1.3 Equity linked products – Asian examples

- 2-Year USD Super Certificate Linked to Basket

- 2-Year JPY Early Redemption Equity-Redeemable Warrant

- Auto-Cancellable Equity Linked Swap

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2-Year USD Super Certificate Plus

(with lookback minimum and lock-in Level)

Linked to Basket

Issuer	:	BNP Paribas (AA/Aa2)
Issue Amount	:	USD3,000,000
Determination Date	:	21 June 2007 (The Valuation Date)
Maturity Date	:	28 June 2007 (5 Busines Days after Determination Date)
Issue price	:	**100%** of Note Denomination
Coupon	:	Zero

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Share Basket   :   A basket made up of the 3 shares (each being a "Share") as shown in table below.

I	Name	RIC	$S_{i,0}$	K_i	$S_{Barrier,\,i}$	$S_{Lock\text{-}in,\,i}$
1	Lloyds TSB Group Plc.	LLOY.L	GBP4.735	GBP4.735	GBP3.3145	GBP5.2085
2	Altria Group, Inc.	MO.N	USD66.85	USD66.85	USD46.795	USD73.535
3	China Petroleium and Chemical Copr. (Sinopec)	0386.HK	HKD2.90	HKD2.90	HKD2.03	HKD3.19

Note Denomination (ND)   :   USD50,000 face value

Particpation Rate (PR)   :   **320%**

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Initial Spot Price of ith Share ($S_{i,0}$)	:	The market price of the ith Share as shown in the table above.
Reference Price of ith Share (K_i)	:	**100%** of Initial Spot Price of the ith Share in the Share Basket.
Barrier Price of ith Share ($S_{\text{barrier},i}$)	:	**70%** of Initial Spot Price of the ith Share in the Share Basket.
Lock-in Levels	:	**110%** of Initial Spot Price of the ith Share in the Share Basket.

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Final Spot Price of
ith Share ($S_{i,f}$) :

The price of the ith Share
on the Valuation Date.

Final Reference Exchange
Rate for GBP (FX_f) :

The mid-market USD:GBP exchange rate
as per Reuters page :GBP-" at 17:30
London Time on the valuation Date.
(Determination Date).

Final Reference Exchange
Rate for HKD (FX_f) :

The mid-market USD:HKD exchange rate
as per Reuters page "HKD=" at 16:00
Hong Kong Time on the Valuation Date.
(Determination Date).

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| Worst Performing Share | : | Means the Share that has the lowest value value (the "Worst Performance") on the Valuation Date (Determination Date) according to the following formula. |

$$\left[\frac{S_{i,f}}{S_{i,0}} - 1\right] \times 100 \ \%$$

Mathematically, Worst Performance is defined by the following formula

$$\text{Performanc e}_{worst} = \left[\frac{S_{i,f}}{S_{i,0}} - 1\right] \times 100\%$$

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Share Amount :	If the Worst Performing Share is denominated GBP (HKD), Share Amount shall mean a quantity of the Worst Performing Share equal to
	(a) an amount in GBP (HKD), equal to the Note Denomination converted into GBP using the Final Reference Exchange Rate for EUR, divided by
	(b) the Reference Price of the Worst Performing Share; rounded to the nearest integer.
	If the Worst Performing Share is denominated USD, Share Amount shall mean a quantity of the Worst Performing Share equal to the Note Denomination divided by the Reference Price of the Worst Performing Share; rounded to the nearest integer.

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Monitoring Period	:	The period from and including the Launch Date to and including the Valuation Date.
Barrier Event	:	A Barrier Event is deemed to have occurred if the price of <u>at least one Share</u> at the Valuation Time is <u>at or below</u> its corresponding Barrier Price on any Exchange Business Day during the Monitoring Period.
Look-back Period	:	The period from and including the Launch Date to and including 21 December 2005.
Call Strike Level (β)	:	Means the lowest daily closing price level observed as compared against the corresponding Initial Spot Price during the Look-back Period, subject to a minimum of 90% and a maximum of 100%.

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$$\beta = \underset{i=1\,\text{to}\,3}{\text{Min}}\left[S_{i,\text{Lookback}-\text{Minimum}}\right]$$

where

$$S_{i,\text{Lookback}-\text{Minimum}} = \text{Min}\left\{100\%,\text{Max}\left\{\left(\frac{S_i^{\text{Minimum}}}{S_{i,0}}\right),90\%\right\}\right\}$$

and where S_i^{Minimum} is the lowest daily closing price observed in respect to the ith Share during the look-back Period.

