ActiveViam

Input File Formats

Atoti ISDA-SIMM

3.0

Table of Contents

Table of Contents 2

Input file formats 3

A note on file name patterns 3

Calculation parameters 4

Calibrations 4

Calibrations Support 4

Schedule Margin Rates 5

SIMM Parameters 5

Vertices 6

Model meta data 6

Add Calibration Data 6

Add Parameter Set 6

Create Parameter Set Data 7

Ensure Support file is 7

Parameter Sets 7

Portfolio risk data 7

FX Rate 7

Portfolio 8

Risk Types 8

Sensitivity Files 9

Trade attributes 9

Input file formats

This section contains the file formats for the TSV files that you can use as input to the Atoti ISDA-SIMM[1] Reference Implementation.

Portfolio data and classification configuration files need to be replaced with organization's data. Calculation parameters contain the default set of parameters as in the SIMM methodology and as a start can be left unchanged.

Sample 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.

A note on file name patterns

The files and their respective names are used as inputs for the Solution. These files however are read by name according to a pattern, so you can add characters before and after the listed names, such as timestamps or ID numbers. ex: [crif.tsv] will be accepted also as [crif_1104894920.tsv] and [file1.crif.tsv].

---

1. Licensed from International Swaps and Derivatives Association, Inc., All Rights Reserved. Please note that your use of this ISDA SIMM(tm) service or product for calculating your firm's initial margin pursuant to applicable regulations requires a license from the International Swaps and Derivatives Association, Inc. (ISDA), which may be obtained by contacting isdalegal@isda.org. Licensing the ISDA SIMM provides documentation and support required to properly implement and maintain the ISDA SIMM(tm).

Calculation parameters

Calibrations

Parameters in the CRIF format. The Solution expects a separate file for each parameter set - for instance, SIMM 2.2 10d. Important: at the top of the file you must include an additional row having RiskType 'AsOfDate' and a start date for a given set in the field 'Parameter'.

Field	Key	Null	FieldType	Description	Example
RiskType	Y	N	String	See Risk Data Standard	Info_SIMM_Version
Bucket	Y	Y	String	See Risk Data Standard	1
Label1	Y	Y	String	See Risk Data Standard	3Y
Label2	Y	Y	String	See Risk Data Standard	1Y
Parameter	N	Y	String	See Risk Data Standard	106

Calibrations Support

This file is used to configure tuple verification for etl of calibrations file, as well as validating calibrations lookups

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Risk value date	2019-12-05
ParameterSet	Y	N	String	Must match ParameterSet in the calibrations file	10d
RiskType	Y	N	String	Must match RiskType in the calibrations file	Calib_BaseCorr_Corr
Bucket	N	N	String, TRUE or FALSE	Indicates whether the corresponding field in the calibrations file is expected to be non-empty	TRUE
Label1	N	Y	String	Indicates whether the corresponding field in the calibrations file is expected to be non-empty	TRUE

Label2	N	Y	String	Indicates whether the corresponding field in the calibrations file is expected to be non-empty	TRUE

Schedule Margin Rates

The file must contain the Margin Rates for the schedule calculation.

Field	Key	Null	FieldType	Description	Example
AsOfDate		N	String with format 'YYYY-MM-DD'	Risk value date	2019-12-01
ParameterSet		Y	String	Specifies the parameter set to which the parameter belongs to. If no ParameterSet is defined within the file, it will be set to default	SIMM 2.2
MaturityBucket		N	String	Key of the bucket. Must match Regulatory Bucket (ProductClass and MaturityBucket if relevant)	Credit5y+
BucketMargin		N	Double	Value of the margin rate that will be applied to notional	0.1

SIMM Parameters

The file must contain the list of parameters. It covers the parameters defined as scalar values. If a file is not provided for a date, the most recent preceding date file will be used.

