



Morningstar's Advanced Portfolio Template

Effective April 2022

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Introduction

This document provides instructions and guidance for portfolio data providers to complete Morningstar's Advanced Portfolio Template, or APT. Morningstar requires all funds to report complete holdings and derivative positions, including cash equivalents and short-term positions, on a monthly or quarterly schedule. Funds that do not provide this information may be removed from Morningstar products. In addition to Morningstar's portfolio analytics, this template includes numerous fields used in advanced risk modeling. These fields assist certain institutional investors that are regulated by the European Insurance and Occupational Pension Authority and fulfil their requirements under Solvency II.

The APT is designed to be flexible. It is designed to handle common securities, widely traded and bespoke derivatives, and direct ownership of physical assets. Assets that can be submitted include, but are not limited to:

- ▶ Stocks
- ▶ Bonds
- ▶ Loans
- ▶ Preferred stocks
- ▶ Interest rate swaps
- ▶ Currency forwards
- ▶ Options, both over the counter and exchange-listed
- ▶ Futures
- ▶ Credit default swaps
- ▶ Cash deposits
- ▶ Contracts for difference
- ▶ Total return swaps
- ▶ Credit default index options
- ▶ Swaptions
- ▶ Variance swaps
- ▶ Interest rate caps and floors
- ▶ Index tranches

The accompanying template contains examples of both common and difficult to model instruments. Additional instruments can be added to the examples upon request.

Version History

Version	Date	Description
1.4	April, 2022	Added concept of Other Identifier and Other Identifier Type to accommodate local market identifiers. Added South African ASIA asset type for local market requirements.
1.3	November, 2021	Removed some questions from QA, improved definition of certain datapoints, removed some typos
1.2	July 24, 2015	Added dual line APT version, simplified list of possible data requirements in 3 categories (required, identifiers, supplemental as applicable), added reference to excel file explaining requirement at security level, added back the column that explain which data is required added data point definitions for surveyed datapoints and APT dual line version
1.1.1	July 20, 2015	Corrected typographic errors
1.1	June 1, 2015	Added surveyed fields, clarified requirement descriptions
1.0	Sept, 12 2014	Issued first final version.
0.9	Sept. 15, 2013	Public draft issued

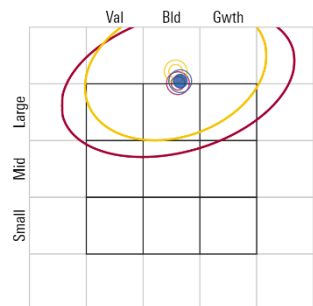
Data Quality and Usage

Morningstar actively monitors our database to ensure that we have the most timely, up-to-date full portfolio holdings available. Once the holdings are received, they undergo a rigorous validation and enrichment process to guarantee that we have the most complete and comprehensive data available. This dataset is then used to power Morningstar’s analytics and proprietary statistics.

Below is a quick sample of different Morningstar analytics and fund presentations that directly utilize portfolio holdings-level data. Providing more-robust holdings data will help ensure the accuracy and depth of the data that Morningstar will be able to produce today and in the future.

Morningstar™ Equity Style Box

The Morningstar Style Box gives financial advisers, investors, and fund managers a way to quickly understand the positioning of a fund. By providing an easy-to-understand visual representation of fund characteristics, the Morningstar Style Box allows informed comparisons and portfolio construction based on what stocks funds actually hold, rather than on assumptions based on a fund’s name or other factor.



Fixed Income Exposure Analysis

The Fixed Income Exposure Analysis tool is a capability that enables users to more effectively analyze fixed-income portfolios. By allowing the combination of attribute breakdowns and multiple exposure perspectives, Fixed Income Exposure Analysis gives users more-detailed information to understand how risks are related and how they may be concentrated or balanced in a portfolio. This powerful tool can reveal more-precise insights into contributors of risk and return, allowing for more meaningful differentiation between fixed-income investment alternatives and assessment of fit for an investor's portfolio.

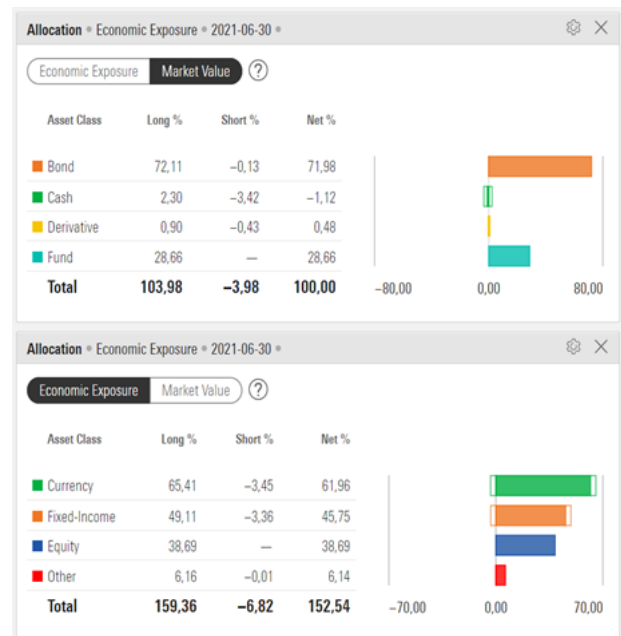
Fixed Income Exposure Analysis ⓘ								
	Effective Duration	Credit Rating	Yield to Maturity	vs. Region (Portfolio Weight %)				
Region (Subtotal Weight)	0-0.5 Y	0.5-1	1-2	2-3	3-4	4-5	5-6	6-7
United States (59.50)	4.53	5.34	8.22	7.69	6.57	8.09	13.91	1.63
Canada (1.76)	—	—	—	0.37	0.44	0.44	0.50	—
United Kingdom (1.52)	—	0.41	0.43	—	—	0.68	—	—
Eurozone (4.93)	0.15	0.50	0.78	1.09	0.44	—	1.70	0.27
Europe ex-Euro	—	—	—	—	—	—	—	—
Europe Emerging	—	—	—	—	—	—	—	—
Africa (0.74)	0.09	—	0.65	—	—	—	—	—
Middle East (0.83)	—	—	—	—	0.83	—	—	—

Economic Exposure

Economic exposure helps investors visualize where the asset manager has allocated the fund's capital using the exposure book value of different financial instruments. As the actual exposure to different asset classes can look very different since the use of derivatives has increased significantly over the last decade, Morningstar's Economic Exposure component provides the client with a product that can visualize the difference in the allocation.

This gives the investor a good understanding of how the asset manager allocates capital and manages the exposure to different asset classes. In the example to the right, the fund does not have any physical positions in equity but achieves material equity exposure using derivatives. The derivative contracts only have a 0.46% net position from an asset perspective but provides 38% equity exposure from an economic exposure perspective.

For more information about Morningstar's data products, please see <https://www.morningstar.com/products/data>



Column Information

The Advanced Portfolio Template contains 120-plus data points, however, depending on the fund holdings, only a few of these data points may be needed. Below is a breakdown of the different tags in the Advanced Portfolio Template.

Mandatory: All data points marked as “Mandatory” are used in the most common Morningstar fund statistics, such as Morningstar Style Box, asset-allocation breakdown, economic exposure, top 10 holdings, sustainability-related calculations, and so on. These data points should be considered as mandatory; however, if these data points are not available, please discuss this with your Morningstar representative.

Identifier: All data points marked as “Identifier” are an identifier of the direct investment or the underlying instrument. This is used by Morningstar to identify the instrument held by the fund and to match it with our reference database. Providing more than one identifier for a specific instrument will increase our matching capabilities, so providing multiple official identifiers is encouraged.

Encouraged: All data points marked as “Encouraged” are used in less-common fund calculations and statistics. These data points are still used by Morningstar to calculate certain statistics or may be used in calculations we are rolling out soon. Providing this information will make sure that the fund receives all calculated statistics if applicable, such as Morningstar calculated fixed-income metrics, modified duration, credit risk, and to make sure that the fund receives new calculations when released into our products.

Optional: All data points marked as “Optional” are currently not used by Morningstar to do any fund-level statistics or analytics; however, this still may be available in specific products, if applicable, and may be used in the future.

The information listed above is only applicable to the proprietary calculations Morningstar uses the information for. However, the information may also be available in our other products, such as Morningstar Data and Morningstar Direct.

