The Challenges of Institutional Investing in ETFs
Ten years of undisputed growth

Global ETP AuM and number of ETPs Available by year

Sources: BlackRock, Koris International, Bloomberg, Reuters.
A Bright future

✓ Growth in the ETP market has been constant and solid, it is expected to remain steady for a number of reasons:

  • Increased demand for core asset allocation building blocks, very attractive and wide product range
  • Need for market access outside trading hours for the underlying assets globally
  • Development of new benchmarks such as smart betas (i.e. non cap-weighted or debt weighted), as well as actively managed ETPs

✓ The failing traditional active asset management industry is under tight scrutiny when it comes to delivering performance above the index, putting a strain on active strategies and pushing investors, especially the very large ones, towards passive instruments or more advanced ‘smart beta’ solutions.
What was supposed to be a simple value proposition...

- ETFs are a hybrid instrument: 1) funds with a perfectly clear and protective legal environment and 2) an embedded security with all the benefits of active secondary markets.

- ETFs have been designed and marketed as straightforward financial products, perfectly tailored to what investors want:
  - Delta one exposure to large indices;
  - Controlled, cheap and transparent replication costs;
  - Controlled replication risk, short term (price uncertainty) but also long term (drag);
  - Clear legal wrapper;
  - Straightforward access;
  - A sense of understanding of what is held.
... turns out to be fairly complex for investors...

- Poor historical data quality even on subscription-based platforms, not fit for quantitative analysis;

- Hidden costs embedded in the products, and during the execution cycle. Wide confusion between management fees, total costs of ownership, expense ratio, total expense ratio and swap costs;

- Misunderstanding by most industry professionals of the meaning of leading performance and risk indicators;

- New reporting requirements resulting in essential information hidden in annual reports, far from investor’s eyes.
... actually, it turns out to be a nightmare

✓ Synthetic vs. Physical war at the heart of extreme marketing games, complex stock lending schemes, financial and legal structuring at its best, tax optimization .... with many hidden surprises;

✓ Changes in indices, in methodologies, in replication techniques... possibly legitimate, certainly impossible to understand and follow for investors;

✓ Significant increase in the complexity of indices tracked by ETFs with very little transparency on the financial risks embedded in the variations from market capitalization indices;

✓ Secondary market barely alive, absence of post-trade report on trades and associated prices and costs.
Leaving investors with one question: How choose?

✓ Consensus does not exist in the industry on how to respond to this legitimate question.

✓ Most professionals suggest to make investment decisions based on the following criteria
  – Tracking error levels, Tracking difference, Performances
  – Replication framework (physical/synthetic)
  – Fund’s Assets under Management, Management fee levels
  – Average daily liquidity, average spread, implicit liquidity
  – Issuer market share

✓ Even though those criteria are highly relevant, we believe there is a significant risk of being misled by a too restrictive analysis and a lack of verified and homogeneous information.
Let’s pave the wave for a pragmatic approach

Optimal ETF Selection

- Performances
- Risks
- Liquidity
Optimal ETF Selection

Performances
Understanding an ETF performances

✓ Absolute vs Relative, index performance v.s tracking performance, alpha?

✓ Factors impacting upon the performance relative to the index of the fund (NAV)
  – Management Fees (Expense Ratio)
  – Execution costs (rebalancing)
  – Tax friction / tax optimization
  – Dividend management
  – Swap cost (if any)
  – Stock lending revenue (if any)

✓ Factors impacting upon the performance relative to the index of the position
  – Spread, execution fees, clearing & settlement, share creation/redemption costs
Tracking Error vs. Tracking Difference vs. Expense Ratio

ETF A
- Expense Ratio: 0.5%
- Tracking Error: 1.0%
- Tracking Difference: -0.1%

ETF B
- Expense Ratio: 0.5%
- Tracking Error: 0.3%
- Tracking Difference: -1.2%
GTR, NTR & PI... A confusing and dangerous game

Difference in total return between the PI and the NTR indices: 1.14%
Do fee levels really matter?

Expense Ratio & Tracking Difference

Universe of 837 ETFs representing 93% of European AUM
Replication method of the fund and relative returns

Universe of 837 ETFs representing 93% of European AUM
Size as an indication of tracking quality

Universe of 837 ETFs representing 93% of European AUM
Optimal ETF Selection

Risks
Tracking Risk

ETF 1 – Physical Replication (> $10bn in AuM)

ETF 3 – Physical Replication (> $10bn in AuM)

ETF 2 – Synthetic Replication (> $1bn in AuM)

ETF 4 – Synthetic Replication (< $300m in AuM)
Counterparty Risk

✓ Counterparty risk exist when the fund enters into OTC derivatives agreement
  – Total Return Swaps
  – Stock Borrowing or lending

✓ The extent of the risk can be analyzed by understanding two essential elements
  – The nominal exposure to the counterparty & the nature of the assets at risk
  – The nature of the collateral held in guarantee & the legal structuration of that guarantee
Liquidity Risk

✓ Liquidity mismatch vs. Secondary liquidity squeeze

✓ ETFs offer a permanent active primary market

✓ Liquidity of the underlying works as a floor to ETF liquidity

✓ There is no structural reason for the price to be physically linked to an iNAV if it exists

✓ Secondary liquidity can add to underlying liquidity (depth & spread)

✓ Don’t forget the very nature of liquidity
Optimal ETF Selection

Liquidity
Assets Under Management – European ETF Universe

AUM - December 2015

TrackInsight as of 31/12/2015
837 ETFs / EUR 403 Bn
93% European ETF Universe

TrackInsight brought to you by Euros International
More issues when we look into liquidity
Average Daily Volume

Cumulated ADV by market and share on TrackInsight - December 2015

- London Stock Exchange / 43% share
- NYSE Euronext / 31% share
- SIX Swiss Exchange / 6% share
- Bolsa Italiana / 9% share
- Deutsche Börse / 11% share
- A - List
Introducing the TrackInsight A-List

a. Difference of annualized performance (tracking difference)
b. Volatility of excess returns (tracking error)
c. Long-term persistence of excess returns (Hurst exponent)
d. Width of extreme excess returns (kurtosis).

<table>
<thead>
<tr>
<th>ETF Rating</th>
<th>Conditions</th>
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<tbody>
<tr>
<td>★★★★★</td>
<td>• a) is greater than the corresponding median value</td>
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<tr>
<td></td>
<td>• b) is lower than the corresponding median value</td>
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<tr>
<td></td>
<td>• c) is higher than 0.5</td>
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<td></td>
<td>• d) is lower than the corresponding median value</td>
</tr>
<tr>
<td>★★★★</td>
<td>• a) is greater than the corresponding median value</td>
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<td></td>
<td>• b) is lower than the corresponding median value</td>
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<tr>
<td></td>
<td>• c) is higher than 0.5 OR d) is lower than the corresponding median value (or both)</td>
</tr>
<tr>
<td>★★★</td>
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Concluding thoughts

✓ Understand the index you invest in and widen your universe

✓ Holistically assess the funds available
  – Performance
  – Risks
  – Liquidity

✓ Stay away from bold conclusions, there is no such thing as one size fits all

✓ Use independent and verified sources of information
The Gate to Exchange-Traded Funds for European professional investors

www.trackinsight.com

“Transparency on ETFs, Now!”