

Non Deliverable Forwards

Education Module: 4

Dated: JULY 2002



NON DELIVERABLE FORWARDS (NDFs)

The NDF market has evolved as a result of restrictions in local forward markets. It allows hedging of currencies which would otherwise be 'unhedgeable' in the offshore market.

Examples of markets where government regulations restrict foreign access to local currency markets include Korea, Taiwan, Philippines, India and China.

CURRENCIES:

Chinese Renminbi (CNY)

Indian Rupee (INR)

Philippine Peso (PHP)

New Taiwan Dollar (TWD)

Korean Won (KRW)

FIXINGS:

fixing page 'SAEC'

Set two days prior to maturity

fixing page 'RBIB' (RBI Reference Rate)

Set two days prior to maturity

fixing page 'PHPESO' (PHP Fix 11am Manila time)

Set one day prior to maturity

fixing 'TFEMA' (11am Taipei time)

Set two days prior to maturity

fixing page 'KFTC19' (9am Seoul time)

Set one day prior to maturity

HOW DOES AN NDF WORK?

An NDF is similar to a deliverable forward. The difference is that no physical delivery of the local currency takes place (as the local currency is 'not deliverable' offshore). No principal amount is exchanged. The deal is settled against a fixing rate at maturity, with the net USD amount either paid or received from the bank.

The fixing basis varies from currency to currency. In each case it is an official Central Bank Official Exchange rate or an average of interbank prices displayed on Reuters at a specified time. Please refer to the following example for Korean Won.

KOREAN WON (KRW)

Due to restrictions on foreign participation in the domestic FX forward market, an offshore NDF market has evolved. This allows offshore counterparties to hedge KRW exposure on a forward basis.

The KRW NDF market is quite liquid to the 1 year period (with pricing up to 5 years available). The net USD difference is settled against a daily fixing set by the Central Bank. This fixing rate is announced at 9am Seoul time and is the market average of the day's trading. It can be found on Reuters page KFTC18. The fixing rate is defined to be set 1 day prior to maturity date of the deal.

Example

Exporter needs to hedge KRW risk for 6 months' maturity. He has equivalent USD 5 Mio to hedge.

Current spot	1110/1111
6mth NDF outright	1114/1115

Here the exporter takes out a 6mth NDF (where he sells KRW outright) at 1115

i.e he buys USD 5 Mio (sells KRW 5.575 bio)

At maturity - 3 possible outcomes of the spot (and hence the fixing rate) at the time:

<u>Case One</u>	<u>Case Two</u>	<u>Case Three</u>
Fixing rate 1100	Fixing rate 1115	Fixing rate 1130
<u>Customer buys</u> KRW 5,575 bio @ 1100 <u>Sells</u> USD 5,068,182	@ 1115 USD 5mio	@ 1130 USD 4,933,628
<u>Net sells (pays)</u> USD 68,162	<u>Net</u> No fixing difference	<u>Net buys (receives)</u> USD 66,372

In each case, the USD difference represents the profit or loss on the deal. Just like a deliverable forward contract, the customer has hedged his KRW exposure at 1115. The receipt or payment in USD via the NDF is offset by the loss or gain in USD/KRW move.

ANZ INVESTMENT BANK AND THE NDF MARKET

ANZ Investment Bank is able to quote forward NDF prices in KRW, TWD, PHP, INR and CNY up to the 1year period. In some cases (KRW, PHP, INR) the markets have evolved and pricing past 1 year is quite liquid.

NDFs are quoted against USD, however ANZ Investment Bank can establish the forward price against any currency, based on the customer's requirements. For example, it may be suitable to take out a NZD, AUD or JPY cross against an NDF currency. In each case ANZ Investment Bank needs to predetermine the fixing basis for the currency nominated.

If you require any further information of prices, please liaise directly with your ANZ Investment Bank Relationship Manager.



DISCLAIMER:

ANZ Investment Bank makes no representation and gives no warranty as to the accuracy of the information contained in this document and does not accept any responsibility for any errors or inaccuracies in or omissions from this document (whether negligent or otherwise) and ANZ Investment Bank is not liable for any loss or damage however it arises as a result of any person acting or refraining from acting in reliance on any information contained in this document. No reader should rely on this document as it does not purport to be comprehensive or to render advice. This disclaimer does not purport to exclude any warranties implied by law which may not be lawfully excluded.

ANZ Investment Bank is a business name of Australia and New Zealand Banking Group Limited ACN 005 357 522, which is a

licensed securities dealer.