General Guidelines

Files may be sent in Excel or plain text format. Below are some general guidelines to keep in mind when submitting portfolio files: For more information on delivering holdings with the advanced portfolio template contact your data consultant at Morningstar

1. It is understood that not all instruments carry equivalent terms and conditions. Some fields in the template are not applicable to all instruments. Refer to the example spreadsheet for instrument-specific inquiries and the excel table listing required data point for specific security.
2. Some fields exist for both listed and over-the-counter instruments. In many cases, these fields are required only for over-the-counter instruments. Inclusion of these fields for listed instruments may aid in data processing and validation. Refer to the template example document for instrument-specific inquiries.
3. All reporting should be done on a trade-date basis, not a settlement-date basis.
4. Data values cannot be represented by formulas or links.
5. Files cannot be password-protected.
6. For all number values, a comma (,) should only be used as delimiter of thousands, and a decimal point (.) should only be used as a delimiter for representing decimal values.
7. Units and monetary amounts should be in actual values and not represented in percentages of total net assets.
8. Rates and coupons are preferred to be expressed as percentages (i.e., 3 means 3%, therefore 0,03 will be interpreted as 0,03%.)
9. Spreads and credit default swap premiums are preferred to be received as basis points, rather than percentages or decimal.
10. Dates should be expressed as of a month-end date: mm/dd/yyyy or yyyyymmdd. The year should be expressed as four digits and not as two.
11. Please include a header that clearly identifies the data included in the column of the file. Our field names are preferred. Use the same header columns in all portfolios you send.
12. If a key is available for your submission, please provide this in your initial test file validation.
13. For validated text fields, use the same field conventions for all portfolios sent according to the preferred validated text value provided in this document.
14. When using Excel, please make sure that leading zeros on the front end of identifiers are not cut off (for example, SEDOL from "0123456" to "123456") and that identifiers are not converted to scientific notation.

General Guidelines (Continued)

15. A single external identifier is needed for each holding and underlying instrument. Multiple identifiers will aid in the accuracy of our matching process. In the absence of industry standard identifiers, please provide an internal code in the field "Deal ID" for each over-the-counter instrument.
16. Multiple-legged derivatives can be input as a single line or multiple lines. A single identifier should be used for all legs if these are input as multiple line items.
17. Collateral positions should be listed as separate line items from positions in the same instrument that are not 1) pledged as collateral for short positions or 2) received as collateral from the counterparty to an over-the-counter derivative.
18. Accounting values should represent the net asset value contribution, not the market exposure when these values are different. (For example, purchased puts have positive value, despite negative notional and delta-adjusted exposures.)
19. Short sales can be indicated by 1) negative units/par value (or a negative notional, as appropriate) or 2) through the use of the Buy/Sell field. If a value of "Sell" but a positive value is provided, Morningstar will assume that your system is delivering absolute values rather than indicating the sign of the trade.
20. Separate notional values in position local currency as well as in portfolio base currency are requested for both legs of multicurrency swaps, and currency forwards.
21. Include all derivatives that are marked-to-market daily, despite the fact that their accounting value may be zero because profit and loss are settled in margin accounts. Please add the margin as a separate cash item reported in a separate line.
22. The data requested in the portfolio template includes many fields that are not applicable to all portfolios; it is not necessary to include unused fields in the delivered template.
23. Fields with the title "Surveyed" will be collected, and initially published in Morningstar analytics, but Morningstar may choose to publish standardized holding-based values calculated or obtained by Morningstar, replacing bespoke calculations from data providers.

General Guidelines (Continued)

24. Based on the experience and research conducted through the development phase of the Advanced Portfolio Template, Morningstar realized that different companies may have different strategy to store and report derivatives with dual legs, namely swaps or forwards. To be more specific, some companies are storing each leg of these derivatives as if they were distinct security and reconnect them through specific internal identifiers or Deal ID while other companies store or report these derivatives as if they were one unique security in their database. On the basis of this experience and with the aim of creating a flexible data collection environment, Morningstar has elaborated 2 different versions of the Advanced Portfolio Template to better adapt to the needs of fund companies and portfolio data providers. Therefore, the portfolio data may be reported using either:
- a. The 1 line reporting APT version where swaps and similar instruments terms and conditions are reported all in one line
- Or
- b. The two lines reporting APT version where for each leg of swaps and similar instruments there is a dedicated line in the template

25. As an additional regarding the use of identifiers, Morningstar recognizes that data submitters in markets may prefer to use local market identifiers. In early versions of this template, Morningstar provided distinct columns to capture those identifiers. After some time, both Morningstar and data reporters found that listing these identifier columns contributed excessively to the length of the template and made the template more cumbersome to use.

In 2022, Morningstar introduced the "Other Identifier Type" and "Other Identifier" columns to capture identifiers specific to certain markets. Providers must specify the ID type in submissions when using these columns.

New data providers should consult with their data relationship manager during onboarding if they prefer to use identifiers not explicitly mentioned in the template. The data relationship provider will be able to confirm if the identifier is supported for identification and matching purposes. Morningstar maintains a robust reference database and will seek to collect different market identifiers as practicable.

Data Fields in the Dual Line Reporting APT version

The dual line reporting APT version is suitable for those fund companies storing distinct legs of a derivative as if they were 2 distinct securities. For example, a plain vanilla interest rate swap may be modelled as a combination of 2 bonds with opposite exposure and where each leg represents one bond.

The data in the file can be grouped into nine sections: Portfolio Information; Holding Identification; Position Information; Swaps & Forwards General Characteristics; Reference Instrument Identifiers; Unregistered Loans & Fixed-Income Derivative Customizations; OTC Option and Exotic Derivative Specifications; Collateral indications and Surveyed information. Each data point has a specific requirement type in the template. The requirement types are explained in the following table

Table 1- Requirement Definitions

Requirement Type	Definition
Mandatory	Required fields are mandatory for accurate portfolio analysis and basic presentations on Morningstar products.
Identifier	Each Position requires one identifier. Additionally, unregistered instruments with cash flows or prices that are linked to reference values require an identifier for the underlying source of value
Encouraged	This data is collected for specific types of securities and usually not applicable to all asset classes. These are highly encouraged to be sent in order to support coverage requirements for new portfolio analytics. If this data is not available, certain calculations may be suppressed to address gaps in data availability.

The following tables include the fields for each of the nine sections. For each data point we list the data format and we indicate if the data point is required for **at least one security type or over the counter derivatives**. If your company is not investing in all possible security types, please use the excel file (Data_Requirements_APT_1.0) to verify which data-points are required for each security type.

Table 2 - Portfolio Information

Field Name	Data Format	Requirement Type
Portfolio Date	Date	Mandatory
Portfolio Identifier	Alphanumeric (75)	Mandatory
Fund Name	Text (75)	Mandatory
Portfolio Base Currency	Alphanumeric (3)	Mandatory



Data Fields in the Dual Line Reporting APT version (Continued)

Table 3 - Holding Identification

Field Name	Data Format	Requirement Type
ISIN	Alphanumeric (12)	Identifier
CUSIP/CINS	Alphanumeric (9)	Identifier
Bloomberg Ticker	Alphanumeric (12)	Identifier
SEDOL	Alphanumeric (7)	Identifier
VALOREN	Alphanumeric (9)	Identifier
WKN, WPKN, WPK	Alphanumeric (6)	Identifier
Common Code	Alphanumeric (9)	Identifier
CNPJ	Alphanumeric (14)	Identifier
Nemotecnico	Alphanumeric (25)	Identifier
KR Code	Alphanumeric (12)	Identifier
JSE Code	Alphanumeric (9)	Identifier
SITCA Code	Alphanumeric (9)	Identifier
OSI Code	Alphanumeric (21)	Identifier
Tickers	Alphanumeric (20)	Identifier
Markit RED Code	Alphanumeric (16)	Identifier
Deal ID	Alphanumeric (100)	Identifier
FIGI	Alphanumeric (12)	Identifier
Other Identifier Type	Text (75)	Identifier
Other Identifier	Variable	Identifier
Asset Type	Text (75)	Mandatory
ASISA Asset Class	Alphanumeric (3)	Optional

Data Fields in the Dual Line Reporting APT version (Continued)

Table 3 - Continued

Issue Description/Name	Text (75)	Mandatory
Country Name	Text (75)	Mandatory
Country ID	Alphanumeric (3)	Mandatory
MIC Code	Alphanumeric (4)	Identifier

Table 4 - General Characteristics

Field Name	Data Format	Requirement Type
Units/Par Value	Number	Mandatory
Market Value (LC)	Number	Mandatory
Local Currency	Alphanumeric (3)	Mandatory
Accounting Value (BC)	Number	Mandatory
Buy/Sell	Validated Text	Mandatory
Issuer/Counterparty	Text (75)	Mandatory
Issuer/Counterparty LEI	Alphanumeric (20)	Optional
Maturity Date/Expiration Date	Date	Mandatory
Effective Date/Issue Date	Date	Encouraged
Market Price (LC)	Number	Encouraged
Fixed-Income Price Type	Validated Text	Encouraged
Accrued Interest (LC)	Number	Encouraged
Cost Basis (LC)	Number	Optional
Cost Basis (BC)	Number	Optional

