March 2012

Interest Rate Options Conventions

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1. Description

This market covers those transactions where the buyer of an interest rate option has the right but not the obligation to buy or sell a designated quantity of a specified interest rate product at a specified price or rate on or before a specified date. The buyer pays a premium for this right.

The predominant appeal of OTC options lies in the fact that the strikes, notional principals, expiry dates and times, type of option and the underlying swap characteristics can all be adjusted to suit individual requirements. The benefit of having exact tailor made risk management products is that interest rate exposures can be perfectly hedged.

The following market conventions provide a basis for the trading of OTC interest rate options. However, given the flexibility involved in this market the following conventions are able to be customised with each deal. Any characteristics which are contrary to the following conventions should be highlighted when the deal is executed and detailed in confirmation notices.

These conventions are specific to AUD OTC IRO products traded between AFMA members on an on shore/on shore basis, and they should also be applicable to all counterparties that trade or enter into AUD OTC IRO products. OTC IRO denominated in other currencies would be subject to the specific conventions/rules governing those markets and products.

2. Products

The most common interest rate options available in the Australian OTC market.

2.1. Cap

A cap is a series of options which places a ceiling on the level of interest rates on a floating rate borrowing. The seller will compensate the buyer on prescribed reference dates if the settlement index (BBSW) is greater than the strike rate.

2.2. Floor

A floor is a series of options which protects the buyer from a fall in interest rates below a specified level. The seller will compensate the buyer on prescribed reference dates if the settlement index is less than the strike rate.

2.3. Swaption

A swaption is an option over an interest rate swap. It gives the buyer the right but not the obligation to enter into a swap at some future date at a predetermined fixed rate. There are two types of swaptions which, may be either bought or sold:

- a payer swaption, which involves an option over a swap where the buyer would be paying a fixed rate if exercised, and
- a receiver swaption, which is an option over a swap where the buyer would be receiving a fixed rate.

2.4. Bond Option

A bond option is an option over a physical bond usually a commonwealth government or semi government bond. A bond option gives the buyer the right but not the obligation to buy (call option) or to sell (put option) a given bond at a specified rate on a specified future date.

3. Dealing

3.1. Methods of Dealing

Direct via telephone and brokers.

3.2. Electronic Dealing

Not applicable.

3.3. Business Days

3.3.1. Good Business Day

A good business day is defined as any day on which banks in the state of New South Wales (NSW) are generally open for business, or a day other than one on which banks in NSW are obliged or permitted to close, excluding Saturday and Sunday.

Essentially, NSW business days are weekdays (Monday to Friday) other than NSW public holidays as gazetted under the NSW state government's Banks and Bank Holidays Act 1912.

That said Australian OTC markets generally tend to operate in a reduced capacity on gazetted NSW public holidays that are not similarly gazette in Victoria.

3.3.2. Non Business Day

A non business day is defined as any day on which banks in the state of NSW are generally obliged or permitted to close, including Saturday and Sunday.

In general, AFMA recommends that transactions should not be negotiated for settlement or price fixing (rollover) on a non business day.

3.4. Standard Transaction Size (AUD million)

	1y	2y	3y	4y	5y	7y	10y
1m	100.00	100.00	100.00	50.00	50.00	50.00	50.00
3m	100.00	100.00	100.00	50.00	50.00	50.00	50.00
6m	100.00	100.00	100.00	50.00	50.00	50.00	50.00
1y	100.00	100.00	75.00	50.00	50.00	50.00	50.00
2y	100.00	75.00	50.00	50.00	50.00	50.00	50.00
3y	100.00	75.00	50.00	50.00	50.00	50.00	25.00
4y	100.00	75.00	50.00	50.00	50.00	50.00	25.00
5y	50.00	50.00	50.00	50.00	50.00	50.00	25.00
7y	50.00	25.00	25.00	25.00	25.00	25.00	25.00
10y	50.00	25.00	25.00	25.00	25.00	25.00	25.00

Any other volume should be indicated when the quote is sought.

3.5. Two Way Pricing

Not required in the market, though may be agreed between participants on a reciprocal basis.

3.6. Quotation and Dealing

Premiums for caps, floors and swaptions will be quoted in basis points based on price only. For example, if the notional principal of a trade is $ 10 million and the premium payable is $ 10,000, then the basis point quotation would be 10 basis points.

