ActiveViam

MRA

Input File Formats

3.0.0

Contents

1 Input file formats

Out of the box, the Market Risk Accelerator will work with a predefined file format, CSV. If you produce your data in this format, you can load and use the Accelerator with no customisations needed. However, you can of course edit and configure the Accelerator to work with any format or file, database source, etc. that ActivePivot is compatible with.

Sample CSV input files are included in the source distribution. These files are loaded during testing of the reference implementation and provide examples of each of the file types.

The input files for the Market Risk Accelerator comprise the following set:

Relevant for	Input file name
Trade attributes	*Trade Attributes*
VaR / ES calculations	*Trade PnLs*
	Quantiles2Rank
	Rounding Methods
	VaR-ES Cube
Scenario names	*Scenarios*
Market data	*Corporate Action*

Relevant for	Input file name
	FX Rates
	Market data
	Market shifts for Taylor VaR
	Market data sets
Reference data - Portfolio and hierarchy configuration	*Legal Entity Parent Child*
	Book Parent Child
	Counterparty Parent Child
Reference data	*Counterparties*
	Countries
Sensitivities	*Cross Sensitivities*
	Sensitivities
	Sensitivity Cube
	Risk Factors Catalog
	Ladder Definition
	Static Tenors and *Dynamic Tenors*
	Static Maturities and *Dynamic Maturities*
	Static Moneyness and *Dynamic Moneyness*
PL Actual	*Profit & Loss*
	Profit & Loss Product Control

Relevant for	Input file name
	PL Cube
Cube-level Adjustments	*Cube Adjustments*

1.1 File name patterns

The Market Risk Accelerator uses glob patterns with the (*) asterisk wildcard character to identify the relevant file names for each category of input file. So you can add characters before and after the listed names, such as timestamps or ID numbers.

For example, the pattern **/TradePnLs*.csv matches all CSV files with names beginning with the string "TradePnL" in any subdirectory.

In this guide, the file pattern section for each of the input files specifies the glob pattern used. However, the glob prefix is omitted as it is now injected automatically.

You can customize the glob patterns in risk.properties.

1.2 Note on AsOfDate

The files in this document that contain an AsOfDate column will rely on that AsOfDate when loaded into the ActivePivot datastores. For the files that do not specify this column (whether described in this document or not), the AsOfDate is taken from the directory structure – these files should reside in the appropriate folder (usually ./data/20xx-yy-zz/ ... /*.csv).

1.3 Key and optional fields

For each input file, the key and optional fields are indicated in the **Key** and **Null** columns respectively.

1.4 Labels and dates for pillars

For the pillar information (Tenors and Maturities), both a label and and date field are available, to allow any combination of source data:

- Pillars as labels, with no equivalent dates available in the source system
- Pillars as dates, with no equivalent labels available in the source system
- Pillars as both labels and dates

The dynamic re-bucketing converts the pillar information into a number of days, this is the basis on which the destination bucket is calculated. The primary cube level upon which this conversion is performed can be configured. The accelerator will attempt to use the configured converter to transform the value of the primary level into a number of days, only using the secondary level if the primary has no value.

To allow the slicing and dicing of input data on source pillars, both fields are selected as levels in the cube.

Examples

Source Label	Source Date	Configured Primary Level	As Of Date	Converted Number Of Days	Destination Buckets (M=30)
2M	-	Dates	2019-09-05	60	2M
2M	-	Labels	2019-09-05	60	2M
-	2019-11-05	Dates	2019-09-05	61	2M & 3M
-	2019-11-05	Labels	2019-09-05	61	2M & 3M

Source Label	Source Date	Configured Primary Level	As Of Date	Converted Number Of Days	Destination Buckets (M=30)
2M	2019-11-05	Dates	2019-09-05	61	2M & 3M
2M	2019-11-05	Labels	2019-09-05	60	2M

Note: For the scalar profile, all pillar fields are keys. Therefore 2M,N/A will be a separate fact from 2M,2019-11-05.

1.5 Trade Attributes

To perform the mapping between the parent/child relationship and market data, Market Risk Accelerator expects a minimum number of trade attributes.

This Trade Attributes file type is identified using the pattern: ****TradeAttributes*.csv** (as specified by `tradeAttributesFilePattern`). This file is loaded using the **TradeAttributes** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates the date of the file. See Note on AsOfDate.	

Field	Key	Null	FieldType	Description	Example
TradeId	Y	N	String	If TradeId comes from multiple systems you may need to prepend source system to the ID for uniqueness. Note that in certain cases, the TradeId could be for adjustment purposes. In such cases we might only have one PnL vector per Book or desk. The TradeId should contain this information clearly (ADDON or ADJ).	"IR_IRSWAP_LIBOR3M", "EQ_12345677", etc.
Book	N	Y	String	Book to map the trade to (must match the node in the Book Hierarchy).	
LegalEntity	N	Y	String	Legal Entity to map the trade to (must match the node in the Legal Entity Hierarchy). See *Legal Entity Parent Child Input File Format*	
CounterpartyId	N	Y	String	Counterparty to map the trade to (must match the node in the Counterparty Hierarchy).See *Counterparty Parent Child File Format*	
Notional	N	Y	Double	Notional of the trade/position.	
NotionalCcy	N	Y	String	Currency of the notional trade.	
Trader	N	Y	String	Trader who performed the trade.	
Sales	N	Y	String	Salesperson who performed the sale of the trade (if applicable).	
InstrumentClass	N	Y	String	Highest level of instrument classification.	"Equity", "Rates", "Forex"
InstrumentType	N	Y	String	Main instrument classification.	"IRSWAP", "Loan", "Bond"

Field	Key	Null	FieldType	Description	Example
InstrumentSubType	N	Y	String	Sub-level of instrument classification.	"XCCY-BASIS", "Overnight", "Gilt"
TradeDate	N	Y	String with format 'YYYY-MM-DD'	Date the trade was made.	
MaturityDate	N	Y	String with format 'YYYY-MM-DD'	Maturity date of the trade.	
VaRInclusionType	N	Y	String	Defines on what basis to include the VaR of this trade: • 'R' for repricing • 'S' for sensitivity,	"R", "S"

1.6 Cube Adjustments

Contains data representing the definition of cube-level adjustments. This file is generated when data is exported after the sign-off process for a sign-off process instance is completed.

