



*ASSET MANAGEMENT, PERFORMANCE, REPORTING*

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## SOLVENCY II REPORTING FOR ETFs

FROM INDEX REPLICATION TO DERIVATIVES LOOK-THROUGH, A  
CONSISTENT APPROACH BASED ON THE TPT TEMPLATE

## I. Acknowledgments

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Since 2007 the Club Ampere is gathering asset managers willing to improve the reading of the performance, the risks and the positions of the funds they manage. Within the Club, all the members companies are investing to meet the needs of their clients for a lot more transparency and a lot more understanding on investments.

The success of the Ampere Matrix, renamed “Tripartite Template” or “TPT” for Solvency 2 reporting, widely adopted across Europe is theirs.

The following paper is explaining how the TPT template and its derivatives can support a full look-through approach on ETF, including synthetic ones.

This would not have been possible without the dedication of 2 outstanding professionals:

- **M. Olivier Richard**, Deputy Head of Financial Engineering, ETF & Index Funds within **Lyxor International Asset Management**
- **M. Nicolas Fragneau**, Head of ETF product specialists, within **Amundi Asset Management**

and of the IT and the client reporting teams of Lyxor Asset Management who have done all the necessary work to make it a working solution and not a mere concept.

Pierre Maugery-Pons

## II. Executive summary

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The basic look-through approach usually relies on the accounting positions of the financial instruments within a fund. It is not sufficient to capture all the economic characteristics of an ETF, as required by the Solvency II Directive.

ETFs are replicating a market index. Thus, ETFs reporting should reflect their exposures to the underlying index with all its financial characteristics (ie index composition) as well as the positions of the financial instruments. Achieving this means that ETF issuers should be able to provide a detailed look-through of the economic exposures and counterparty risks.

This is possible in a manner which is compliant with both the Solvency II Directive and the Tripartite Ampere standardized template.

### III. Context and purpose

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This White Paper is intended to answer questions from the industry about an adequate manner to implement a full look-through for ETFs under the Solvency II Directive. ETFs are indeed able to replicate a market index while holding a basket which is different from the index, because they can use securities lending or derivatives instruments. But for ETFs transparency purposes, should the investor report the positions physically held or the actual exposure of their ETFs?

This White Paper focuses on the consequences of the use of derivatives. The CLUB AMPERE has completed a thorough and comprehensive analysis of the index replication techniques used by representative ETFs issuers in the market. This White Paper envisions a solution to the question raised above and proposes an effective look-through of the actual ETF exposure.

### IV. Replication techniques and the look-through challenge

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When an ETF investor needs an Ampere Tripartite report (TPT) with transparency on its investments, he often expects to receive a detailed breakdown of the securities currently held by the ETF in order to determine its risks.

This custody approach is however not always representative of the actual exposure of the ETF. The ETF may use securities lending or invest in derivatives which introduce new exposures to the portfolio. In both cases the securities held are not representative of the real financial exposures.

In particular, in an indirect-replication ETF, the economic exposure is achieved through the purchase of an over-the-counter derivative contract usually described as a Total Return Swap (TRS), the characteristics of which are not available from a simple access to the custodian account of the ETF.

The characteristics of such TRS<sup>1</sup> are usually designed to provide for:

- a perfect mitigation of the existing exposures and risks related to a basket directly invested (hereinafter the “Substitute Basket”). All the risks implied by the Substitute Basket (equity risk, interest rate, forex, credit, etc. depending on the basket) are fully and perfectly neutralized by the TRS;
- a pure “delta-one” exposure to the underlying index of the ETF. All the economic characteristics implied by the underlying index (equity, interest rate, Forex, credit, etc. depending on the index) are fully and perfectly introduced by this TRS.

In a nutshell, the look-through solely based on accountings is insufficient to capture the full spectrum of ETF characteristics. It may not support a comprehensive evaluation of the risks and a complete SCR sub modules calculations.

#### A. Filling the TPT report

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The latest standard TPT report (V3 published October 13 2015) can be viewed as an enriched inventory with 10 groups of data:

- Portfolio data (data point 1 to 11)
- Instrument codification (data point 12 to 17)
- Valuations and exposures (data point 17b to 31)
- Instrument characteristics ( data point 32 to 94b) that can be sub-divided by
  - Characteristics of the instrument (data point 32 to 65)
  - Characteristics of an eventually existing underlying instrument (data point 67 to 89)
  - Analytics (data point 90 to 94b)
- Transparency indicator (data point 95)
- Contribution to SCR sub module (data point 97 to 105b)
- Additional information (data point 106 to 131) for specific use.

The TPT report of an ETF will present each position effectively held by the fund: the securities, the securities lending transactions and the swap transactions. Multiple leg instruments such as swap can be presented on several lines using correct instrument codification.