Start date for all spot starting caps and floors to be spot +3months

Bond option premiums will be quoted in AUD amounts per million dollars of principal.

Caps, floors and swaptions refer to the at-the-money rate as the swap rate for the underlying structure of the trade.

Bond options are quoted at-the-money against the spot price not against the forward bond price pertaining to the expiry date. Bond options can be requested as at-the-money-forward, meaning the at-the-money price is the forward bond price corresponding to the expiry date.

Swaptions and bond options will be European style unless American style is requested when the quote is given.

3.7. Other Instrument Conventions

Not applicable.

3.8. Basis

Markets are quoted on A/365 basis unless otherwise specified at the time of trading.

Caps and floors are quoted on a quarterly basis.

Swaptions are quoted on a quarterly basis for maturities out to 3 years and on a semi-annual basis for maturities of 4 years and greater. Swaptions falling between the 3 and 4 year maturity will be negotiated between the two counterparties. This is in line with the corresponding conventions for swaps.

3.9. Maturity Conventions

Not applicable.

3.10. Settlement Rate or Index

Caps and floors settle against BBSW, unless otherwise agreed at the time of trading.

3.11. Premium Payment Date(s)

Premiums will be payable by the buyer to the seller. In the case of bond options premiums are payable 3 business days after the date of the transaction, except where the expiry of the option is in less than 3 business days when the premium is payable on expiry. In the case of caps, floors and swaptions, premiums are payable 2 business days after the date of the transaction, or by agreement on any other date or dates. In cases where Swaption transactions are negotiated with premium payment being described as *forward premium*, then the premium is paid on the business day following expiry.

3.12. Expiry Conventions

Not applicable.

3.13. Broker Conventions

Refer to Section 3.6.

When dealing through brokers prices should be expressed in terms of spot value premium and not option implied volatility.

All prices quoted to brokers should be basis a price in the underlying asset with the exchange of delta hedge. The size and type of the delta hedge should be agreed prior to the time of dealing.

Dealers requiring no exchange of delta hedge should identify the quote as no basis.

3.14. Confidentiality

Not applicable.

3.15. Credit

The ability to deal is subject to credit constraints/limits. Dealers should advise the counterparty if they are unable to deal because of credit limits as quickly as possible. The transaction is not finalised until both parties have agreed with the other party that credit is available. Both parties have the right to request a change in the price of the deal until the time that credit limits have been finalised.

3.16. Exercise of Options

Exercise will be automatic for caps and floors if the reference rate is above the cap rate or below the floor rate on the reference date. In the case of swaptions and bond options it will be the responsibility of the buyer to notify the seller, by expiry date, whether they intend on exercising the option. It is good market practice for the seller of a swaption or bond option to call the buyer if at expiry time the seller believes the option to be in-the-money and the buyer has not notified the seller of their intention to exercise the option.

In the case of swaptions the right of the buyer to exercise the option ceases at 10:00am AEST on the expiry date. Note that the expiry time is 10:00am on the date of expiry regardless of when notification of exercise is given. Any other expiry time should be indicated when the quote is given.

For bond options the right of the buyer to exercise the option ceases at 3:00pm AEST on the expiry date. Note that the expiry time is 3:00pm on the date of expiry regardless of when notification of exercise is given. Any other expiry time should be indicated when the quote is given.

In the interbank market a buyer of an option intending to exercise that option must exercise that option for the full notional value of that option. Partial exercise of options is not acceptable unless agreed at the time of dealing.

3.17. Data Source

Data relating to interest rate option pricing can be found on AFMA*data* page Interest Rate Options - Monthly.

3.18. Pricing Formulae

Not applicable.

4. Confirmations

4.1. Timing

Confirmations are to be provided as soon as possible after the details of the transaction are agreed. Generally, this should take place within 24 hours of dealing.

4.2. Confirmation Standards

The initial confirmation for this type of product supplements and forms part of the ISDA Master Agreement, and therefore the transaction must be confirmed using the standard form of confirmation.