Table 5 - Swaps and Forwards General Characteristics

Field Name	Data Format	Requirement Type
Coupon Payment Type	Validated Text	Encouraged
Coupon Rate	Number	Encouraged
Underlying Coupon Rate	Number	Encouraged
Coupon Reference Rate	Text (75)	Encouraged
Coupon Spread	Number	Encouraged
Coupon Payment Frequency	Number	Encouraged
Underlying Coupon Payment Frequency	Number	Encouraged
Underlying Name	Text (75)	Mandatory
Notional (LC)	Number	Mandatory
Underlying Currency	Alphanumeric (3)	Mandatory

Data Fields in the Dual Line Reporting APT version (Continued)

Table 5 - Reference Identifiers

Field Name	Data Format	Requirement Type
Underlying ISIN	Alphanumeric (12)	Identifier
Underlying CUSIP/CINS	Alphanumeric (9)	Identifier
Underlying Bloomberg Ticker	Alphanumeric (12)	Identifier
Underlying SEDOL	Alphanumeric (7)	Identifier
Underlying VALOREN	Alphanumeric (9)	Identifier
Underlying WKN, WPKN, WPK	Alphanumeric (6)	Identifier
Underlying Common Code	Alphanumeric (9)	Identifier
Underlying CNPJ	Alphanumeric (14)	Identifier
Underlying Nemotecnico	Alphanumeric (25)	Identifier
Underlying KR Code	Alphanumeric (12)	Identifier
Underlying JSE Code	Alphanumeric (9)	Identifier
Underlying SITCA Code	Alphanumeric (9)	Identifier
Underlying Tickers	Alphanumeric (20)	Identifier
Underlying Markit RED Code	Alphanumeric (16)	Identifier
Underlying MIC Code	Alphanumeric (3)	Identifier
Underlying Deal ID	Alphanumeric (50)	Identifier

Table 6 - Unregistered Loans and Fixed-Income Derivative Customizations

Field Name	Data Format	Requirement Type
Notional (BC)	Number	Mandatory
Day Count	Validated Text	Encouraged
Time Lag	Number	Optional
Setting Type	Validated Text	Optional
Underlying Day Count	Validated Text	Encouraged
First Accrual Date	Date	Encouraged
First Coupon Date	Date	Encouraged
Guarantor	Text (75)	Optional
Guarantor LEI	Alphanumeric (20)	Optional
Reset Frequency	Number	Encouraged
Initial Notional (LC)	Number	Optional

Data Fields in the Dual Line Reporting APT version (Continued)

Table 6 - Continued

Exchange Notional	Validated Text	Optional
Settlement Type	Validated Text	Optional
Settlement Currency	Alphanumeric (3)	Optional
Callable/Putable	Validated Text	Optional
Next Call/Put Date	Date	Optional
Bond Factor	Number	Optional
Cap/Floor Strike Rate	Number	Optional
Cap/Floor Strike Date	Date	Optional
Cap/Floor Type	Validated Text	Optional
Seniority Level	Validated Text	Encouraged
Tranche Type	Text (75)	Encouraged
Attachment Percent	Number	Optional
Detachment Percent	Number	Optional
Premium	Number	Encouraged
Premium Payment Frequency	Number	Encouraged

Table 7 - Option and Exotic Derivative Specifications

Field Name	Data Format	Requirement Type
Delta-Adjusted Exposure (BC)	Number	Mandatory
Contract Multiplier	Number	Optional
Notional Units	Number	Optional
Option Type	Validated Text	Mandatory
Exercise Type	Validated Text	Optional
Strike (Price or Rate)	Number	Optional
Strike Type	Validated Text	Optional
Barrier Level	Number	Optional
Barrier Rebate	Number	Optional
Barrier Type	Text (75)	Optional
FX Pair Quote Convention	Text (75)	Optional
Underlying Market Price (LC)	Number	Optional
Underlying Contract Effective Date	Date	Optional
Underlying Maturity Date	Date	Mandatory
Financing Rate	Number	Optional
Variance Dividend Adjusted	Number	Optional
Underlying Variance Dividend Adjusted	Number	Optional

Data Fields in the Dual Line Reporting APT version (Continued)

Table 8 - Collateral Indication

Data points in this table have to be reported whenever securities held as collateral are included in the file

Field Name	Data Format	Requirement Type
Collateral	Binary (0, 1)	Mandatory
Collateral Counterparty LEI	Alphanumeric (20)	Mandatory

Table 9 -Surveyed Measures

Data points in this group are collected mainly for supporting Solvency II solutions. They have the same definition of the tripartite template.

Field Name	Data Format	Requirement Type
Surveyed Hedge Strategy	Binary	Optional
Surveyed Convertible Option Premium	Number	Optional
Surveyed Convertible Bond Floor	Number	Optional
Surveyed Delta	Number	Optional
Surveyed Gamma	Number	Optional
Surveyed Rho	Number	Optional
Surveyed Modified Duration	Number	Optional
Surveyed Modified Duration To next	Number	Optional
Surveyed Credit Duration	Number	Optional

The single reporting file is suitable for those fund companies that store legs of a derivatives in 1 unique line. In this file you can find references to portfolio is underlying 1 and underlying 2 data-points where each underlying refers to 1 leg of the derivative. The data in the file can be grouped into nine sections: Portfolio Information; Holding Identification; Position Information; Swaps & Forwards General Characteristics; Reference Instrument Identifiers; Unregistered Loans & Fixed-Income Derivative Customizations; OTC Option and Exotic Derivative Specifications; and Collateral indications. The following tables include the fields for each of the nine sections.

Each data point has a specific requirement type in the template. The requirement types are explained in the following table.

Data Fields in the Single Line Reporting APT version

Table 1- Requirement Definitions

Requirement Type	Definition
Required	Required fields are mandatory for accurate portfolio analysis.
Identifier	Each Position requires one identifier. Additionally, unregistered instruments with cash flows or prices that are linked to reference values require an identifier for the underlying source of value
Supplemental as applicable	This data may be received and stored by Morningstar if it is applicable to a specific security. If the data will not be available, some calculations will be blocked by Morningstar or Morningstar will use standard assumptions to execute them

The following tables include the fields for each of the nine sections. For each data point we list the Data Format and we indicate if the data point is required for **at list one security type or over the counter derivative**. If your company is not investing in all possible security types, please use the excel file to verify which data-point are required for each security type.

Table 2 - Portfolio Information

Field Name	Data Format	Requirement type
Portfolio Date	Date	Mandatory
Portfolio Identifier	Alphanumeric (75)	Mandatory
Fund Name	Text (75)	Mandatory
Portfolio Base Currency	Alphanumeric (3)	Mandatory

Table 3 - Holding Identification

Field Name	Data Format	Requirement type
ISIN	Alphanumeric (12)	Identifier
CUSIP/CINS	Alphanumeric (9)	Identifier
Bloomberg Ticker	Alphanumeric (12)	Identifier
SEDOL	Alphanumeric (7)	Identifier
VALOREN	Alphanumeric (9)	Identifier
WKN, WPKN, WPK	Alphanumeric (6)	Identifier
Common Code	Alphanumeric (9)	Identifier
CNPJ	Alphanumeric (14)	Identifier
Nemotecnico	Alphanumeric (25)	Identifier
KR Code	Alphanumeric (12)	Identifier
JSE Code	Alphanumeric (9)	Identifier
SITCA Code	Alphanumeric (9)	Identifier
OSI Code	Alphanumeric (21)	Identifier
Tickers	Alphanumeric (20)	Identifier
Markit RED Code	Alphanumeric (16)	Identifier
Deal ID	Alphanumeric (100)	Identifier



Data Fields in the Single Line Reporting APT version (Continued)

FIGI	Alphanumeric (12)	Identifier
Other Identifier Type	Text (75)	Identifier
Other Identifier	Variable	Identifier
Asset Type	Text (75)	Mandatory
ASISA Asset Class	Alphanumeric (3)	Optional
Country Name	Text (75)	Optional
Country ID	Alphanumeric (3)	Optional
MIC Code	Alphanumeric (4)	Identifier

Table 4 - General Characteristics

Field Name	Data Format	Requirement Type
Units/Par Value	Number	Mandatory
Market Value (LC)	Number	Mandatory
Local Currency	Alphanumeric (3)	Mandatory
Accounting Value (BC)	Number	Mandatory
Buy/Sell	Validated Text	Mandatory
Issuer/Counterparty	Text (75)	Encouraged
Issuer/Counterparty LEI	Alphanumeric (20)	Encouraged
Maturity Date/Expiration Date	Date	Mandatory
Effective Date/Issue Date	Date	Mandatory
Market Price (LC)	Number	Encouraged
Fixed-Income Price Type	Validated Text	Encouraged
Accrued Interest (LC)	Number	Encouraged
Cost Basis (LC)	Number	Optional

