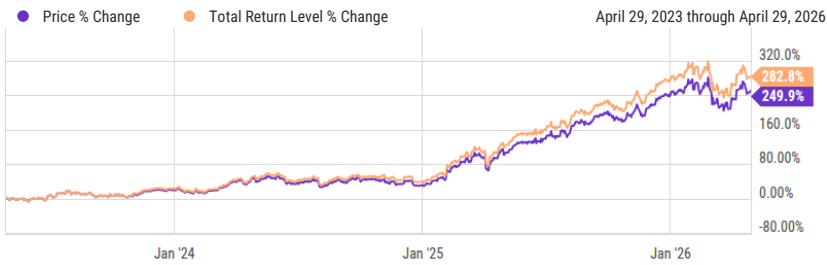


# Banco Santander SA



Performance data quoted presents past performance; past performance does not guarantee future results; the investment return and principal value of an investment will fluctuate; an investor's shares, when redeemed, may be worth more or less than their original cost; current performance may be lower or higher than quoted performance data.

Inc. Statement	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	TTM
Revenue	82.46B	87.28B	89.53B	89.11B	73.59B	78.16B	98.35B	136.81B	141.05B	140.42B	120.76B
Operating Margin	14.37%	20.47%	18.06%	17.37%	12.97%	21.60%	15.77%	12.63%	13.24%	14.64%	17.39%
EBIT Margin	45.87%	42.56%	44.08%	42.35%	18.23%	41.15%	50.61%	61.51%	62.80%	62.19%	59.05%
Effective Tax Rate	31.79%	34.11%	36.29%	36.23%	-284.4%	34.67%	30.84%	26.98%	29.08%	26.22%	26.12%
Net Income	7.912B	9.257B	10.99B	9.084B	-8.787B	11.41B	11.31B	13.17B	13.52B	15.75B	16.18B
EPS Basic	0.4275	0.4367	0.5075	0.3884	-0.6138	0.5172	0.5661	0.7075	0.8344	1.022	1.072
EPS Diluted	0.4275	0.4356	0.5062	0.3876	-0.6138	0.5158	0.5643	0.7043	0.8306	1.016	1.038

Balance Sheet	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Last Qtr.
Total Assets	1.412T	1.734T	1.668T	1.709T	1.845T	1.815T	1.851T	1.985T	1.902T	2.193T	2.193T
Total Liabilities	1.304T	1.607T	1.546T	1.586T	1.735T	1.705T	1.748T	1.871T	1.791T	2.061T	2.061T
Financial Debt	444.27B	555.15B	535.39B	541.40B	560.71B	545.51B	529.65B	578.28B	542.95B	611.59B	611.59B
Shareholders Equity	95.92B	112.57B	109.37B	111.49B	98.72B	98.11B	94.36B	104.61B	102.10B	121.17B	121.17B

Cash Flow	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	TTM
Cash from Operations	29.99B	59.99B	-18.83B	-112.40B	-115.05B	-86.66B	30.81B	87.10B	63.22B	94.27B	--
Cash from Investing	-30.27B	-55.18B	-54.88B	64.72B	1.288B	-50.33B	-5.793B	-87.48B	-93.37B	-110.41B	--
Cash from Financing	2.843B	40.74B	77.56B	32.06B	178.77B	198.04B	-10.47B	-2.225B	-5.960B	-16.03B	--
Free Cash Flow	20.76B	49.86B	-33.21B	-128.23B	-124.76B	-100.13B	19.42B	72.35B	51.76B	85.63B	--

Dividend	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	TTM
Dividend Per Share	0.1669	0.1976	0.1893	0.0792	0.029	0.0743	0.0844	0.1317	0.1684	0.2015	0.2015
Payout Ratio	39.03%	45.24%	37.30%	20.39%	--	14.36%	14.90%	18.61%	20.18%	19.72%	18.79%

Profitability	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	TTM
Return on Assets	0.55%	0.59%	0.65%	0.54%	-0.49%	0.62%	0.62%	0.69%	0.70%	0.77%	--
Return on Equity	7.34%	7.85%	8.82%	7.41%	-7.51%	10.35%	10.62%	12.10%	12.00%	12.94%	--
Return on Invested Capital	1.39%	1.50%	1.64%	1.37%	-1.32%	1.72%	1.76%	1.99%	2.01%	2.25%	--

Estimates	Q1 2026	Q2 2026	Q3 2026	Q4 2026	Q1 2027	2026	2027	2028
EPS	0.3040	0.3107	0.3323	0.3167	--	1.127	1.323	1.350
Revenue	18.26B	18.80B	18.72B	18.75B	--	73.41B	78.87B	81.86B

Shareholder Friendliness	Liquidity	Short Interest
Dividend Yield	Quick Ratio Annual	Short Interest
Net Payout Yield	Current Ratio Ann	Days to Cover Short
Net Buyback Yield	Working Capital Ann	Percent of Float Short
Debt Paydwn Yield	EBIT/Int Expense Ann	% of Shr Outst Short

Banco Santander SA is a banking services company, which engages in the provision of banking services to individuals, companies, and institutions. It operates through the following segments: Retail & Commercial Banking, Digital Consumer Bank, Corporate & Investment Banking, Wealth Management & Insurance, Payments, and Corporate Centre. The Retail & Commercial Banking segment integrates the retail banking business for individuals and commercial banking. The Digital Consumer Bank segment includes Santander Consumer Finance, which incorporates the entire consumer finance business in Europe, Openbank, Open Digital Services (ODS), and SBNA Consumer. The Corporate ... Investment Banking segment includes markets, investment banking, finance, and global transactional banking; offers products and services on a global scale to corporate and institutional customers; and collaborates with other global businesses to better serve a broad customer base. The Wealth Management & Insurance segment includes the

Currency: USD

Symbol: SAN	Price - April 28, 2026 12.07
Sector: Financials	Price Target 11.72
Industry: Banks	52 Week High - Feb. 25, 2026 13.24
Consensus Rating: Hold	52 Week Low - April 30, 2025 6.82
Y-Rating: Neutral	Market Cap 173.81B
Last Fiscal Period: --	

Performance	1M	3M	YTD	1Y*	3Y*	5Y*	10Y*
Total Return	13.33%	-4.81%	2.90%	67.26%	56.44%	30.66%	13.80%
Price Return	13.33%	-4.81%	2.90%	62.23%	51.52%	26.14%	9.33%

\*Figures are annualized.

Comparables	Total Returns			Valuation (TTM)	
	1Y*	3Y*	5Y*	P/E	P/S
SAN	67.26%	56.44%	30.66%	11.63	1.541
BBVA	61.06%	52.77%	40.52%	10.66	1.409
BCS	46.85%	46.53%	20.82%	10.01	--
LYG	39.93%	36.66%	22.17%	14.51	3.167

\*Figures are annualized.

