

XTF Rating & Methodology

9.4

Out of 10

The XTF Rating for an ETF is based on a proprietary statistical analysis of Structural Integrity and Investment Metric producing a score between 0 and 10 with 10 being the best. The Structural Integrity measure quantifies the ETFs structural characteristics such as cost, efficiency, tracking error, liquidity, and capital gains distributions. The Investment Metrics measure quantifies the ETFs investment characteristics such as risk-adjusted performance, earnings yield, dividend yield, momentum, diversification and more. The Structural Integrity and Investment Metric ranking (show on page two below) allows investors to make relative comparisons of an ETFs fundamentals among all ETFs in the same asset class. XTF uses a transparent empirical approach to evaluate each ETF using a minimum of six months data. This approach allows investors to quickly and accurately compare ETFs.

Fund Objective

Vanguard Large Cap ETF is an exchange-traded fund incorporated in the USA. The Fund employs an indexing investment approach designed to track the performance of the CRSP US Large Cap Index, a broadly diversified index of large U.S. companies representing approximately the top 85% of the U.S. market capitalization. The Fund attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the Index, holding each stock in approximately the same proportion as its weighting in the Index.

Price	Today's Change	Price Range	52 Week Range	Volume
\$144.65	▲1.28 (.89%)	\$144.32 - \$144.88	\$107.34 - \$145.02	177.46K

Performance Details

3 Month Price Performance (as of 12/6/19)



NAV	\$144.64	Market Cap	\$15.88B
Bid/Ask Spread Ratio	0.03%	Net Expense Ratio	0.04%
Premium(Discount) (Prior 1 Month Average)	0.00%	Net Assets	\$15.87B
Premium(Discount) (Prior Day's Close)	0.01%	Net Flows (Prior Trading Day)	\$94.75K
Average Trade Size (shares)	147	Net Flows (Prior Month)	\$132.78M
Average Daily Volume (6 months)	199.01K	Annual /SEC Yield	1.77% /1.82%
7 Day Average Volume	196.41K	Last Dividend Paid / Date	0.56 / 09/16/2019
90 Day Average Volume	191.85K	Capital Gains Dist.	0%
Short Interest / Days to Cover	0.1% / 1	Fund Turnover	585 Days
Options Traded	Y	Futures Traded	Y

