FpML Interest Rate Derivative Example XML

Working Draft 30 January 2002

Version: 3.0

This Version:

http://www.fpml.org/spec/2002/wd-fpml-ird-examples-3-0-2002-01-30

Latest Version:

http://www.fpml.org/spec/fpml-3-0

Previous Version:

http://www.fpml.org/spec/2002/tr-fpml-2-0-2002-01-14

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1 Introduction

This section contains twenty eight example FpML trades. Each example illustrates how different product features are modeled in FpML.

Example 5 shows the defaulted 'type' attributes as part of the sample document. This illustrates the additional content model information available to a validating parser when processing an FpML document.

The sample xml document are available for download from the fpml.org website.

2 Example 1 - Fixed/Floating Single Currency Interest Rate Swap

File: ird_example_1.xml

On 12 December, 1994 Chase New York and Barclays Bank London enter into an ISDA swap agreement with each other. The terms of the contract are:

- Effective Date: 14 December, 1994
- Termination Date: 14 December, 1999
- Notional Amount: DEM 50,000,000
- Chase pays the floating rate every 6 months, based on 6-month DEM-LIBOR-BBA, on an ACT/360 basis
- Barclays pays the 6% fixed rate every year on a 30E/360 basis
- The swap is non compounding, non amortizing and there are no stub periods. There is no averaging of rates. The business day convention for adjusting the calculation dates is the same as that used for payment date adjustments.

Note the following:

- This example is identical to the MT360 Example 1 message in the S.W.I.F.T. User Handbook (Page 361, Category 3 - Treasury Markets - Foreign Exchange, Money Markets and Derivatives - October 1998 Standards Release - August 1998 Edition)
- Optional cashflows are not included in this example
- The floatingRateIndexScheme refers to the 1991 ISDA Definitions.

3 Example 2 - Fixed/Floating Single Currency Interest Rate Swap with Initial Stub Period and Notional Amortization

File: ird_example_2.xml

The swap contract is identical to Example 1 except that there is an initial stub period and the notional amortizes.

The rate for the stub period is the linear interpolation between the 4-month and 5-month DEM-LIBOR-BBA rates.

The stub period on the floating stream runs from 16 January, 1995 to 14 June, 1995, and on the fixed stream from 16 January, 1995 to 14 December, 1995.

The notional amount is decreased by DEM 10,000,000 each year.

Note the following:

- This example is identical to the MT360 Example 2 message in the S.W.I.F.T. User Handbook (Page 364, Category 3 - Treasury Markets - Foreign Exchange, Money Markets and Derivatives - October 1998 Standards Release - August 1998 Edition)
- Optional cashflows are included. An assumption that all weekdays are good business days has been made in calculating the adjusted dates in the cashflows
- The floatingRateIndexScheme refers to the 1991 ISDA Definitions.

4 Example 3 - Fixed/Floating Single Currency Interest Rate Swap with Compounding, Payment Delay and Final Rate Rounding

File: ird_example_3.xml

On 25 April, 2000 Morgan Stanley Dean Witter and JPMorgan enter into an ISDA swap agreement with each other. The terms of the contract are:

- Effective Date: 27 April, 2000
- Termination Date: 27 April, 2002
- Notional Amount: USD 100,000,000
- JPMorgan pays the 5.85% fixed rate semi-annually on a 30/360 basis.
- Morgan Stanley Dean Witter pays the floating rate semi-annually, based on 3-month USD-LIBOR-BBA reset and compounded flat quarterly, on an ACT/360 basis. The compounded rate to be used for calculating each floating payment amount will be rounded to the nearest 5 decimal places. Note how a percentage rate rounding of 5 decimal places is expressed as a rounding precision of 7 in the FpML document since the percentage is expressed as a decimal, e.g. 9.876543% (or 0.09876543) being rounded to the nearest 5 decimal places is 9.87654% (or 0.0987654)
- The business day convention for adjusting the calculation dates is the same as that used for payment date adjustments. There is a payment delay of 5 business days.

Note the following:

- Optional cashflows are included. An assumption that all weekdays are good business days has been made in calculating the adjusted dates in the cashflows
- The floatingRateIndexScheme refers to the 1998 Supplement to the 1991 ISDA Definitions.