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Lock-in Event	:	A Lock-in Event is deemed to have occurred if the prices of all Shares, at the Valuation Time on an Exchange Business Day during the Monitoring Period, are <u>at or above</u> their corresponding Lock-in Prices in respect of a particular Lock-in Level; such Lock-in Level is then deemed to have been reached. For the avoidance of doubt, more than one Lock-in Event can occur during the Monitoring Period.
Actual Lock-in Level : (Performance$_{Locked}$)		The highest Lock-in Level reached among the Lock-in Levels reached in respect of all Lock-in Events where applicable.

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Redemption Amount : at maturity

(Case 1): If the <u>at least one lock-in Event has occurred during the Monitoring Period</u>, the Issuer shall pay the Note holder the following amount in respect of each Note held on Maturity Date.

$$ND \times \left[100\% + PR \times \mathrm{Max}\left\{ \left(\mathrm{Performance}_{\mathrm{Locked}} - 1\right), \underset{i=1\text{to}3}{\mathrm{Min}}\left[\frac{S_{i,f}}{S_{i,0}} - \beta \right] \right\} \right],$$

Case 1 occurs when at least one share has increased by more than 10%.

This is called a **lock-in event**. In this case, it is principal protected plus extra percentage based on the stock performance.

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(Case 2): If <u>Lock-in Event has not occurred during the Monitoring Period</u> and that

    (Case 2a): <u>Barrier Event has not occurred during the Monitoring Period</u>, the Issuer shall pay the Note holder the following amount in respect of each Note held on Maturity Date.

$$ND \times \left[100\% + PR \times \text{Max}\left\{ 0, \underset{i=1\text{to}3}{\text{Min}}\left[\frac{S_{i,f}}{S_{i,0}} - \beta \right] \right\} \right],$$

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(Case 2b): at least one <u>Barrier Event has occurred during the Monitoring Period</u>.

(Case 2b-i): and if Performance$_{worst}\geq$ 0, that is the Worst Performance is greater than or equal to zero, the Issuer shall pay the Note holder the following amount in respect of each Note held on Maturity Date.

$$ND\times\left[100\%+PR\times\text{Max}\left\{0,\underset{i=1to3}{Min}\left[\frac{S_{i,f}}{S_{i,0}}-\beta\right]\right\}\right],$$

or

(Case 2b-ii): and if Performance$_{\text{worst}}<$ 0, that is the Worst Performance is less than zero, the Issuer shall pay to the Note holder the Share Amount (fractional entitlement will be subject to cash settlement) **<u>AND</u>** shall pay the Note holder the follow amount (if the amount is greater than zero) per Note in respect of each Note held on Maturity Date.

$$ND \times PR \times \text{Max}\left\{0, \underset{i=1\text{to}3}{Min}\left[\frac{S_{i,f}}{S_{i,0}} - \beta\right]\right\},$$
where

$$\text{Performance}_{\text{worst}} = \underset{i=1\text{to}3}{\text{Min}}\left[\frac{S_{i,f}}{S_{i,0}} - 1\right] \times 100\%$$

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1. To the note holder, it is most desirable to have

    (a) A small value of b. This occurs when there are drops in the share prices
        during the lookback period.

    (b) A higher performance$_{Locked}$ value (which can be greater than 10%). It is easier
        to be achieved when the share prices are more correlated.

2. Cases 2a and 2b-i are at least principal protected.

3. When knock-out event occurs and performance$_{worst}$ < 0, the note holder acquires the
   share plus some cash compensation. In this case, the note is not principal protected.

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Adjustments	Method of Adjustment:
	If at any time between the Issue Date and the Determination Date the price on the Relevant Exchange of any Share comprised in the Share Basket becomes equal to or less than 25% of its Initial Spot Price the Calculation Agent is entitled (but under no obligation) to make the following adjustments to the terms of this Note:

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- select in good faith a substitute share in accordance with the criteria for share selection set out under Extraordinary Events below (the "Substitute Share") which will replace the affected Share in the Share Basket and determine its weighting in the Share Basket;

- select a date (the "Substitution Date") on which the Substitute Share will be deemed to replace the affected Share in the Share Basket; and

- determine the Initial Spot Price (and therefore the Reference Price) of the Substitute Share in accordance with the following formula:

$$\text{Initial Spot Price of the Substitute Share} = A \times (B/C)$$

where:

"A" is the official closing price of the relevant Substitute Share on the Substitution Date;

"B" is the Initial Spot Price of the relevant affected Share; and

"C" is the official closing price of the relevant affected Share on the Substitution Date.