Table 5 - Swaps and Forwards General Characteristics

Field Name	Data Format	Requirement Type
Coupon/Payer/Underlying 1 Payment Type	Validated Text	Encouraged
Coupon/Payer/Underlying 1 Rate	Number	Encouraged
Coupon/Payer/Underlying 1 Reference Rate	Text (75)	Encouraged
Coupon/Payer/Underlying 1 Spread	Number	Encouraged
Coupon/Payer/Underlying 1 Payment Frequency	Number	Encouraged
Payer/Underlying 1 Name	Text (75)	Encouraged
Payer/Underlying 1 Notional (LC)	Number	Mandatory
Payer/Underlying 1 Notional Currency	Alphanumeric (3)	Mandatory
Receiver/Underlying 2 Payment type	Validated Text	Encouraged
Receiver/Underlying 2 Rate	Number	Encouraged
Receiver/Underlying 2 Reference Rate	Text (75)	Encouraged
Receiver/Underlying 2 Spread	Number	Encouraged
Receiver/Underlying 2 Payment Frequency	Number	Encouraged
Receiver/Underlying 2 Name	Text (75)	Mandatory

Data Fields in the Single Line Reporting APT version (Continued)

Receiver/Underlying 2 Notional (LC)	Number	Mandatory
Receiver/Underlying 2 Notional Currency	Alphanumeric (3)	Mandatory

Note: Receiver/Underlying 2 fields are only applicable for single line reporting. In multiple line reporting the Receiver/Underlying field would be collected in the Payer/Underlying 1 fields.

Table 5 - Reference Identifiers

Field Name	Data Format	Requirement Type
Payer/Underlying 1 ISIN	Alphanumeric (12)	Identifier
Payer/Underlying 1 CUSIP/CINS	Alphanumeric (9)	Identifier
Payer/Underlying 1 Bloomberg Ticker	Alphanumeric (12)	Identifier
Payer/Underlying 1 SEDOL	Alphanumeric (7)	Identifier
Payer/Underlying 1 VALOREN	Alphanumeric (9)	Identifier
Payer/Underlying 1 WKN, WPKN, WPK	Alphanumeric (6)	Identifier
Payer/Underlying 1 Common Code	Alphanumeric (9)	Identifier
Payer/Underlying 1 CNPJ	Alphanumeric (14)	Identifier
Payer/Underlying 1 Nemotecnico	Alphanumeric (25)	Identifier
Payer/Underlying 1 KR Code	Alphanumeric (12)	Identifier
Payer/Underlying 1 JSE Code	Alphanumeric (9)	Identifier
Payer/Underlying 1 SITCA Code	Alphanumeric (9)	Identifier
Payer/Underlying 1 Tickers	Alphanumeric (20)	Identifier
Underlying Markit RED Code	Alphanumeric (16)	Identifier
Payer/Underlying 1 MIC Code	Alphanumeric (3)	Identifier
Payer/Underlying 1 Deal ID	Alphanumeric (50)	Identifier
Receiver/Underlying 2 ISIN	Alphanumeric (12)	Identifier
Receiver/Underlying 2 CUSIP/CINS	Alphanumeric (9)	Identifier
Receiver/Underlying 2 Bloomberg Ticker	Alphanumeric (12)	Identifier
Receiver/Underlying 2 SEDOL	Alphanumeric (7)	Identifier
Receiver/Underlying 2 VALOREN	Alphanumeric (9)	Identifier
Receiver/Underlying 2 WKN, WPKN, WPK	Alphanumeric (6)	Identifier
Receiver/Underlying 2 Common Code	Alphanumeric (9)	Identifier
Receiver/Underlying 2 Tickers	Alphanumeric (20)	Identifier
Receiver/Underlying 2 CNPJ	Alphanumeric (14)	Identifier
Receiver/Underlying 2 Nemotecnico	Alphanumeric (25)	Identifier
Receiver/Underlying 2 KR Code	Alphanumeric (12)	Identifier
Receiver/Underlying 2 JSE Code	Alphanumeric (9)	Identifier
Receiver/Underlying 2 SITCA Code	Alphanumeric (9)	Identifier
Receiver/Underlying 2 Deal ID	Alphanumeric (50)	Identifier
Receiver/Underlying 2 MIC Code	Alphanumeric (3)	Identifier

Table 6 - Unregistered Loans and Fixed-Income Derivative Customizations

Field Name	Data Format	Requirement type
Payer/Underlying 1 Notional (BC)	Number	Mandatory
Coupon/Payer/Underlying 1 Day Count	Validated Text	Encouraged



Data Fields in the Single Line Reporting APT version (Continued)

Payer/Underlying 1 Time Lag	Number	Optional
Payer/Underlying 1 Setting Type	Validated Text	Optional
Receiver/Underlying 2 Notional (BC)	Number	Mandatory
Receiver/Underlying 2 Day Count	Validated Text	Encouraged
Receiver/Underlying 2 Time Lag	Number	Optional
Receiver/Underlying 2 Setting Type	Validated Text	Optional
First Accrual Date	Date	Encouraged
First Coupon Date	Date	Encouraged
Guarantor	Text (75)	Optional
Guarantor LEI	Alphanumeric (20)	Optional
Reset Frequency	Number	Encouraged
Initial Notional (LC)	Number	Optional

Data Fields in the Single Line Reporting APT version (Continued)

Table 6 - Continued

Exchange Notional	Validated Text	Optional
Settlement Type	Validated Text	Optional
Settlement Currency	Alphanumeric (3)	Optional
Callable/Putable	Validated Text	Optional
Next Call/Put Date	Date	Optional
Bond Factor	Number	Optional
Cap/Floor Strike Rate	Number	Optional
Cap/Floor Strike Date	Date	Optional
Cap/Floor Type	Validated Text	Optional
Seniority Level	Validated Text	Optional
Tranche Type	Text (75)	Optional
Attachment Percent	Number	Optional
Detachment Percent	Number	Optional
Premium	Number	Encouraged
Premium Payment Frequency	Number	Encouraged

Table 7 - Option and Exotic Derivative Specifications

Field Name	Data Format	Requirement type
Delta-Adjusted Exposure (BC)	Number	Mandatory
Contract Multiplier	Number	Optional
Notional Units	Number	Optional
Option Type	Validated Text	Mandatory
Exercise Type	Validated Text	Optional
Strike (Price or Rate)	Number	Optional
Strike Type	Validated Text	Optional
Barrier Level	Number	Optional
Barrier Rebate	Number	Optional
Barrier Type	Text (75)	Optional
FX Pair Quote Convention	Text (75)	Optional
Underlying Price (LC)	Number	Optional
Underlying Contract Effective Date	Date	Optional
Underlying Maturity Date	Date	Optional
Financing Rate	Number	Optional
Variance Dividend Adjusted	Number	Optional

Table 8 - Collateral Indication

Field Name	Data Format	Requirement type
Collateral	Binary (0, 1)	Mandatory
Collateral Counterparty LEI	Alphanumeric (20)	Mandatory

Data Fields in the Single Line Reporting APT version (Continued)

Table 9 - Surveyed Measures

Data points in this group are collected mainly for supporting Solvency II solutions. They have the same definition of the tripartite template.

Field Name	Data Format	Requirement type
Surveyed Hedge Strategy	Binary	Optional
Surveyed Convertible Option Premium	Number	Optional
Surveyed Convertible Bond Floor	Number	Optional
Surveyed Delta	Number	Optional
Surveyed Gamma	Number	Optional
Surveyed Rho	Number	Optional
Surveyed Modified Duration	Number	Optional
Surveyed Modified Duration To next	Number	Optional
Surveyed Credit Duration	Number	Optional

Formats

Table 10 - Format Definitions

Date	Date format is a number with leading zeros, either MMDDYYYY or YYYYMMDD. For example, Aug. 31, 2013, must be reported either as 08312013 or 20130831.
Alphanumeric (XX)	Text combination of numbers and letters, including all leading zeros. The number of accepted characters for the field is in parentheses. Spaces are not expected in alphanumeric fields.
Number	Number values. These can be the number of units or values in currency. In some cases these are in decimal, percentage, or basis-point scale.
Text (XX)	Text fields can include numbers, letters, and symbols, as well as spaces. These are generally reserved for fields including names and descriptions.
Binary (0, 1)	For binary fields, a value of 1 indicates that the characteristic is true. A value of zero or a blank field indicates that the characteristic is false.
Validated Text	These fields will only comprehend specific values. Suggested values are in Table 4. Please retain the same values for these fields per file.