Growth	3Y	5Y	10Y
Revenue	12.60%	13.80%	5.20%
Operating Income	9.84%	16.58%	5.76%
EPS Basic	21.75%	--	8.81%
Total Dividends Paid	24.75%	--	8.54%
Book Value	8.69%	4.18%	2.39%
Total Assets	5.81%	3.51%	4.18%

Valuation	TTM	3Y Med.	5Y Med.	Ind. Avg.
PE Ratio	11.63	6.650	6.644	--
PS Ratio	1.541	0.6039	0.6743	--
PB Ratio	1.434	0.7384	0.6627	--
Price/FCF	--	--	--	--
EV/EBITDA	54.48	39.64	40.62	--
EV/EBIT	11.17	7.720	9.478	--
EV/Revenue	6.597	4.698	5.430	--
EV/FCF	90.21	65.64	67.25	--
EV/Assets	0.3625	0.2922	0.2922	--
P/E Forward	10.71	--	--	--
P/S Forward	2.354	--	--	--
PEG Forward	0.9789	--	--	--

Risk	3Y	5Y	10Y
Beta	0.7634	0.7650	1.051
Standard Deviation	28.64%	32.14%	37.32%
Historical Sharpe Ratio	1.604	0.8722	0.3444
Max Drawdown	20.29%	61.56%	77.35%
VaR 5%	2.80%	3.21%	3.27%
Historical Sortino	3.657	1.588	0.5637

2026 YCharts, Inc. All Rights Reserved. YCharts, Inc. ("YCharts") is not registered with the U.S. Securities and Exchange Commission (or with the securities regulatory authority or body of any state or any other jurisdiction) as an investment adviser, broker-dealer or in any other capacity, and does not purport to provide investment advice or make investment recommendations. This report has been generated using data manually input by the creator of this report combined with data and calculations from YCharts.com and is intended solely to assist you or your investment or other adviser(s) in conducting investment research. You should not construe this report as an offer to buy or sell, as a solicitation of an offer to buy or sell, or as a recommendation to buy, sell, hold or trade, any security or other financial instrument. THE IMPORTANT DISCLOSURES FOUND AT THE END OF THIS REPORT (WHICH INCLUDE DEFINITIONS OF CERTAIN TERMS USED IN THIS REPORT) ARE AN INTEGRAL PART OF THIS REPORT AND MUST BE READ IN CONJUNCTION WITH YOUR REVIEW OF THIS REPORT. For further information regarding your use of this report, please go to: <https://get.ycharts.com/disclosure/>

# Banco Santander SA One Page Report (Recommended)



## Important Information About This Report

---

This report is supplemental material, and when applicable, must be accompanied by a prospectus or equivalent document. These disclosures contain important information for an investor and their financial professional. They cover key terms, criteria, methodology, assumptions, risks, and limitations outlined in this report.

**Investors should carefully consider an investment's objectives, risks, charges and expenses. This and other important information is contained in the prospectus or equivalent document which can be obtained from their financial professional and should be read carefully before investing.**

This report should not be solely relied upon for making investment decisions. Investing carries inherent risks, including the potential for financial loss. It is advisable to seek guidance from legal, tax, or other advisors, including your financial professional, before making any investment decisions. This report is not an official account statement or other official document of a financial professional or any other party, and it does not constitute legal or tax advice; investors should consult with their legal and tax advisors for such advice.

The data contained or used in generating this report has not been audited or verified by your financial professional or any other party, and any use of this report should be made with this understanding. All data included in this report is based on the latest data available to YCharts as of the indicated release date, may not be an accurate reflection of current data for the report securities or any portfolios included and is subject to change without notice.

2026 YCharts, Inc. All Rights Reserved. YCharts, Inc. ('YCharts') is not registered with the U.S. Securities and Exchange Commission (or with the securities regulatory authority or body of any state or any other jurisdiction) as an investment adviser, broker-dealer or in any other capacity, and does not purport to provide investment advice or make investment recommendations. This report has been generated using data manually input by the creator of this report combined with data and calculations from YCharts.com and is intended solely to assist you or your investment or other adviser(s) in conducting investment research. You should not construe this report as an offer to buy or sell, as a solicitation of an offer to buy or sell, or as a recommendation to buy, sell, hold or trade, any security or other financial instrument. THE IMPORTANT DISCLOSURES FOUND AT THE END OF THIS REPORT (WHICH INCLUDE DEFINITIONS OF CERTAIN TERMS USED IN THIS REPORT) ARE AN INTEGRAL PART OF THIS REPORT AND MUST BE READ IN CONJUNCTION WITH YOUR REVIEW OF THIS REPORT. For further information regarding your use of this report, please go to: <https://get.ycharts.com/disclosure/>

## Security Type Disclosures

**Stocks:** Stocks are a type of security that provide a share of ownership in a company. When an investor buys a stock, they become a part owner of the business, along with all the other stockholders, and the value of their ownership stake will rise and fall according to the underlying business. The return on investment that a stock provides depends on the success or failure of that company. If the company does well and makes money from the products or services it sells, its stock price is likely to reflect that success. Stockholders are entitled to the profits, if any, generated by the company after everyone else – employees, vendors, lenders – get paid. Companies usually pay out their profits to investors in the form of dividends, or they reinvest the money back into the business. Stocks trade on exchanges throughout the day, through a brokerage firm who will charge a commission for the purchase or sale of shares.

## Investment Risks

Investments in securities involve investment risks, including possible loss of principal and fluctuation in value. The investment return and principal value of securities and other financial instruments will fluctuate so that an investor's investments, when sold or redeemed, may be worth more or less than the original cost. Investment results are not guaranteed. No investment strategy (including asset allocation and diversification strategies) can guarantee a profit or protect against a loss of principal.

**International/Emerging Market Equities:** Investing in securities from global and emerging markets carries heightened risks. These encompass currency fluctuations, political instability, and the challenges tied to diverse accounting standards. Emerging markets can exacerbate these risks.

**Sector Strategies:** Portfolios concentrating solely on one industry or sector entail added risks. The lack of diversity in industries exposes investors to amplified industry-specific vulnerabilities.

**Non-Diversified Strategies:** Portfolios heavily invested in a single issuer come with extra risks, including heightened share price oscillations due to the concentrated nature of investments.

**Small-Cap Equities:** Investing in small-company stocks introduces extra risks due to their greater likelihood of failure and relative lack of establishment compared to larger, established companies. Such stocks have historically displayed more pronounced market volatility.

**Mid-Cap Equities:** Portfolios involving companies with market capitalization below \$10 billion come with additional risks. Securities from these companies can be less stable and less easily tradable than those of larger corporations.

**High-Yield Bonds:** Investing in lower-rated debt securities brings additional risks because of the lower credit quality of these securities. Be prepared for heightened volatility and an increased risk of default.

**Tax-Free Municipal Bonds:** Income from tax-free municipal bond funds might still be subject to state, local, and Alternative Minimum Taxation.

**Bonds:** Bonds are susceptible to interest rate fluctuations. Rising bond interest rates lead to declines in the value of existing bonds in a portfolio. Bond portfolios can undergo value shifts due to general interest rate changes.

**Hedge Funds:** Hedge fund investing comes with specialized risks dependent on the strategies undertaken by the fund manager. These may include distressed or event-driven approaches, long/short strategies, arbitrage, international exposure, and the use of leverage, options, and derivatives. Hedge funds can involve substantial risk and are suitable only for financially capable investors willing to bear potential losses.

