ANZ Investment Bank

Interest Rate Swaps

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1. What is an Interest Rate Swap?

An Interest Rate Swap (or Swap) involves the exchange of interest rate payments between two parties (usually one is a bank) over a specified period. The notional principal amount of a Swap is used to calculate the periodic interest payments only and is not exchanged.

A Fixed/Floating Swap enables fixed payments or receipts to be swapped for floating (or variable) rate payments or receipts and vice versa. The physical borrowings or deposits which normally underlie these cash flows need not be held with the same financial institution with which the Swap is transacted.

For example, a borrower with funding on a floating rate basis may prefer to have certainty in repayments by paying a fixed rate. A Swap can be entered into where they undertake to pay a fixed rate to a counterparty in return for it paying a floating rate back to the borrower. The floating rate amount received is then used to meet the floating rate borrowing obligations. This brochure concentrates on the use of Swaps by borrowers but is equally applicable to Investors wanting to protect against falling interest rates.

2. Features

Reduces Uncertainty

Swaps can assist in the budget process by locking in the interest rate on the debt, thereby providing a known cost for all or part of the exposure over a given period. Swaps can also be used to effectively transform a fixed interest rate to a floating rate. These features mean that Swaps can help manage interest rate risk, most commonly from 1 - 10 years.

Risk management separate from funding source

Swaps do not represent a commitment to borrow a principal sum. Rather they operate in conjunction with, but separately to, the underlying debt. The Swap is specified in terms of a notional principal amount which enables it to be combined with a debt portfolio to achieve a desired interest rate outcome.

This separation allows the borrower the flexibility to borrow in line with their actual cashflow requirements.

The ANZ's Fixed Rate Facility product ties the risk management capabilities of a Swap to the funding capabilities of a Bank Bill. Further information on this product can be obtained through an ANZ Relationship Manager or ANZ Capital Markets Representative.

Tailored structures available

Swaps can be structured around a desired risk profile, cash flow requirements, timing of commitments and views on interest rates.

- A Swap can be structured such that the *principal amount varies* over the life of the Swap in line with expected changes to funding requirements – increasing principal, decreasing principal, or a combination of both.

- *Preferred settlement (payment) periods can be specified by the borrower* to match with funding requirements. These can include monthly, quarterly, semi-annual, annual or seasonal. It is advisable to align settlement periods on the Swap with actual funding requirements for an effective hedge.

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- A *Forward Start Swap* allows the establishment of interest rates and parameters of a Swap now for future funding requirements, to guard against future volatility.

Cancellation

While Swaps can be an extremely effective tool in managing interest rate exposures, it must be understood that by having entered into a Swap, the borrower is locked into the agreement regardless of where rates move.

However, should termination of the agreement be required, ANZ will arrange to cancel the Swap at current market rates for the remaining term. This may result in the borrower making a payment if market rates have moved adversely, or receiving a payment from the Bank if market rates have moved favourably.

Documentation

ANZ has developed the ANZ Master Agreement for Interest Rate Derivative Transactions, a document which covers Interest Rate Swap Transactions. This document details the obligations and responsibilities of both ANZ and its counterparty in respect to the Swap. It is signed only once, with future Swap deals covered by this document and only the confirmation of settlement details necessary on a deal by deal basis.

For those clients that do not wish to use ANZ's document, standard documentation has been established by the professional markets covering Interest Rate Swaps called the ISDA Master Agreement. This master document covers the obligations and conditions of parties to a Swap in the marketplace and must be signed only once by both parties. Future Swap deals are covered by this document with only the confirmation of settlement details necessary on a deal by deal basis.

Credit Limits

Swaps create an obligation for both parties of the Swap to make interest rate payments at set dates to each other (usually netted). A credit limit representing only the net interest amount is therefore required by the Bank to cover the contin-

gent liability this poses to the Bank. Swaps limit requirements can be discussed with an ANZ Relationship Manager or ANZ Capital Markets Representative.

Matching Basis

Swaps are a very effective interest rate management tool when the underlying borrowing is priced off the stated benchmark - the BBSW or BBSY rate (refer below for definition of these rates). However, a basis risk is undertaken in the event that the underlying borrowing is not priced off the benchmark BBSW/BBSY rate. That is, the movement in rate of the underlying borrowing may not move the same way or to the same extent as the BBSW/BBSY rate from which the Swap is settled. It is important to be aware of this and minimise this risk as much as possible.

3. How Swaps Work

A Swap enables a borrower to change the nature of the underlying loan from a floating rate to a fixed rate loan or from fixed to floating. These Swaps are sometimes called 'Plain Vanilla' Swaps and involve a single currency. Principal amounts are not exchanged, however the calculation of the net payment under the Swap is based on the agreed 'notional' principal.