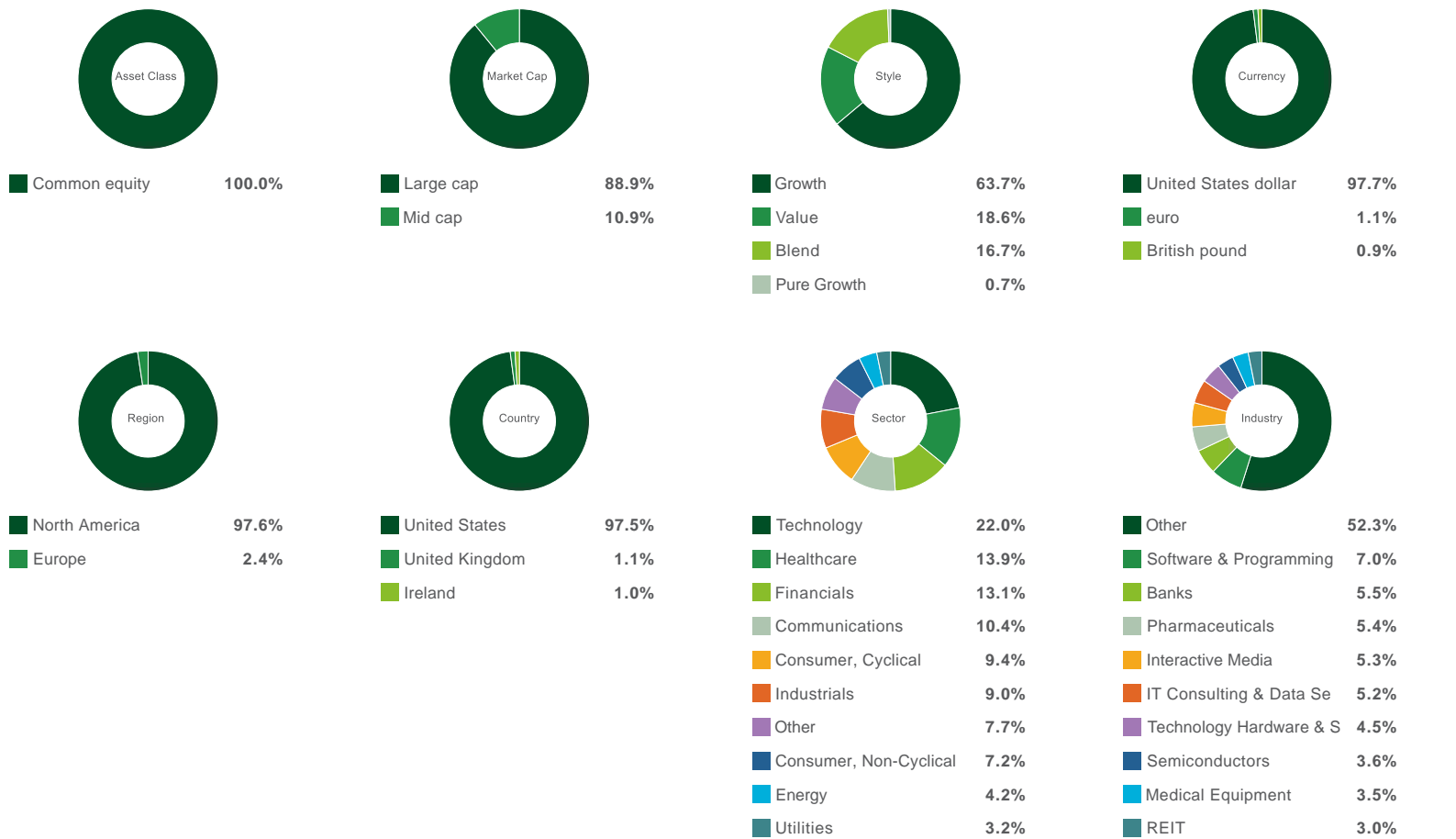
Launch Date 01/27/2004	Sponsor Vanguard	Underlying Index CRSP US Large Cap Index	Similar Funds VOO - Vanguard S&P 500 ETF
Legal Structure Open-End Investment Company	Investment Philosophy Passively Managed	Index Composition Cap-Weighted	SPY - SPDR S&P 500 ETF
Geography Objective US			BBUS - JPMorgan BetaBuilders U.S. Equity ETF
Asset Class / Style Equity / Core or Blend			IVV - iShares Core S&P 500 ETF
Sector Not Specified			LFEQ - VanEck Vectors NDR CMG Long/Flat Allocation ETF

Top 10 Holdings

VV has **596 total holdings** (Showing only the top 10 holdings by weight.)

Symbol	Description	Weight	Currency	Region/Country	Sector	Industry	Security Type
MSFT	Microsoft Corp	4.32%	USD	North America / United States	Technology	Software & Programming	Common Equity
AAPL	Apple Inc	4.10%	USD	North America / United States	Technology	Technology Hardware & Storage	Common Equity
AMZN	Amazon.com Inc	2.76%	USD	North America / United States	Consumer, Cyclical	Internet & Direct Marketing	Common Equity
FB	Facebook Inc	1.80%	USD	North America / United States	Communications	Interactive Media	Common Equity
BRK.B	Berkshire Hathaway Inc	1.63%	USD	North America / United States	Financials	Financial Services	Common Equity
JPM	JPMorgan Chase & Co	1.53%	USD	North America / United States	Financials	Banks	Common Equity
GOOG	Alphabet Inc	1.48%	USD	North America / United States	Communications	Interactive Media	Common Equity
GOOGL	Alphabet Inc	1.48%	USD	North America / United States	Communications	Interactive Media	Common Equity
JNJ	Johnson & Johnson	1.38%	USD	North America / United States	Healthcare	Pharmaceuticals	Common Equity
V	Visa Inc	1.17%	USD	North America / United States	Technology	IT Consulting & Data Services	Common Equity

Portfolio Exposure



Glossary

Annual Yield. The annual percentage measure of income (dividends and interest) of the fund based on all actual distributions made over the past year. The yield is annualized only in the case where the fund is less than one year old.