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2-Year JPY Early Redemption Equity-Redeemable ("ER") Warrants Linked to a Basket of Japan Equities (Japan Basket ER Warrants)

Summary

"Equity Redeemable" ("ER") Warrants are issued by Merrill Lynch International & Co. C.V. under its Warrant Program. The Japan Basket ER Warrant pays a Periodic Payment of **10.00% p.a.** in the first 3 months.

This Warrant will also pay a quartered Periodic Payment of **10.00% p.a.** if on any quarterly Observation Dates, the closing price of __all__ the shares in the Japan Share Basket *does not decline* by more than 12.00% from their respective Reference Price. Otherwise, the Periodic Payment Rate for that particular quarter will be **1.00 p.a.**.

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Also, the Warrant will be redeemed early and investors will receive 100% of the Notional Amount, if the closing price of any share in the Japan Share Basket *does not decline* by more than 2.00% from their respective Reference Price at any quarterly Observation Dates.

If the Warrants are not redeemed prior to Maturity Date, the Warrants will be redeemed on the Maturity Date in either cash or shares based on the value of the Worst Performing Share as described below.

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A typical investor in the Japan Basket ER Warrants would be one who holds the belief that over the next two years the prices of **all** of the shares in the Japan Share Basket will not decline by more than 12.00% from their respective Reference Price. In addition, the typical investor must be willing to take delivery of the worst two performing shares if any of the shares in the basket falls below their respective Strike Price at the Valuation Date.

This product is not principal-protected.

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Japan Share Basket : A basket made up of the 5 shares as shown in the table below:

Name	Bloomberg Code	Reference Price	Strike Price	Trigger Price
Mitsubishi Estate Co. Ltd.	8802 JT	JPY 1,146	JPY 1,008.48	JPY 1,123.08
Sumitomo Realty	8830 JT	JPY 1,185	JPY 1,042.80	JPY 1,161.30
Nippon Building Fund Inc.	8951 JT	JPY 987,000	JPY 858,560	JPY 967,260
Japan Real Estate Investment Corp.	8952 JT	JPY 890,000	JYP 783,200	JPY 872,200
Japan Prime Realty Investment Corp.	8955 JT	JPY 322,000	JYP 283,360	JPY 315,560

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Issue Size	:	1,000,000,000 warrants
Minimum Subscription	:	JPY 10,000,000
Notional Amount	:	JPY 1,000,000,000
Issue Price	:	100%
Trade Date	:	14 June 2005
Issue Date	:	28 June 2005
Maturity Date	:	28 June 2007, subject to the following business day convention
Periodic payment	:	Payable quarterly in arrear on each Periodic Payment Date and accruing on 1 30/360 basis at the Periodic Payment Rate

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Day-count convention

$D_1 = (d_1, m_1, y_1)$ and $D_2 = (d_2, m_2, y_2)$

1.   Actual/365

      A year is 365 days long. Year fraction is

$$\frac{D_2 - D_1}{365}$$

      where $D_2 - D_1$ is the actual number of days between the two dates, D_1 included while D_2 excluded.

2.   Actual/360

      A year is assumed to be 360 days long.

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3.   30/360

Year fraction between D_1 and D_2 is

$$\frac{\max(30-d_1,0)+\min(d_2,30)+300\times(y_2-y_1)+30\times(m_2-m_1-1)}{360}.$$

For example, the year fraction between Jan. 4, 2000 and July 4, 2000 is

$$\frac{(30-4)+4+360\times0+30\times5}{360}=0.5.$$

If D_2 is a holiday, then it is replaced by the first working date following it.

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Periodic Payment Rate :	For the first period, from the issue date to the first Periodic Payment Date, **10.00% p.a.** fixed in the first period
	Thereafter, **10.00% p.a.** if the closing prices of **all** the Shares in the Share Basket are **at or greater than** their respective Strike Prices on an Observation Date. <u>Otherwise, the Periodic Payment Rate is deemed to be</u> **1.00 p.a.**.
Early Redemption by Issuer :	If the closing prices of **all** the Shares in the Share Basket **are at or greater than** their respective Trigger Prices on an Observation Date, the Warrants will be redeemed in full at 100% of the Notional Amount together with accrued interest on the related Periodic Payment Date.