This Cube Adjustments file type is identified using the pattern: ****cubeAdjustment*.csv** (as specified by `cubeLevelAdjustmentFilePattern`). This file is loaded using the **SignOffDigestStore** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
ID	Y	N	String	Execution ID of the adjustment	PNL_ADD_ON_0
SignOffTaskName	Y	N	String	The name of the task for which the adjustment was created	Sensis Bonds
MandateAsOfDate	Y	N	String with format 'YYYY-MM-DD'	The as-of date for which the adjustment was created	2020-08-03
PivotID	N	N	String	The name of the cube for which the adjustment was created	Sensitivities Cube
Digest	N	N	String	The string representing the location digest. A digest is a string representation of the form: *dimensionName @hierarchyName = ... | dimensionName @hierarchyName = ...* in which hierarchies for which the path is "AllMember" are excluded.	Book@Bookings=AllMember\BookA|Trader=AllMember\John
Currency	N	N	String	The currency used to express the value of the adjustment	EUR
Measure	N	N	String	The name of the measure to adjust	Delta
Value	N	N	String	The value used to override the measure value	1000.0

1.7 Scenarios

This Scenarios file type is identified using the pattern: ****Scenarios*.csv** (as specified by `scenariosFilePattern`). This file is loaded using the **Scenarios** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates the date of the file. See Note on AsOfDate.	
ScenarioSet	Y	N	String	Name of the set of scenarios.	"Historical", "Stress"
Index	Y	N	Integer	Pointer to position in the PnL[] vector for that Scenario. Values range from 0 to the total number of scenarios in the given scenario set. Note: The index must start at 0 for each ScenarioSet.	0 to 499 for a PnL[] vector of 500 values of historical scenarios
Scenario	N	N	String	Name of the scenario for that Index. For historical scenarios, this could be the date. For stress simulations, it could be the name of the particular event.	"Black Monday 2007"

2 Market data

The following market data input files are available for MRA:

- *Corporate Action*
- *FX rates*
- *Market data*
- *Market data sets*
- *Market shifts for Taylor VaR*

2.1 Corporate Action

Specific event that occurs on instruments such as dividends or instrument spilt

This Corporate Action file type is identified using the pattern: ****CorporateAction*.csv** (as specified by `corporateActionFilePattern`). This file is loaded using the **CorporateAction** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates the date of the file. See Note on AsOfDate.	2018-09-27
RiskFactor	Y	N	String	Identifier of the risk factor. Must match risk factor identifier in the sensitivities files	Honda_Spot price
CashDividend		Y	Double	Dividend or Coupon amount paid to the holder this day	0.25
SplitRatio		Y	Double	If there's an underlying instrument split, the quantity ratio between this day and the previous one	0.25

This file is intended to describe the corporate actions performed on the market data. It is separated from the market data input file and store to avoid empty fields as those events may occur rarely. It can contain either of the following:

- Instrument-related modification such as split / merge, described by the `SplitRatio` column that will be used as a scale factor for market price correction.
- Cash-related event such as dividend payment or bond coupon drop, that is expressed by a cash stream described in the `CashDividend` column.

2.2 FX rates

Exchange rates used for currency conversion

This FX rates file type is identified using the pattern: ****FXRates*.csv** (as specified by `fxRatesFilePattern`). This file is loaded using the **FXRates** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates the date of the file. See Note on AsOfDate.	
MarketDataSet	Y	N	String	String defining the market data set	'Official EOD' or 'Stressed'
BaseCcy	Y	N	String	The left side of the currency pair.	
CounterCcy	Y	N	String	The right side of the currency pair.	
Term	Y	N	String	The term of the rate.	"Spot" or "3M"
Rate	N	N	Double	Forex rate between the two currencies.	
RiskFactorId (optional field)	N	Y	String	Risk factor id used to compute FX risk	"JPY_FX Equivalent"

The Market Risk Accelerator uses the rates defined by the MarketDataSet context value to perform currency conversion, based on the reporting currency you set and the native currencies (from underlying/contributing facts, for a given query scope) defined as follows:

Cube	Level
VaR	Ccy
Sensitivities	DeltaCcy (for Delta), GammaCcy (for Gamma)

The FxRate for converting the native currency value into the reference currency value is obtained from the data in the FX Rates data store in the following lookup sequence.

1. **Direct**: In most cases, the algorithm simply looks up the rate based on these key fields: AsOfDate, BaseCcy, CounterCcy. Initially the algorithm will search for

the rate that will have AsOfDate, NativeCurrency, ReferenceCurrency in the key fields.

2. **Indirect**: If the rate was not found, the algorithm searches for the rate by AsOfDate, ReferenceCurrency, NativeCurrency and takes the reciprocal of the rate if found.

3. **FXCrosses**: If the rate is still not found at this stage, the algorithm computes the rate using the FX crosses via the "CommonCcy" configured in the fx-rates.common-currency in the risk.properties. For example, you need JPY/EUR for conversion and both JPY/USD and EUR/USD were provided.

For more information, see FX Calculation theory

2.3 Market data

The file is used to provide market prices for the greek-based PL calculations.

