Introduction
Synthetic ETFs are exchange-traded funds that use over-the-counter derivatives to replicate an index return. The portfolios of these funds include the OTC derivative and collateral. The assets of these funds are primarily collateral, and do not generate the investment returns. The OTC derivative generates the investment returns. The economic exposure of the OTC derivative is that of the index (or a multiple of that index) that the fund is replicating.

The assets of these synthetic replication products no longer represent the economic exposure. But the assets do represent the value that an investor would receive in the event of a default of the derivative counterparty.

Morningstar's Synthetic ETF Exposure presents the economics of the ETF within portfolio holdings and provides investors relevant information on the collateral and counterparty exposure. The collateral and counterparty exposure is also referred to as the accounting exposure of the portfolio.

Morningstar collects portfolios from fund providers or their agents and uses this information along with operational information from fund filings to generate information on both the economic exposure and the accounting exposure.
Methodology (Con’t)

Methodology
The index being replicated is verified through fund communication or fund literature. The replication derivatives are created with an economic exposure equal to the total net assets of the portfolio and an accounting exposure equal to the value not collateralized or overcollateralized.

From this data Morningstar generates two sets of analytics, one on economic exposure and one on accounting exposure. The economic exposure is represented by the replication derivative holding(s).

Exposure holdings: TRS Index Name

Note: Morningstar uses the abbreviation TRS, because of our observation that most replication derivatives are considered total return swaps.

The collateral information includes the individual security level information provided by the fund company.

Economic Exposure Analytics

For these synthetic ETFs, Morningstar presents the portfolio statistics on the index being replicated rather than the holdings. This information is presented when index permission rights exist. In cases where Morningstar is unable to present the statistics underlying the index, only the index name will be provided and no further portfolio statistics will be presented.

Collateral Analytics

Portfolios constructed in this manner hold collateral assets and the OTC derivative, both of which have accounting value. The combination of these values is equal to the portfolios' total net assets. The variance between the market value of the collateral and the total net assets is the counterparty exposure.

The counterparty exposure can be positive or negative. In many jurisdictions the regulations require a specific level of collateralization. It is common for regulations to dictate that risky collateral have a discount applied before calculating regulatory collateral. For example: UCITS-compliant funds cannot be owed more than 10% of total net assets from a single counterparty. In funds where risky collateral is protecting investors, it is common for the counterparty...
exposure to appear negative in our calculations. The following calculations will appear alongside fund information for synthetic ETFs.

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\text{Collateral Level} = \frac{\text{Market Value of Collateral}}{\text{Total Net Assets}}
\]

\[
\text{Counterparty Exposure} = \frac{(\text{Market Value of Collateral} - \text{Total Net Assets})}{\text{Total Net Assets}}
\]

Standard portfolio statistics are also calculated on the collateral holdings, and are available in certain Morningstar products.
Appendix - Frequently Asked Questions

Synthetic ETF Initiative FAQ

What is a Synthetic ETF?
Synthetic ETFs are exchange-traded funds that use over-the-counter derivatives to provide the return of an index that the fund is replicating. In most cases, the derivative is a total return swap. In many instances, the assets of the fund are the collateral backstopping the derivative. Although owned by the fund, the collateral does not generate returns for investors; rather, it is used as security in the case where a derivative counterparty goes bankrupt.

Why has Morningstar decided to take on this initiative?
It aligns with our company goals of building a premier exchange-traded product database. Synthetic ETFs are very prevalent vehicles in the industry (making up nearly 36% of overall assets under management for European ETFs¹) but can be complex and hard to understand for the average investor. Therefore, Morningstar sees this as an opportunity to help our clients educate the end investor and demystify these investments.

What is Morningstar’s “Synthetic ETF Initiative”?
Morningstar has worked to maintain its thought leadership in ETPs through a number of related steps.

Clarifying definitions of ETP replication methods. Morningstar has added a replication method, Derivatives Based, as a tool to distinguish between funds using a fully synthetic structure and products using derivatives as a tool in the replication process. The ETF industry, primarily in Europe, has adopted the term Synthetic for products that derive their returns solely from OTC derivatives that deliver the index performance. This is slightly different from academic terminology, which includes any exposure received from derivatives as synthetic.

This has been available for products since the beginning of Q4 2012 and implemented in Direct since shortly thereafter.

Adding new operational and portfolio data points. We’re providing investors additional information on the structure and operations of synthetic portfolios. Primarily we’re adding information such as Synthetic Type, Counterparty Name, Collateral Level, and Swap Exposure. The addition of these data points will aid investors in understanding how these products function in the event of a counterparty default. We

¹ Deutsche Bank Market Research’s Europe Monthly ETF Market Review, report dated 12/7/12
also believe the information we’re adding aligns with recent actions by European regulators, who have been calling for more transparency.

- These data points will be available to products by the end of Q1 2013 for all funds that provide data in a timely manner.