## Investment Risks

**Bank Loan/Senior Debt:** Bank loans and senior debt share the risks associated with fixed income, such as interest rate and default risks. Often falling below investment-grade, these securities hold a high default risk. They can also be less tradable. Funds investing in these assets are often highly leveraged, heightening the risk of return volatility.

**Exchange Traded Notes (ETNs):** ETNs are unsecured debt obligations, and their repayment hinges on the issuer's ability to fulfill obligations. ETNs typically do not provide interest payments.

**Leveraged ETFs:** Leveraged investments aim to achieve multiples of an index's return but can lead to returns greater or less than the index's performance, compounded over a specific period. Leverage introduces amplified risk.

**Short Positions:** Holding short positions brings theoretically unlimited losses if the position moves unfavorably. Brokers might demand additional collateral, and managers might need to close out short positions at unfavorable times to limit losses.

**Long-Short:** Long-short funds, utilizing strategies like leverage, short selling, and derivatives, can carry higher risk, volatility, and expenses compared to traditional investment-focused funds.

**Liquidity Risk:** Closed-end fund and ETF trading can halt due to market conditions, impacting an investor's ability to sell.

**Market Price Risk:** The market price of ETFs and closed-end funds, traded on the secondary market, is influenced by supply and demand, independent of NAV. This leads to trading at a premium or discount, affecting investor value.

**Market Risk:** Fluctuations in ETFs' market prices stem from factors like specific securities or general investor sentiment. Be mindful of potential market fluctuations and their impact.

**Target-Date Funds:** These funds invest in other mutual funds, designed for investors planning to retire around a target date. The fund's strategy becomes more conservative over time. Principal value isn't guaranteed, even at the target date.

**Money Market Funds:** An investment in a money market fund is not insured or guaranteed by the Federal Deposit Insurance Corporation (FDIC), the National Credit Union Association (NCUA), or any other governmental agency; although money market funds seek to preserve the value of the investment at \$1 per share, it is possible to lose money. Non-bank deposit investments are not FDIC- or NCUA-insured, are not guaranteed by the bank/financial institution, and are subject to risk, including loss of principal invested.

## Definitions

**52 Week High/Low:** The 52-Week High/Low is the highest and lowest price at which a security has traded during the previous 52 weeks.

**Annualized Price Return:** Annualized Price Returns measure the compound annual growth rate (CAGR) of an investment's market price over a specified period. This metric reflects only the price appreciation or depreciation of the investment, excluding any income from dividends or interest.

## Definitions

**Annualized Total Returns:** Annualized Total Returns represent the compound annual growth rate (CAGR) of an investment over a specified period, assuming all income—such as dividends, interest, and capital gains distributions—is reinvested. This metric captures the full effect of both price appreciation and income generated by the investment, offering a comprehensive measure of performance.

**Beta:** Beta is a risk metric that measures the risk associated with a security in comparison to the risk associated with the market overall. A beta of 1 would signify that the beta is neutral with the market. A common use of beta is within the Capital Asset Pricing Model (CAPM), to find a security's expected return.

**Book Value of Equity:** YCharts calculates book value of equity as the equivalent of total assets less total liabilities and preferred equity. The book value of equity represents the equity of shareholders (from a balance sheet perspective) less the preferred stock.

**Cash From Financing:** Cash flow from financing is a major line item of the statement of cash flows. This metric tracks the movement of cash flows for the overall financing activities of the company. A few examples of financing activities include common stock issuance, total dividends paid, and net debt issuance.

**Cash From Investing:** Cash from Investing is a major line item of the statement of cash flows. This metric tracks the movement of cash flows for the overall investing activities of the company. A few examples of investing activities include net change in PP&E, and net divestitures.

**Cash From Operations:** Cash flow from operations is a major line item of the statement of cash flows. This metric tracks the movement of cash flows for the overall operating activities of the company. A few examples of operating activities include change in receivables, change in inventories, and changes in current assets.

**Current Ratio:** Current ratio is measured by current assets/current liabilities. This metric measures how well a company is able to pay short-term liabilities that are on its balance sheet. An attractive current ratio shows that a company's balance sheet is healthy and has solvency.

**Dividend Per Share:** Dividends Per Share is the dollar amount of dividends that were paid per share to owners of shares. It is a good indicator on how the company gives value back to shareholders. However, low dividend per share figures are not a bad thing if the company has good opportunities to reinvest its earnings in its own business. YCharts uses the reported dividends paid per share using the "Dividend" metric and sums them over a trailing 12 month period to calculate this figure.

**Dividend Yield:** Dividend yield is a financial metric that measures the income from dividends relative to the value of an investment. It shows how much a company, fund, or portfolio has paid out in dividends each year relative to its price, NAV (Net Asset Value) or level (for portfolios). Dividend yield is available for the following security types on YCharts: stocks, mutual funds, ETFs, Closed End Funds (CEFs), and portfolios.

**EBIT Margin:** An EBIT Margin is the operating earnings over operating sales. This margin allows investors to understand true business costs of running a company, because parts of a company's property, plant, and equipment will eventually need to be replaced as they get used, broken down, decayed, etc. Lower EBIT Margins indicate lower profitability from a company. When comparing against its competitors, investors can determine if lower EBIT margins are due to the competitive landscape (where all companies are having lower margins) or a issue just within the company (where the company is facing lower sales and higher costs).

## Definitions

**EBIT to Interest Expense:** EBIT to Interest Expense is a measurement of how much a company is earning (EBIT) over its interest payments. A ratio of five means that a company is making five times its interest payment expense. Companies may have quarters where its EBIT coverage is not significantly higher (or lower) than its interest expense, however, reserve cash can help cover during non-profitable periods. Companies that consistently have an EBIT less than interest expense eventually face solvency issues (inability to make interest payments results in default). In general, the higher this ratio is, the better the financial health of the company. If a company has constant periods where this ratio is less than one, the company may be in poor financial health.

**EPS Growth:** YCharts EPS growth rates are calculated as quarterly year over year growth rates. EPS growth (earnings per share growth) illustrates the growth of earnings per share over time. EPS growth rates help investors identify stocks that are increasing or decreasing in profitability. If a company has an EPS of \$5.00 in 2008 and EPS of \$6.00 in 2009, the company has an EPS growth rate of  $\frac{6.00}{5.00} - 1 = 20\%$  during fiscal year 2009.

**EV to EBITDA:** The EV to EBITDA measures the ratio between enterprise value and earnings before interest, taxes, depreciation, and amortization. This metric is important to analyze when looking at a company's true value based on how much they are valued at compared to how money they are earning.

**Earnings Per Share Estimates:** This is the earnings consensus estimate for a given period of time, according to analysts polled by Standard & Poor's. Important notes about all EPS estimates: 1) Analysts are making guesses. While they generally become more accurate as they approach the reporting date, they do guess incorrectly. This can lead to large effects on the stock price when the true numbers are revealed. 2) Companies have different end dates. Do not assume all end dates occur at the same time. 3) Reporting dates are later than the actual end date. Hence, estimates for the end date continue to be issued until the company reports earnings. 4) There are multiple sources for earnings estimates, and different providers will give slightly different "consensus" numbers. 5) We show weekly history. Gaps in the data are because we did not receive data for a given week and should not be interpreted as anything else.

