separately reported on trade confirmations or account statements. Certain managers have historically directed most, if not all, of their trades to outside firms. Information provided by managers concerning trade execution away from Morgan Stanley is summarized at: [www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf](http://www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf). For more information on trading and costs, please refer to the ADV Brochure for your program(s), available at [www.morganstanley.com/ADV](http://www.morganstanley.com/ADV), or contact your Financial Advisor/Private Wealth Advisor.

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

##### 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.

##### Russell 2500

The Russell 2500 Index measures the performance of the 2,500 smallest companies in the Russell 3000 Index, which represents approximately 16% of the total market capitalization of the Russell 3000 Index.



**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.