



ETF Portfolio Construction

Universe Definitions

In defining our three ETF universes, we start with all U.S.-traded ETFs (over 1,500). First, we eliminate the broad-based, capitalization-weighted stock and bond ETFs. Then, we eliminate any ETFs that are too illiquid. Finally, we cull any ETFs that have too much overlap with any others, generally preferring the one that is the largest, most liquid, and has the longest return history. We divide the remaining ETFs into three universes:

1. *Alternative* ETFs —a universe of about 130 alternative ETFs investing in (for example):
 - Commodities
 - Currencies
 - Long/Short equities
 - High yield debt
 - Emerging market debt and equity
 - Real estate debt and equity
 - Merger arbitrage
 - Publicly traded venture capital
 - Equity market volatility futures
 - Inflation-indexed debt
2. *Sector and Industry* ETFs —a universe of about 80 sector and industry ETFs.
3. *International* ETFs —a universe of about 70 non-U.S. ETFs, most focused on a specific country.

Utility Calculation

Within each of the three ETF universes we select only the few most attractive investment opportunities for inclusion in our portfolios. Our methodology takes into account not only expected return, but also estimated risks and expected costs, including fund expenses, bid/ask spreads, and commissions. Final ETF selection and weighting are determined by the “utility” of an ETF, defined as follows:

Expected return
- Systematic risk penalty (MKT, LTB, DLR, and OIL)
- Residual risk penalty (downside volatility of residual returns)
- Implementation shortfall (fund tracking error to benchmark index including expense ratio)
- Bid/ask spread
- Commission
- Borrow cost (for shorts)
=Utility

After rank-ordering the attractiveness of the ETFs by utility, we invest in the 16 highest as follows:

- 10.0% in #1
 - 9.5% in #2
 - 9.0% in #3
-and so on down to.....
- 2.5% in #16

at which point 100% of capital has been invested. Short target weights are similarly set for the ETFs with the most negative utility. This methodology has the effect of concentrating our holdings in the most attractive ETFs.

In practice, our “live” portfolios typically hold 20-25 long positions (in the long-only Multi-Strategy Portfolio) and (in the long/short Global Macro Portfolio) 20-25 short positions. We typically establish positions up to within 3% of the target weight (maximum 10% as explained above), with actual portfolio weights usually 2%-3% below the target. Targets are updated daily, but we do not typically trade positions unless actual weights are outside of +/- 3% relative to the current target weight. We find that this methodology helps to reduce unnecessary turnover.

We rebalance our portfolios *every day*. Factor data for each stock is updated overnight, new alphas (forecasts of one-month excess return) are calculated and loaded, along with transaction cost forecasts and risk factor data, into a computerized optimization routine that identifies the few most optimal (highest expected return after transaction cost) trade ideas for that day.

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SELECT ALTERNATIVE INVESTMENTS LLC

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