QuantZ Machine Intelligence Technologies

QMIT LBO Top 100 Index QLBO

Nov 2024

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Introduction

Index Objective

The QMIT LBO Top 100 Index (LBO100) tracks the alpha of an equally weighted market neutral portfolio whose holdings are the Top 100 machine learning based leveraged buyout (LBO) candidates hedged by a dollar neutral short position in the IWN ETF (Russell 2000 Value). The index is rebalanced daily and reconstituted weekly.

Highlights

The index is owned and managed by QuantZ Machine Intelligence Technologies, a pioneer in the application of ML/AI to Hedge Funds and is calculated by VettaFi, a leader in the Index Business.

The LBO100 tracks the equally weighted top 100 machine learning based leveraged buyout predictions based on a spanning set of 18 ML enhanced smart betas (see the appendix). Portfolio names are selected subject to constraints reflecting the feasibility of LBO financing from a universe of the largest approximately 2,500 US stocks with minimum liquidity constraints. The index is inclusive of short rebates. This hedged strategy tends to outperform in both boom & bust cycles. The model is not specifically designed to anticipate strategic buyer interest, but many targets may yield to strategic buyers or such stocks may also be propelled by activist interest, buybacks, dividend hikes and related catalysts.

Dates

Reference Dates: Weekly, every Thursday (or last available trading day).

Reconstitution Dates: Index reconstituted weekly at the Friday close (or the next trading day if Friday is closed).

Weight Date: Weekly, every Thursday (or last available trading day).

Rebalance Dates: Indexes are rebalanced daily to their target weights.

Supporting Documents

This methodology is meant to be read in conjunction with supporting documents providing greater detail with respect to the policies, procedures and calculations described herein.

The list of the main supplemental documents for VettaFi's policies, where applicable, can be found in the Methodologies and Governance tabs on the Index Resources page as follows:

Supporting Documents
Index Maintenance Policy
Index Governance
Index Policies
Methodology Policies
Glossary
Index Change and Consultation Policy

Eligibility Criteria and Index Construction

Universe

1. ~2,500 US names domiciled in US and listed on major exchanges like NYSE, NASDAQ and PHLX based on the following constraints:
    a. Minimum Market Capitalization: USD 250 Million based on un-split prices from prior close.
    b. Minimum $ price criterion: USD 4.00 based on un-split prices from prior close.
    c. Certain industries are excluded due to event risk or because a generic quant model is not appropriate for those industries (such as Biotech, Biopharma, Bioscience, Biomedical and REITs).
    d. The LBO model also excludes ADRs, REITs, Biotechs, Financials, Utilities as well as OTC & microcaps due to LBO feasibility considerations in an institutional product.
    e. Liquidity screen: min average daily trading volume of $1.5 million USD.
    f. Only US common stocks (excluding non-primary share classes and ETFs, mutual funds, closed end funds, pooled vehicles etc.).

Index Construction

Constituent Selection

The index is market neutral with the top 100 LBO candidates selected as the long alpha portfolio and a short an index hedge to neutralize market risk.

The top 100 LBO candidates are selected by QMIT using their Optimization and Machine Learning models. The models construct LBO candidate profiles using a spanning set of 18 ML enhanced smart betas. The 18 ESBs are derived via QMIT's ML ensemble learners.

Constituent Weightings & Constraints

The QMIT LBO Top 100 Index (LBO100) tracks the alpha of an equally-weighted market neutral portfolio whose holdings are the Top 100 machine learning based leveraged buyout (LBO) candidates hedged by a dollar neutral short position in the IWN ETF (Russell 2000 Value).

Index Maintenance

Rebalancing

The Indexes are rebalanced on the "Rebalance Date" and additionally reconstituted on the "Reconstitution Date". Pricing used in share weights used for reconstitutions are as of the "Weight Date". Share weights for the rebalanced Indexes are computed as of the "Weight Date". Changes to the Indexes related to the rebalances are as of the "Rebalance Date". Additions/ deletions are only made on reconstitution dates.