**Earnings per Share:** Earnings per share measures the total net income / average shares outstanding during income period. There are a few variations to earnings per share that are listed including "EPS Basic", "EPS Diluted", "Normalized Basic EPS", and "Normalized Diluted EPS". Each of these metrics are dependent on which earnings and shares outstanding metrics are used. Basic and Diluted EPS differ in that diluted shares are the amount of shares outstanding after all convertible securities, options, and warrants are exercised. Normalized EPS allows does not include one-time expenses.

**Effective Tax Rate:** Effective tax rates show a company's anticipated tax bill as a percentage of taxable income. Generally, companies that can work within the tax code to pay lower taxes are looked upon favorably by investors, since these tax savings indirectly accrue to shareholders. Two important notes regarding effective tax rates: (1) YCharts does not calculate an effective tax rate when pre-tax income is zero or negative to avoid confusion with negative tax on negative income or positive tax on negative income. (2) Effective tax rates are different from marginal tax rates (the tax rate the company paid on its last dollar of income). YCharts Quarterly Effective Tax Rates can display more volatile numbers than TTM. This may be the result of tax liabilities that were not paid in previous quarters that a firm is paying off now. For analyzing purposes, we recommend to use TTM rather than quarterly data.

## Definitions

**Enterprise Value Ratios (EV):** Enterprise Value/Financial Metrics are often used by analysts to quickly look at a company's valuation multiples. All things being equal, the lower this ratio is, the better. **EV / Assets:** The enterprise value of a company divided by its total assets. It should be the default EV multiple when the business is asset driven (when ROA is relatively constant and assets show future cash flows the best). A high (low) EV/Assets mean the company is potentially overvalued (undervalued). **EV / CFO:** EV/CFO answers the question, "What is a company being valued per each dollar of CFO?", which really answers, "How long will it take the company to pay for itself using all of the operating cash flow?" EV/CFO tells the amount of time the company would need to pay for itself. For example if the company's ratio is 10, that would mean the company would take 10 years to buy all its outstanding stock and pay all debts using the operating cash flow. **EV / Earnings:** EV / Earnings answers the question, "What is a company being valued per each dollar of earnings?" A high (low) EV/Earnings mean the company is potentially overvalued (undervalued). **EV / EBIT:** EV/EBIT answers the question "What is a company being valued per each dollar of EBIT?" A high (low) EV/EBIT mean the company is potentially overvalued (undervalued). **EV / Free Cash Flow:** EV/FCF answers the question "What is a company being valued per each dollar of FCF?" A high (low) EV/FCF mean the company is potentially overvalued (undervalued). **EV / Revenues:** EV/Revenues answers the question "What is a company being valued per each dollar of revenues?" A high (low) EV/Revenues mean the company is potentially overvalued (undervalued). Other similar metrics include : EV/EBITDA : How much is each dollar of EBITDA worth to investors?

**Financial Debt:** Amount of non-operational debt that a company has. This can be thought of as debt that is non-critical for a company's operations. **To illustrate operational and non-operational debt:** Accounts payable is an operational debt used to pay suppliers of a firm for goods / services. If it doesn't pay these liabilities, it would be unable to continue day-to-day operations. Notes payable is a non-operational debt that represents written obligations to creditors in exchange for funds. If a firm doesn't make payments to its notes payable, there are no immediate consequences to operations. (Eventually, drastic consequences). Financial Debt can be different than other types of short term obligations. Because financial debts can be larger in nature, they can be more complexly structured, along with terms that are enacted to protect both the lender/borrower. Companies facing difficult business odds may take on more debt for riskier ventures to "gamble" on a new product/strategy.

**Forward PE Ratio:** The Forward Price to Earnings (PE) Ratio is similar to the price to earnings ratio. The regular P/E ratio is a current stock price over its earnings per share. The forward P/E ratio is a current stock's price over its "predicted" earnings per share. If the forward P/E ratio is higher than the current P/E ratio, it indicates decreased expected earnings. Keep in mind, analyst estimates are not set in stone, and can often be wrong.

**Forward PEG Ratio:** Similar to the PEG Ratio, the forward PEG ratio illustrates the relationship between stock price, earning per share, and the company's expected growth rate. Typically, PEG Ratios are calculated based on historical growth rates, while forward PEG Ratios use expected EPS growth. By dividing the PE ratio by the expected earnings growth rate, the forward PEG ratio allows investors to predict if a company is overvalued based on analyst estimates. For most PEG analysis, a PEG greater than 1 is considered overvalued, a PEG of 1 is fairly valued, and a PEG less than 1 is considered undervalued.

**Forward PS Ratio:** Forward Price to Sales Ratio is the current stock price over the predicted sales per share. While similar to the price to sales ratio, this is a forward looking estimate of a company's sales.

**Free Cash Flow:** Free cash flow measures the amount of cash left over from a time period after all operational and working capital payments are made. Free cash flow is an important metric because it allows you to view the amount actual cash is available to the company. Free cash flow is also commonly used in valuation calculations like the discounted cash flow valuation model.

**Growth Metrics:** Growth metrics are used to examine a company's historical growth (and hopefully provide clues for the future). Depending on a company's current context, different metrics can be used to more accurately capture a company's historical growth. YCharts offers growth metrics that allow you to investigate quarterly growth (QoQ) and annual growth metrics that range from annual YoY to three, five, and ten year growth.

## Definitions

**Historical Sharpe Ratio:** The Sharpe Ratio measures the risk-adjusted return of a security. This is a useful metric for analyzing the return you are receiving on a security in comparison to the amount of volatility expected. The historical sharpe ratio uses historical returns to calculate the return and standard deviation.

**Historical Sortino Ratio:** Measures risk-adjusted return like the Sharpe Ratio but focuses only on downside volatility, isolating harmful fluctuations while ignoring upside movements.

**Market Capitalization:** Market Capitalization measures the total value of a company based on their stock price multiplied by the shares outstanding. This metric is important because it gives you an idea of the size of a company, and how the size has changed over time. When studying companies from a relative basis, it would make sense to compare companies that have a similar market capitalization because factors like market share, economies of scale, and business models would also be similar.

**Max Drawdown:** Max drawdown is an indicator of the risk of a portfolio chosen based on a certain strategy. It measures the largest single drop from peak to bottom in the value of a portfolio before a new peak is achieved.

**Net Common Buyback Yield:** Net Common Buyback Yield is the amount of common stock buybacks / market cap. Since buyback show a sign of the company adding shareholder value, a higher buyback yield is usually looked at positively.

**Net Debt Paydown Yield:** The Net Debt Paydown Yield gives a good idea of how much total debt is paid down in relation to market capitalization. This metric can give an idea of what a company is doing with their capital structure. Net Debt Paydown Yield can give a good idea of the health of a company's financials as well.

**Net Income:** Net Income is the total amount of profit earned by a company. This metric boils down to the overall profit that is left from the revenue that a company receives after taking out various operational line items like cost of goods sold, income tax expense, SG&A expense, etc. Eventually, all companies would want to have a consistent positive and growing net income, so that this can be used for various purposes like reinvesting into the company, paying off debt, and potentially paying out dividends to shareholders.

**Net Payout Yield:** Net Payout Yield measures the amount of payouts through repurchases and dividends that a company pays divided by its market capitalization. This yield gives a good idea of how much a company takes advantage of free cash flow to provide value to shareholders.