This Market data file type is identified using the pattern: ****MarketData*.csv** (as specified by `marketDataFilePattern`). This file is loaded using the **MarketData** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates value date	2019-01-01
MarketDataSet	Y	N	String	String defining the market data set, for example "Trader marks" or "Official EOD"	Official EOD
RiskFactorId	Y	N	String	Identifier of the risk factor. Must match risk factor identifier in the sensitivities files	USD.OIS

Field	Key	Null	FieldType	Description	Example
Quote			Double or list of doubles (delimited by semicolons)	Market data quote(s) to be used by the greek-based calculation (configured in greek-based-pl-formula-rules.properties file). For example, stock price, swap rates or implied rates, implied volatility levels. Can be a single value or list of values: Single value for a sensitivity without tenor/moneyness/underlying swap structure. List of values, corresponding to different tenors, swap maturities, moneyness for a sensitivity with corresponding axes. For example, a sensitivity to four tenors and two underlying swap instruments will be published as a list of eight values, the first four corresponding to different tenors and the first underlying maturity and the second four corresponding to tenors and the second underlying maturity. Must correspond to sensitivities to the same risk factor.	1568.2 ;4568.2 ;16.2 ;2453.1
TenorLabels	N	Y	Array (delimited by semicolons)	List of tenor labels, such as 3M, 5Y, and so on, if applicable.	1Y;3Y;5Y;10Y

Field	Key	Null	FieldType	Description	Example
MaturityLabels	N	Y	Array (delimited by semicolons)	List of underlying maturities for volatility cubes, if applicable.	0.5Y;1Y;3Y;5Y;10Y
MoneynessLabels	N	N	Array (delimited by semicolons)	List of moneyness labels, if applicable	45p;ATM;45c
TenorDates	N	N	Array (delimited by semicolons)	List of explicit tenor dates, which are used to sort tenors and to re-bucket sensitivities (if supported)	2019-03-16; 2019-04-27; 2019-10-27; 2020-10-27
MaturityDates	N	N	Array (delimited by semicolons)	List of explicit maturity dates, which are used to sort tenors and to re-bucket sensitivities (if supported)	2019-03-16; 2019-04-27; 2019-10-27; 2020-10-27
Nominal	N	N	Double	Nominal value of this risk factor if applicable. For further explanation, see Market Data Retrieval Service	

For information on how the labels and dates fields are used for the pillars (tenors and maturities), please see Labels and dates for pillars.

2.4 Market data sets

The file is used to provide available market data sets for the day.

This Market data sets file type is identified using the pattern: ****MarketDataSets*.csv** (as specified by `marketDataSetsFilePattern`). This file is loaded using the

MarketDataSets topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates value date	2019-01-01
MarketDataSet	Y	N	String	String defining the market data set, for example "Trader marks" or "Official EOD"	Official EOD

2.5 Market shifts for Taylor VaR

The file is used to provide market prices for the Taylor VaR calculations.

This Market shifts for Taylor VaR file type is identified using the pattern: ****MarketShifts*.csv** (as specified by `riskFactorMarketShiftsFilePattern`). This file is loaded using the **MarketShifts** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates value date.	2019-01-01
RiskFactorId	Y	N	String	Identifier of the risk factor. Must match risk factor identifier in the sensitivities files.	USD.OIS

Field	Key	Null	FieldType	Description	Example
ScenarioSet	Y	N	String	String defining the market data set, for example “Trader marks” or “Official EOD”	Official EOD
Tenor	N	Y	String	Tenor label, such as 3M, 5Y, and so on, if applicable	1Y
Maturity	N	N	String	Underlying maturity for volatility cubes, if applicable.	0.5Y
Moneyness	N	N	String	Moneyness label, if applicable	ATM
Values	N	N	Double array (delimited by semicolons)	Market data shifts to be used by the Taylor VaR calculation (configured in greek-based-pl-formula-rules.properties. This is always an array. The length of the array corresponds to the number of scenarios used to compute the PnL data from sensitivities.	1568.2

For the market data shift inputs, labels are only supported for tenors, maturities and moneyness. Dates are not currently supported.

For information on how the labels and dates fields are used for the pillars (tenors and maturities), please see Labels and dates for pillars.

3 Profit & loss

The following P&L input files are available for MRA:

- *PLCube*
- *Profit & Loss with Product Control fields*
- *Profit & Loss without Product Control fields*

3.1 PLCube

This is the input file for the PL Summary Cube

This PLCube file type is identified using the pattern: ****PLCube*.csv** (as specified by `pnlImportFilePattern`). This file is loaded using the **PnLBaseStore** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates value date.	2019-01-01

Field	Key	Null	FieldType	Description	Example
TradeID	Y	N	String	If TradeId comes from multiple systems you may need to prepend source system to the ID for uniqueness. Note that in certain cases, the TradeId could be for adjustment purposes. In such cases we might only have one PnL vector per Book or desk. The TradeId should contain this information clearly (ADDON or ADJ).	"IR_IRSWAP_LIBOR3M", "EQ_12345677", etc.
Type	Y	N	String	Type of P&L	'Actual PL'
PLDriver	N	Y	String	Driver for the P&L value	'Market moves'
IsFullReval	N	Y	String	Flag to indicate whether the P&L comes from a full revaluation in the risk engine. 'Y' or 'N'.	
Ccy	N	N	String	Currency of the P&L value	
RiskFactor	N	N	String	Underlying risk factor (may be more than one) of the risk class.It is expected that the risk factor name encompasses the definition of the risk factor per the FRTB specification (paragraphs 59-66) or remains as close as possible to this regulation. This field is mandatory.	

Field	Key	Null	FieldType	Description	Example
RiskFactorType	N	Y	String or list of strings	Type of underlying risk factor.	“implied rate”, “repo margin”, “currency pair”, “skew parameter”, “correlation parameter”, “recovery rate”
RiskFactorCcy	N	Y	String	Three-letter ISO currency code that represents the currency of the risk factor	EUR
CurveType	N	Y	String	Only populated if the risk class is a rates curve, otherwise left blank. Specifies the type of the curve. For example, “Interest rate”, “Tenor basis” or “Inflation”	EUR 3 Months
Qualifier	N	Y	String	Identifier of a risk factor’s set.	Reference instrument identifier, curve identifier, vol surface identifier, etc.
RiskClass	N	N	String	Risk factor’s asset class: “Interest rate”, “Credit spread”, “Foreign exchange”, “Equity”, “Commodity”, “Hybrid”.	Equity
Bucket	N	Y	String	Placeholder for FRTB bucket of the risk factor.	
Desk	N	Y	String	Set to “Y” to identify this node as a desk, otherwise left empty.	
Book	N	Y	String	Book to map the trade to (must match the node in the Book Hierarchy).	