5 Example 4 - Fixed/Floating Single Currency Interest Rate Swap with Arrears Reset, Step-Up Coupon and Upfront Fee

File: ird_example_4.xml

On 25 April, 2000 Morgan Stanley Dean Witter and JPMorgan enter into an ISDA swap agreement with each other. The terms of the contract are:

- Effective Date: 27 April, 2000
- Termination Date: 27 April, 2002
- Notional amount: USD 100,000,000
- JPMorgan pays a 6.0% fixed rate semi-annually on a 30/360 basis for the first year and a fixed rate of 6.5% for the final year
- Morgan Stanley Dean Witter pays the floating rate quarterly, based on 3-month USD-LIBOR-BBA reset in arrears, on an ACT/360 basis
- There is no adjustment to period end dates on the fixed stream, i.e. the business day convention used for adjusting the payment dates does not apply for adjusting the calculation dates
- There is an upfront fee of USD 15,000 payable by Morgan Stanley Dean Witter to JPMorgan on the Effective Date.

Note the following:

- Optional cashflows are not included in this example
- The floatingRateIndexScheme refers to the 1998 Supplement to the 1991 ISDA Definitions.

6 Example 5 - Fixed/Floating Single Currency Interest Rate Swap with Long Initial Stub and Short Final Stub

File: ird_example_5.xml

On 3 April, 2000 Chase and UBS Warburg enter into an ISDA swap agreement with each other. The terms of the contract are:

- Effective Date: 5 April, 2000
- Termination Date: 5 January, 2005
- Notional Amount: EUR 75,000,000
- Chase pays the floating rate every 6 months, based on 6-month EUR-EURIBOR-Telerate plus 10 basis points spread, on an ACT/360 basis
- UBS Warburg pays the 5.25% fixed rate every year on a 30/360 basis
- There is a long initial stub period of 7 months. The first period runs from 5 March, 2000 to 5 October, 2000 and an initial stub rate of 5.125% has been agreed for this period on the floating stream
- There is a short final stub period of 3 months. The final period runs from 5 October, 2004 to 5 January, 2005 and the 3-month EUR-EURIBOR-Telerate rate will be used for this period on the floating stream
- The business day convention for adjusting the calculation dates is the same as that used for payment date adjustments.

Note the following:

- The optional cashflows are not shown in this example
- This example shows the defaulted 'type' attributes to illustrate the additional content model information available to a validating parser. Whilst it is not invalid to include this information in the XML document instance, it is not recommended to do so, as any inconsistencies between the type information specified in the document and that in the DTD will result in a well formed but invalid FpML document
- The floatingRateIndexScheme refers to the 1998 ISDA Euro Definitions.

7 Example 6 - Fixed/Floating Cross Currency Interest Rate Swap

File: ird_example_6.xml

On 12 December, 1994 Chase New York and Barclays Bank London enter into an ISDA cross-currency swap agreement with each other. The terms of the contract are:

- Effective Date: 14 December, 1994
- Termination Date: 14 December, 1999
- Chase pays the floating rate every 6 months, based on 6-month USD-LIBOR-BBA, on USD 10,000,000 and an ACT/360 basis
- Barclays pays the 6% fixed rate every year on JPY 1,000,000,000 and a 30E/360 basis
- The swap is non compounding, non amortizing and there are no stub periods. There is no averaging of rates. The business day convention for adjusting the calculation dates is the same as that used for payment date adjustments.

Note the following:

- This example is identical to the MT361 Example 1 message in the S.W.I.F.T. User Handbook (Page 477, Category 3 - Treasury Markets - Foreign Exchange, Money Markets and Derivatives - October 1998 Standards Release - August 1998 Edition)
- Optional cashflows are included. An assumption that all weekdays are good business days has been made in calculating the adjusted dates in the cashflows
- The floatingRateIndexScheme refers to the 1991 ISDA Definitions.

8 Example 7 - Fixed/Floating Overnight Interest Rate Swap (OIS)

File: ird_example_7.xml

On 25 January, 2001 Citibank and Mizuho Capital enter into an ISDA swap agreement with each other. The terms of the contract are:

- Effective Date: 29 January, 2001
- Termination Date: 29 April, 2001
- Notional Amount: EUR 100,000,000
- Citibank makes a single floating rate payment at maturity based on the self-compounding floating rate index EUR-EONIA-OIS-COMPOUND, on an ACT/360 basis. The payment is delayed by one TARGET settlement day
- Mizuho Capital makes a single fixed rate payment at maturity based on a fixed rate of 5.1%, on an ACT/360 basis. The payment is delayed by one TARGET settlement day.