Definitions

Table 11 - Field Definitions

Field Name	Definition
Portfolio Date	Format must be (mmddyyyy) or (yyyymmdd). The as-of date for the portfolio included in the supplied file.
Portfolio Identifier	A unique combination of numbers and characters. It can be as simple as the fund ISIN or the fund's name. This must be the same for each file delivery. Morningstar can provide our Morningstar Portfolio ID at your request.
Fund Name	This is the name of the investment. It should be unique from other investments in your file. It must be kept consistent per fund, per portfolio file. It can vary from delivery to delivery due to name changes.
Portfolio Base Currency	The currency code that the portfolio is priced in. This should follow ISO 4217.
ISIN	This is the International Securities Identification Number. This meets ISO standard 6166.
CUSIP/CINS	These are identifiers issued by the Committee on Uniform Securities Identification Procedures.
Bloomberg Ticker	The Bloomberg Global ID is a public identifier containing 12 alphanumeric characters. The Bloomberg Corporation has created this identifier to overcome the complexity of multiple identifiers and proprietary codes. There is no charge for this data and it is open for public use. The Bloomberg Open Symbology website is http://bsym.bloomberg.com . Additionally, Bloomberg Tickers and other Bloomberg identifiers are generally able to be matched.
SEDOL	This is the Stock Exchange Daily Official List, a security identifier issued by the London Stock Exchange.
VALOREN	The VALOR number is a code that uniquely identifies listed securities and financial instruments used in Switzerland.
WKN, WPKN, WPK	The Wertpapierkennnummer, (WKN, WPKN, WPK or simply Wert), is a German securities identification code. Six digits or capital letters (excluding I and O), no check digit.
Common Code	This is a nine-digit identification code issued in Luxembourg, jointly by CEDEL and Euroclear.
CNPJ	Cadastro Nacional de Pessoas Jurídicas, is an identification number of Brazilian companies issued by the Brazilian Ministry of Revenue, in Portuguese "Secretaria da Receita Federal" or "Ministério da Fazenda."
Nemotecnico	This is the numeric code assigned to each bond issued by the Bolsa de Santiago. In the Chilean market, it is known as the Código Nemotecnico.
KR Code	An identifier of any mutual fund registered or available for sale in Korea as assigned by Korea Financial Investment Association (KOFIA).
JSE Code	The nine-digit numbering system issued by the Johannesburg Stock Exchange.
SITCA Code	The code issued by the Securities Investment Trust and Consulting Association of Taiwan.
OSI Code	The Options Symbology Initiative (OSI) symbols provide codes for many exchange-traded options. These are created by the Options Clearing Corporation. Information on this identification system can be found here: http://www.theocc.com/webapps/delo-download .
Tickers	This is the symbol for a listed stock, bond, or future. Note: In order for this to be matched, the MIC code is needed.

Definitions (Continued)

Table11 - Continued

Field Name	Definition
Markit RED Code	The reference entity database (RED) code used to identify credit default swaps, created by Markit Partners (www.markit.com).
Deal ID	The Deal ID is a custom identifier for OTC derivatives and other instruments. Please limit the use of these to instruments without available external identifiers. For multiple-legged derivatives such as swaps and swaptions, the same Deal ID should be used to identify separate legs of the transactions. This field is also the column where we request that internal identifiers be located for transmission.
FIGI	The Financial Instrument Global Identifier is a unique identifier issued and assigned by Bloomberg to identify instruments across global asset classes. The FIGI is a 12-character alphanumeric identifier that contains three parts. The FIGI follows ISO 8859. The first two characters contain a prefix; the third character is an uppercase G; the fourth through 11th characters contain a combination of uppercase consonant letters and the numbers 0 through 9. The 12th character contains a check digit. FIGIs are published by Bloomberg and are available for public use on openfigi.com .
Other Identifier Type	If a different ID than the common global identifiers already listed must be provided, please indicate the type of ID in this column.
Other Identifier	For other types of identifiers not already listed, please add identifier here.
Asset Type	A general description of the instrument type. For example: common stock, treasury future, corporate bond, commodity future, interest rate swap, FX forward, and so on.
ASISA Asset Class	The instrument code required by ASISA in the South African market - this will be either 2 or 3 letters. Further information can be found on ASISA website.
Issue Description/Name	This field is reserved for a full description of the instrument within the portfolio. In some cases these security descriptions may also pass straight through to our products, so we ask that you please make sure the description is legible and provides enough information for our analysts and your investors to make an informed decision.
Country Name	This is the common name of the country of issuance for a security. Note: At times Morningstar will assign an issuer to the business country rather than the issuing country.
Country ID	This is the three-digit code for a country. This follows ISO 3166-1.
MIC Code	The Market Identifier Code is used to identify securities trading exchanges and regulated and unregulated trading markets. MIC meets ISO 10383.
Units/Par Value	Units are the number of shares of stock, par value or face value of bonds, units of currency, or the number of derivative contracts.
Market Value (LC)	This is the local currency value for the aggregated position in the instrument. (For fixed income this includes accrued interest.)
Local Currency	ISO symbol for the currency of the instrument. This follows ISO 4217.

Definitions (Continued)

Accounting Value (BC)	This is the base currency value for the aggregated position in the holding. This is the value that contributes to the total net assets of the portfolio. This is also known as market value. For many marked-to-market derivatives there is no accounting value; for these issuances please assign a value of zero.
Buy/Sell	This value indicates whether the position is long or short. This is supplemental for firms that provide negative values in the Notional Units and (when appropriate) Accounting Value fields.
Issuer/Counterparty	Please provide the name of the issuer of the security or contract. For OTC derivative contracts, the counterparty is also the issuer. Note: for instruments with an external identifier, this field will be used for quality control purposes. <ul style="list-style-type: none"> - For bonds, the issuer is the entity listed on the debenture, or the parent company of the subsidiary issuing the debt. - For OTC derivatives, the issuer is the counterparty or parent company of the counterparty - For listed derivatives, the exchange should be identified. - For stocks, the corporation's name should be listed here.
Issuer/Counterparty LEI	The Legal Entity Identification for Financial Contracts is a unique ID associated with a single corporate entity. ISO 17442 specifies the elements of an unambiguous legal entity identifier (LEI) scheme to identify the legal entities relevant to any financial transaction.
Maturity Date/Expiration Date	This is the date on which the principal amount of a debt instrument becomes due and payable. The final date of a derivatives contract (not underlying).
Effective Date/Issue Date	Starting date for a contract, also known as Dated Date.

Definitions (Continued)

Table11 - Continued

Field Name	Definition
Market Price (LC)	Price per unit in local currency. For fixed-income holdings, this must indicate whether it is "clean" or "dirty."
Fixed-Income Price Type	"Dirty" or "Clean." If blank, clean price quotes are assumed and verified by Market Value and Accrued Interest amounts.
Accrued Interest (LC)	The interest on a fixed-income instrument that has accumulated since the principal investment or since the previous coupon payment. Presented in local currency.
Cost Basis (LC)	Historical cost of the holding expressed in the base currency.
Coupon/Payer/Underlying 1 Payment Type	For unlisted fixed-income instruments, the coupon type describes the type of interest being paid to the lender throughout the life of the instrument: floating, fixed, zero coupon, constant maturity, or zero coupon floating.
Receiver/Underlying 2 Payment type	The payment type for the second leg of a derivative transaction: floating, fixed, zero coupon, constant maturity, or zero coupon floating.
Underlying Coupon Rate	The interest rate of the underlying of a fixed income derivative. a debt security, expressed as an annual percentage of face value. For variable-rate instruments, provide the next coupon payment if the rate has been set or the most recent rate if the next-period rate is not yet available. This field should be used for the rate of an interest rate or currency swap for the APT dual line reporting
Coupon/Payer/Underlying 1 Rate	The interest rate of a debt security, expressed as an annual percentage of face value. For variable-rate instruments, provide the next coupon payment if the rate has been set or the most recent rate if the next-period rate is not yet available. (This field is also used for the rate of an interest rate or currency swap.)
Receiver/Underlying 2 Rate	Coupon rate of the second underlying instrument.
Coupon Reference Rate	Name or external ID of the reference interest rate for variable-rate instruments
Coupon/Payer/Underlying 1 Reference Rate	Name or external ID of the reference interest rate for variable-rate instruments.
Receiver/Underlying 2 Reference Rate	Name or external ID of the second underlying reference interest rate for variable-rate instruments.
Coupon Spread	This is the amount of the spread above (or below) the reference rate for swaps, variable-rate notes, and loans, expressed as the number of basis points above the reference rate
Coupon/Payer/Underlying 1 Spread	This is the amount of the spread above (or below) the reference rate for swaps, variable-rate notes, and loans, expressed as the number of basis points above the reference rate.
Receiver/Underlying 2 Spread	This is the amount of the spread above (or below) the reference rate for the receiver or second leg of swaps, variable-rate notes, and loans, expressed as the number of basis points above the reference rate.
Coupon Payment Frequency	Number of coupon payments per year. Possible values are 0 for zero coupon, 1 for annually, 2 for semiannually, 3 for every four months, 4 for quarterly, 6 for every two months, and 12 for monthly. Use this datapoint to report coupon payment frequency of non-derivative instruments.
Coupon/Payer/Underlying 1 Payment Frequency	Number of coupon payments per year. Possible values are 0 for zero coupon, 1 for annually, 2 for semiannually, 3 for every four months, 4 for quarterly, 6 for every two months, and 12 for monthly.