3.2 Profit & Loss with Product Control fields

This Profit & Loss with Product Control fields file type is identified using the pattern: **PLPCActuals*.csv (as specified by `pnlFilePattern`). This file is loaded using the **PnL** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates value date.	2019-01-01
TradeID	Y	N	String	If TradeId comes from multiple systems you may need to prepend source system to the ID for uniqueness. Note that in certain cases, the TradeId could be for adjustment purposes. In such cases we might only have one PnL vector per Book or desk. The TradeId should contain this information clearly (ADDON or ADJ).	"IR_IRSWAP_LIBOR3M", "EQ_12345677", etc.
Daily	N	N	Double	P&L	
Monthly	N	N	Double	Monthly (MTD) P&L	
Yearly	N	N	Double	Yearly (YTD) P&L	
Lifetime	N	N	Double	Lifetime (LTD) P&L	
Type	Y	N	String	Type of P&L	'Actual PL'
PLDriver	N	Y	String	Driver for the P&L value	'Market moves'

Field	Key	Null	FieldType	Description	Example
IsFullReval	N	Y	String	Flag to indicate whether the P&L comes from a full revaluation in the risk engine. 'Y' or 'N'.	
Ccy	N	N	String	Currency of the P&L value	
RiskFactor	N	N	String	Underlying risk factor (may be more than one) of the risk class. It is expected that the risk factor name encompasses the definition of the risk factor per the FRTB specification (paragraphs 59-66) or remains as close as possible to this regulation. This field is mandatory.	
RiskClass	N	N	String	Risk factor's asset class: "Interest rate", "Credit spread", "Foreign exchange", "Equity", "Commodity", "Hybrid".	Equity
Bucket	N	Y	String	Placeholder for FRTB bucket of the risk factor.	
SignOffAdjustmentSource	N	Y	String	Optional input for the source of a sign-off adjustment. Only available when using the `enable-signoff` profile.	
SignOffAdjustmentInputType	N	Y	String	Optional input for the input type of a sign-off adjustment. Only available when using the `enable-signoff` profile.	

3.3 Profit & Loss without Product Control fields

This Profit & Loss without Product Control fields file type is identified using the pattern: ****PLActuals*.csv** (as specified by `pnlFilePattern`). This file is loaded using the **PnL** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates value date.	2019-01-01
TradeID	Y	N	String	If TradeId comes from multiple systems you may need to prepend source system to the ID for uniqueness. Note that in certain cases, the TradeId could be for adjustment purposes. In such cases we might only have one PnL vector per Book or desk. The TradeId should contain this information clearly (ADDON or ADJ).	"IR_IRSWAP_LIBOR3M", "EQ_12345677", etc.
Daily	N	N	Double	P&L	
Type	Y	N	String	Type of P&L	'Actual PL'
PLDriver	N	Y	String	Driver for the P&L value	'Market moves'
IsFullReval	N	Y	String	Flag to indicate whether the P&L comes from a full revaluation in the risk engine. 'Y' or 'N'.	
Ccy	N	N	String	Currency of the P&L value	

Field	Key	Null	FieldType	Description	Example
RiskFactor	N	N	String	Underlying risk factor (may be more than one) of the risk class.It is expected that the risk factor name encompasses the definition of the risk factor per the FRTB specification (paragraphs 59-66) or remains as close as possible to this regulation. This field is mandatory.	
RiskClass	N	N	String	Risk factor’s asset class: “Interest rate”, “Credit spread”, “Foreign exchange”, “Equity”, “Commodity”, “Hybrid”.	Equity
Bucket	N	Y	String	Placeholder for FRTB bucket of the risk factor.	

4 Reference data

The following reference data input files are available for MRA:

- *Book Parent Child*
- *Counterparties*
- *Counterparty Parent Child*
- *Countries*
- *Legal Entity Parent Child*

4.1 Book Parent Child

This Book Parent Child file type is identified using the pattern: ****BookParentChild*.csv** (as specified by `bookParentChildFilePattern`). This file is loaded using the **BookParentChild** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates the date of the file. See Note on AsOfDate.	
Child	Y	N	String	Name of the node in the Book/Desk hierarchy	
Parent	N	N	String	Name of the parent node (or null if there is no parent).	
Desk	N	Y	String	Set to "Y" to identify this node as a desk, otherwise left empty.	

4.2 Counterparties

This Counterparties file type is identified using the pattern: ****Counterparties*.csv*** (as specified by `counterpartiesFilePattern`). This file is loaded using the **Counterparties** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates the date of the file. See Note on AsOfDate.	
CounterpartyId	Y	N	String	Counterparty identifier. Used as a foreign key when counterparty is referenced.	"HSBC Group", "EBRD"

Field	Key	Null	FieldType	Description	Example
CounterpartyName	N	Y	String	Full counterparty name.	“HSBC Holdings PLC”, “European Bank for Reconstruction and Development”
Rating	N	Y	String	Rating of the counterparty.	“AAA”, “BB”
Sector	N	Y	String	Sector of the counterparty.	
CountryOfAddress	N	Y	String	Country where the counterparty is located, in the form of a unique three-letter country identifier code.	
CountryOfRisk	N	Y	String	Country the risk of counterparty can be attributed to, in the form of a unique three-letter country identifier code.	

4.3 Counterparty Parent Child

This Counterparty Parent Child file type is identified using the pattern: ****CounterpartyParentChild*.csv** (as specified by `counterpartyParentChildFilePattern`). This file is loaded using the **CounterpartyParentChild** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates the date of the file. See Note on AsOfDate.	
Child	Y	N	String	Identifier of the node in the Counterparty hierarchy.	
Parent	N	N	String	Identifier of the parent node (or null if there is no parent).	