For existing securities lending or swap transactions, the characteristics of the underlying instrument should be detailed using the relevant data fields (data point 97 to 105b).

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<sup>1</sup> There may be other types of TRS used in indirect replication ETFs. For instance, there can be encountered ETFs with 2 TRS: one for the hedging of the Substitute Basket and one to introduce the index exposure. All these TRS would be treated according to the same principles detailed in this White Paper.

B. Obtaining effective transparency at the level of the derivatives

The above limits show that a look-through approach is required at the level of the TRS <sup>2</sup>. Any TRS should be reported with all its economic exposures in the TPT report. Therefore it should be broken into each single underlying security.

Below is an example of how an indirect-replication ETF should be reported in the TPT reports: assume an ETF which has received EUR 100 to replicate the MSCI Emerging Markets index (hereinafter M1EF). This replication is implemented by investing in:

- a substitute basket valued at EUR 105
- a TRS exchanging the performance of this Substitute Basket while receiving the performance of a EUR 100 of the M1EF index.

Instrument Name	Valuation	Market exposure	Counter party	Underlying Security	Underlying security price
Substitute Basket (one line per security)	+105	+105			
Short leg of the TRS - Hedge of Substitute Basket (one line per underlying security)	-105	-105		Subs. bask.	105
TRS - M1EF index (one line per index security)	+100	+100		M1EF	100
TRS – Cash	+5	0		Cash	5
TRS - Mark to Market	-5	0	Ctpy name		

The report displays:

- The Substitute Basket which is the direct investment made by the ETF. There is one line per security specifying the exposure with all its characteristics (type of security, currency, issuer, rate where applicable, etc.).
- One block of lines describing the perfect hedge of the Substitute Basket by the TRS. This block describes each underlying security, specifying the exposure with all its characteristics (type of security, currency, issuer, rate where applicable, etc.).
- One block of lines describing the index exposure provided by the TRS. This block also describes each underlying security, specifying the exposure with all its characteristics (type of security, currency, issuer, rate where applicable, etc.). In the example above, the 837 components of the M1EF would be reported with one line each.
- A Cash leg describing the cash flow under the TRS which funds the purchase of the portion of the Substitute Basket which is exceeding the value of the index.

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<sup>2</sup> In practice, an ETF which is not able to provide with the transparency at the level of the TRS should be considered as a non-transparent ETF.

- Any potential counterparty risk would be explicitly disclosed in a separate line, which is embodied by the mark-to-market valuation of the TRS. This line embeds however no market exposure.

As a summary, a full look-through TPT report for indirect-replication ETF would embed the detailed exposure of the fund with its underlying index, along with the transparency on the Substitute Basket and its perfect hedge through the TRS.

SCR for interest rates, equity, spread and Forex can be calculated using the characteristics of each financial instrument of the substitute basket and the characteristics of each underlying instrument of the TRS.

The Substitute Basket should have no contribution to the sub-modules of the market risks (rates, equity, spread, concentration and FX). The reason is that the Substitute Basket should be compensated by the short leg of the TRS displayed within the TPT. Any potential miss-hedge should however have an impact on the SCR Market calculation.

### C. Measuring the actual counterparty risk of the ETF

As analyzed above, the ETF usual replication techniques – securities lending or TRS – may entail counterparty risk which has to be adequately reported with the full transparency. Capturing the counterparty risk can prove to be complex:

- ETFs using securities lending should offer transparency on the counterparties they are exposed to. In particular, ETFs receiving ETFs as collateral should also disclose the indirect counterparty risks embedded in their collateral ETFs.
- ETFs investing in TRS should offer transparency on the counterparties with the actual net level of risk.

In order to avoid an overestimation of counterparty risk for the TRS and simplify concentration risk calculation :

- The characteristics of the underlying issuer are presented in data point 46 to 54 for each line of TRS short legs (substitute basket) and long legs (Index).
- Each TRS displays a dedicated line which mentions the counterparty and the actual exposure.

This allows a simple and efficient way to measure the counterparty risk level the dedicated line which mentions the credit and the actual exposure. A negative figure indicates that the counterparty risk is over-collateralized.

#### D. Netted report: an efficient way to report ETF economic features

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It is possible to net the long positions of the substitute basket and short positions of the swap, provided :

- Each instrument is also an underlying of the short leg of the TRS Swap,
- The TRS swap has more than a year of residual maturity or is systematically rolled,

As the TRS provides for a perfect mitigation of the risks introduced by the Substitute Basket, each line comprising the Substitute Basket can be perfectly matched in the TPT report with a perfect mitigation through a line of the TRS, the second cancelling the first.

This netted TPT report support the compensation of the hedged risks and displays the actual economic features of the ETF which is exposed to the index.

Any potential counterparty and currency risk should be stated through specific lines.