Definitions (Continued)

Underlying Coupon Payment Frequency	Number of coupon payments per year of the underlying asset or leg of a derivative. Possible values are 0 for zero coupon, 1 for annually, 2 for semiannually, 3 for every four months, 4 for quarterly, 6 for every two months, and 12 for monthly. Use this data-point to report coupon payment frequency of a swap leg
Receiver/Underlying 2 Payment Frequency	Number of coupon payments per year for the second leg. Possible values are 0 for zero coupon, 1 for annually, 2 for semiannually, 3 for every four months, 4 for quarterly, 6 for every two months, and 12 for monthly.
Underlying Name	This is the name of the underlying instrument within a derivative contract. It is possible for the underlying instrument to also be a derivative, as is the case with swaptions.
Payer/Underlying 1 Name	This is the name of the underlying instrument within a derivative contract. It is possible for the underlying instrument to also be a derivative, as is the case with swaptions.
Receiver/Underlying 2 Name	This is the name of the second underlying instrument within a multiple-legged derivative contract.
Notional (LC)	Full face amount that is used to calculate payments or other economic characteristics of the instrument reported in the local currency of the instrument. For Bonds Par Value use the appropriate data point.
Payer/Underlying 1 Notional (LC)	Full face amount that is used to calculate payments or other economic characteristics of the instrument. Reported in the local currency of the instrument.
Underlying Currency	Local currency of the underlying instrument. Use it for derivative positions
Payer/Underlying 1 Notional Currency	Local currency of the underlying instrument.
Receiver/Underlying 2 Notional (LC)	Full face amount that is used to calculate payments or other economic characteristics of the second instrument. Reported in the local currency of the instrument.
Receiver/Underlying 2 Notional Currency	Local currency of underlying second leg.
Underlying ISIN	This is the International Securities Identification Number associated with the underlying instrument.
Payer/Underlying 1 ISIN	This is the International Securities Identification Number associated with the underlying instrument.
Underlying CUSIP/CINS	The CUSIP/CINS associated with the underlying instrument (or instrument underlying the first leg of a multiple-legged derivative)
Payer/Underlying 1 CUSIP/CINS	The CUSIP/CINS associated with the underlying instrument (or instrument underlying the first leg of a multiple-legged derivative)

Definitions (Continued)

Table11 - Continued

Field Name	Definition
Underlying Bloomberg Ticker	This is the Bloomberg ticker associated with the underlying instrument (or instrument underlying the first leg of a multiple-legged derivative).
Payer/Underlying 1 Bloomberg Ticker	This is the Bloomberg ticker associated with the underlying instrument (or instrument underlying the first leg of a multiple-legged derivative).
Underlying SEDOL	This is the SEDOL associated with the underlying instrument (or the first leg of a multiple-legged derivative).
Payer/Underlying 1 SEDOL	This is the SEDOL associated with the underlying instrument (or the first leg of a multiple-legged derivative).
Underlying VALOREN	This is the VALOREN associated with the underlying instrument (or the first leg of a multiple-legged derivative).
Payer/Underlying 1 VALOREN	This is the VALOREN associated with the underlying instrument (or the first leg of a multiple-legged derivative).
Underlying WKN, WPKN, WPK	This is the WKN associated with the underlying instrument (or the first leg of a multiple-legged derivative).
Payer/Underlying 1 WKN, WPKN, WPK	This is the WKN associated with the underlying instrument (or the first leg of a multiple-legged derivative).
Underlying Common Code	This is the Common Code associated with the underlying instrument (or the first leg of a multiple-legged derivative).
Payer/Underlying 1 Common Code	This is the Common Code associated with the underlying instrument (or the first leg of a multiple-legged derivative).
Underlying CNPJ	This is the CNPJ of the underlying instrument of a derivative (or the first leg of a multiple-legged derivative).
Payer/Underlying 1 CNPJ	This is the CNPJ of the underlying instrument of a derivative (or the first leg of a multiple-legged derivative).
Underlying Nemotecnico	This is the Nemotecnico underlying instrument for a derivative (or the first leg of a multiple-legged derivative).
Payer/Underlying 1 Nemotecnico	This is the Nemotecnico underlying instrument for a derivative (or the first leg of a multiple-legged derivative).
Underlying KR Code	This is the KR Code for the underlying instrument for a derivative (or the first leg of a multiple-legged derivative).
Payer/Underlying 1 KR Code	This is the KR Code for the underlying instrument for a derivative (or the first leg of a multiple-legged derivative).
Underlying JSE Code	This is the JSE Code for the underlying instrument for a derivative (or the first leg of a multiple-legged derivative).
Payer/Underlying 1 JSE Code	This is the JSE Code for the underlying instrument for a derivative (or the first leg of a multiple-legged derivative).
Underlying SITCA Code	This is the SITCA Code for the underlying instrument for a derivative (or the first leg of a multiple-legged derivative).
Payer/Underlying 1 SITCA Code	This is the SITCA Code for the underlying instrument for a derivative (or the first leg of a multiple-legged derivative).
Underlying Tickers	The exchange ticker of the underlying instrument (or the first leg of a multiple-legged derivative).
Payer/Underlying 1 Tickers	The exchange ticker of the underlying instrument (or the first leg of a multiple-legged derivative).
Underlying Markit RED Code	Markit Red is the reference entity database (RED) code used to identify credit default swaps, created by Markit Partners. (www.markit.com)

Definitions (Continued)

Underlying Markit RED Code	Markit Red is the reference entity database (RED) code used to identify credit default swaps, created by Markit Partners. (www.markit.com)
Underlying MIC Code	The MIC code of the ticker for the underlying instrument (or the first leg of a multiple-legged derivative).
Payer/Underlying 1 MIC Code	The MIC code of the ticker for the underlying instrument (or the first leg of a multiple-legged derivative).
Underlying Deal ID	A custom ID for an OTC derivative that is the underlying instrument for a derivative (or the first leg of a multiple-legged derivative).
Payer/Underlying 1 Deal ID	A custom ID for an OTC derivative that is the underlying instrument for a derivative (or the first leg of a multiple-legged derivative).
Receiver/Underlying 2 ISIN	The ISIN associated with the second leg of a multiple-legged derivative contract.
Receiver/Underlying 2 CUSIP/CINS	The CUSIP associated with the second leg in a multiple-legged derivative contract.
Receiver/Underlying 2 Bloomberg Ticker	The Bloomberg ticker associated with the second leg of a multiple-legged derivative contract.
Receiver/Underlying 2 SEDOL	The SEDOL associated with the second leg of a multiple-legged derivative contract.
Receiver/Underlying 2 VALOREN	The VALOREN associated with the second leg of a multiple-legged derivative contract.
Receiver/Underlying 2 WKN, WPKN, WPK	The WKN associated with the second leg of a multiple-legged derivative contract.
Receiver/Underlying 2 Common Code	The common code associated with the second leg in a multiple-legged derivative contract.
Receiver/Underlying 2 Tickers	The exchange ticker associated with the second leg in a multiple-legged derivative contract.
Receiver/Underlying 2 CNPJ	The CNPJ associated with the second leg in a multiple-legged derivative contract.
Receiver/Underlying 2 Nemotecnico	The Nemotecnico associated with the second leg in a multiple-legged derivative contract.
Receiver/Underlying 2 KR Code	The KR code associated with the second leg in a multiple-legged derivative.
Receiver/Underlying 2 JSE Code	The JSE code associated with the second leg of a multiple-legged derivative instrument.