**Operating Income:** Profit earned from a company's core business operations. It is gross profit less all operating expenses and depreciation.

**Operating Margin:** Operating margin measures the proportion of revenue left over after paying the variable costs of production. It is an important indicator of efficiency and profitability. Operating margins can be used to demonstrate management effectiveness in maintaining costs or increasing revenues. High operating margins, or increasing margins over time, demonstrate management's effectiveness in increasing operating profits, whereas declining operating margins can point out significant weaknesses in company growth. Low operating margins in certain industries may also indicate cost controls (if implemented) could lead to better operating income. An operating margin of .15 indicates that for each dollar of revenue that comes in, 15 cents will drive to the operating income. Operating margin can be used to make predictions of future operating profits based on revenue growth.

**Payout Ratio:** The payout ratio is the percentage of total dividends paid / net income. This metric is important for dividend investors as it can be used to give an idea of how much of a dividend payout you are expected to receive.

## Definitions

---

**Percent of Float Short:** Percent of Float Short is the percentage of shares available for trading that are sold short.

**Percent of Shares Outstanding Short:** The percent of shares that investors are currently short on a particular stock. If Company X has 5 million shares outstanding and 1 million shares sold short, the percent of shares outstanding short is 20%.

**Price:** The price of a security measures the cost to purchase 1 share of a security. For a company, price can be multiplied by shares outstanding to find the market capitalization (value of the company).

**Price Return:** The Price Return is the change in price over a specific period of time displayed as a percentage.

**Price Target:** It is the stock price analysts expect to see within a period of 0-18 months. Target price is a non-periodic estimate and will not have Actuals available.

**Price to Book Ratio:** Price to book value is a valuation ratio that is measured by stock price / book value per share. The book value is essentially the tangible accounting value of a firm compared to the market value that is shown.

**Price to Cash Flow:** Price to free cash flow measures the Price / TTM Free Cash Flow. Like other price ratios (ie. PE Ratio, PS Ratio, P/B Ratio), this metric can be used to compare companies with similar capital structures. Free cash flow gives an idea of how much cash is available for shareholders through stock buybacks and dividend payouts. A lower price to free cash flow is more desirable when assessing different companies.

**Price to Earnings Ratio (PE Ratio):** The Price to Earnings Ratio (PE Ratio) is calculated by taking the stock price / EPS Diluted (TTM). This metric is considered a valuation metric that confirms whether the earnings of a company justifies the stock price. There isn't necessarily an optimum PE ratio, since different industries will have different ranges of PE Ratios. Because of this, PE Ratio is great to evaluate from a relative standpoint with other similar companies.

**Price to Sales Ratio:** The Price to Sales Ratio (PS Ratio) is calculated by taking the stock price / revenue per share (ttm). This metric is considered a valuation metric that confirms whether the sales of a company justifies the stock price. There isn't necessarily an optimum PS ratio, since different industries will have different ranges of PS Ratios. Because of this, PS Ratio is great to evaluate from a relative standpoint with other similar companies. PS Ratio might also be a handy metric for companies that are not profitable yet, since they might be valued more so by their overall sales and potential of becoming profitable in the future.

**Quick Ratio:** The Quick Ratio, also known as the acid-test ratio, is a solvency metric used to determine a firm's ability to pay down current liabilities with its cash, short term equivalents, and accounts receivables. This ratio was nicknamed quick to describe the "quick assets" needed to pay down any current liabilities. Firms with high quick ratios often indicate the firm is solvent and able to pay current liabilities quickly. A low quick ratio may indicate that the firm is potentially having solvency issues. Other similar solvency ratios include : Cash Ratio - Measures the amount of cash that can be used to pay liabilities Current Ratio - Measures the amount of current assets over current liabilities The quick ratio is more lenient than the cash ratio, but stricter than the current ratio. The cash ratio is the most strict because it only calculates the amount of cash and short term equivalents to pay off current liabilities. The quick ratio assumes accounts receivables to be a liquid enough asset that can potentially be used to pay off current liabilities. Companies with poor credit policies (managing accounts receivables) may have high quick ratios, but not be as solvent as they appear.

## Definitions

**Return on Assets:** Return on Assets measures Net Income / Total Assets. This metric is important because it gives an idea of how efficiently a business is being run in using assets and generating income. ROA can vary for different sectors and industries depending on the financial statement structures.

**Return on Equity (ROE):** Return on Equity (ROE) measures Net Income / Total Shareholders' Equity. This metric is important because it gives an idea of how efficiently a business is being run. ROE can vary for different sectors and industries depending on the financial statement structures.

**Return on Invested Capital (ROIC):** Return on invested capital is calculated as the Net Income / (Current and Non-Current Portion of Debt + Shareholders Equity + Minority Interests). This metric gives insight into how the particular company is doing in comparison to the total amount of capital that is being put into investments.

**Revenue Growth:** Revenue growth illustrates sales increases/decreases over time. It is used to measure how fast a business is expanding. More valuable than a snapshot of revenue, revenue growth helps investors identify trends in order to gauge revenue growth over time. If a company generated \$75 billion in revenue during 2008 and \$100 billion in revenue during 2009, the company experienced roughly a  $(\$100 \text{ billion} / \$75 \text{ billion}) - 1 = \%33$  increase in revenue.

**Revenues:** Revenues measure the total amount of value that a company brings in during a certain period. This is also considered the "top-line" of the income statement. Revenues are used for all operating expenses as well as other line items which eventually lead to the net income for the company. Revenue is an extremely important metric when analyzing a company. A company with efficient margins is able to turn revenues into the most net income.

**Shareholders' Equity:** Shareholder's Equity is a main portion of the balance sheet of a company that measures the net value of a company. The reason for this is because from an accounting perspective, the balance sheet equation is Shareholder's Equity = Assets - Liabilities. A few examples of shareholder's equity of a company include retained earnings, paid in capital, and preferred stock.

**Short Interest:** The number of shares that have been sold short but have yet to be covered or closed out. This is commonly used as a sentiment indicator. High short interest shows a bearish or pessimistic outlook. Short selling, or Shorting, is when an investor borrows stock from a lender, sells the stock, and then buys the stock back to return it to the lender. The investor is betting that the stock will drop in price.

**Standard Deviation:** Standard deviation measures how much an investment's return deviates from its average over a specific period. Higher standard deviation indicates more volatility, while lower standard deviation signifies steadier returns. YCharts makes five types of standard deviation metrics over different time periods available: daily, monthly, quarterly, annualized monthly, and annualized quarterly.

**Total Assets:** Assets are a main portion of the balance sheet of a company that measure things that provide economic value. A few examples of assets of a company include cash, inventories, and accounts receivable. From an accounting perspective, the balance sheet equation is Assets = Liabilities + Shareholder's Equity.

**Total Liabilities:** Liabilities are a main portion of the balance sheet of a company that measure outstanding payables/obligations. A few examples of liabilities of a company include accounts payable, current debt, and capital lease obligations. From an accounting perspective, the balance sheet equation is Liabilities = Assets - Shareholder's Equity.

**Total Return:** The Total return is the change in price over a specific period of time that includes dividends and distributions paid.