Asset Class Exposure. A classification of an ETPs exposure based on its underlying constituent's structure, performance and risk characteristics. Examples include, but not limited to equities, fixed income, real estate and cash.

Benchmark Type Exposure. A classification of a commodity index based on its constituent pricing. It can include either the physical (spot) price or derivative (future) price of the underlying hard asset.

Cap-Weighted . The weight of each security will be assigned based on its market capitalization relative to the market capitalization of all securities in the basket.

Capitalization Exposure. A classification of an ETPs exposure based on its underlying constituent's market size (shares outstanding multiplied by price per share). Examples include, large, mid, and small/micro cap.

Concentration Risk. Concentration Risk quantifies the level of diversification within an Exchange Traded Product. Concentration Risk takes into account the number of securities in the fund as well as their relative weights. The lower the concentration risk the better because the risk is being distributed among the funds components.

Coupon Type Objective. The Coupon Type Objective describes a fixed income ETPs interest payments on the bonds that it holds. Coupons are normally described in terms of the coupon rate that the bondholder receives during the time between when the bond is issued and when it matures. The types of objectives that can be classified are as follows: fixed, variable (floating, adjustable), inflation indexed, zero coupon, or blend.

Credit Grade Exposure. A classification of an ETPs exposure according to the credit grade(s) of the constituent debt. Credit grade refers to the quality rating based on the securities risk profile as assigned by a rating agency, such as Standard & Poor's. Examples include: 'AAA' (highest credit quality), Investment Grade, and High Yield (below investment grade). The percentage may not total to 100% if an ETP holds non-fixed income securities such as cash and equities. If a security is rated by two or more of the credit rating firms of S&P, Moody or Fitch, then the most conservative (lowest) rating is used. If only one of those firms rates the security, that rating is used. If a security is not rated by any of those firms, it is classified as "Not Rated."

Custom-Weighted. The weight of each security will be based on a set of rules that are either proprietary or do not fall into any other category.

Debt Issuer Exposure. A classification of an ETPs exposure according to the issuer(s) of the constituent debt. Examples include: corporate, government and collateralized.

Dividend Yield-Weighted. The weight of each security will be based on the company's annual dividend payments divided by the market cap of that security relative to the dividend yield of all the security's in the basket.

Dividend-Weighted. The weight of each security will be based on the annual distribution (total dividend) amount paid by the firm in terms of dollars or appropriate currency.

Efficiency. Efficiency quantifies how well an Exchange Traded Product outperforms its stated index/benchmark as a measure of excess profit or loss relative to the index/benchmark. The higher the efficiency the better as it illustrates the fund manager's aptitude of including higher returning securities in the funds portfolio.

Equal-Weighted . Each security in the basket will be of equal weight regardless of the price or market cap of the company.

ETP type. The type of Exchange Traded Product as defined by the funds structure and composition; the choices are ETF and ETN.

Exchange Traded Fund (ETF). An ETF is an investment fund traded on a stock exchange. An ETF holds assets such as stocks or bonds and trades at approximately the same price as the net asset value of its underlying assets over the course of the trading day.

Exchange Traded Note (ETN). An ETN is a senior, unsecured, unsubordinated debt security issued by an underwriting bank. Similar to other debt securities, ETNs have a maturity date and are backed only by the credit of the issuer. ETNs are traded on an exchange and are linked to the return of a benchmark index.

Fund Flows. The net change in ETP assets. The performance is not taken into account, only redemptions (outflows) and creations (inflows) are tracked. Fund flows can be used to track the movement of assets between geographical boundaries, asset classes, sectors, and industries in order to measure investor sentiment, and track trends within these markets.

Fund Turnover. A measure of how many days it takes for the entire market cap of the fund to trade on average.

Index Composition. A portfolio of securities that are selected based on the objective and rules as stated by the index methodology. Each index has its own proprietary calculation methodology and composition as defined by the index provider. This methodology is used to select and weight the constituent securities and then rebalance them according to predefined metrics.