4.4 Countries

This Countries file type is identified using the pattern: ****Countries*.csv** (as specified by `countriesFilePattern`). This file is loaded using the **Countries** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates the date of the file. See Note on AsOfDate.	
CountryCode	Y	N	String	Unique three-letter country identifier code.	"GBR", "FRA"
Region	N	Y	String	The region in which the country is located.	
SubRegion	N	Y	String	The sub-region in which the country is located.	
Country	N	Y	String	Name of the country.	

Field	Key	Null	FieldType	Description	Example
Latitude	N	Y	Double	The latitude of the country in the decimal degrees format.	“51.514451”
Longitude	N	Y	Double	The longitude of the country in the decimal degrees format.	“0.127723”

4.5 Legal Entity Parent Child

This Legal Entity Parent Child file type is identified using the pattern: ****LegalEntityParentChild*.csv** (as specified by `legalEntityParentChildFilePattern`). This file is loaded using the **LegalEntityParentChild** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format ‘YYYY-MM-DD’	Indicates the date of the file. See Note on AsOfDate.	
Child	Y	N	String	Name of the Legal Entity.	
Parent	N	N	String	Name of the parent Legal Entity (or null if there is no parent).	

5 VaR-ES calculations

The following VaR/ES calculation input files are available for MRA:

- *Trade PnL*
- *Quantiles2Rank for VaR*
- *Rounding Methods for VaR*
- *VaR-ES Cube*

5.1 Trade PnL

The calculation of VaR and similar measures (Marginal VaR, Expected Shortfall) form the backbone of the Market Risk Accelerator. Input data consists of trade-level/position-level vectors of PnL simulations. The reference data model proposes a breakdown by risk factor - which may or may not be used - and a single set of PnLs per trade.

This Trade PnL file type is identified using the pattern: ****TradePnLs*.csv** (as specified by `tradePnlFilePattern`). This file is loaded using the **TradePnLs** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates the date of the file. See Note on AsOfDate.	
TradeId	Y	N	String	If TradeId comes from multiple systems you may need to prepend source system to the ID for uniqueness. Note that in certain cases, the TradeId could be for adjustment purposes. In such cases we might only have one PnL vector per Book or desk. The TradeId should contain this information clearly (ADDON or ADJ).	"IR_IRSWAP_LIBOR3M", "EQ_12345677", etc.
ScenarioSet	Y	N	String	Name of the scenario set for the PnL vector.	"Historical", "Stress"
CalculationId	Y	N	String	Name of the PnL vector calculation run. There may be several runs per AsOfDate.	
RiskFactor	Y	N	String	Underlying risk factor (may be more than one) of the risk class. It is expected that the risk factor name encompasses the definition of the risk factor per the FRTB specification (paragraphs 59-66) or remains as close as possible to this regulation. This field is mandatory.	
				Name of underlying curve (e.g. UsdLibor3m).	
				Name of issuer credit spread curve plus basis (Bond or CDS), or issuer tranche	

Field	Key	Null	FieldType	Description	Example
				Name of equity plus type (spot or repo) (e.g.“IBM_SPOT”).	
				Unique commodity name should include commodity name, grade, and delivery time	
				Currency pair or the currency against the reporting currency.	
RiskClass	N	N	String	Defines the risk class that the PnL vector is computed for.	
				“GIRR”	
				“CSR” and other credit risks.	
				“Equity”	
				“Commodity”	
				“FX”	
SensitivityName	N	Y	String	Name of the sensitivity that the PnL is attributed to.	“Delta”
LiquidityHorizon	N	Y	Integer	The Liquidity Horizon in days. This field is optional.	10, 20, 40, 60, 120
Ccy	N	N	String	Currency in which the PnL values are expressed.	

Field	Key	Null	FieldType	Description	Example
PnL[]	N	N	Double Array, separated by semicolons	Vector of profit and loss values.	

5.2 Quantiles2Rank for VaR

This Quantiles2Rank for VaR file type is identified using the pattern: ****Quantiles*.csv** (as specified by `quantilesFilePattern`). This file is loaded using the **Quantiles** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
QuantileName	Y	N	String	Indicates the quantile used to round VaR values	“EXCLUSIVE”, “EQUAL_WEIGHTS”, “CENTERED”
Quantile	N	N	String	Non-technical name for the quantile	“Exclusive”, “Centered”

5.3 Rounding Methods for VaR

This Rounding Methods for VaR file type is identified using the pattern: ****RoundingMethods*.csv** (as specified by `roundingMethodsFilePattern`). This file is loaded using the **RoundingMethods** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
MethodName	Y	N	String	Indicates the rounding method used to round VaR values	“CEIL”, “ROUND”, “FLOOR”, “ROUND_EVEN”, “WEIGHTED”
Method	N	N	String	Non-technical name for the rounding method	“Ceiling”, “Rounded”

5.4 VaR-ES Cube

This is the input file for the VaR-ES Summary Cube

This VaR-ES Cube file type is identified using the pattern: ****VaR-ES Cube*.csv** (as specified by `varImportFilePattern`). This file is loaded using the **BaseStore** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates value date.	2019-01-01
Calculation	Y	N	String	Name of the PnL vector calculation run. There may be several runs per AsOfDate.	
RiskClass	N	N	String	Risk factor's asset class: "Interest rate", "Credit spread", "Foreign exchange", "Equity", "Commodity", "Hybrid".	Equity
RiskFactor	N	N	String	Underlying risk factor (may be more than one) of the risk class.It is expected that the risk factor name encompasses the definition of the risk factor per the FRTB specification (paragraphs 59-66) or remains as close as possible to this regulation. This field is mandatory.	
Liquidity Horizon	N	Y	Integer	The Liquidity Horizon in days. This field is optional.	10, 20, 40, 60, 120
Scenario Set	Y	N	String	Name of the set of scenarios.	"Historical", "Stress"
RiskFactorType	N	Y	String or list of strings	Type of underlying risk factor.	"implied rate", "repo margin", "currency pair", "skew parameter", "correlation parameter", "recovery rate"