## Definitions

---

**Total Return Level:** The total return level allows investors to view the performance of a security inclusive of both price appreciation and dividends/distributions. Total return level is seen as the most accurate calculation that produces returns consistent with most other sources.

**Total Stock Dividends Paid:** Total Stock Dividends Paid is the sum of all dividends paid to stockholders. This includes both common stock dividends and preferred stock dividends.

**Value At Risk (VaR):** The VaR calculates the potential loss of an investment with a given time frame and confidence level. For example, if a security has a 5% Daily VaR (All) of 4%: There is 95% confidence that the security will not have a larger loss than 4% in one day. Since this metric says (All) we are calculating this using all available price history for the security. In another example, if a security has a Monthly VaR 1% (3Y Lookback) of 15%: There is 99% confidence that the security will not have a larger loss than 15% in one month. This is calculated using the past 3 years of historical prices. Keep in mind that VaR does not give you any information about the magnitude of the potential loss in excess of the VaR. For a calculation that give you this information you can view [Expected Shortfall](#).

**Working Capital:** The difference between current assets and current liabilities. Illustrates the amount of liquid assets that a company has to build its business. Working capital are funds used for operational liquidity. A firm often has day to day liquidity needs that require short term capital. Large quantities of working capital indicate potential to expand quickly. Firms with low levels of working capital may encounter liquidity issues. For example, companies often need to make quick equipment purchases and must tap into working capital to do so. If a company has an insufficient amount of working capital, it may have to turn to other sources of funding, such as debt, potentially slowing growth. While having a surplus of working capital is good for growth, excess amounts of working capital may mean the company could find better uses of its current assets.

## Disclosures

### IMPORTANT DISCLOSURES

This report does not reflect the performance of any account actually managed by your Adviser. This is supplemental material, and when applicable, should be accompanied by a prospectus or equivalent document.

The data contained in or used in generating this report has not been audited or verified by your Adviser or any other party, and any use of this report should be made with this understanding. This report is not an official account statement or other official document of your Adviser or any other party.

This report does not constitute legal or tax advice. Please consult with your legal and tax advisors for such advice.

### CRITERIA AND ASSUMPTIONS USED IN PORTFOLIO PERFORMANCE

All portfolios represent hypothetical blended investments of weighted securities as designated by the creator of this report based on the expected financial situation of the intended audience and should be used for illustrative purposes only and should not be considered performance reports. They are calculated by taking a weighted average of the target weights and the securities total return, assuming all dividends reinvested, since the latest rebalance date. These portfolios are assumed to rebalance to the exact designated weights at each calendar quarter or month end – whichever is chosen when setting up the portfolio. No transaction costs or taxes are included. Portfolio holdings are weighted by percentage, not whole share numbers.

### RISKS AND LIMITATIONS OF HYPOTHETICAL PERFORMANCE

**ACCORDINGLY, ALL PORTFOLIO RETURNS ARE HYPOTHETICAL OR SIMULATED AND SHOULD NOT BE CONSIDERED PERFORMANCE REPORTING.** No representation is made that your investments will achieve results similar to those shown, and actual performance results may differ materially from those shown. Returns portrayed in this report do not reflect actual trading and investment activities, but are hypothetical or simulated results of a hypothetical portfolio over the time period indicated and do not reflect the performance of actual accounts managed by your Adviser or any other person. The mutual funds and other components of the hypothetical portfolio(s) were selected with the full benefit of hindsight, after their performance during the time period was known. In general, hypothetical returns generally exceed the results of client portfolios actually managed by advisers due to several factors, including the fact that actual portfolio allocations differed from the allocations represented by the market indices used to create the hypothetical portfolios over the time periods shown, new research was applied at different times to the relevant indices, and index performance does not reflect the deduction of any fees and expenses. Results also assume that asset allocations would not have changed over time and in response to market conditions, which is likely to have occurred if an actual account had been managed during the time period shown.

**INVESTMENTS IN SECURITIES INVOLVE INVESTMENT RISKS, INCLUDING POSSIBLE LOSS OF PRINCIPAL AND FLUCTUATION IN VALUE.** See "INVESTMENT RISKS" below for a brief summary of certain risks. The investment return and principal value of securities and other financial instruments will fluctuate so that an investor's investments, when sold or redeemed, may be worth more or less than the original cost. Investment results are not guaranteed. No investment strategy (including asset allocation and diversification strategies) can guarantee a profit or protect against a loss of principal. **THIS REPORT IS NOT AN INVESTMENT PERFORMANCE REPORT. DO NOT RELY ON THIS REPORT AS PORTRAYING, OR CONTAINING PERFORMANCE OF, AN ACTUAL ACCOUNT. THIS REPORT SHOWS HYPOTHETICAL OR SIMULATED RETURNS OF portfolio(S) AND IS FOR ILLUSTRATIVE PURPOSES ONLY.** The SEC has not approved the returns being displayed within the report. This report is not intended to and does not predict or show the actual investment performance of any account. A portfolio represents an investment in a hypothetical weighted blend of securities which, together with other inputs, were selected by you and/or your Adviser and, accordingly, a portfolio should be used for illustrative purposes only.

The performance of a portfolio is calculated by taking a weighted average of the stated target weights and the securities' total return, assuming reinvestment of all dividends and other distributions on the related ex-date, since the latest rebalance date. The portfolio(s) portrayed in this report are assumed to rebalance to the exact designated weights on a monthly, quarterly or annual basis, whichever you and/or your Adviser selected in generating this report. The performance illustrated in this report may assume that rebalancing occurred in a manner different from how your Adviser rebalances a client portfolio. Your Adviser may recommend rebalancing when an asset class varies from its targeted allocation. In general, your Adviser reinvests dividends generated by investments. The way your Adviser invests dividends may be different than how the portfolio(s) invest dividends.

All stated target weights are based on allocation choices input by your and/or your Adviser. These weights represent the values used at rebalance periods. All weightings ignore the concept of whole shares and instead use the exact percentage chosen when creating the portfolio(s).

## Disclosures (continued)

Unless otherwise noted, no transaction costs (e.g., commissions, sales loads), taxes, or advisory fees are deducted from the performance results generated by the portfolio(s). Any expense ratio shown is inclusive of the underlying fees in the securities included in the portfolio(s) (as reported by Morningstar Inc.), and as such should be considered for illustrative purposes only. As discussed above, such fees do not include transaction costs (e.g., commissions, sales loads), taxes, or advisory fees.

The stated yield for a hypothetical portfolio is based on the weighted average of trailing 12-month yields for the underlying securities. It is no indication or guarantee of future yield.

**PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.** To the extent this report portrays historical performance of particular securities or other financial instruments, past performance of such securities or other instruments is not indicative of future results. Further, when reviewing past performance records of actual accounts, it is important to note that different accounts (even if they are managed pursuant to the same strategy), can have varying results. The reasons for this include: 1) the period of time in which the accounts are active; 2) the timing of contributions and withdrawals; 3) the account size; 4) the minimum investment requirements and/or withdrawal restrictions; 5) the rate of advisory, brokerage commissions and transaction fees charged to an account; and 6) restrictions or limitations on whether the account can be rebalanced annually, quarterly or otherwise.