- **Releasing dual portfolio display.** Synthetic ETFs do not own the securities within the index they are tracking, but they receive the economic exposure of those indexes. Morningstar is standardizing the presentation of synthetic ETFs to ensure that investments from different fund providers are presented consistently. This will enable investors to analyze the economics and the counterparty risk of the synthetic product. In order to present all of this information to investors, Morningstar has determined it is best to present economic exposure (the index being received through a derivative) and the supporting collateral as two different displays. These displays will each have the standard portfolio analytics and will be made available to products by the end of February 2013. However, coverage of these two portfolios for each synthetic ETF will depend on the data providers’ ability to deliver the data to us in a timely manner.

- Different products will present different levels of detail on the collateral and the exposure, with full security level analytics available to institutional clients through feeds and Morningstar Direct. A full dual portfolio display is targeted to be released in Morningstar Direct in Q3 2013.

**Why is the portfolio of a synthetic ETF missing?**

In the course of ensuring that our ETF data provides investors with the most accurate information, we discovered inconsistency in the information reported by funds. Some funds report the collateral listed on their statement of investments from the financial statements, and others passed along the index constituents. In order to build consistency across funds and providers, we developed new methods for funds to deliver this data and for our portfolio-processing team to deliver this data to products and clients. For a smooth transition, portfolios of certain synthetic ETFs were removed on Feb. 23, 2013. This has an impact on 733 portfolios that will be subject to data removal.
When is the new portfolio display becoming available?

On Feb. 23, 2013, current portfolios of synthetic ETFs will be removed. On Feb. 24, 2013, the index exposure of synthetic ETFs will replace this information. Morningstar will only be able to produce statistics on indexes for which it has a license to redistribute this data. Upon launch, 240 of 922 funds will have index exposure portfolios. Products that have index permissioning capabilities can deliver an additional 85 exposure portfolios to clients with index rights. We are presently working with ETF providers and index providers to expand the number of indexes for which we have licenses to distribute this data.

Collateral data is also available in the database as of Feb. 24, 2013. The number of funds delivering collateral data at this time is approximately 230 of the 922 funds. While this data is presently available for one fourth of synthetic ETFs, few products will be publishing collateral information at this time. Morningstar Direct expects to present the collateral holdings and analytics in Q3 2013, licensed data clients will be able to start receiving dual portfolios in Q2 2013, and other products will be adding this to their product development timelines if collateral information is determined to be appropriate for their specific users.

Why are we removing portfolios if we cannot immediately replace them?

Presently, of the 733 portfolios being removed, approximately one third represent collateral holdings, and two thirds are index holdings. Both can be misleading to investors. We are moving the collateral holdings into the second display, which will be available for products upon removal. For the funds delivering index constituents as actual portfolio holdings, it has been determined that both Morningstar and the fund providers are violating licensing agreements for this data. Indexes for which Morningstar has sufficient rights to display data will appear in products as of Feb. 24, 2013. This change results in consistent portfolio data, representing the economic exposure received by synthetic ETF investors, in a presentation that shows the structure in a meaningful manner.

Why are leveraged and inverse ETFs not included?

Portfolios holding instruments with embedded leverage present a number of different difficulties. Most of our systems and our clients' systems require that portfolio statistics reconcile to 100% of total net assets. This creates a situation where there is an accounting plug (called a cash offset) to reconcile the economics of the embedded leverage to the portfolio’s accounting. We believe that further extending this approach to leveraged and inverse ETFs would create additional confusion for investors rather than clarity. Morningstar is actively working to enhance our display of investment portfolios that have embedded leverage.

In Europe, where the predominant number of synthetic ETFs are domiciled, UCITS regulations do not permit shorting or leverage. UCITS-compliant synthetic ETFs therefore track leveraged or inverse indexes rather than owning a swap tracking a multiple (or inverse multiple) of the index. These UCITS-compliant synthetic ETFs are still considered in scope for the project.
Why are ETNs and ETCs not included?

Despite all exchange-traded products generally being grouped together, there are very important differences between these products. Morningstar views the counterparty risks of exchange-traded notes and exchange-traded commodities differently from that of ETFs.

ETFs are funds that entitle the owner to assets backstopping the fund. In most countries ETFs are structured under the same operating regulations as open-end funds and provide investors a level of protection that is regulated differently from other ETPs.

Exchange-traded notes are, as the name implies, debentures backstopped by the balance sheet of the issuing entity. These frequently do not have dedicated collateral associated with a specific fund.

Exchange-traded commodities are most similar to exchange-traded notes. While some ETCs are secured by assets on a one-to-one relationship with the issued ETC, it is also common for multiple ETCs to be secured by a single pool of assets, so the failure of one ETC could lead to losses in what otherwise appears to be an unrelated product.

Because of these structural differences between ETFs and ETCs & ETNs, ETCs & ETNs are not in scope for phase 1 of our synthetic ETF initiative.

Have we communicated this change to synthetic ETF providers?

We’ve presented our Synthetic ETF Initiative to the main synthetic ETF providers in the industry and walked them through our initiative, step by step. The feedback we have received has been positive, with firms not only agreeing with and supporting our end goal but also stating that this is what Morningstar should be doing as it will ultimately benefit the industry as a whole in the long run.