Note the following:

- Optional cashflows are not included in this example
- The floatingRateIndexScheme refers to the 2000 ISDA Definitions
- The calculationPeriodFrequency, paymentFrequency and resetFrequency are all specified as 'Term' since payments on the fixed and floating streams occur only at maturity and there is a single calculation period. The rollConvention is specified as 'None'
- The floating rate reset date is the last day of the calculation period. The ISDA definition of the OIS floating rate index provides for the compounding of the overnight deposit rates to occur in the process of arriving at the floating rate. There is no need to specify compounding of the rate separately, i.e. calculationPeriodFrequency and paymentFrequency are the same and no compoundingMethod is specified
- The fixing date is equal to the reset date
- There is no indexTenor (designated maturity) specified for the OIS floating rate index
- The calculation agent is Citibank.

9 Example 8 - Forward Rate Agreement

File: ird_example_8.xml

On 14 May, 1991 ABN AMRO Bank and Midland Bank enter a Forward Rate Agreement in which ABN AMRO is the seller of the notional contract amount and Midland the buyer. The terms of the contract are:

- Effective Date: 17 July, 1991
- Termination Date: 17 January, 1992
- Notional Amount: CHF 25,000,000
- Fixed Rate: 4.0%
- Day Count Fraction: Actual/360

Note the following:

- This example is identical to the MT340 Example message in the S.W.I.F.T. User Handbook (Page 243, Category 3 - Treasury Markets - Foreign Exchange, Money Markets and Derivatives - October 1998 Standards Release - August 1998 Edition).
- The floatingRateIndexScheme refers to the 1991 ISDA Definitions.

10 Example 9 - European Swaption, Physical Settlement, Explicit Underlying Effective Date

File: ird_example_9.xml

On 30 August, 2000 Party buys from PartyB an option to exercise into an underlying ISDA swap. The terms of the contract are:

- PartyA pays to partyB a premium of EUR 100000, on 30 August, 2000.
- The Option Expires on 28th August, 2001.
- The Option should be exercised no earlier than 09:00 hours Brussels time, and no later than 11:00 hours Brussels time
- Follow-up confirmation of the exercise decision is required.
- Effective Date of the Underlying Swap: 30 August, 2001
- Termination Date of the Underlying Swap: 30 August, 2006
- Notional on the Underlying Swap Amount: EUR 100,000,000
- Should the option be exercised, PartyA makes semi-annual floating rate payments based on the floating rate index EUR-EURIBOR-Telerate, on an ACT/360 basis.
- Should the option be exercised, PartyB makes annual fixed rate payments based on a fixed rate of 5.0%, on an 30/360 basis.

Note the following:

- The Calculation agent is partyB
- The notification party is partyB, i.e. it is to partyB that notice of exercise must be given.
- The Swap is not specified with cashflows.
- The options settles physically.
- The effective date of the underlying swap is explicitly set as 30 August, 2001 by virtue of the fact that there is no relevantUnderlyingDate element set.

11 Example 10 - European Swaption, Physical Settlement, Relative Underlying Effective Date

File: ird_example_10.xml

On 30 August, 2000 Party buys from PartyB an option to exercise into an underlying ISDA swap. The terms of the contract are:

- PartyA pays to partyB a premium of EUR 100000, on 30 August, 2000.
- The Option Expires on 28th August, 2001.
- The Option should be exercised no earlier than 09:00 hours Brussels time, and no later than 11:00 hours Brussels time
- Follow-up confirmation of the exercise decision is required.
- Effective Date of the Underlying Swap is defined as being 2 days after the Exercise Date.
- Termination Date of the Underlying Swap: 30 August, 2006
- Notional on the Underlying Swap Amount: EUR 100,000,000
- Should the option be exercised, PartyA makes semi-annual floating rate payments based on the floating rate index EUR-EURIBOR-Telerate, on an ACT/360 basis.
- Should the option be exercised, PartyB makes annual fixed rate payments based on a fixed rate of 5.0%, on an 30/360 basis.

