

# Forward Rate Agreements

## Contents

1. What is a Forward Rate Agreement?
2. Features
  - Reduce Uncertainty
  - Risk management separate from funding source
  - Cancellation
  - Currencies
  - Documentation
  - Credit Limits
  - Matching Basis
3. How FRAs work
  - Terminology
  - Borrower
  - Settlement of a FRA
4. Application of FRAs
  - Using FRAs for tactical exposure management
  - Short Term Instrument

## 1. What is a Forward Rate Agreement?

A Forward Rate Agreement (or FRA) is an agreement between two parties to exchange payments usually equal to short term underlying interest rate obligations of those two parties. The notional principal amount of a FRA is used to calculate the interest payment only and is not exchanged.

Fixed payments or receipts can be swapped for floating (or variable) rate payments or receipts and vice versa. FRAs can be used to hedge borrowing costs or investment returns in a number of currencies, and can be tailored to suit exact requirements. The physical borrowings or deposits which normally underlie these cash flows need not be held with the same financial institution with which the FRA is transacted.

FRAs are a useful tool for managing interest rate exposures on a short-term basis. The duration of a FRA is usually equal to one interest rate period. For example, the borrower/investor may wish to stay floating for the long term but wish to lock in the interest rate for a particular interest rate payment period of the borrowing or investment in the future ie. a 90 day period starting in 2 months time.

FRAs can be an effective hedging instrument for both borrowers and investors however, the examples covered in this brochure focus on the borrower's perspective.

## 2. Features

### Reduces Uncertainty

Having uncertainty in a short-term interest rate climate can make it difficult to budget cashflows

accurately. By entering into a FRA, the borrower is guaranteed that short term borrowing costs will not rise above a certain rate for the contract period of the FRA.

### Risk management separate from funding source

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

Therefore, any future decision based on a borrower's interest rate risk profile will not affect the underlying borrowing and vice versa. This also means that cashflows under the FRA are quite separate from the cashflows associated with the underlying borrowing.

### Cancellation

While FRAs can be an extremely effective tool in managing short term interest rate exposures, once a FRA is entered into the borrower is committed to settle the FRA on the agreed date, regardless of whether rates move in their favour or against them.

However, should termination of the agreement be required, ANZ will arrange to cancel the FRA at current market rates. For a floating rate borrower who has entered into a FRA to provide a fixed rate, this may result in the borrower receiving a payment if market rates have risen, or effecting payment to the bank if they have fallen.

## Forward Rate Agreements

### Currencies

FRAs are generally transacted in Australian Dollars (AUD). However, it is also possible to enter into United States Dollar (USD) FRAs, New Zealand Dollar (NZD) FRAs, or other currencies on request, in order to manage exposures held in these currencies.

### Documentation

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

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

### Credit Limits

FRAs create an obligation for both parties of the FRA to make interest rate payments on the settlement date to each other (usually netted). A credit limit representing only the net interest amount is therefore required by the Bank to cover the contingent liability this poses to the Bank. Please discuss FRA limit requirements with an ANZ Capital Markets Representative or ANZ Relationship Manager.

### Matching Basis

FRAs are a very effective interest rate management tool when the underlying borrowing is priced off the stated benchmark rate- BBSW or BBSY rate\*. However, a basis risk is undertaken

in the event that the underlying borrowing is not priced off the benchmark rate. That is, the movement in rate of the underlying borrowing may not move the same way or to the same extent as the benchmark rate from which the FRA is settled. It is important to be aware of this and minimise this risk as much as possible.

\*BBSW rate = the Bank Bill Swap Rate. It is an independently determined and published floating rate benchmark for Australian Dollar Interest Rate Swaps, and is used to settle fixed/floating Australian Dollar interest rate obligations. It is the 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 usually 5 points higher than the BBSW rate. FRAs can be priced off a BBSY bid rate benchmark on request.

## 3. How FRAs Work

### Terminology

Two numbers define all FRAs; the first represents how many months forward the exposure will commence, and the second represents how many months forward the exposure will expire. For example, a FRA commencing three months from now and expiring six months after commencement would be described as a 3 x 9 (pronounced "Threes Nines") FRA. Likewise a 1 x 4 (pronounced "Ones Fours") FRA is a FRA commencing in one month and expiring in four months time.

### Borrower

Assume debt is funded by Bank Bills which are rolled over every 6 months and that the next rollover is due in 3 months time. If the borrower is concerned that rates may rise over this period, a 3 x 9 ("Threes Nines") FRA could be bought, effectively locking in the future rollover interest rate today.

If rates actually rise by the rollover date, ANZ would reimburse the borrower for the additional cost incurred by rolling the Bank Bills over at higher rates, ie. the difference between the agreed rate in the FRA and the BBSY rate on that day.