Reference Price   : Executed price of each Share in the Share Basket on Trade Date

Settlement Price   : Closing price of each Share in the Share Basket on the last Observation Date, as determined by the Calculation Agent

Strike Price   : 88.00% of the Reference Price of each Share in the Share Basket

Trigger Price   : 98.00% of the Reference Price of each Share in the Share Basket

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Worst Performing Share :	The Share in the Share Basket which has the lowest value on Valuation Date according to the following formula: (Settlement Price / Reference Price) – 1
Redemption at Maturity Date :	On the last Observation Date: (1) If the Settlement Prices of <u>ALL</u> the Underlying Stocks are **higher than or equal to their respective Strike Price**, each holder of the ER Warrant will receive 100.00% of the Notional Amount per warrant held.

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(2) If the Settlement Price of <u>ANY</u> of the Underlying Stocks are **lower than their respective Strike Price**, each warrant holder will on the maturity Date receive per Warrant physical delivery of the Worst Performing Share equal to:

$$\frac{\text{Notional Amount}}{\text{Strike Price of the "Worst Performing" Stock}}$$

Any fraction of a trading lot of the Shares to be delivered shall be paid out in JPY cash at a price calculated using the relevant Settlement Price.

Settlement Currency   :   JPY

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Payout at any Observation Date

Performance on relevant Observation Date	Periodic Payment (p.a.)	Redemption prior to Maturity
25%	10.00%	Yes, Redeems Par
10%	10.00%	Yes, Redeems Par
5%	10.00%	Yes, Redeems Par
3%	10.00%	Yes, Redeems Par
0%	10.00%	Yes, Redeems Par
-1%	10.00%	Yes, Redeems Par
-2%	10.00%	Yes, Redeems Par
-3%	10.00%	No, Warrant Continues
-5%	10.00%	No, Warrant Continues
-10%	10.00%	No, Warrant Continues
-25%	1.00%	No, Warrant Continues
-50%	1.00%	No, Warrant Continues

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Payout at Maturity if not Early Terminated (i.e. Warrant is held to Maturity Date)

Performance on relevant Observation Date	Periodic Payment (p.a.)	Redemption prior to Maturity
25%	10.00%	Par in Cash
10%	10.00%	Par in Cash
5%	10.00%	Par in Cash
3%	10.00%	Par in Cash
0%	10.00%	Par in Cash
-1%	10.00%	Par in Cash
-2%	10.00%	Par in Cash
-3%	10.00%	Par in Cash
-5%	10.00%	Par in Cash
-10%	10.00%	Par in Cash
-25%	1.00%	85.23% in Shares
-50%	1.00%	56.82% in Shares

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Auto-Cancellable Equity Linked Swap

Contract Date: June 13, 2003

Effective Date: June 18, 2003

Termination Date:
The earlier of (1) June 19, 2006 and (2) the Settlement Date relating
to the Observation Date on which the Trigger Event takes place
(maturity uncertainty).

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Trigger Event:
The Trigger Event is deemed to be occurred when the closing
price of the Underlying Stock is at or above the Trigger Price on an
Observation Date.

Observation Dates:
1. Jun 16, 2004, 2. Jun 16, 2005, 3. Jun 15, 2006

Settlement Dates:
With respect to an Observation Date, the
2nd business day after such Observation Date.

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Underlying Stock: HSBC (0005.HK)
Notional: HKD 83,000,000.00
Trigger Price: HK$95.25

Party A pays:
For Calculation Period 1 – 4: 3-month HIBOR + 0.13%, Q, A/365
For Calculation Period 5 – 12: 3-month HIBOR - 0.17%, Q, A/365

Party B pays:
On Termination Date,
8% if the Trigger Event occurred on Jun 16, 2004;
16% if the Trigger Event occurred on Jun 16, 2005;
24% if the Trigger Event occurred on Jun 15, 2006; or
24% if the Trigger Event occurred on Jun 15, 2006; or
0% if the Trigger Event never occurs.