Swap prices are normally quoted by referring to the fixed rate in the transaction. The floating rate benchmark used for Australian dollar Swaps is the Bank Bill Swap Rate (BBSW) or the BBSY bid rate. The BBSW rate is an independently determined and published mid-rate between the money market buy and sell rates for Bank Bill parcels over $10 million. The 'BBSY bid rate', often used as a basis for Bank Bill funding, is the money market buy rate for Bank Bill parcels over $10 million, and is therefore usually 5 points higher than the 'BBSW' rate.

In Arrears Swap (normal)

Interest payments made under Swap transactions are netted off wherever possible. Swap payments are normally made at the end of each settlement period (in arrears). However, the floating rate and the notional principal amount are agreed at the start of each payment period.

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Example

Best Practices Pty Ltd is granted a $5 million loan facility by the ANZ with interest payable in arrears. To protect their profit margin against adverse movements in interest rates, Best Practices Pty Ltd decides on a Swap where they pay fixed with the following characteristics:

Swap term = 3 years	**Fixed Rate (off BBSY) = 7.00%**
Payment period = quarterly	**Floating Rate = BBSY 90 day rate**
Principal amount = $5 million	

Using two different floating rate benchmark scenarios, the net settlement amounts for the above example have been calculated below.

Table 1 – In Arrears Swap

Using a 91 day settlement period	If BBSY = 6.00%	If BBSY = 8.00%
Fixed Interest Amount	PAID to Bank = 5m x 91 x 7.00% ÷ 365 = $87,260.27	PAID to Bank = $87,260.27
Floating Interest Amount	RECEIVED from Bank = $74,794.52	RECEIVED from Bank = $99,726.03
Net Settlement Amount	PAY $12,465.75	RECEIVE $12,465.76

The formula used for the calculation of the fixed and floating interest amount for an in arrears swap is:

Principal Amount x No.of Days in Payment Period x Rate ÷ 365

The net settlement amount for any settlement date is the difference between the floating and fixed interest payments.

Discounted Swap

A Discounted Swap is designed to protect against rate rises where the underlying borrowing is by way of a Bank Bill facility. As a Bank Bill is a discount instrument, the cash flows on the Swap are also structured on a discount basis. The Swap payment under a Discounted Swap occurs at the beginning of each settlement period, and therefore at the same time as the cashflows received under the Bank Bill.

By using the same Swap parameters as stated in the Example and two different floating rate benchmark scenarios, the following table illustrates the different net settlement amount for each scenario.

Table 2 – Discounted Swap

Using a 91 day settlement period	If BBSY = 6.00%	If BBSY = 8.00%
Fixed Interest Amount	PAID to Bank = 5m-[5m÷(1+(91 x 7.00% ÷ 365))] = $85,763.52	PAID to Bank = $85,763.52
Floating Interest Amount	RECEIVED from Bank = $73,692.17	RECEIVED from Bank = $97,775.87
Net Settlement Amount	PAY $12,071.35	RECEIVE $12,012.35

The formula used for the calculation of the fixed and floating settlement amount for a discounted Swap is:

Principal Amount –[Principal Amount ÷ (1+ (No.of Days in Payment Period x Rate ÷ 365))]

The net amount therefore received by the borrower is equal to the Swap net settlement payment and the Bank Bill receipts. The effective rate paid on the funds for each quarter over the term of the Swap is equivalent to the Swap interest rate plus the Bank Bill margin payable above the BBSY rate (assume margin is 0.40%). This is further illustrated below.

Table 3 – Cashflows

	If BBSY = 6.00%	If BBSY = 8.00%
Swap (Net Settlement Amount)	PAY $12,071.35 (1.00%) (as above)	RECEIVE $12,012.35 (1.00%)
Bank Bill Funding	RECEIVE $4,921,472.18 (6.40%) = (5m x 365)÷((91 x 6.40%) + 365)	RECEIVE $4,897,435.62 (8.40%) = (5m x 365)÷((91 x 8.40%) + 365)
Total Funds Received	RECEIVE $4,909,400.83 (7.40%) = -$12,071.35 + $4,921,472.18	RECEIVE $4,909,447.97 (7.40%) = $12,012.35 + $4,897,435.62
Effective Rate	7.40% =((5m x365)÷4,909,400.83–365)÷91	7.40% =((5m x365)÷4,909,447.97–365)÷91

A Discounted Swap therefore provides effective protection to Bank Bill borrowers against rising interest rates.

Further information and/or brochures on additional Swap and related risk management instruments is available through an ANZ Relationship Manager or ANZ Capital Markets Representative.

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