## Forward Rate Agreements

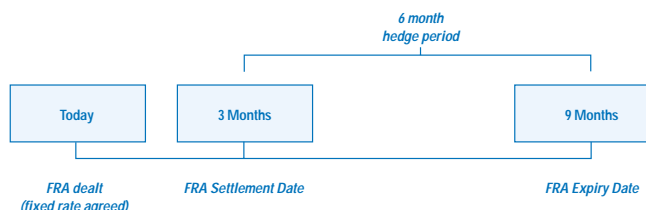
If however rates fall, the borrower would be required to reimburse ANZ for the difference between the BBSY rate and the FRA rate. In effect, whether interest rates rise or fall, borrowing costs will be known in advance based on the FRA rate.

### Settlement of a FRA

FRAs are settled at the commencement of the period being hedged by the FRA, sometimes referred to as the 'settlement date' as shown in the following diagram.

### Diagram – Time Line

3 x 9 FRA (pronounced Three Nines)



The fixed and floating components of the FRA settlement are calculated and netted to determine the settlement amount. The following formula is used to calculate the net settlement amount :

### FRA Settlement Amount

$$= \frac{\text{FRA Principal Amount} \times 365}{(\text{Term} \times \text{FRA rate}) + 365} - \frac{\text{FRA Principal Amount} \times 365}{(\text{Term} \times \text{Floating rate}) + 365}$$

The following example will illustrate how a FRA works, using two different floating rate scenarios.

### Example

FRA Rate (benchmark = BBSY):	6.50%
Bank Bill Margin:	0.40%
Contract Period:	180 days
Notional Principal Amount:	\$2,000,000

Table 1

	If BBSY = 6.00%	If BBSY = 8.00%
Fixed Interest Amount	PAID to Bank = \$62,118.40  = $2m - \frac{2m \times 365}{(180 \times 6.50\%) + 365}$	PAID to Bank = \$62,118.40
Floating Interest Amount	RECEIVED from Bank = \$57,477.38  = $2m - \frac{2m \times 365}{(180 \times 6.00\%) + 365}$	RECEIVED from bank = \$75,909.33  = $2m - \frac{2m \times 365}{(180 \times 8.00\%) + 365}$
Net Settlement Amount	PAY \$4,641.02	RECEIVE \$13,790.93

The net amount therefore received by the borrower is equal to the FRA net settlement amount and the Bank Bill receipts. The effective rate paid on the funds for the term of the FRA is equivalent to the FRA interest rate plus the Bank Bill margin payable above the BBSY rate (6.90% in our example). This is further illustrated below.

Table 2 – Cashflows

	If BBSY = 6.00%	If BBSY = 8.00%
FRA (Net Settlement Amount)	PAY \$4,641.02 (0.50%) (as above)	RECEIVE \$13,790.93 (1.50%) (as above)
Bank Bill Funding	RECEIVE \$1,938,808.03 (6.40%) = $\frac{(2m \times 365)}{((180 \times 6.40\%) + 365)}$	RECEIVE \$1,920,446.17 (8.40%) = $\frac{(2m \times 365)}{((180 \times 8.40\%) + 365)}$
Total Funds Received	RECEIVE \$1,934,167.01 = -\$4,641.02 + \$1,938,808.03	RECEIVE \$1,934,237.10 = +\$13,790.93 + \$1,920,446.17
Effective Rate	<b>6.90%</b>  = $\frac{((2m - 1,934,167.01) \times 365)}{1,934,167.01 \times 180}$	<b>6.90%</b>  = $\frac{((2m - 1,934,237.10) \times 365)}{1,934,237.10 \times 180}$

A FRA provides effective protection to Bank Bill borrowers against rising interest rates for the period specified.

## Forward Rate Agreements

### 4. Application of FRAs

#### Using FRAs for tactical exposure management

FRAs may be utilised as short term hedging instruments to cover exposures over a period of expected volatility in floating rates. For example, bill funding may fall due at or around the announcement of the next Balance of Payments figures, and the borrower is concerned that the market will be extremely volatile at this time. A FRA can be entered into for all or part of their exposures to ensure that borrowing costs do not suffer because of this expected volatility.

Alternatively, a borrower with a predominantly fixed rate exposure may decide to use FRAs to swap to floating for a short period of time.

#### Short Term Instrument

FRAs are a useful tool for managing interest rate exposures on a short-term basis. However, they do not address underlying longer-term structural exposures that may exist.

Interest Rate Swaps (Swaps) are just one tool that can be used to modify longer-term exposures. That is, what can be achieved through FRAs to implement short-term tactical adjustments to working capital, can be achieved for longer-term strategic adjustments to a borrower's long-term debt structure through Swaps. In fact, a series of FRAs can be used to replicate a Swap transaction.

The management of financial exposures such as interest rate risk is an ongoing concern. An ANZ Capital Markets Representative or ANZ Relationship Manager is available to discuss changing interest rate exposure requirements.

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