

## Case Study: Interest Rate Swap (IRS) valuation for a Fund Administrator

### Business Problem

**The Client:** A US based Fund Administrator, which provides global fund administration and accounting services. The firm sought an independent verification of the month-end valuation for a portfolio of interest rate swap instruments.

### Need and Scope

- Our client needed us to verify the mark to market (MTM) values of the IRS contracts in its swap portfolio on a monthly basis.
- The trade specific information of the swap contracts (OTC derivatives) were provided to Epitome.
- Back-testing our computed values by reference to an established market source to ensure the values were accurate and within a given tolerance limit.

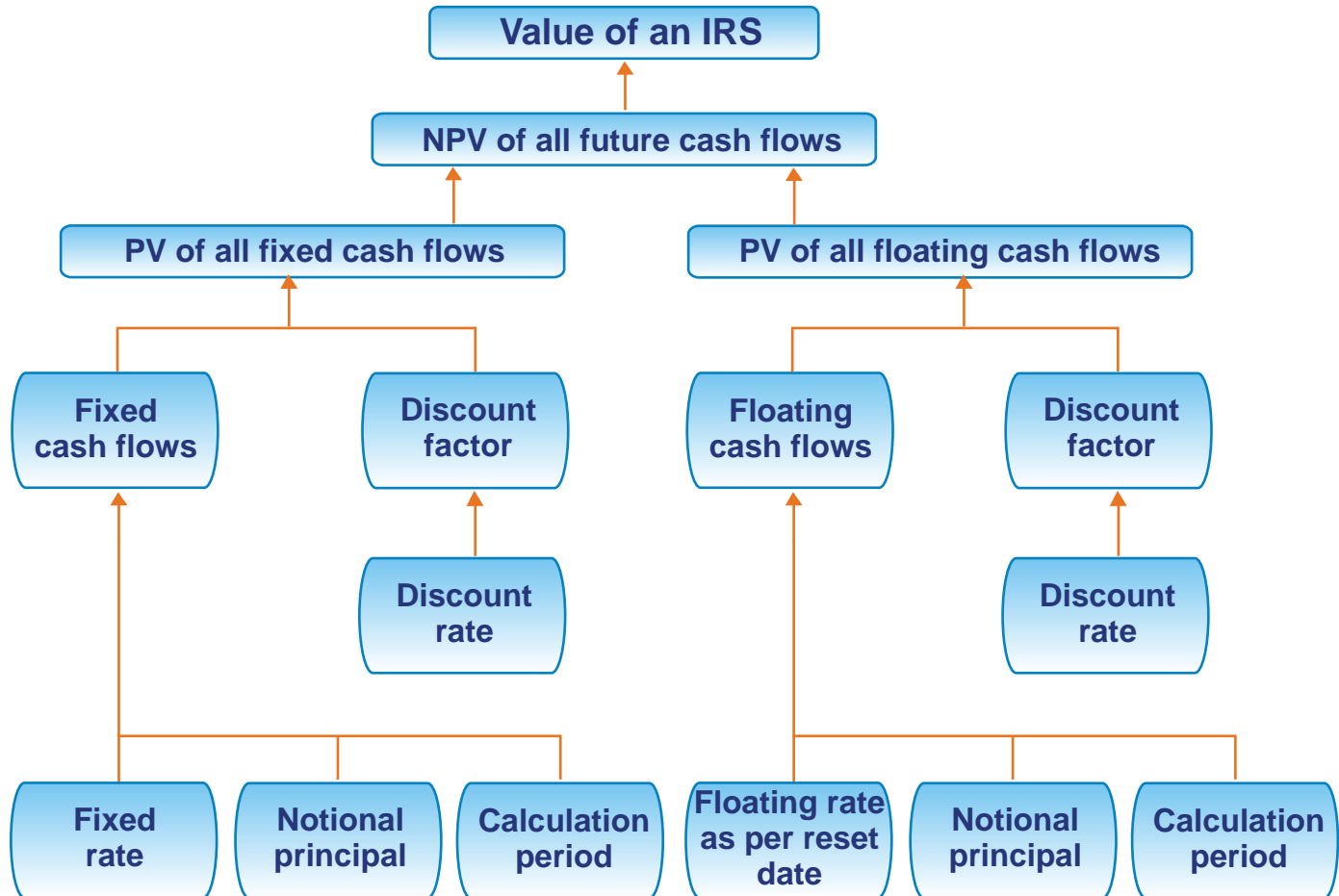
## Solution

- We used our in-house developed Excel - VB based model for valuing the interest rate swaps.
- Methodology used in our model: discounting of cash flows to find the net present value (NPV), which gives the mark-to-market value of the swap as on a valuation date
- The output (MTM Value) for each contract was obtained by inputting trade specific information.
- The team at Epitome made use of the swap calculator in the Bloomberg Terminal (SWPM) to back-test our values by giving the same trade details used in the excel calculator.
- The back-tested values from Bloomberg were found to be close to the values calculated from the excel calculator and within the tolerance limits, with the variations observed at less than 2%.

## Benefits

- The valuations were reliable and consistent, verified by the back testing process using Bloomberg Analytics.
- Valuing the interest rate swaps with our model based on market principles, enabled our client to validate their internal information.

## Epitome's IRS Valuation Process Flow



# Snapshot of the Bloomberg Swap Calculator

<HELP> for explanation.

P210c EquitySWPM

Options | New Deal | Save Deal | View | Hedge | SWAP MANAGER

Deal Counterparty **SWAP CNTRPARTY** Ticker / **SWAP** Series Deal # **DETAIL**

**Receive Fixed** **DETAIL**

Ticker	# SWAP	Series	Leg#
Notional	10	MM	Cpn 5.23000 %
Curr	USD	Calc Basis	Money Mkt
Effective	03/20/07	Pay Freq	SemiAnnual
Maturity	03/20/10	Day Cnt	30I 360
FirstPmt	09/20/07	Unwind Cpn	4.70100 %
NxtLastPmt	09/20/09	Unwind Annuity	0.52900 %
DiscountCrv	23 Bid	USD Swaps(30/360,S/A)	

**Pay Float** **DETAIL**

Ticker	# SWAP	Series	Leg#
Notional	10	MM	Index US0003M
Curr	USD	Latest Index	5.36000
Effective	03/20/07	Spread	0.00 bp
Maturity	03/20/10	Reset Freq	Quarterly
FirstPmt	06/20/07	Pay Freq	Quarterly
NxtLastPmt	12/20/09	Day Cnt	ACT 360
DiscountCrv	23 Bid	USD Swaps(30/360,S/A)	
ForwardCrv	23 Bid	USD Swaps(30/360,S/A)	

Valuation Curve **08/30/07** Valuation **08/30/07** All Values in **USD**

Market Value	10,329,012.91	DV01	2,394.18	Market Value	-10,102,848.47	DV01	-58.81
Accrued	232,444.44			Accrued	-105,711.11		

Net Principal	99,431.10	Calculate	Premium	Par Cpn	4.81162
Accrued	126,733.33	Premium	0.99431	DV01	2,335.38
Market Value	226,164.44	Unwind PV	149,232.35		

**Refresh**

Main	Curves	Cashflow	Risk	Horizon
Australia 61 2 9777 8600	Brazil 5511 3048 4500	Europe 44 20 7330 7500	Germany 49 69 920410	
Hong Kong 852 2977 6000	Japan 81 3 3201 8900	Singapore 65 6212 1000	U.S. 1 212 318 2000	Copyright 2007 Bloomberg L.P. H255-886-3 11-Sep-2007 13:04:15