Final Exchange: Applicable only if the Trigger Event has never occurred
Party A pays: Notional Amount
Party B delivers: 1,080,528 shares of the Underlying Stock

Interest Period Reset Date: 18th of Mar, Jun, Sep, Dec of each year

Party B pays Party A an upfront fee of HKD1,369,500.00 (i.e. 1.65% on Notional) on Jun 18, 2003.

Model Formulation

- This swap may be visualized as an auto knock-out equity forward contract with terminal payoff

    1,080,528 x terminal stock price - Notional.

- Modeling of the equity risk: The stock price follows the trinomial random walk. The "clock" of the stock price trinomial tree is based on trading days. When we compute the drift rate of stock and "equity" discount factor, "one year" is taken as the number of trading days in a year.

- The net interest payment upon early termination is considered as knock-out rebate. In simple terms, the contribution of the potential rebate to the swap value is given by the Expected Net Interest Payment times the probability of knock-out.

- The Expected Net Interest Payment is calculated based on today's yield curve. Linear interpolation on today's yield curve is used to find the HIBOR at any specific date. The dynamics of interest rate movement has been neglected for simplicity since only Expected Net Interest Payment (without cap or floor feature) appears as rebate payment.

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Quanto version

Underlying Stock: HSBC (0005.HK)
Notional: USD 10,000,000.00
Trigger Price: HK$95.25

Party A pays:
For Calculation Period 1 – 4: 3-month LIBOR, Q,
A/360
For Calculation Period 5 – 12: 3-month LIBOR - 0.23%,
Q, A/360

Party B pays:
On Termination Date,
7% if the Trigger Event occurred on Jun 16, 2004;
14% if the Trigger Event occurred on Jun 16, 2005;
21% if the Trigger Event occurred on Jun 15, 2006; or
0% if the Trigger Event never occurs.

Final Exchange: Applicable only if the Trigger Event has never occurred
Party A pays: Notional Amount
Party B delivers: Number of Shares of the Underlying Stock

Number of Shares: Notional x USD-HKD Spot Exchange Rate on
Valuation Date / Trigger Price

Interest Period Reset Date: 18th of Mar, Jun, Sep, Dec of each year

Party B pays Party A an upfront fee of USD150,000.00 (i.e. 1.5% on
Notional) on Jun 18, 2003.

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Model Formulation

- By the standard quanto prewashing technique, the drift rate of the HSBC stock in US currency $= r_{HK} - q_S - \rho \, \sigma_S \, \sigma_F$,

    where
    r_{HK} = riskfree interest rate of HKD
    q_S = dividend yield of stock
    ρ = correlation coefficient between stock price and exchange rate
    σ_S = annualized volatility of stock price
    σ_F = annualized volatility of exchange rate

- Terminal payoff (in US dollars)

    = Notional / Trigger Price (HKD) x terminal stock price (HKD) - Notional.

- The exchange rate F is the domestic currency price of one unit of foreign currency. The dynamics of F does not enter into the model since the payoff in US dollars does not contain the exchange rate. The volatility of F appears only in the quanto-prewashing formula.

Worst of two stocks

Contract Date: June 13, 2003
Effective Date: June 18, 2003

Underlying Stock: The Potential Share with the lowest Price Ratio with respect to each of the Observation Dates.

Price Ratio: In respect of a Potential Share, the Final Share Price divided by its Initial Share Price.

Final Share Price: Closing Price of the Potential Share on the Observation Date

Potenital Share	Initial Share Price	Trigger Price	Number of Shares
HSBC (0005.HK)	95.25	95.25	1,080,528
HK Electric (0006.HK)	29.00	29.00	3,549,193

Party A pays:
For Calculation Period 1 – 4: 3-month HIBOR + 0.13%, Q, A/365
For Calculation Period 5 – 12: 3-month HIBOR - 0.17%, Q, A/365

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Party B pays:

On Termination Date,

10% if the Trigger Event occurred on Jun 16, 2004;

20% if the Trigger Event occurred on Jun 16, 2005;

30% if the Trigger Event occurred on Jun 15, 2006; or

0% if the Trigger Event never occurs.

Final Exchange: Applicable only if the Trigger Event has never occurred

Party A pays: Notional Amount

Party B delivers: Number of Shares of the Underlying Stock as shown above

Interest Period Reset Date: 18th of Mar, Jun, Sep, Dec of each year

Party B pays Party A an upfront fee of HKD1,369,500.00 (i.e. 1.65% on Notional) on Jun 18, 2003.

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