Field	Key	Null	FieldType	Description	Example
RiskFactorCcy	N	Y	String	Three-letter ISO currency code that represents the currency of the risk factor	EUR
CurveType	N	Y	String	Only populated if the risk class is a rates curve, otherwise left blank. Specifies the type of the curve. For example, “Interest rate”, “Tenor basis” or “Inflation”	EUR 3 Months
Qualifier	N	Y	String	Identifier of a risk factor’s set.	Reference instrument identifier, curve identifier, vol surface identifier, etc.
Ccy	N	N	String	Currency of the sensi value	
Desk	N	Y	String	Set to “Y” to identify this node as a desk, otherwise left empty.	
Book	N	Y	String	Book to map the trade to (must match the node in the Book Hierarchy).	
TradeID	Y	N	String	If TradeId comes from multiple systems you may need to prepend source system to the ID for uniqueness. Note that in certain cases, the TradeId could be for adjustment purposes. In such cases we might only have one PnL vector per Book or desk. The TradeId should contain this information clearly (ADDON or ADJ).	“IR_IRSWAP_LIBOR3M”, “EQ_12345677”, etc.

6 Sensitivities

The following sensitivities input files are available for MRA:

- *Cross Sensitivities*
- *Sensitivities*
- *Risk Factors Catalog*
- *Static Tenors*
- *DynamicTenors*
- *Sensitivity Cube*
- *Ladder Definition*
- *Static Maturities*
- *Dynamic Maturities*
- *Static Moneyness*
- *DynamicMoneyness*

6.1 Cross Sensitivities

This file is used to store the sensitivities of a trade relative across two risk factors.

This Cross Sensitivities file type is identified using the pattern: **[**VannaSensitivities*.csv **CrossGammaSensitivities*.csv **CorrelationSensitivities*.csv]** (as specified by `[sensiVannaFilePattern sensiCrossGammaFilePattern sensiCorrelationFilePattern]`). This file is loaded using the **[Vanna CrossGamma Correlation]** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates the date of the file. See Note on AsOfDate.	
TradeId	Y	N	String	If TradeId comes from multiple systems you may need to prepend source system to the ID for uniqueness. Note that in certain cases, the TradeId could be for adjustment purposes. In such cases we might only have one PnL vector per Book or desk. The TradeId should contain this information clearly (ADDON or ADJ).	"IR_IRSWAP_LIBOR3M", "EQ_12345677", etc.
SensitivityName	Y	N	String	Name of sensitivity (cube measure). Currently only the values "Delta", "Gamma" and "Vega" are supported.	
RiskClass	N	N	String	Risk factor's asset class: "Interest rate", "Credit spread", "Foreign exchange", "Equity", "Commodity", "Hybrid".	Equity
RiskFactorId	Y	N	String	Internal risk factor/bucket identifier: instrument, curve, vol surface/cube identifier	USD_3v6_basis
RiskFactorId2	Y	N	String	Second risk factor for the cross sensitivity.	UniCredit_Spot price

Field	Key	Null	FieldType	Description	Example
TenorLabels	N	Y	Array (delimited by semicolons)	List of tenor labels, corresponding to the vertex of the risk factor, such as 3M, 5Y, and so on.	1Y;3Y;5Y;10Y
TenorDates	N	Y	Array (delimited by semicolons)	List of explicit tenor dates, which are used to sort tenors and to re-bucket sensitivities (if supported)	2019-03-16; 2019-04-27; 2019-10-27; 2020-10-27
UnderlyingMaturities	N	Y	Array (delimited by semicolons)	List of underlying maturities for volatility cubes	0.5Y;1Y;3Y;5Y;10Y
MaturityDates	N	Y	Array (delimited by semicolons)	List of explicit maturity dates, which are used to sort tenors and to re-bucket sensitivities (if supported)	2019-03-16; 2019-04-27; 2019-10-27; 2020-10-27
Moneyness	N	Y	Array (delimited by semicolons)	List of labels corresponding to different ways of stating moneyness. Supported formats: - moneyness in percent - delta-moneyness	(moneyness in percent): 80;100;120;(delta moneyness): “25p;ATM ;25c”

Field	Key	Null	FieldType	Description	Example
Values	N	Y	Double or list of doubles (delimited by semicolons)	Single value or list of values: - single value for a sensitivity without tenor structure/underlying maturities - list of values, corresponding to tenors, for a sensitivity with only a term structure - list of values, corresponding to tenors and underlying maturities for interest rate volatilities: For example, a sensitivity along four tenors and two underlying maturities will be published as a list of eight values, the first four corresponding to different tenors and the first underlying maturity and the second four corresponding to tenors and the second underlying maturity. If the Moneyness is a vector, then the list is interpreted as a 3-dimensional array with the TenorLabels index changing first and Moneyness changing last. Null values are interpreted as "N/A".	1568.2 ;4568.2 ;16.2 ;2453.1(moneyness vector) 0;0.34;1.345;24251.0;0;0;12.4;453.23
Ccy	N	N	String		USD

Field	Key	Null	FieldType	Description	Example
SignOffAdjustmentSource	N	Y	String	Optional input for the source of a sign-off adjustment. Only available when using the `enable-signoff` profile.	
SignOffAdjustmentInputType	N	Y	String	Optional input for the input type of a sign-off adjustment. Only available when using the `enable-signoff` profile.	

For information on how the labels and dates fields are used for the pillars (tenors and maturities), please see Labels and dates for pillars.

6.2 Sensitivities

This file is used to store the sensitivities of a trade relative to a risk factor.