Definitions (Continued)

Table11: (continued)

Field Name	Definition
Receiver/Underlying 2 SITCA Code	The SITCA code associated with the second leg of a multiple-legged derivative.
Receiver/Underlying 2 Deal ID	The custom identifier associated with the second leg of a derivative instrument if no external ID is available.
Receiver/Underlying 2 MIC Code	The MIC code of the ticker associated with the second leg of a multiple-legged derivative.
Notional (BC)	Full face amount that is used to calculate payments or other economic characteristics of the instrument. Reported in the portfolio's base currency. Use this data point for derivative positions
Payer/Underlying 1 Notional (BC)	Full face amount that is used to calculate payments or other economic characteristics of the instrument. Reported in the portfolio's base currency.
Receiver/Underlying 2 Notional (BC)	Full face amount that is used to calculate payments or other economic characteristics of the second instrument. Reported in the portfolio's base currency.
Day Count	This is the accrual convention for the coupon rate for a fixed-income instrument, also known as Day Count.
Underlying Day Count	This is the accrual convention for the underlying rate for a fixed-income derivative.
Coupon/Payer/Underlying 1 Day Count	This is the accrual convention for the coupon rate or underlying rate for a fixed-income instrument, also known as Day Count.
Receiver/Underlying 2 Day Count	This is the accrual convention for the second underlying rate for an interest rate derivative with multiple legs.
Time Lag	Period lag on the market data reference used in the interest accrual calculation, for example, three months lag index-linked gilt. Information should be provided in the format of numeric length of period and period size, for example, 15 days = 15D, 3 months = 3M, 1 year = 1Y.
Payer/Underlying 1 Time Lag	Period lag on the market data reference used in the interest accrual calculation, for example, three months lag index-linked gilt. Information should be provided in the format of numeric length of period and period size, for example, 15 days = 15D, 3 months = 3M, 1 year = 1Y.
Receiver/Underlying 2 Time Lag	Period lag on the market data reference used in the interest accrual calculation, for example, three months lag index-linked gilt. Information should be provided in the format of numeric length of period and period size, for example, 15 days = 15D, 3 months = 3M, 1 year = 1Y.
Setting Type	For floating legs, this defines how and when the coupons are fixed and paid.
Payer/Underlying 1 Setting Type	For floating payer legs, this defines how and when the coupons are fixed and paid.
Receiver/Underlying 2 Setting Type	For floating receiver legs, this defines how and when the coupons are fixed and paid.
First Accrual Date	The date at which interest begins to accrue on a fixed-income instrument, also called Dated Date.
First Coupon Date	The first date on which an interest payment occurs.
Guarantor	The guarantor or secondary obligor of a fixed-income instrument. In the U.S., the federal government is the secondary obligor or guarantor of agency debt.
Guarantor LEI	LEI of guarantor(s) if available.
Reset Frequency	For a floating or inflation-linked instrument. This is the number of interest rate resets in a year. Possible values are 1 for annually, 2 for semiannually, 3 for every four months, 4 for quarterly, 6 for every two months, 12 for monthly, and 365 for daily.

Definitions (Continued)

Initial Notional (LC)	The notional at the outset of a derivative contract with varied notional. Also initial face value of bonds with sinking provisions or inflation-linked bonds.
Exchange Notional	Indicates whether the notional is exchanged in a currency forward or swap. Values are None, Initial, Final, and Both.
Settlement Type	The type of delivery used to close or reconcile a derivatives contract, typically cash or physical delivery.
Settlement Currency	Payment currency in a settled derivative transaction.
Callable/Puttable	Indicates whether underlying instrument is callable or puttable.
Next Call/Put Date	Next subsequent call or put date for a swap (or other OTC contract) with put or call provisions.
Bond Factor	For asset-backed securities, this is the remaining principal factor as of the portfolio date. For index-linked notes, this is the factor representing the inflation adjustment.
Cap/Floor Strike Rate	Numerical rate for an interest rate contract with a cap (or the cap on the first leg of a multiple-legged contract).
Cap/Floor Strike Date	The effective date of the cap if different from the reset date.
Cap/Floor Type	Cap/Floor/Collar.

Definitions (Continued)

Table11 - Continued

Field Name	Definition
Seniority Level	Seniority level of debt security.
Tranche Type	The description of the tranche for a credit default index instrument or a collateralized debt instrument.
Attachment Percent	The tranche attachment point as a percentage of the pool nominal (for example, 0).
Detachment Percent	The tranche detachment point as a percentage of the pool nominal (for example, 15).
Premium	The payment made to the counterparty in a one-sided derivative transaction. The periodic payment to the CDS counterparty.
Premium Payment Frequency	Number of premium payments per year. Possible values are 1 for annually, 2 for semiannually, 3 for every four months, 4 for quarterly, 6 for every two months, and 12 for monthly.
Delta Adjusted Exposure (BC)	The economic exposure of the position after adjusting for Delta. Delta is the ratio of the change in a position's value relative to the price of the reference instrument. This is reported in the base currency of the portfolio.
Contract Multiplier	For derivatives instruments, this is the number of units in the underlying instrument, generally expressed in shares for an option contract or currency for a futures contract, that each contract represents.
Notional Units	Number of units of the underlying instrument that a derivative contract delivers.
Option Type	This field denotes whether an option is a put or a call, receiver or payer on a swaption.
Exercise Type	This describes the exercise type of an OTC option (American, European, Bermudan, Asian, other).
Strike (Price or Rate)	This is the price or interest rate on the underlying instrument when a derivative becomes in-the-money.
Strike Type	The quote convention of the strike price. Possible values are "Spread" for a strike quoted in spread (given in basis points) terms; "Price" for a strike quoted in price terms; or "Rate" for an option quoted in percent.
Barrier Level	For barrier options, this is the level of the barrier before the option becomes in-force or is retired.
Barrier Rebate	The amount paid to the option holder if a barrier is breached and the option is null and void. Quoted in the local currency of the option.
Barrier Type	For exotic options, this specifies what event occurs upon the breach of the barrier. Common barrier types include knock-in; knock-out; up and in, and so on.
FX Pair Quote Convention	This is the format of the strike rate in a foreign exchange option contract. This can be foreign-for-domestic, domestic-for-foreign, USD/EUR.
Underlying Market Price (LC)	Market price of underlying instrument.
Underlying Contract Effective Date	Starting date of the underlying contract.
Underlying Maturity Date	Maturity of underlying instrument of a derivative transaction (or the first leg of a multiple-legged instrument).
Financing Rate	Interest rate associated with the lending or borrowing embedded in a contract for difference.
Variance Dividend Adjusted	Indicates whether the price series is dividend-adjusted. Possible values are Y for dividend-adjusted and N for not dividend-adjusted.

Definitions (Continued)

Underlying Variance Dividend Adjusted	Indicates whether the price series is dividend-adjusted. Possible values are Y for dividend-adjusted and N for not dividend-adjusted.
Collateral	This indicates that a position is held as collateral for a short position or an OTC derivative such as a total return swap. These holdings do not typically deliver economic exposure to the portfolio. Examples of collateral include substitute baskets for synthetic ETFs, and received collateral on reverse repos.
Collateral Counterparty LEI	This is the legal entity identifier of the counterparty for collateral received as security on an OTC derivative.
Surveyed Hedge Strategy	This indicates an existing hedge program (Y = the position is systematically rolled at maturity, N = no systematic roll at maturity)
Surveyed Convert. Bond Floor	The lowest value of a convertible bond expressed in quotation currency, at current issuer spread
Surveyed Gamma	Convexity for interest rates instruments; or gamma for derivatives with optional components
Surveyed Modified Duration	The weighted average modified duration of portfolio positions
Surveyed Modified Duration to Next Option Exercise Date	The modified duration based on dirty price at next option. Derivative of the dirty price of the instrument with respect to the interest rate. It is a signed amount that should be negative in most cases.
Surveyed Credit Duration	Change in price associated with 1% change in credit spread.
Surveyed Delta	This is the sensitivity to the underlying asset. It assumes value from 0 and 1 for calls and -1 and 0 for puts
Surveyed Vega	The amount of change in option's price for a corresponding one point change in implied volatility.

Field Values

Table 12: Validated Text Fields

Field Name	Accepted Text
Buy/Sell	Buy
	Sell
Fixed-Income Price Type	Clean
	Dirty
	Fixed
Payment Type	Floating
	Zero Coupon
	Constant Maturity
	Zero Coupon Floating
Day Count	1/1
	30/360
	30E/360
	30E/360(ISDA)
	30E+/360(ISDA)
	ACT/360
	ACT/365Fixed
	ACT/365L
	ACT/365A
	NL/365
	ACT/ACTISDA
	ACT/ACTICMA
Setting Type	Business/252
	Standard
	Early
	Arrears
	Simple
	Explicit
	Bloomberg Standard
	Bloomberg Simple

Field Values (Continued)

Table 12: (continued)

Field Name	Accepted Text
Exchange Notional	None
	Initial
	Final
	Both
Settlement Type	Cash
	Physical
Callable/Putable	Callable
	Putable
	Convertible
Cap/Floor Type	Cap
	Floor
	Collar
Seniority Level	Secured
	Senior
	Senior Subordinated
	Subordinated
	Junior Subordinated
Option Type	Preferred
	Call
	Put
	Payer
Exercise Type	Receiver
	American
	European
	Bermudan
	Asian
Strike Type	Other
	Price
	Rate
	Spread

Appendix I - Frequently Asked Questions

What data points do I need to fill out?

All data points that are not marked as optional should be filled out if applicable to a specific instrument. Morningstar recognizes that not every field will be applicable but would like to provide more fields in order to collect and process information for instruments with more complex attributes, such as derivative contracts with granular terms and conditions information.

Should I use single- or multi-line?

