

# IRS Cross Ccy - Front and Back

## PURPOSE

To show illustration of IRS cross currency front and back.

## OVERVIEW

## TRANSACTION DETAILS

Accounting Base Ccy
Trade ID
Trade Date
Start Date
Maturity Date
Structure
USD
IRS1001
3-Feb-03
3-Feb-03
3-Feb-06
Front and Back

Principal
Basis
Rate %
Accrual Method
Frequency

Pay Leg

USD 1,000,000
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Fixed
5.000000
Act/360
Quarterly

Rec Leg

SGD 1,750,000
Float
5.000000
Act/365 (fixed)
Quarterly

Interest Payment Dates

From Date

3-Feb-03
5-May-03
3-Nov-05

To Date

5-May-03
4-Aug-03
3-Feb-06

Days

91
91
92

Fix Rate

5.000000%
5.000000%
5.000000%

USD (Pay) Fix

-12,638.89
-12,638.89
-12,777.78

Float Reset

4.900000%
5.123200%
4.900000%

SGD (Rec) Float

21,387.77
22,352.59
21,613.70

## SUMMARY OF JOURNALS

ID	Date	Description
J1	3-Feb-03	Settlement on IRS
J2	3-Feb-03	Settlement on IRS
J3	28-Feb-03	Month End IRS Accruals
J4	1-Mar-03	Reversal Month End IRS Accruals.
J5	31-Mar-03	Month End IRS Accruals.
J6	1-Apr-03	Reversal Month End IRS Accruals
J7	30-Apr-03	Month End IRS Accruals
J8	1-May-03	Reversal Month End IRS Accruals

ID	Date	Description
J9	5-May-03	Interest Settlement on IRS
J10	3-Feb-06	Final Settlement on IRS

## **J1 Settlement on IRS**

TradeID	PostDate	B/P	Account	Ccy	Ccy Amount	Exc Rate	Ccy	Base Amount	Line
IRS1001	3-Feb-03	B	Cash at Bank	USD	-1,000,000.00	1.000000	USD	-1,000,000.00	J1a
IRS1001	3-Feb-03	B	FX USD Cash Clearing Account	USD	1,000,000.00	1.000000	USD	1,000,000.00	J1b

## **J2 Settlement on IRS**

TradeID	PostDate	B/P	Account	Ccy	Ccy Amount	Exc Rate	Ccy	Base Amount	Line
IRS1001	3-Feb-03	B	Cash at Bank	SGD	1,750,000.00	0.567456	USD	993,048.66	J2a
IRS1001	3-Feb-03	B	FX SGD Cash Clearing Account	SGD	-1,750,000.00	0.567456	USD	-993,048.66	J2b

**Note J2a: The exchange rate on 03-Feb-03 is 1.76225 (Multiplier 0.567456). See Exchange Rates below.**

## **J3 Month End IRS Accruals**

TradeID	PostDate	B/P	Account	Ccy	Ccy Amount	Exc Rate	Ccy	Base Amount	Line
IRS1001	28-Feb-03	B	[7000] IRS Receivable	SGD	6,108.22	0.568919	USD	3,475.08	J3a
IRS1001	28-Feb-03	P	[7002] IRS Income	SGD	-6,108.22	0.571584	USD	-3,491.36	J3b

TradeID	PostDate	B/P	Account	Ccy	Ccy Amount	Exc Rate	Ccy	Base Amount	Line
IRS1001	28-Feb-03	P	[5003] Unrealised FX Gains and Loss	SGD	0.00	0.000000	USD	16.28	J3c
IRS1001	28-Feb-03	B	[7001] IRS Payable	USD	-3,611.11	1.000000	USD	-3,611.11	J3d
IRS1001	28-Feb-03	P	[7003] IRS Expenses	USD	3,611.11	1.000000	USD	3,611.11	J3e

**Note J3a: Calculation of Accrual in SGD**

Start date	3-Feb-03	
Month End Date	28-Feb-03	
Days (include 28-Feb)	26	=A
Start date	3-Feb-03	
Maturity Date	5-May-03	
Days (exclude 5-May)	91	=B
Total Interest	21,378.77	=C
Period Interest	6,108.22	=C*A/B

**Note J3b: The average multiplier rate between 3-Feb and 28-Feb is 0.571584. See Exchange Rates below.**

**Note J3c: The unrealised foreign exchange loss on interest income is analyzed as follows:**

	SGD	Rate+	USD
At Closing Rate	6,108.22	0.568919	3,475.08
At Average Rate	6,108.22	0.571584	3,491.36
	Loss in exchange		-16.28

+ Rates used for calculation are in full precision. Illustrated rates are rounded to 6dp.