This Sensitivities file type is identified using the pattern: **[**DeltaSensitivities*.csv **VegaSensitivities*.csv **GammaSensitivities*.csv **VolgaSensitivities*.csv **CashSensitivities*.csv **ThetaSensitivities*.csv]** (as specified by `[sensiDeltaFilePattern sensiVegaFilePattern sensiGammaFilePattern sensiVolgaFilePattern sensiCashFilePattern sensiThetaFilePattern]`). This file is loaded using the **[Delta Vega Gamma Volga Theta Cash]** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates the date of the file. See Note on AsOfDate.	
TradeId	Y	N	String	If TradeId comes from multiple systems you may need to prepend source system to the ID for uniqueness. Note that in certain cases, the TradeId could be for adjustment purposes. In such cases we might only have one PnL vector per Book or desk. The TradeId should contain this information clearly (ADDON or ADJ).	"IR_IRSWAP_LIBOR3M", "EQ_12345677", etc.
SensitivityName	Y	N	String	Name of sensitivity (cube measure). Currently only the values "Delta", "Gamma" and "Vega" are supported.	
RiskClass	N	N	String	Risk factor's asset class: "Interest rate", "Credit spread", "Foreign exchange", "Equity", "Commodity", "Hybrid".	Equity
RiskFactorId	Y	N	String	Internal risk factor/bucket identifier: instrument, curve, vol surface/cube identifier	USD_3v6_basis
TenorLabels	N	Y	Array (delimited by semicolons)	List of tenor labels, corresponding to the vertex of the risk factor, such as 3M, 5Y, and so on.	1Y;3Y;5Y;10Y
TenorDates	N	Y	Array (delimited by semicolons)	List of explicit tenor dates, which are used to sort tenors and to re-bucket sensitivities (if supported)	2019-03-16; 2019-04-27; 2019-10-27; 2020-10-27

Field	Key	Null	FieldType	Description	Example
UnderlyingMaturities	N	Y	Array (delimited by semicolons)	List of underlying maturities for volatility cubes	0.5Y;1Y;3Y;5Y;10Y
MaturityDates	N	Y	Array (delimited by semicolons)	List of explicit maturity dates, which are used to sort tenors and to re-bucket sensitivities (if supported)	2019-03-16; 2019-04-27; 2019-10-27; 2020-10-27
Moneyness	N	Y	Array (delimited by semicolons)	List of labels corresponding to different ways of stating moneyness. Supported formats: - moneyness in percent - delta-moneyness	(moneyness in percent): 80;100;120;(delta moneyness): “25p;ATM ;25c”

Field	Key	Null	FieldType	Description	Example
Values	N	Y	Double or list of doubles (delimited by semicolons)	Single value or list of values: - single value for a sensitivity without tenor structure/underlying maturities - list of values, corresponding to tenors, for a sensitivity with only a term structure - list of values, corresponding to tenors and underlying maturities for interest rate volatilities: For example, a sensitivity along four tenors and two underlying maturities will be published as a list of eight values. For a multi-dimensional array (with any number of dimensions), the indexing is in reverse order of dimensions; given four tenors, two maturities and three moneyness values (TMm), the index coordinates are:[T0M0m0, T0M0m1, ..., T2M0m2, T2M1m0, ..., T3M1m2]. Null values are interpreted as “N/A”.	1568.2 ;4568.2 ;16.2 ;2453.1(moneyness vector) 0;0.34;1.345;24251.0;0;0;12.4;453.23

Field	Key	Null	FieldType	Description	Example
FirstOrderLadder	N	Y	List of doubles (delimited by semicolons)	Flattened list of values, with a subvector corresponding to each double in the Values field. Only relevant for sensitivities configured to use first-order ladders, e.g. Delta. Indexes correspond to the values, with an extra ladder scale dimension: for a 3-dimensional sensitivity array as described above (TMm), the ladder indexing becomes TMm*L.	For a single value sensitivity, and a ladder scale of size 3:90.0;100.0;110.0For a multi-value sensitivity of size 3 and a ladder scale of size 3:90.0;100.0;110.0;85.0;100.0; 115.0;110.0;115.0;120.0
SecondOrderLadder	N	Y	List of doubles (delimited by semicolons)	See FirstOrderLadder field above. Only relevant for sensitivities configured to use second-order ladders, e.g. Gamma.	See FirstOrderLadder example above.
Ccy	N	N	String		USD
SignOffAdjustmentSource	N	Y	String	Optional input for the source of a sign-off adjustment. Only available when using the `enable-signoff` profile.	
SignOffAdjustmentInputType	N	Y	String	Optional input for the input type of a sign-off adjustment. Only available when using the `enable-signoff` profile.	

For information on how the labels and dates fields are used for the pillars (tenors and maturities), please see Labels and dates for pillars.

6.3 Risk Factors Catalog

This Risk Factors Catalog file type is identified using the pattern: ****RiskFactorCatalog*.csv** (as specified by `riskFactorCatalogueFilePattern`). This file is loaded using the **RiskFactorsCatalogue** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates the date of the file. See Note on AsOfDate.	
RiskFactorID	Y	N	String	Internal risk factor/bucket identifier: instrument, curve, vol surface/cube identifier	
RiskClass	N	N	String	Risk factor's asset class: "Interest rate", "Credit spread", "Foreign exchange", "Equity", "Commodity", "Hybrid".	Equity
Qualifier	N	Y	String	Identifier of a risk factor's set.	Reference instrument identifier, curve identifier, vol surface identifier, etc.

Field	Key	Null	FieldType	Description	Example
RiskFactorType	N	Y	String or list of strings	Type of underlying risk factor.	"implied rate", "repo margin", "currency pair", "skew parameter", "correlation parameter", "recovery rate"
RiskFactorCcy	N	Y	String	Three-letter ISO currency code that represents the currency of the risk factor	EUR
CurveType	N	Y	String	Only populated if the risk class is a rates curve, otherwise left blank. Specifies the type of the curve. For example, "Interest rate", "Tenor basis" or "Inflation"	EUR 3 Months

6.4 Static Tenors

Pillars of tenor used to tore sensitivities internally

This Static Tenors file type is identified using the pattern: ****StaticTenors*.csv** (as specified by `sensiTenorsFilePattern`). This file is loaded using the **Tenors** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
TenorLabels	Y	N	String	Name for the bucket of time points	
NumberOfDays	N	N	String	Number of days to include in the bucketed group	
SensitivityName	Y	N	String	Sensitivity for which the tenor label is used	