Field	Key	Null	FieldType	Description	Example
AsOfDate		N	String with format 'YYYY-MM-DD'	Risk value date	2019-12-01
ParameterSet		Y	String	Specifies the parameter set to which the parameter belongs to. If no ParameterSet is defined within the file, it will be set to default	SIMM 2.2

Key	N	String	Key of a parameter	schedule.im.first.part.scalar
Value	N	Double	Value of the parameter	0.62

Vertices

The file provides tenor grids - indexes and labels - for different risk classes

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Value date	2018-09-28
ParameterSet	Y	Y	String	Specifies the parameter set to which the parameter belongs to. If no ParameterSet is defined within the file, it will default to BCBS	BCBS
Vertex	Y	N	Double	Tenor in years. Must be a tenor defined in regulatory calculation.	0.25
RiskClass	N	N	String	Risk class. Expected values for the SIMM risk types: commodity; credit non-qualifying; credit qualifying; equity; foreign exchange; interest rate	interest rate
Index	Y	N	String, integer	Index of a vertex (tenor), used to sort vertices. Must be 0 for the first tenor.	2

Model meta data

Add Calibration Data

This guide serves as a starting point for adding new calibration data to your Atoti ISDA-SIMM.

Add Parameter Set

Add a new row to the file parameter-sets.tsv found in the directory data-samples\data\model-meta-data.

Create Parameter Set Data

Create a file with parameter-set data. This file should contain "calibrations" in the name of the file.

For more information on how to create a calibration file with a sample please see *calibrations*.

Important: Excluding the file header the first three lines are unique and must be in the same format as the sample.

Ensure Support file is

For our new calibration data to load properly append calibration-support.tsv found in data-samples\data\parameters\ with associated tuples.

For more information on see *calibrations-support*.

Parameter Sets

Declaration of parameter sets and their hierarchies

Field	Key	Null	FieldType	Description	Example
ParameterSet	Y	N	String	Parameter set identifier	Experimental SIMM
ParentParameterSet	N	Y	String	Identifier of a parent parameter set, if applicable	SIMM 2.2

Portfolio risk data

FX Rate

This file provides FX spot rates used for currency conversion.

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	Date 'YYYY-MM-DD'	Timestamp (at close of business) for the data.	
BaseCcy	Y	N	String	The left side of the currency pair.	
CounterCcy	Y	N	String	The right side of the currency pair	
FXRate	N	N	Double	Forex rate between the two currencies.	

Portfolio

This file provides Portfolio attributes. Portfolios are used as netting sets in the calculations.

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Risk value date	2019-12-05
PortfolioId	Y	N	String	Unique netting set identifier	CSA_US_JP_33948
BaseCcy	N	Y	ISO currency code for the netting set's base currency	Trade date	USD
PostCalculationCcy	N	Y	String	ISO currency code for the netting set's post risk currency - fx delta will be filtered out	USD
CollectCalculationCcy	N	Y	String	ISO currency code for the netting set's post risk currency - fx delta will be filtered out	USD

Risk Types

Declaration of risk types, mapping to risk class and sensitivity types, and domains

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Risk value date	2019-12-01
RiskType	Y	N	String	Must list all SIMM risk types for the SIMM domain. Can include other risk types for the non-SIMM domains (custom domains)	Risk_IRCurve

RiskClass	N	N	String	Risk class for a risk type. Expected values for the SIMM risk types: commodity; credit non-qualifying; credit qualifying; equity; foreign exchange; interest rate	interest rate
SensitivityType	N	N	String	Type of sensitivity for a risk type. Expected values for the SIMM risk types: delta, vega.	delta
DefaultDomain	N	N	String	Domain for which a risk type belongs to. Must be 'SIMM' for SIMM risk types	SIMM

Sensitivity Files

Input files should be created according to the standard ISDA CRIF (Common Risk Interchange Format). For details on how to become a licensed CRIF user, contact ISDA at analytics@isda.org.

Trade attributes

This file provides additional analytical attributes enriching risk data for analytical purposes.

Field	Key	Null	FieldType	Description	Example
AsOfDate	Y	N	String with format 'YYYY-MM-DD'	Risk value date	2019-12-05
TradeId	Y	N	String	Unique trade/position identifier	mx_cfc8ed1e
TradeDate	N	Y	String with format 'YYYY-MM-DD'	Trade date	2019-03-12
CounterpartyId	N	Y	String	Counterparty identifier	CPTY_42
ProductId	N	Y	String	Internal product identifier	IRS
Book	N	Y	String	Internal book identifier	EQ_FLOW
Underlying	N	Y	String	Trades underlying instrument identifier	USD.IBOR3M