**Note J3d: Calculation of Accrual in USD**

Start date	3-Feb-03	
Month End Date	28-Feb-03	
Days (include 28-Feb)	26	=A
Start date	3-Feb-03	
Maturity Date	5-May-03	
Days (exclude 5-May)	91	=B
Total Interest	12,638.89	=C
Period Interest	3,611.11	=C*A/B

**J4 Reversal Month End IRS Accruals.**

TradeID	PostDate	B/P	Account	Ccy	Ccy Amount	Exc Rate	Ccy	Base Amount	Line
IRS1001	1-Mar-03	B	[7000] IRS Receivable	SGD	-6,108.22	0.568919	USD	-3,475.08	J4a
IRS1001	1-Mar-03	P	[7002] IRS Income	SGD	6,108.22	0.571584	USD	3,491.36	J4b
IRS1001	1-Mar-03	P	[5003] Unrealised FX Gains and Loss	SGD	0.00	0.000000	USD	-16.28	J4c
IRS1001	1-Mar-03	B	[7001] IRS Payable	USD	3,611.11	1.000000	USD	3,611.11	J4d
IRS1001	1-Mar-03	P	[7003] IRS Expenses	USD	-3,611.11	1.000000	USD	-3,611.11	J4e

**J5 Month End IRS Accruals.**

TradeID	PostDate	B/P	Account	Ccy	Ccy Amount	Exc Rate	Ccy	Base Amount	Line
IRS1001	31-Mar-03	B	[7000] IRS Receivable	SGD	13,391.10	0.577434	USD	7,732.47	J5a

TradeID	PostDate	B/P	Account	Ccy	Ccy Amount	Exc Rate	Ccy	Base Amount	Line
IRS1001	31-Mar-03	P	[7002] IRS Income	SGD	-13,391.10	0.571775	USD	-7,656.70	J5b
IRS1001	31-Mar-03	P	[5003] Unrealised FX Gains and Loss	SGD	0.00	0.000000	USD	-75.77	J5c
IRS1001	31-Mar-03	B	[7001] IRS Payable	USD	-7,916.67	1.000000	USD	-7,916.67	J5d
IRS1001	31-Mar-03	P	[7003] IRS Expenses	USD	7,916.67	1.000000	USD	7,916.67	J5e

**Note J5a: Calculation of Accrual in SGD**

Start date	3-Feb-03	
Month End Date	31-Mar-03	
Days (include 31-Mar)	57	=A
Start date	3-Feb-03	
Maturity Date	5-May-03	
Days (exclude 5-May)	91	=B
Total Interest	21,378.77	=C
Period Interest	13,391.10	=C*A/B

**Note J5b: The average multiplier rate between 3-Feb and 31-Mar is 0.571775. See Exchange Rates below.**

**Note J5c: The unrealised foreign exchange gain on interest income is analyzed as follows:**

	SGD	Rate+	USD
At Closing Rate	13,391.10	0.577434	7,732.47
At Average Rate	13,391.10	0.571775	7,656.70
	Gain in exchange		75.77

+ Rates used for calculation are in full precision. Illustrated rates are rounded to 6dp.