Index Composition (Alternative). Alternatively weighted methodologies weight securities based on non-traditional and non-fundamental metrics while usually attempting to generate excess returns. Examples include: Option Strategy, Production-Weighted, Volume-Weighted and Custom-Weighted.

Index Composition (Fundamental). Fundamentally weighted methodologies weight securities based on fundamental metrics while attempting to generate excess returns. Examples include: Dividend-Yield weighted, Dividend-weighted, Revenue weighted and Various Fundamentals.

Index Composition (Traditional). Traditionally weighted methodologies weight securities without attempting to generate excess returns. Examples include: Cap-weighted, Equal weighted, Price-weighted and Shares Out-weighted.

Index Provider. An index provider is the company which creates an index.

Investment philosophy. A classification of a fund's overall strategy that guides its investment principles. Examples include the use of a passive or enhanced index or a benchmark for use in an actively managed fund.

Investment philosophy (Actively managed). An ETP that does not follow any particular index. The fund manager actively selects the components and assigns weights using a methodology that falls within the parameters of the investment objective as stated in the prospectus. A benchmark can be assigned to evaluate the funds performance.

Investment philosophy (Enhanced Index). Enhanced Index is an index designed to track a segment of the market by holding either all of the securities or a "representative" sample while attempting to weight or select the securities in order to deliver excess returns.

Investment philosophy (Passive Index). Passive Index is an index designed to track a segment of the market by holding either all of the securities or a "representative" sample without attempting to weight or select the securities in order to deliver excess returns.

Launch Date. The date that an ETP first started trading on an exchange.

Legal Structure. The structure of an ETP as legally defined and stated in the prospectus. There are three primary legal structures: open-end investment companies (most typical), unit investment trusts, and grantor trusts.

Leverage Factor. A multiplier that identifies the leverage exposure. A leveraged fund provides the investor with exposure greater than 100% as compared to the underlying index. It can also be negative to provide inverse exposure.

Market Impact. Market Impact quantifies the liquidity of each ETP by measuring the price impact of executing a hypothetical trade of 50,000 ETP shares (equivalent to one creation unit). It is calculated by multiplying the daily ETP price volatility by the square root of the ratio of one creation unit to the average daily volume. The market impact percentage can then be multiplied by the ETP price to determine the additional cost of execution due to slippage from the mid-point of the bid/ask spread.

Maturity Exposure. A classification of an ETPs exposure according to the maturity of the constituent debt. Maturity refers to the length of time until the principal amount of a bond must be repaid. Bonds are typically classified into the following three categories: **Short-Term (bills):** maturities between one and five years; (instruments with maturities less than one year are called Money Market Instruments)

Intermediate-Term (notes): maturities between six to ten years; **Long-Term (bonds):** maturities greater than ten years.

Option Strategy. The weight of each security will be determined whereby a derivative of the underlying security (such as an option), rather than the security itself, plays a key role.

Price-Weighted. The weight of each security will be based on its price regardless of the shares outstanding of the company.

Production-Weighted. Similar to market capitalization, but usually used for a commodity. The weight of each security will be based on the average quantity of production of the underlying hard asset.

Rebalance Frequency . How often the fund or index rebalances its constituents. Leveraged ETPs typically rebalance daily.

Revenue-Weighted. The weight of each security will be based on the annual revenue generated by the company.

SEC Yield. A standard yield calculation developed by the Securities and Exchange Commission (SEC) that allows for a fairer comparison of funds. It is based on the most recent 30-day period covered by the fund's filings with the SEC. The yield figure reflects the dividends and interest earned during the past 30 days after the deduction of the fund's expenses.

Sector/Industry Exposure. A classification taxonomy of an ETPs exposure according to an area of the economy which can be defined by the types of products or services being produced. Each publicly traded company belongs to one of ten economic sectors and companies within the same sectors tend to have relatively similar performance characteristics. Industries further classify companies according to more specific goods or services allowing investors to compare industry trends between well-defined subsectors; there are over 100 industries which roll-up into their corresponding sectors.

Shares Out-Weighted. The weight of each security will be based on the number of shares outstanding regardless of market price.