12 Example 11 - European Swaption, Physical Settlement, Partial Exercise, Automatic Exercise

File: example11.xml

On 30 August, 2000 Party buys from PartyB an option to exercise into an underlying ISDA swap. The terms of the contract are:

- PartyA pays to partyB a premium of EUR 100000, on 30 August, 2000.
- The Option Expires on 28th August, 2001.
- The option is exercised automatically where the threshold rate for exercise is set as 2 basis points.
- There is allowance for partial exercise, where the minimum notional amount is EUR 50,000,000 increasing in multiples of EUR 10,000,000.
- Effective Date of the Underlying Swap: 30 August 2001.
- Termination Date of the Underlying Swap: 30 August, 2006
- Notional on the Underlying Swap Amount: EUR 100,000,000
- Should the option be exercised, PartyA makes semi-annual floating rate payments based on the floating rate index EUR-EURIBOR-Telerate, on an ACT/360 basis.
- Should the option be exercised, PartyB makes annual fixed rate payments based on a fixed rate of 5.0%, on an 30/360 basis.

13 Example 12 - European Swaption, Cash Settlement, Swaption Straddle

File: ird_example_12.xml

On 30 August, 2000 Party buys from PartyB an option to exercise into an underlying ISDA swap. The terms of the contract are:

- PartyA pays to partyB a premium of EUR 100000, on 30 August, 2000.
- The Option Expires on 28th August, 2001.
- The Option should be exercised no earlier than 09:00 hours Brussels time, and no later than 11:00 hours Brussels time
- The exercise, settlement is made in cash with valuation being performed using the yield curve unadjusted method (rate source - ISDA, rate type - Mid).
- Follow-up confirmation of the exercise decision is required.
- Effective Date of the Underlying Swap: 30 August, 2001
- Termination Date of the Underlying Swap: 30 August, 2006
- Notional on the Underlying Swap Amount: EUR 100,000,000
- The Option held is a straddle, therefore, on exercise, PartyA will either
- Make semi-annual floating rate payments based on the floating rate index EUR-EURIBOR-Telerate, on an ACT/360 basis, and receive annual fixed rate payments based on a fixed rate of 5.0%, on an 30/360 basis.
- or
- Make annual fixed rate payments based on a fixed rate of 5.0%, on an 30/360 basis and receive semi-annual floating rate payments based on the floating rate index EUR-EURIBOR-Telerate, on an ACT/360 basis.

14 Example 13 - European Swaption, Cash Settled, cashflows included

File: ird_example_13.xml

On 30 August, 2000 Party buys from PartyB an option to exercise into an underlying ISDA swap. The terms of the contract are:

- PartyA pays to partyB a premium of EUR 100000, on 30 August, 2000.
- The Option Expires on 28th August, 2001.
- The Option should be exercised no earlier than 09:00 hours Brussels time, and no later than 11:00 hours Brussels time
- The exercise, settlement is made in cash with valuation being performed using the yield curve unadjusted method (rate source - ISDA, rate type - Mid).
- Follow-up confirmation of the exercise decision is required.
- Effective Date of the Underlying Swap: 30 August, 2001
- Termination Date of the Underlying Swap: 30 August, 2006
- Notional on the Underlying Swap Amount: EUR 100,000,000
- Should the option be exercised, PartyA makes semi-annual floating rate payments based on the floating rate index EUR-EURIBOR-Telerate, on an ACT/360 basis.
- Should the option be exercised, PartyB makes annual fixed rate payments based on a fixed rate of 5.0%, on an 30/360 basis.

Note the following:

- The Calculation agent is partyB
- The swaption is specified with its adjusted exercise date.
- The Swap is specified with cashflows included

15 Example 14 - Bermudan Swaption, Physical Settlement.

File: ird_example_14.xml

On 30 August, 2000 Party buys from PartyB an option to exercise into an underlying ISDA swap. The terms of the contract are:

- PartyA pays to partyB a premium of EUR 100000, on 30 August, 2000.
- The Option can be exercised the following dates: 28 December, 2000, 28 April, 2000 or 28 August, 2000
- The Option should be exercised on these dates no earlier than 09:00 hours Brussels time, and no later than 11:00 hours Brussels time
- Follow-up confirmation of the exercise decision is required.
- Effective Date of the Underlying Swap: 30 August, 2001
- Termination Date of the Underlying Swap: 30 August, 2006
- Notional on the Underlying Swap Amount: EUR 100,000,000
- Should the option be exercised, PartyA makes semi-annual floating rate payments based on the floating rate index EUR-EURIBOR-Telerate, on an ACT/360 basis.
- Should the option be exercised, PartyB makes annual fixed rate payments based on a fixed rate of 5.0%, on an 30/360 basis.