**Note J5d: Calculation of Accrual in USD**

Start date	3-Feb-03	
Month End Date	31-Mar-03	
Days (include 31-Mar)	57	=A
Start date	3-Feb-03	
Maturity Date	5-May-03	
Days (exclude 5-May)	91	=B
Total Interest	12,638.89	=C
Period Interest	7,916.67	=C*A/B

**J6 Reversal Month End IRS Accruals**

TradeID	PostDate	B/P	Account	Ccy	Ccy Amount	Exc Rate	Ccy	Base Amount	Line
IRS1001	1-Apr-03	B	[7000] IRS Receivable	SGD	-13,391.10	0.577434	USD	-7,732.47	J6a
IRS1001	1-Apr-03	P	[7002] IRS Income	SGD	13,391.10	0.571775	USD	7,656.70	J6b
IRS1001	1-Apr-03	P	[5003] Unrealised FX Gains and Loss	SGD	0.00	0.000000	USD	75.77	J6c
IRS1001	1-Apr-03	B	[7001] IRS Payable	USD	7,916.67	1.000000	USD	7,916.67	J6d
IRS1001	1-Apr-03	P	[7003] IRS Expenses	USD	-7,916.67	1.000000	USD	-7,916.67	J6e

**J7 Month End IRS Accruals**



TradeID	PostDate	B/P	Account	Ccy	Ccy Amount	Exc Rate	Ccy	Base Amount	Line
IRS1001	30-Apr-03	B	[7000] IRS Receivable	SGD	20,439.04	0.567681	USD	11,602.85	J7a
IRS1001	30-Apr-03	P	[7002] IRS Income	SGD	-20,439.04	0.572554	USD	-11,702.46	J7b
IRS1001	30-Apr-03	P	[5003] Unrealised FX Gains and Loss	SGD	0.00	0.000000	USD	99.61	J7c
IRS1001	30-Apr-03	B	[7001] IRS Payable	USD	-12,083.33	1.000000	USD	-12,083.33	J7d
IRS1001	30-Apr-03	P	[7003] IRS Expenses	USD	12,083.33	1.000000	USD	12,083.33	J7e

**Note J7a: Calculation of Accrual in USD**

Start date	3-Feb-03	
Month End Date	30-Apr-03	
Days (include 30-Apr)	87	=A
Start date	3-Feb-03	
Maturity Date	5-May-03	
Days (exclude 5-May)	91	=B
Total Interest	21,378.77	=C
Period Interest	20,439.04	=C*A/B

**Note J7b: The average multiplier rate between 3-Feb to 30-Apr is 0.572554. See Exchange Rates below.**

**Note J7c: The unrealised foreign exchange loss on interest income is analyzed as follows:**

	SGD	Rate+	USD
At Closing Rate	20,439.04	0.567681	11,602.85
At Average Rate	20,439.04	0.572554	11,702.46

	Loss in exchange		-99.61
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+ Rates used for calculation are in full precision. Illustrated rates are rounded to 6dp.

### Note J7d: Calculation of Accrual in USD

Start date	3-Feb-03	
Month End Date	30-Apr-03	
Days (include 30-Apr)	87	=A
Start date	3-Feb-03	
Maturity Date	5-May-03	
Days (exclude 5-May)	91	=B
Total Interest	12,638.89	=C
Period Interest	12,083.33	=C*A/B

### J8 Reversal Month End IRS Accruals

TradeID	PostDate	B/P	Account	Ccy	Ccy Amount	Exc Rate	Ccy	Base Amount	Line
IRS1001	1-May-03	B	[7000] IRS Receivable	SGD	-20,439.04	0.567681	USD	-11,602.85	J8a
IRS1001	1-May-03	P	[7002] IRS Income	SGD	20,439.04	0.572554	USD	11,702.46	J8b
IRS1001	1-May-03	P	[5003] Unrealised FX Gains and Loss	SGD	0.00	0.000000	USD	-99.61	J8c
IRS1001	1-May-03	B	[7001] IRS Payable	USD	12,083.33	1.000000	USD	12,083.33	J8d
IRS1001	1-May-03	P	[7003] IRS Expenses	USD	-12,083.33	1.000000	USD	-12,083.33	J8e