**ALL RISK CALCULATIONS ARE FOR ILLUSTRATIVE PURPOSES ONLY.** They are calculated at the portfolio level using a benchmark (discussed below) selected by you and/or your Adviser. The benchmark is displayed for comparison purposes and is used to calculate portfolio level risk data when necessary.

For a glossary of terms relating to risk calculations that may be used in this report, see "DEFINITIONS," below.

**DO NOT RELY UPON THIS REPORT FOR DETERMINING THE VALUE OF YOUR ASSETS.** This report was generated based on information provided by you and by various other sources. If your Adviser generated this report, you should consult with your Adviser to determine what sources of information were used by it in connection with generating this report besides information that was provided by you. You should refer to official final account statements or other final official documents you receive from your Adviser or your other financial services providers when determining the value of your assets.

### INVESTMENT RISKS

**International/Emerging Market Equities:** Investing in international securities involves special additional risks. These risks include, but are not limited to, currency risk, political risk, and risk associated with varying accounting standards. Investing in emerging markets may accentuate these risks. **Sector Strategies:** Portfolios that invest exclusively in one sector or industry involve additional risks. The lack of industry diversification subjects the investor to increased industry-specific risks.

**Non-Diversified Strategies:** Portfolios that invest a significant percentage of assets in a single issuer involve additional risks, including share price fluctuations, because of the increased concentration of investments.

**Small Cap Equities:** Portfolios that invest in stocks of small companies involve additional risks. Smaller companies typically have a higher risk of failure, and are not as well established as larger blue-chip companies. Historically, smaller-company stocks have experienced a greater degree of market volatility than the overall market average.

**Mid-Cap Equities:** Portfolios that invest in companies with market capitalization below \$10 billion involve additional risks. The securities of these companies may be more volatile and less liquid than the securities of larger companies.

**High-Yield Bonds:** Portfolios that invest in lower-rated debt securities (commonly referred to as junk bonds) involve additional risks because of the lower credit quality of the securities in the portfolio. The investor should be aware of the possible higher level of volatility, and increased risk of default.

**Tax-Free Municipal Bonds:** The investor should note that the income from tax-free municipal bond funds may be subject to state and local taxation and the Alternative Minimum Tax.

**Bonds:** Bonds are subject to interest rate risk. As the prevailing level of bond interest rates rise, the value of bonds already held in a portfolio declines. Portfolios that hold bonds are subject to declines and increases in value due to general changes in interest rates.

## Disclosures (continued)

**Hedge Funds:** The investor should note that hedge fund investing involves specialized risks that are dependent upon the type of strategies undertaken by the fund's manager. This can include distressed or event-driven strategies, long/short strategies, using arbitrage (exploiting price inefficiencies), international investing, and use of leverage, options and/or derivatives. Although the goal of hedge fund managers may be to reduce volatility and produce positive absolute return under a variety of market conditions, hedge funds may involve a high degree of risk and are suitable only for investors of substantial financial means who could bear the entire loss of their investment.

**Bank Loan/Senior Debt:** Bank loans and senior loans are impacted by the risks associated with fixed income in general, including interest rate risk and default risk. They are often non-investment grade, therefore, the risk of default is high. These securities are also relatively illiquid. Managed products that invest in bank loans/senior debt are often highly leveraged, producing a high risk of return volatility.

**Exchange Traded Notes (ETNs):** ETNs are unsecured debt obligations. Any repayment of note is subject to the issuer's ability to repay its obligations. ETNs do not typically pay interest.

**Leveraged ETFs:** Leveraged investments are designed to meet multiples of the return performance of the index they track and seek to meet their daily fund objectives (or other time period stated within the prospectus objective). The leverage/gearing ratio is the amount of excess return that a leveraged investment is designed to achieve in comparison to its index performance (i.e., 200%, 300%, or -300% or 2X, 3X, -2X, -3X). Compounding could affect the performance of the fund to be either greater or less than the index performance multiplied by the multiple stated within the funds objective over a stated time period.

**Short Positions:** When a short position moves in an unfavorable way, the losses are theoretically unlimited. The broker may demand more collateral and a manager might have to close out a short position at an inopportune time to limit further losses.

**Long-Short:** Due to strategies used by long-short funds, which may include but are not limited to leverage, short selling, short-term trading, and investing in derivatives, these funds may have greater risk, volatility, and expenses than those focusing on traditional investment strategies.

**Liquidity Risk:** Closed-end fund, ETF, and HOLDR trading may be halted due to market conditions, impacting an investor's ability to sell a fund.

**Market Price Risk:** The market price of ETFs, HOLDRs, and closed-end funds traded on the secondary market is subject to the forces of supply and demand and thus independent of the NAV. This can result in the market price trading at a premium or discount to the NAV, which will affect an investor's value.

**Market Risk:** The market price of ETFs and HOLDRs can fluctuate because of several factors, such as security-specific factors or general investor sentiment. Therefore, investors should be aware of the prospect of market fluctuations and the impact it may have on the market price.

**Target-Date Funds:** Target-date funds typically invest in other mutual funds and are designed for investors who are planning to retire during the target date year. The fund's target date is the approximation date when investors expect to begin withdrawing their money. A target-date fund's investment objective/strategy typically becomes more conservative over time, primarily by reducing its allocation to equity mutual funds and increasing its allocations in fixed-income mutual funds. An investor's principal value in a target-date fund is not guaranteed at any time, including the fund's target date.

**Money Market Funds:** Investments in these funds are not guaranteed by the FDIC or any other government agency. You can lose money by investing in these funds. The fund strives to preserve your investment, however, it can not guarantee to do so.

### INDEXES AND BENCHMARK DISCLOSURES

Indices and benchmarks are unmanaged and cannot be invested in directly. Returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment. Index return information is provided by vendors and although deemed reliable, is not guaranteed by YCharts, your Adviser or any other person. Benchmark returns may or may not be adjusted to reflect ongoing expenses such as sales charges. An investment portfolio may differ significantly from the securities in the benchmark. Due to timing of information, benchmarks may be adjusted after the publication of this report. Following is a brief description of the common market indexes and benchmarks.

**Bloomberg Barclays Municipal Bond Index:** Covers the USD-denominated long-term tax exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and prefunded bonds.

## Disclosures (continued)

**Bloomberg Barclays U.S. Aggregate Index:** Covers the USD-denominated, investment-grade, fixed-rate, taxable bond market of SEC-registered securities. The index includes bonds from the Treasury, Government-Related, Corporate, MBS (agency fixed-rate and hybrid ARM pass-through securities), ABS, and CMBS sectors.

**Bloomberg Commodity Index:** A liquid and diversified benchmark for commodities as an asset class. The index is composed of futures contracts on 19 physical commodities which include oil, metals and agricultural products such as corn or soybean. The Bloomberg Commodity Index family includes nine sub-indexes that group commodities based on type, plus single-commodity indexes for each of the 19 individual commodities in the broad index, plus Cocoa, Lead, Platinum and Tin.

**Dow Jones U.S. Select REIT Index:** Comprised of companies whose charters are the equity ownership and operation of commercial real estate and which operate under the REIT Act of 1960. Each REIT in the REIT Index is weighted by its float-adjusted market capitalization. The total return version of the index is calculated with gross dividends reinvested.