Note the following:

- The Calculation agent is partyB
- The options settles physically.

16 Example 15 - American Swaption, Physical Settlement.

File: ird_example_15.xml

On 30 August, 2000 Party buys from PartyB an option to exercise into an underlying ISDA swap. The terms of the contract are:

- PartyA pays to partyB a premium of EUR 100000, on 30 August, 2000.
- The Option can be exercised on any date from 30 August 2000 to 30 August 2002.
- The Option should be exercised on these dates no earlier than 09:00 hours Brussels time, and no later than 11:00 hours Brussels time
- Follow-up confirmation of the exercise decision is required.
- Effective Date of the Underlying Swap will be 2 days after the exercise date.
- Termination Date of the Underlying Swap: 30 August, 2006
- Notional on the Underlying Swap Amount: EUR 100,000,000
- Should the option be exercised, PartyA makes semi-annual floating rate payments based on the floating rate index EUR-EURIBOR-Telerate, on an ACT/360 basis.
- Should the option be exercised, PartyB makes annual fixed rate payments based on a fixed rate of 5.0%, on an 30/360 basis.

Note the following:

- The Calculation agent is partyB
- The options settles physically.

17 Example 16 - Fixed/Floating Single Currency IRS With Mandatory Early Termination.

File: ird_example_16.xml

On 30 August, 2000 PartyA and PartyB agree to enter into an ISDA swap with early termination provision. The terms of the contract are:

- Effective Date of the Swap: 30 August 2001.
- Termination Date of the Underlying Swap: 30 August, 2006
- Notional on the Underlying Swap Amount: EUR 100,000,000
- PartyA makes semi-annual floating rate payments based on the floating rate index EUR-EURIBOR-Telerate, on an ACT/360 basis.
- PartyB makes annual fixed rate payments based on a fixed rate of 5.0%, on an 30/360 basis.
- The will terminate on the 30 August 2001.
- Cash settlement will be made on this date with valuation taking place 2 days prior to settlement at 11:00 hours (Brussels time).
- The Swap will be valued at this lime using the cash-price method

Note the following:

- The partyA and partyB are joint calculation agents

18 Example 17 - Fixed/Floating Single Currency IRS With European Style Optional Early Termination.

File: ird_example_17.xml

On 30 August, 2000 PartyA and PartyB agree to enter into an ISDA swap with early termination provision. The terms of the contract are:

- Effective Date of the Swap: 30 August 2001.
- Termination Date of the Underlying Swap: 30 August, 2006
- Notional on the Underlying Swap Amount: EUR 100,000,000
- PartyA makes semi-annual floating rate payments based on the floating rate index EUR-EURIBOR-Telerate, on an ACT/360 basis.
- PartyB makes annual fixed rate payments based on a fixed rate of 5.0%, on an 30/360 basis.
- The partyA has a chance to terminate the swap early - cash-settling on 30 August 2001. Notification of this needs to be given 5 days prior to this date after 9:00 hours (Brussels time) and not after (11:00 hours Brussels time)
- Cash settlement will be made on this date with valuation taking place 2 days prior to settlement at 11:00 hours (Brussels time).
- The Swap will be valued at this time using the cash-price method

19 Example 18 - Fixed/Floating Single Currency IRS With Bermudan Style Optional Early Termination, Cashflows + optionalEarlyTerminationAdjustedDates.