### J9 Interest Settlement on IRS

TradeID	PostDate	B/P	Account	Ccy	Ccy Amount	Exc Rate	Ccy	Base Amount	Line
IRS1001	5-May-03	B	Cash	SGD	21,378.77	0.570125	USD	12,188.58	J9a
IRS1001	5-May-03	P	[7002] IRS Income	SGD	-21,378.77	0.572689	USD	-12,243.39	J9b
IRS1001	5-May-03	P	[5008] FX Realised - Income	SGD	0.00	0.000000	USD	54.81	J9c
IRS1001	5-May-03	B	Cash	USD	-12,638.89	1.000000	USD	-12,638.89	J9d
IRS1001	5-May-03	P	[7003] IRS Expenses	USD	12,638.89	1.000000	USD	12,638.89	J9e

**Note J9a:**            **The realised foreign exchange loss on interest income is analyzed as follows:**

	SGD	Rate+	USD
At Closing Rate	21,378.77	0.570125	12,188.58
At Average Date	21,378.77	0.572689	12,243.39
	Loss in exchange		-54.81

+ Rates used for calculation are in full precision. Illustrated rates are rounded to 6dp.

**Note J9b:**            **The average multiplier rate between 3-Feb to 5-May is 0.572689. See Exchange Rates below.**

## **J10                      Final Settlement on IRS**

TradeID	PostDate	B/P	Account	Ccy	Ccy Amount	Exc Rate	Ccy	Base Amount	Line
IRS1001	3-Feb-06	B	Cash at Bank	USD	-1,012,777.78	1.000000	USD	-1,012,777.78	J10a

TradeID	PostDate	B/P	Account	Ccy	Ccy Amount	Exc Rate	Ccy	Base Amount	Line
IRS1001	3-Feb-06	B	FX USD Cash Clearing Account	USD	1,000,000.00	1.000000	USD	1,000,000.00	J10b
IRS1001	3-Feb-06	P	[7003] IRS Expenses	USD	12,777.78	1.000000	USD	12,777.78	J10c
IRS1001	3-Feb-06	B	Cash	SGD	1,771,613.70	0.564898	USD	1,000,781.65	J10d
IRS1001	3-Feb-06	B	FX SGD Cash Clearing Account	SGD	-1,750,000.00	0.564898	USD	-988,572.11	J10e
IRS1001	3-Feb-06	P	[7002] IRS Income	SGD	-21,613.70	0.574810	USD	-12,423.78	J10f
IRS1001	3-Feb-06	P	[5008] FX Realised - Income	SGD	0.00	0.000000	USD	214.24	J10g

**Note J10f: The average multiplier rate between 3-Nov to 3-Feb is 0.574810. See Exchange Rates below.**

**Note J10g: The realised foreign exchange loss on interest income is analyzed as follows:**

	SGD	Rate+	USD
At Closing Rate	21,613.70	0.564898	12,209.54
At Average Date	21,613.70	0.574810	12,423.78
	Loss in exchange		-214.24

+ Rates used for calculation are in full precision. Illustrated rates are rounded to 6dp.

## **EXCHANGE RATES**

Our illustration assumes the company uses different daily exchange rates for accounting.

Average rates are computed by using the multiplier rate from trade/transaction currency to the base currency each day and averaging this over the relevant period.

The following rates were used for this illustration.

#### Spot Rate

Date	USD/SGD	SGD/USD*
3-Feb-03	1.762250	0.567456
28-Feb-03	1.757720	0.568919
31-Mar-03	1.731800	0.577434
30-Apr-03	1.780370	0.561681
5-May-03	1.754000	0.570125
1-Jun-03	1.754360	0.570008
3-Nov-05	1.743900	0.586720
3-Feb-06	1.770230	0.564898

#### Average

From Date	To Date	SGD/USD*
3-Feb-03	28-Feb-03	0.571584
3-Feb-03	31-Mar-03	0.571775
3-Feb-03	30-Apr-03	0.572554
3-Feb-03	5-May-03	0.572689
3-Nov-05	3-Feb-06	0.574810

\* Rates used for calculation are in full precision. Illustrated rates are rounded to 6dp.

### **FREQUENTLY ASKED QUESTIONS**

### **RELATED INFORMATION**

### **CHANGE HISTORY**

<b>Date</b>	<b>By</b>	<b>Changes</b>
23-Aug-2008	CS	Creation.
13-Jun-2016	RJ	Reformatted.
24-Apr-2020	LT	Re-formatting.