Corporate Actions

Please refer to the Index Maintenance Policy document for information on Corporate Action processing.

Base Date and History Availability

Index history availability, base dates and base values are shown in the table below.

Index	Price Index	Base Date	Base Value	Total Return Index	Base Date	Base Value
QMIT LBO Top 100[1]	QLBOE	12/31/18	1000	QLBOT	12/31/18	1000

Index Calculation

Equity indices of the long and short positions are calculated and maintained following VettaFi's Index Maintenance Policy.

Long and short total return indices are combined into a Long/Short basket where an Excess Return Index and Total Return Index are computed. The Total Return is inclusive of short funding rebates which assumes Overnight Bank Funding Rate (OBFR) reduced by a spread of 75bps. The Long Index is rebalanced to 100% and the short index is rebalanced to -100% daily.

Excess Return Index $_{t}$ (ER) = ER $_{t-1}$ + Total Daily Increment (TDI)

TDI = Long TR * Long Units $_{t-1}$ + Short TR * Short Units $_{t-1}$

Units $_{t}$ = (ER $_{t}$ * Target Weight (TW))/ Underlying Index Level (Long TR or Short TR)

Total Return Index $_{t}$ (TR) = TR $_{t-1}$ * ((1 + (ER $_{t}$/ER $_{t-1}$)-1) + ((OBFR $_{t-1}$ - Spread) * (Days/365)))

Days = number of days between T and T-1

Index Committee

The index is governed by QMIT for the purpose of meeting the goals of the index. The Index Committee ("The Committee") will be composed of not less than three members including the firm CIO, CTO & Head of Research. The Committee is responsible for managing & maintaining the index methodology.

Index Policies

Index calculation is governed by VettaFi's calculation policies.

Contact Information

For any questions regarding an index, please contact: index.production@vettafi.com

[1] The index was originally calculated and distributed by QMIT starting Jan 1, 2019. VettaFi, as the calculation agent, is calculating the index from its base date and base level and has been tracking it live January 1, 2024

Methodology Updates and Changes

Date	Version	Previous	New

Appendix – ESB catalog:

No	QMIT ESBs	Acronym	Description
1	Deep Value	DV	Captures excess returns to value stocks based on intrinsic value metrics
2	Relative Value	RV	Captures excess returns to value stocks based on relative valuation metrics
3	Dividends	DIV	Captures excess returns to stocks that pay higher-than-average dividends
4	Reversals	REV	Captures excess returns to stocks displaying mean reversion
5	Price Momentum	MOM	Captures excess returns to stocks experiencing trend continuation
6	Enhanced Momentum	ENMOM	Captures excess returns to stocks experiencing trend continuation enhanced to adjust for shorts vulnerable to short covering rallies
7	Analyst Revisions	ARS	Captures excess returns to stocks due to earnings momentum resulting from analyst revisions & consensus change etc.
8	Analyst Ratings & Targets	ART	Captures excess returns to stocks due to revisions in analyst recommendations and target prices
9	Growth Historical	GROH	Captures excess returns to stocks that have higher-than-average historical growth
10	Earnings Quality	EQ	Captures excess returns to stocks that are characterized by low accruals etc.
11	Quality – Leverage	LEV	Captures excess returns to stocks with low leverage & related credit metrics
12	Quality – Profitability	PROF	Captures excess returns to stocks with high profitability related metrics
13	Quality - Capital Structure/ Usage	CSU	Captures excess returns to firms owing to better capital structure and capital usage decisions
14	Quality – Stability	STAB	Captures excess returns to stocks with more stable financial ratios
15	Quality – Efficiency	EFF	Captures excess returns to stocks characterized by better operating efficiency metrics
16	Size	SIZE	Captures excess returns to smaller firms

17	Short Interest	SIRF	Captures excess returns to stocks with lower Short Interest related metrics
18	Safety/Risk	RISK	Captures excess returns to stocks with lower than average volatility, beta, and/ or idiosyncratic risk

Disclaimers

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