File: ird_example_18.xml

On 30 August, 2000 PartyA and PartyB agree to enter into an ISDA swap with early termination provision. The terms of the contract are:

- Effective Date of the Swap: 30 August 2001.
- Termination Date of the Underlying Swap: 30 August, 2006
- Notional on the Underlying Swap Amount: EUR 100,000,000
- PartyA makes semi-annual floating rate payments based on the floating rate index EUR-EURIBOR-Telerate, on an ACT/360 basis.
- PartyB makes annual fixed rate payments based on a fixed rate of 5.0%, on an 30/360 basis.
- The partyA has a chance to terminate the swap early - cash-settling either 30 August 2003, or 30 August 2004. Notification of this needs to be given 5 days prior to this date after 9:00 hours (Brussels time) and not after (11:00 hours Brussels time)
- Cash settlement will be made on this date with valuation taking place 2 days prior to settlement at 11:00 hours (Brussels time).
- The Swap will be valued at this time using the cash-price method

Note the following:

- The swap is defined with cashflows.

20 Example 19 - Fixed/Floating Single Currency IRS With American Style Optional Early Termination.

File: ird_example_19.xml

On 30 August, 2000 PartyA and PartyB agree to enter into an ISDA swap with early termination provision. The terms of the contract are:

- Effective Date of the Swap: 30 August 2001.
- Termination Date of the Underlying Swap: 30 August, 2011
- Notional on the Underlying Swap Amount: EUR 100,000,000
- PartyA makes semi-annual floating rate payments based on the floating rate index EUR-EURIBOR-Telerate, on an ACT/360 basis.
- PartyB makes annual fixed rate payments based on a fixed rate of 5.0%, on an 30/360 basis.
- The partyA has a chance to terminate the swap early - cash-settling any time between 30 August 2001 and 30 August 2006. Notification of this needs to be given 5 days prior to this date after 9:00 hours (Brussels time) and not after (11:00 hours Brussels time)
- Cash settlement will be made on this date with valuation taking place 2 days prior to settlement at 11:00 hours (Brussels time).
- The Swap will be valued at this time using the cash-price method

21 Example 20 - Fixed/Floating Single Currency IRS With European Cancelable Provision.

File: ird_example_20.xml

On 30 August, 2000 PartyA and PartyB agree to enter into an ISDA swap with Cancelable provision. The terms of the contract are:

- Effective Date of the Swap: 30 August 2001.
- Termination Date of the Underlying Swap: 30 August, 2011
- Notional on the Underlying Swap Amount: EUR 100,000,000
- PartyB makes semi-annual floating rate payments based on the floating rate index EUR-EURIBOR-Telerate, on an ACT/360 basis.
- PartyA makes annual fixed rate payments based on a fixed rate of 5.0%, on an 30/360 basis.
- The partyB has a chance to cancel the swap after five years (30 August 2006) giving notification 15 days prior to this date after 9:00 hours (Brussels time) and not after (11:00 hours Brussels time)

22 Example 21 - Fixed/Floating Single Currency IRS With European Extendible Provision.

File: ird_example_21.xml

On 30 August, 2000 PartyA and PartyB agree to enter into an ISDA swap with Extendible provision. The terms of the contract are:

- Effective Date of the Swap: 30 August 2001.
- Termination Date of the Underlying Swap: 30 August, 2006
- Notional on the Underlying Swap Amount: EUR 100,000,000
- PartyB makes semi-annual floating rate payments based on the floating rate index EUR-EURIBOR-Telerate, on an ACT/360 basis.
- PartyA makes annual fixed rate payments based on a fixed rate of 5.0%, on an 30/360 basis.
- The partyA has a chance to extend the swap after five years (30 August 2006) giving notification 15 days prior to this date after 9:00 hours (Brussels time) and not after (11:00 hours Brussels time). If extended, the swap will continue until 30 August 2011

23 Example 22 - Interest Rate Cap

File: ird_example_22.xml

On 30 August, 2000 PartyA sells to PartyB an interest rate cap. The terms of the contract are:

- Effective Date of the Swap: 30 August 2001.
- Termination Date of the Underlying Swap: 30 August, 2006
- Notional on the Underlying Swap Amount: EUR 100,000,000
- PartyA sells partyB a stepped cap (initial rate of 6%) on semi-annual floating rate payments based on the floating rate index EUR-EURIBOR-Telerate, on an ACT/360 basis (partyB being the payer of the floating rate).

Note the following:

- The cap rate schedule defines annual 'step up' intervals hence keeping the same strike for 2 successive caplets.