**MSCI EAFE® Index-Net Total Return:** Measures the equity market performance of developed markets, excluding the US & Canada. The index returns are calculated with reinvestment of net dividends after the deduction of applicable non-resident withholding taxes. Prior to July 1, 2016, the returns of the MSCI EAFE index were calculated with gross dividends, before application of local taxes, to approximate the maximum possible dividend reinvestment.

**MSCI Emerging Markets® Index-Net Total Return:** Measures the equity market performance of emerging markets. The index returns are calculated with reinvestment of net dividends, after the deduction of applicable nonresident withholding taxes. Prior to July 1, 2016, the returns of the MSCI Emerging Markets index were calculated with gross dividends, before application of local taxes, to approximate the maximum possible dividend reinvestment.

**S&P 500® Index:** Capitalization-weighted index of 500 stocks. The index is designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries. The total return version of the index is used, which reflects the effects of dividend reinvestment.

**S&P MidCap 400® Index:** Covers 7% of the U.S. equity market and is comprised of companies with market capitalization in the range of US \$1.4 billion to US \$5.9 billion. The total return version of the index is used, which reflects the effects of dividend reinvestment.

**S&P SmallCap 600® Index:** Covers approximately 3% of the domestic equities market covering companies with market capitalization in the range of US \$400 million to US \$1.8 billion. The total return version of the index is used, which reflects the effects of dividend reinvestment.

### DEFINITIONS

The following terms, if used in this Report, have the following meanings:

1. **Alpha:** Alpha measures the risk and market-adjusted returns for the portfolio. The metric is calculated on the specified lookback period using the benchmark that is set for the portfolio.

Formula Alpha = Annualized security return - risk free rate - beta \* (annualized benchmark return - risk free rate) \* 100

Note: Risk free rate = average 1 month treasury rate throughout the lookback period.

2. **Beta:** Beta measures the movement of the portfolio in comparison to the benchmark based on the lookback period. It is a statistical measure that can be used to measure the volatility of price movements.

Formula Beta = Covariance ( Portfolio Return , Benchmark Return) / Variance (Benchmark Return)

3. **Standard Deviation:** Standard deviation measures the range of return values that you can statistically expect from your portfolio compared to its mean return. This measure is annualized for the specified lookback period.

Formula Standard Deviation = SQRT(Variance of Monthly Returns for Lookback Period)

4. **Historical Sharpe:** Sharpe measures the risk-adjusted return for the specified lookback period.

Formula Sharpe = (Average monthly return over lookback period) / (Historical standard deviation)

5. **Historical Sortino:** Sortino Ratio measures the downside risk-adjusted outperformance of the portfolio versus the benchmark.

## Disclosures (continued)

Formula Historical Sortino = (Average Monthly Returns - risk free rate) / downside deviation

6. Max Drawdown: Max drawdown is an indicator of the risk of a portfolio chosen based on a certain strategy. It measures the largest single drop from peak to bottom in the value of a portfolio (before a new peak is achieved).

Formula: Max Drawdown = (Peak value before largest drop - Lowest value before new high established) / (Peak value before largest drop)

7. Monthly Value at Risk (VaR) 5%: The VaR calculates the potential loss of an investment with a given time frame and confidence level. This metric is a statistical measure that gives an idea of the statistical chance of a drawdown occurring.

8. Dividend Yield (TTM): For the underlying holdings of the portfolio, the dividend yield measures the total amount of dividends per share paid over the last 12 months, divided by the price per share of the security. To calculate the portfolio's dividend yield, a weighted average of the underlying holdings' dividend yield is taken.

9. 7-Day SEC Yield: Annualized yield calculated using interest and dividends earned and paid out over a 7-day period. It is primarily used for money market funds. The unsubsidized version of this yield reflects what the value would be without any fee waivers or expense reimbursements.

10. 30-Day SEC Yield: Annualized yield calculated using net investment income per share earned over a 30-day period. The unsubsidized version of this yield reflects what the value would be without any fee waivers or expense reimbursements.

11. Distribution Yield (TTM): Measures the total amount of distributions received from common dividends paid in the underlying holdings over the last 12 months.

12. Weighted Average PE Ratio: A weighted average of each underlying holding's share price relative to the net income per share. Stocks that have EPS < 0 are excluded in this calculation.

13. Weighted Average Price to Sales Ratio: A weighted average of each underlying holding's share price relative to the sales per share. Stocks that have Revenue per Share < 0 are excluded in this calculation.

14. Weighted Average Price to Book Ratio: A weighted average of each underlying holding's share price relative to the book value per share. Stocks that have Book Value per Share < 0 are excluded in this calculation.

15. Weighted Median ROE: Return on equity is measured as the Net Income / Average TTM shareholder's equity. On the portfolio level, the weighted median ROE of the underlying holdings is calculated.

16. Expense Ratio: A measure of the fees charged by a fund manager to the investors that own shares of the fund. The value is a percentage and represents the portion of the investor's assets that are paid to the fund manager on a periodic basis.

17. Gross Expense Ratio: Represents the total expenses incurred by a mutual fund or investment product without any adjustments. It includes all costs associated with managing and operating the fund, such as management fees, administrative expenses, marketing expenses, legal fees, and other operational charges.

18. Net Expense Ratio: Takes into account any fee waivers or expense reimbursements that the fund may receive. These waivers or reimbursements are often provided by the fund's management company or other entities associated with the fund to reduce the overall expenses borne by the investors. By subtracting these waived or reimbursed amounts from the Gross Expense Ratio, the Net Expense Ratio reflects the actual expenses that investors will have to pay.

19. Weighted Median ROA: Return on assets is measured as the Net Income / Average Total assets of the last 5 quarters. On the portfolio level, the weighted median ROA of the underlying holdings is calculated.

20. Avg. Market Cap: Market capitalization is the share price multiplied by the total number of shares outstanding. For the portfolio, an average of the underlying holdings' market cap is taken.

21. Weighted Avg. Debt to Capital: The debt to capital for underlying stocks is calculated as the total long-term debt divided by the capital of the firm. Capital is measured as the sum of common equity, preferred equity, and long term debt. For the portfolio, the weighted average is taken of the underlying holdings' debt to capital.

## Disclosures (continued)

---

22. **Portfolio Rebalance:** Each portfolio listed on this report contains a rebalance frequency. This can be selected when creating portfolio on YCharts. The portfolios are rebalanced to the proper target weights at each target rebalance point. For monthly rebalancing, the portfolio will rebalance to the target weight at the end of each calendar month. For quarterly rebalancing, the portfolio will rebalance to the target weight at the end of each calendar quarter (March 31st, June 30th, September 30th, December 31st). For annual rebalancing, the portfolio will rebalance to the target weight at the end of each calendar year. Lastly, if the portfolio never rebalances, the target weights are implemented at the portfolio inception date, but will not change after that.

23. **Market Price:** Refers to the current trading price at which shares are bought or sold on a stock exchange. It is the price at which buyers and sellers in the market agree to transact.

24. **Net Asset Value:** Net Asset Value (NAV) is a financial term commonly used in the context of mutual funds and other investment funds. It represents the per-share value of the fund's assets minus its liabilities. In simpler terms, NAV is the net value of each share in the fund.