Depending on how your database is set up, it usually makes it easier to use one and then the other, but Morningstar is able to accommodate both reporting styles. [The multi-line reporting APT version](#) is designed for fund companies storing distinct legs of a derivative as if they are separate distinct securities. For example, a plain-vanilla interest-rate swap may be modeled as a combination of two bonds with opposite exposure and where each leg represents one bond. [The single-line reporting file](#) is suitable for those fund companies that store legs of a derivative in one unique line. For swaps and other compound derivatives, please include the data associated with a single payment flow where underlying one or underlying two are referenced.

What other formats are accepted?

Morningstar can also process TPT (EU standard for calculating CSR) and SEC FORM N-PORT (U.S. standard). Morningstar is agnostic with format selection, but we would favor a format that can be produced consistently in a high-quality manner. We would also value a format that can be reported more frequently than others, as differences may exist in production schedule.

How long does it take from the time I send portfolios to Morningstar until it's available in the products?

The portfolio processing can take up to 48 hours (if everything is correct; if not, we will reach out to the sender in order to validate deviations). The first time a portfolio is provided it may take longer due to initial onboarding.

Frequently Asked Questions (Continued)

When do we get a Sustainability Rating?

The sustainability rating is calculated on a monthly basis with a one-month delay. For more information about the methodology and requirements, please see the Morningstar Sustainability Rating Methodology document.

Why are so many data points included in the template?

The template is built to manage all types of derivatives, and we need these data points to complete all portfolio calculations as well as to provide information to clients that use Morningstar products to manage their Solvency II capital requirements.

What format of the APT can we send?

Holdings files can be sent in .xlsx or .csv format by email or FTP, but the file needs to be approved first.

We do not have access to a specific data point that is marked as required. What can we do?

If Morningstar does not receive all data points, we will not calculate certain metrics, such as Economic Exposure, Asset Allocation, Fixed Income Exposure, and so on. Please consult with your data consultant that you have been in contact with to discuss implications of not being able to provide all requested data points.

What value should I use in Accounting Value (LC) and Accounting Value (BC) for derivatives?

The values should include the unsettled P/L (likely 0 for daily settled contracts) in the local currency (quotation currency) and fund base currency (BC). Notional values should include the actual or full exposure of the underlying.

Frequently Asked Questions (Continued)

What is Morningstar’s definition for notional value for derivatives?

Morningstar recognizes the possibility in some variation in the definition and presentation of notional value for derivative types in the asset-management industry. Morningstar seeks to collect the value that is equal to the exposure value (with the appropriate sign direction) to the underlying that is achieved by a derivative contract.

Futures: Please provide the notional value that incorporates the total contract size and spot price/index value of the underlying instrument.

Options: As a non-delta 1 instrument, please provide the delta-adjusted exposure to the underlying of the optional contract in the “Delta Adjusted Column.”

Foreign-Exchange Forwards: Please provide the current exposure to or relative value of each currency leg being exchanged in the forward. For the currency being purchased, please indicate the value with a positive sign and for the currency being sold, please use a negative sign.

Swaps (Interest Rate, Inflation, Cross Currency): Please provide the nominal or principal value of the swap contract as well as the signs for each side of the swap. For example, in a vanilla swap for paying fixed rate and receiving float rate, please indicate the nominal for the fixed rate with a negative sign and provide the nominal for the float rate with a positive sign. For swap contracts where the principal changes over the life of the contract, such as accreting or amortizing swaps, please provide the updated principals. For cross-currency swaps, please convert into base currency of the portfolio and indicate the appropriate positive/negative exposure sign of the principal.

Credit Default Swaps/Credit Default Index Swaps: Please provide the nominal value or exposure to the reference entity provided in the contract. Buying protection should be represented by a negative sign to represent reduced exposure to the reference entity, while selling protection should be represented by a positive sign for increased exposure to the reference entity.

Where should I send the first file?

Please send the first file to the data research analyst or data consultant you received the template from. When this is done, we will complete checks on the file as well as upload it in a test environment to make sure the asset exposure looks correct.

Frequently Asked Questions (Continued)

Our fund has several share classes. Is there anything I should know?

The file should be filled out on "fund level," so please provide Identifier for the primary share class, and we will match it to any other share classes we may have in our database.

How many identifiers should I provide?

Please include at least one identifier for every instrument, including cash and OTC instruments. Providing more public identifiers (when applicable) will help Morningstar ensure that the correct instrument and derivative are matched to the correct instrument-level analytics.

What Identifier should we use for cash and OTC instruments?

Please use Deal ID as the identifier if no other code is available. For APT in dual-line format, it is important that instruments with multiple legs have the same "Deal ID." For multi-legged instruments such as swaps, please ensure that the Deal ID (the unique internally assigned ID) corresponds to the two legs of swaps in order for Morningstar to recognize which legs belong to the same derivative contract.

Why is Morningstar moving from the current portfolio template to the new template?

Over the past few years, the use of derivatives within investment fund portfolios has expanded. Many derivatives provide customized and partial exposures that cannot be measured or identified through the standard portfolio template. The Advanced Portfolio Template, or APT, allows Morningstar to enhance its coverage of market identifiers and allows the collection of "terms and conditions" data points for instruments such as OTC derivatives. The APT facilitates additional identification and analysis of a wider variety of instruments. The result will be a more accurate representation within Morningstar products of the holdings, as well as the economic exposures within investment portfolios.

Frequently Asked Questions (Continued)

What benefits are there to supplying the APT, rather than the current template?

By adopting the APT, Morningstar will be able to calculate different weights for each holding and derivative that will be appropriate for specific calculations. Not one weight fits all purposes especially in the context of derivatives. We believe this transparency will allow investors and interested parties to more effectively analyze funds and search for specific attributes.

Additionally, Morningstar's APT does not require gross-ups or accounting plugs for derivatives with embedded leverage. While the amount of data being requested is expanded, Morningstar expects to process the raw information, rather than requesting calculated data. By using raw data, the portfolio analysis tools we offer will no longer be dependent on data calculated by separate data providers.

What happens if my fund chooses not to adopt the Morningstar APT?

Morningstar's ability to provide advanced portfolio analytics is hampered when data providers do not provide sufficient portfolio holdings details. These funds will have more limited analytics. In general, funds without any derivative holdings should receive full portfolio analytics. Funds with derivative positions that do not adopt the APT will likely see imperfect portfolio displays that do not effectively communicate the impact of derivative positions.

The APT requests a large number of identifiers for each holding; do I need to fill out all of the identifier fields?

Over many years, Morningstar has determined that different fund companies and data providers store different identifiers. Rather than inputting any identifier into a single field, it improves accuracy if we can determine the identifier type earlier in our portfolio processing. Therefore, we ask that multiple identifiers be separated into separate fields. Morningstar does not assume that all identifiers are available for each instrument. We ask that you provide at least one identifier for each holding, but multiple identifiers can improve the accuracy of our portfolio processing.

Frequently Asked Questions (Continued)

Please note that it is imperative that each provided field be completed in the vendor's standard format, including all leading zeroes. Additionally, if exchange tickers are provided, the Market Identifier Code (MIC) is also required.

Many exchange-cleared derivatives do not have CUSIP or ISIN. What should we provide as an identifier?

Morningstar is able to automatically match derivatives by Bloomberg ID (FIGI codes) or the combination of exchange ticker and MIC if ISIN or CUSIP are not available.

Should I still calculate cash offsets?

Cash offsets should remain in the standard portfolio template submissions. Once your organization has transitioned to the APT, these should no longer be included. Morningstar will work with individual data providers through the transition to the APT.

Should I still report futures at their economic exposure?

The economic exposure of futures should remain in the standard portfolio template submissions. Once your organization has transitioned to the APT, futures should be reported following the APT guidelines. Morningstar will work with individual data providers through the transition to the APT.

Should I still report delta-adjusted values for options?

For portfolios submitted through the standard template, Morningstar continues to request that options be reported at the delta-adjusted value with accompanying cash offsets. Once your organization has transitioned to the APT, options should be reported following the APT guidelines. Morningstar APT allows for reporting the delta adjusted exposure denominated in portfolio base currency as well as surveyed delta. Morningstar will work with individual data providers through the transition to the APT.

Frequently Asked Questions (Continued)

How frequently should we send Morningstar our data?

We are not asking you to send data any more frequently than you currently do. However, we prefer you send portfolio data as frequently as possible.

What does the template mean by collateral?

Within portfolios, collateral can refer to multiple items. Morningstar wishes to remove balance-sheet assets pledged to the portfolio from the calculation of economic exposures. Examples of such assets include sovereign bonds in a "reverse repo" or pledged collateral for a total return swap. Encumbered assets, or margin collateral, held by the portfolio that are pledged to another party, such as a margin accounts for derivatives or short positions, continue to deliver the economic returns to the portfolio, despite being limited from other investment uses. Margin positions should not be marked as collateral.

Additional Information

For more information on how the data is used or the Advanced Portfolio Template, please reach out to your data consultant or contact:

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Australia: PortfolioAustralia@morningstar.com