24 Example 23 - Interest Rate Floor

File: ird_example_23.xml

On 30 August, 2000 PartyA sells to PartyB an interest rate floor. The terms of the contract are:

- Effective Date of the Swap: 30 August 2001.
- Termination Date of the Underlying Swap: 30 August, 2006
- Notional on the Underlying Swap Amount: EUR 100,000,000
- PartyA sells partyB a stepped floor (initial rate of 4%) on semi-annual floating rate payments based on the floating rate index EUR-EURIBOR-Telerate, on an ACT/360 basis (partyB being the receiver of the floating rate).

Note the following:

- The floor rate schedule defines annual 'step up' intervals hence keeping the same strike for 2 successive floorlets.

25 Example 24 - Interest Rate Collar

File: ird_example_24.xml

On 30 August, 2000 PartyA sells to PartyB an interest rate floor. The terms of the contract are:

- Effective Date of the Swap: 30 August 2001.
- Termination Date of the Underlying Swap: 30 August, 2006
- Notional on the Underlying Swap Amount: EUR 100,000,000
- PartyA sells partyB a stepped collar (initially between 4% and 6%) on semi-annual floating rate payments based on the floating rate index EUR-EURIBOR-Telerate, on an ACT/360 basis (partyB being the payer of the floating rate).

Note the following:

- The cap and floor rate schedule defines annual 'step up' intervals hence keeping the same strike for 2 successive caplets and floorlets respectively.

26 Example 25 - Fixed/Floating IRS Where The Floating Stream Notional Is Reset Based On Prevailing Spot Exchange Rate

File: ird_example_25.xml

On 9 January, 2001 PartyA and PartyB agree to enter into an FX Reseting interest rate swap. The terms of the contract are:

- Effective Date of the Swap: 11 January 2006.
- Termination Date of the Underlying Swap: 11 January, 2011
- PartyB makes semi-annual fixed rate payments based on a fixed rate of 1.0%, on an ACT/360-Fixed basis.
- Notional on the fixed leg of the Swap: JPY 100,000,000
- PartyA makes quarterly floating rate payments based on the floating rate index USD-LIBOR-BBA, on an ACT/360 basis.
- Notional on the floating leg of the swap has a Ccy of USD and is FX Linked to the fixed leg JPY notional. The conversion rate for each cashflow is that observed on payment day at 17:00 hours from the Bank of Japan information source.

27 Example 26 - Example 25 - Fixed/Floating IRS Where The Floating Stream Notional Is Reset Based On Prevailing Spot Exchange Rate - Cashflows.

File: ird_example_26.xml

On 9 January, 2001 PartyA and PartyB agree to enter into a forward starting FX Reseting interest rate swap. The terms of the contract are:

- Effective Date of the Swap: 11 January, 2006.
- Termination Date of the Underlying Swap: 11 January, 2001
- PartyB makes semi-annual fixed rate payments based on a fixed rate of 1.0%, on an ACT/360-Fixed basis.
- Notional on the fixed leg of the Swap: JPY 100,000,000
- PartyA makes quarterly floating rate payments based on the floating rate index USD-LIBOR-BBA, on an ACT/360 basis.
- Notional on the floating leg of the swap has a Ccy of USD and is FX Linked to the fixed leg JPY notional. The conversion rate for each cashflow is that observed on payment day at 17:00 hours from the Bank of Japan information source.

Things to note:

- The Swap stream is defined with cashflows

28 Example 27 - Inverse Floater

File: ird_example_27.xml

On 30 August, 2000 PartyA and PartyB agree to enter into an ISDA. The terms of the contract are:

- Effective Date of the Swap: 30 August 2001.
- Termination Date of the Underlying Swap: 30 August, 2006
- Notional on the Underlying Swap Amount: USD 100,000,000
- PartyA makes quarterly payments with floating rate payments derived as (8.5% - floating rate index EUR-EURIBOR-Telerate), on an ACT/360 basis.
- PartyB makes semi-annual fixed rate payments based on a fixed rate of 4.5%, on an 30/360 basis.

Things to note:

- The use of the floatingRateMultiplierSchedule to invert the floating USD rate.

29 Example 28 - BulletPayments

File: ird_example_28.xml

On 29 April, 2000 PartyA agrees the payment of a single cashlow to PartyB. The terms of the contract are:

- The payment has an unadjusted payment date of 27 July 2001.
- The amount to be paid is USD 15,000.
- Payment dates are adjusted to London and NY business centers for both payments