4.3. Transaction Information

The complete transaction information must be confirmed. The confirmation must include all applicable items from the list below:

4.3.1. Caps, Floors and Collars

- Trade Date
- Date of ISDA Master Agreement
- Fixed Rate Payer (ie. the Buyer)
- Fixed Amount
- Fixed Rate Payer Payment Date(s)
- Floating Rate Payer
- Notional Amount(s) and Currencies
- Effective Date
- Termination Date
- Cap Rate
- Floor Rate
- Reset Date
- Payment Date for each Party
- Business Day Convention
- Day Count Fraction

If the *2006 ISDA Definitions* have been incorporated into the Master Agreement with a counterparty, "FRA Yield Discounting" will apply to all cap, floor and collar transactions. However, because these products pay interest in arrears, the confirmation should specify that "'FRA Yield Discounting' will not apply".

4.3.2. Swaptions

- Trade Date
- Date of ISDA Master Agreement
- Buyer
- Seller
- Premium
- Premium Payment Date
- Procedure for Exercise
- Settlement Terms
- All details of underlying Swap Transaction (refer to section on Swap Transactions)

4.3.3. Bond Options

- Trade Date
- Date of ISDA Master Agreement
- Option Style
- Option Type
- Buyer
- Seller
- Premium
- Premium Payment Date
- Procedure for Exercise
- Settlement Terms
- All details of underlying Bond

5. Settlements

5.1. Physical Settlements

5.1.1. General

Settlement of bond options and swaptions will be by physical delivery unless cash settlement is agreed between the parties at the time of the deal.

The settlement conventions of the underlying markets will apply for swaptions and bond options unless otherwise agreed. For example, delivery of a ten year commonwealth bond will take place 3 business days after the exercise of a bond option.

5.1.2. Swaptions

With an exercised swaption the swap will commence in 1 business day unless otherwise specified. On the exercise date the swaption buyer may exercise the option and will execute the underlying swap transaction with the swaption seller. The settlement of this swap transaction proceeds as with any normal swap (which may include EFP). It is advisable to have the swap start date at least 1 business day after the exercise date to ensure smooth settlement procedures.

5.2. Cash Settlements

5.2.1. Methodology - Caps and Floors

The cash settlement style for caps and floors will be non-discounted in arrears. Bond options will be par methodology and swaptions will be zero coupon methodology unless otherwise specified.

5.2.2. Methodology - Swaptions

At the exercise time, the swaption buyer may exercise the option which requires the swaption seller to make a cash payment that is equal to the difference between the present value of the underlying swap at the swaption strike rate and the present value of the swap at current market rates.

The swaption buyer and seller should mutually agree the market rate for the specified swap as well as the appropriate cash settlement amount. If agreement cannot be reached the matter is determined by reference to a panel of market participants (usually 3-4) or to the index specified. The panel of market participants or index must be specified at the time the swaption is dealt. If one or more of the panel has ceased to trade in the market when a market rate is required another market participant may be substituted by mutual agreement of the counterparties to the deal.

The average of the panel valuation, or the index itself, will provide a market rate for the specified swap. The calculation of the cash settlement amount is made on a zero coupon basis in the same way as a swap assignment.

5.2.3. Payments - Caps and Floors

With caps and floors settlement payments by the seller to the buyer will be on a non discounted in arrears basis or on a discounted in advance basis payable on the reference date following the day on which the reference rate is set or, in the case of the final reference date, on the maturity date. For swaption cash settlement payments the amount will be paid 1 business day following the exercise date. Any other method of payment should be indicated when the quote is given.

5.2.4. Discounted in Advance

This refers to a common cap/floor settlement method. The settlement amount is calculated according to the following formulae and paid on the reference date.

Caps (if BBSW > strike):

$$\left(\frac{Principal}{1 + strike \times \frac{days}{365}}\right) - \left(\frac{Principal}{1 + BBSW \times \frac{days}{365}}\right)$$

Floors (if BBSW < strike):

$$\left(\frac{Principal}{1 + BBSW \times \frac{days}{365}}\right) - \left(\frac{Principal}{1 + strike \times \frac{days}{365}}\right)$$

5.2.5. Non Discounted in Arrears

This refers to another common cap/floor settlement method. The settlement amount is calculated according to the following formulae and paid on the reference date following the date on which the rate is set.

Caps (if BBSW > strike):

$$Principal \times (BBSW - strike) \times \frac{days}{365}$$

Floors (if BBSW < strike):

$$Principal \times (strike - BBSW) \times \frac{days}{365}$$