Short Interest. Percentage of the outstanding shares that have been sold short.

Similar ETPs. A list of ETPs dynamically generated by an XTF proprietary algorithm which have the closest characteristics to a specified ETP. ETP characteristics are weighted according to priority and include geography, investment philosophy, style, market capitalization, credit grade, return correlations and more.

Style Exposure. A classification of an ETPs exposure based on its underlying constituent's value and/or growth characteristics.

Tracking Error. Every Exchange Traded Product has an index or benchmark that it is intended to closely replicate before fees on a daily basis. Tracking error quantifies how well the fund is tracking its index/benchmark as a measure of the volatility of returns relative to the index/benchmark. The lower the tracking error the better job it is doing in replicating its index/benchmark.

Volume-Weighted. The weight of each security will be determined by the average trading volume of the security over time.

Weighted Average Coupon (WAC). The weighted average of the coupon rate of the underlying bonds in the fund. The average coupon of a bond fund is expressed as a percentage.

Weighted Average Maturity (WAM). The weighted average of the remaining term to maturity of the underlying bonds in the fund. The maturity of a bond is expressed as the number of years remaining.

Yield Curve Strategy. The weight of each security targets a specific level of sensitivity to changes in the yield curve. The yield curve depicts the relationship between U.S. Treasury note maturities and their corresponding yields.

XTF Rating Methodology	Important Information	Disclosures
<p>The XTF overall rating provides XTF's quantitative assessment of the past performance, risk profile and relative costs of a given ETP compared with all ETPs in the same asset class. All ETPs require a minimum of six months of trading prior to consideration of an XTF overall rating. An ETP may receive an overall XTF rating even when the ETP does not have a ranking for each of the 14+ input factors. XTF ratings are updated monthly based on the previous 6 months of daily data. For a complete description of our XTF Ratings methodology please read our whitepaper:</p> <p>https://www.xtf.com/Library/Public/Whitepapers/XTF_RS_Methodology.pdf</p>	<p>Total Return performance is historical and assumes reinvestment of all dividends and capital gains distributions.</p> <p>Exchange Traded Notes carry additional risk similar to other debt securities, they have a maturity date and are backed only be the credit of the issuer.</p> <p>Indexes are unmanaged statistical composites and their returns do not include any fees an investor would pay to purchase the securities they represent. Such costs would lower performance. It is not possible to invest directly in an index.</p>	<p>The XTF Ratings are based on a proprietary methodology intended for informational purposes only and are not a recommendation by XTF or its affiliates to buy, sell, or hold the ETPs, nor is it considered to be investment advice. The data and analysis contained herein are provided "as is" and without warranty of any kind, either expressed or implied. All investment involves risk including the possible loss of principal and that there is no guarantee that any fund will achieve its objective. Please see each ETPs prospectus for the specific risks associated with an investment in the ETP. Past performance is no guarantee of future results.</p>
<p>XTF Rating. The XTF Rating for an ETP is based on a proprietary statistical analysis of structural integrity and investment metric producing a score between 0 and 10 with 10 being the best. XTF uses a transparent empirical approach to evaluate each ETP using a minimum of six months data. This approach allows investors to quickly and accurately compare ETPs.</p>		<p>The XTF Ratings accurately reflect our quantitatively driven models. No part of our compensation was, is, or will be, directly or indirectly related to specific ETP Ratings. Sponsors or Issuers of Exchange Traded Products do not pay any fees to XTF for ratings of their ETPs. XTF does not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. XTF does not trade for its own account.</p>
<p>XTF Structural Ranking. An XTF measure quantifying the ETPs structural characteristics such as cost, efficiency, tracking error, liquidity, and capital gains distributions. The Structural Integrity ranking allows investors to make relative comparisons of an ETPs structure among ETPs in the same asset class.</p>		<p>© 2019 XTF Inc., All rights reserved.</p>
<p>XTF Investment Metric Ranking. An XTF measure quantifying the ETP's investment characteristics such as risk-adjusted performance, earnings yield, dividend yield, momentum, diversification and more. The Investment Metric ranking allows investors to make relative comparisons of an ETP's fundamentals among ETPs in the same asset class.</p>		