6.5 DynamicTenors

Tenors and set used for dynamic bucketing feature

This DynamicTenors file type is identified using the pattern: ****DynamicTenors*.csv** (as specified by `sensiDynTenorsFilePattern`). This file is loaded using the **DynamicTenors** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
TenorLabels	Y	N	String	Name for the bucketed group	3Y
NumberOfDays	N	N	String	Number of days to include in the bucketed group	1080
SensitivityName	Y	N	String	Sensitivity for which the tenor label is used	

Field	Key	Null	FieldType	Description	Example
TenorSet	Y	N	String	Specifies the label for the context value that users can select at query time to apply this tenor.	DECADE

6.6 Sensitivity Cube

This is the input file for the Sensitivity Summary Cube

This Sensitivity Cube file type is identified using the pattern: ****Sensitivity Cube*.csv** (as specified by `sensiImportFilePattern`). This file is loaded using the **Sensi-BaseStore** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates value date.	2019-01-01
RiskClass	N	N	String	Risk factor's asset class: "Interest rate", "Credit spread", "Foreign exchange", "Equity", "Commodity", "Hybrid".	Equity

Field	Key	Null	FieldType	Description	Example
RiskFactor	N	N	String	Underlying risk factor (may be more than one) of the risk class.It is expected that the risk factor name encompasses the definition of the risk factor per the FRTB specification (paragraphs 59-66) or remains as close as possible to this regulation. This field is mandatory.	
RiskFactor2	N	N	String	Underlying second risk factor of the risk class.It is expected that the risk factor name encompasses the definition of the risk factor per the FRTB specification (paragraphs 59-66) or remains as close as possible to this regulation.	
Ladder Available	N	N	String	Is a ladder scale available for this sensitivity (Y or N)	N
RiskFactorType	N	Y	String or list of strings	Type of underlying risk factor.	“implied rate”, “repo margin”, “currency pair”, “skew parameter”, “correlation parameter”, “recovery rate”
RiskFactorCcy	N	Y	String	Three-letter ISO currency code that represents the currency of the risk factor	EUR

Field	Key	Null	FieldType	Description	Example
CurveType	N	Y	String	Only populated if the risk class is a rates curve, otherwise left blank. Specifies the type of the curve. For example, “Interest rate”, “Tenor basis” or “Inflation”	EUR 3 Months
Qualifier	N	Y	String	Identifier of a risk factor’s set.	Reference instrument identifier, curve identifier, vol surface identifier, etc.
Ccy	N	N	String	Currency of the sensi value	
Desk	N	Y	String	Set to “Y” to identify this node as a desk, otherwise left empty.	
Book	N	Y	String	Book to map the trade to (must match the node in the Book Hierarchy).	
TradeID	Y	N	String	If TradeId comes from multiple systems you may need to prepend source system to the ID for uniqueness. Note that in certain cases, the TradeId could be for adjustment purposes. In such cases we might only have one PnL vector per Book or desk. The TradeId should contain this information clearly (ADDON or ADJ).	“IR_IRSWAP_LIBOR3M”, “EQ_12345677”, etc.

6.7 Ladder Definition

This Ladder Definition file type is identified using the pattern: ****LadderDefinition*.csv** (as specified by `sensiLaddersFilePattern`). This file is loaded using the **SensiLadders** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Indicates the date of the file. See Note on AsOfDate.	2018-09-28
RiskClass	Y	N	String	The risk class that the ladder scale is defined for.	Equity
ShiftType	N	N	String	The type of the scale ('A' for absolute, 'R' for relative).	A
Scale	N	N	List of doubles (delimited by semicolons)	The ladder scale for the risk class and as-of-date. The ladder must include the zero-shift as 0.0.	-0.5;-0.25;-0.1;0.0;0.1;0.25;0.5 (Relative, percentages) or -47.6;-20.0;0.0;20.0;47.6 (Absolute shift values)

For more information, see Sensitivity ladders

6.8 Static Maturities

Pillars of maturity used to tore sensitivities internally

This Static Maturities file type is identified using the pattern: ****StaticMaturities*.csv** (as specified by `sensiMaturitiesFilePattern`). This file is loaded using the **Maturities** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
MaturityLabels	Y	N	String	Name for the bucket of time points	
NumberOfDays	N	N	String	Number of days to include in the bucketed group	
SensitivityName	Y	N	String	Sensitivity for which the maturity label is used	

6.9 Dynamic Maturities

Maturities and set used for dynamic bucketing feature

This Dynamic Maturities file type is identified using the pattern: ****DynamicMaturities*.csv** (as specified by `sensiDynMaturitiesFilePattern`). This file is loaded using the **DynamicMaturities** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
MaturityLabels	Y	N	String	Name for the bucketed group	0.5Y
NumberOfDays	N	N	String	Number of days to include in the bucketed group	180
SensitivityName	Y	N	String	Sensitivity for which the maturity label is used	
MaturitySet	Y	N	String	Specifies the label for the context value users can select at query time to apply this maturity.	REDUCED

6.10 Static Moneyness

Pillars of moneyness used to tore sensitivities internally

This Static Moneyness file type is identified using the pattern: ****StaticMoneyness*.csv** (as specified by `sensiMoneynessFilePattern`). This file is loaded using the **Moneyness** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
MoneynessLabels	Y	N	String	Name for the bucket of time points	
Shift	N	N	String	Shift from the moneyness	-45
SensitivityName	Y	N	String	Sensitivity for which the moneyness label is used	

6.11 DynamicMoneyness

Moneyness and set used for dynamic bucketing feature

This DynamicMoneyness file type is identified using the pattern: ****DynamicMoneyness*.csv** (as specified by `sensiDynMoneynessFilePattern`). This file is loaded using the **DynamicMoneyness** topic. See the Topic Aliases table for an understanding of the topic aliases associated with each topic.

For information on the glob patterns used and how to customize them, see note on File name patterns

Field	Key	Null	FieldType	Description	Example
MoneynessLabels	Y	N	String	Name for the bucket of time points	
Shift	N	N	String	Shift from the moneyness	-45
SensitivityName	Y	N	String	Sensitivity for which the tenor label is used	
MoneynessSet	Y	N	String	Specifies the label for the context value that users can select at query time to apply this tenor.	NO_SMILE

