Rules for the Merger Arbitrage Index®

January 2003

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1. Basic Principles of the Index

1.1 The Merger Arbitrage Index (the “Index”) is a basket price index composed on the basis of a Proprietary Model of BNP Paribas (as defined in Appendix 2). It is built in such a way that it aims to represent and give the best performance of the global merger arbitrage market. The Index reflects the market value of a dynamically evolving set of arbitrage positions between stocks involved in a mutual announced take-over situation. The allocation of the arbitrage positions reflects the weights put on the various available deals. The index has a base date of December 31st, 2002 at a level of 100.00 index points.

1.2 The global merger arbitrage market is defined to include the following countries:

Europe
Austria
Belgium
Denmark
Finland
France
Germany
Greece
Ireland
Italy
Luxembourg
Netherlands
Norway
Portugal
Spain
Sweden
Switzerland
United Kingdom

North America
Canada
United States

Asia
Australia
Hong Kong
Japan
Singapore

1.3 The merger deals that are referred to in these ground Rules are all the mergers and take-overs that are announced on the financial news pages of Bloomberg and/or Reuters. The announcement has to be made through a publicly available official press release by either (one of) the companies concerned or their financial advisors and hence should be available on Bloomberg and/or Reuters. Market speculation and/or rumours on possible mergers and take-overs are thus not included in this definition.

1.4 Merger and take-over deals are defined to include the following types of offers:

(a) **Cash offer**. The parity is the cash received at the Maturity (defined in Appendix 2). In this case, a positive number of shares of the Target (defined in Appendix 2) is included in the Index calculation (“Long position”).

(b) **Stock Offer**. A distinction can be made between the following variations:

Fixed parity:
In this case, the Index includes a positive number of shares (“Long”) of the Target, and a negative number of shares (“Short”) of the Acquirer (defined in Appendix 2), equal to the Long number of shares of the Target included in the Index Basket multiplied by the stock ratio of the offer. In case the ratio is not subject to a pricing period, the fixed and announced ratio described in the proxy of the merger/take-over agreement will be used. In case of a pricing period, the ratio of the offer is calculated according to the pricing period Rules described in the proxy of the merger/take-over agreement.

Collar:

In this case, the Index Basket includes a long position in the Target and a short position in the Acquirer. The hedge corresponds to the number of long shares multiplied by the ratio determined by the delta of the Equivalent Option Strategy of the Collar (as defined in Appendix 2). This delta will be readjusted daily. The effect of this adjustment on the Index Basket is described in rule 5.4.1.

(c) **Offer with a Stub**. In case of an offer with a Stub, the usual Cash or Stock Offer is supplemented by a Stub (defined in Appendix 2) that can be represented by a stock, a Contingent Value Right ("CVR") (defined in Appendix 2), a bond, an option etc. In these cases the following adapted method will be used to price the Stub: adapted standard valuation model in case of an option and a CVR. The price of the stock or bond is based on the market valuation if there is a grey market, or on BNP Paribas evaluation if there is none. In case a new type of Stub is going to be part of a new arbitrage, the Board will decide what the most suitable pricing model will be. BNP Paribas will provide the estimation of the Stub on a daily basis at 17:15 CET to the Compiler. If the Stub is to be quoted in the market (OTC or standardised), the market prices fixed according to rule 2.5 and according to the zone within which the Stub is, will then be used.

(d) **Mixed Offer.** The parity is a mix of the previous type of offer and is adjusted prorata of the different offers. To determine the exact proration at the end of a mixed offer, the official company proration will be used. This information needs to be available on Bloomberg or on Reuters.

1.5 No long position should exceed 3% of the total outstanding market capitalisation of the company. This percentage is the ratio between the total number of shares of a company (S) in the Index Basket and the total number of shares issued by the company (S).

1.6 Every merger or take-over where both the Target and the Acquirer are quoted in the Eligible Countries list will be eligible for the Index.

1.7 In order to qualify for inclusion in the Index, the Target company must have a minimum outstanding market capitalisation of € 100 million on the official announcement date of the merger or take-over.

1.8 In cases of ambiguity or special circumstances, the Merger Arbitrage Index Board has the right to include or exclude constituents at its sole discretion.

2. Calculation of the Index

2.1 The Index is calculated on a daily basis. The base value of the Index is set at 100 at the initial date (the “Launch date”). It represents the performance of a theoretical basket (the “Index Basket”) whose allocation reflects the weights that are put on the various available deals at any time. The Index has no unit and is expressed in “basis points”, the initial value being set at 100 as of the “Launch Date”. The value of the Index Basket is expressed in Euro. The conversion of stock prices is calculated based on the official fixing of the Euro Foreign Exchange Reference Rates of the European Central Bank (as published on Reuters page ECB37).

2.2 The Index Basket is described as a number of shares (positive for long positions, negative for short positions) of all the securities included. The exact number of shares used in the Index calculation is determined on a daily basis by the Carat software model developed by BNP Paribas.

2.3 For each currency involved in the Index Basket, there are two special cash securities, denominated as ‘long cash’ and ‘short cash’, which will be part of the Index Basket. They are used for uninvested (respectively borrowed) amounts. The prices of these securities are increased every day of accrued interest calculated at the official overnight rates of each currency, corrected by a spread. This spread is set at a negative (resp. positive) level for the long cash (resp. short cash) security. The number of shares held in the long cash (resp. short cash) security can only be positive (resp. negative).

2.4 The daily Index value is calculated as follows. The value of the Index Basket on day D is the sum of the following (positive or negative) elements:

(a) The value in € on D day of the previous Index Basket,
(b) The impact of stock additions, subtractions, merger completions on day D,
(c) The net dividends detached in D, or any corporate event (i.e. split),
(d) The cost of financing and stocks borrowing between D-1 and D,
(e) The daily fees applied to the Index Basket.

The detailed calculations for these elements are presented in Appendix 1.

2.5 The daily Index value is calculated using reference share prices of all the securities included in the Index. The calculation method for these reference prices differ per share category, as defined in rule 2.6 and 2.7.

2.6 The reference price of cash shares are calculated recursively by using the latest published overnight rate. The reference price is calculated as follows:

$$LC_j(t_i) = LC_j(t_{t-1}) * \left[1 + \frac{(r_j(t_{i-1}) - fs) * (t_i - t_{i-1})}{360}\right] \quad (1)$$

$$SC_j(t_i) = SC_j(t_{t-1}) * \left[1 + \frac{(r_j(t_{i-1}) + fs) * (t_i - t_{i-1})}{360}\right] \quad (2)$$

Where:

$LC_j(t_i)$ (resp. $SC_j(t_i)$):	the Long Cash share (resp. Short Cash share),
t_{i-1} and t_i:	two consecutive reference dates,
$r_j(t)$:	official overnight rate at date t in the currency j,
fs:	the financing spread.

2.7 For stocks other than cash, the reference share price is an arithmetical average of prices of transactions concluded at the fixing times, on the respective zone of each security (see the table in Appendix 2). For each zone, the fixing times are set based on CET. The prices retained will be the first traded price after these times unless there are no trades in the following 2 minutes, in which case the last traded price will be taken.

2.8 The leverage of the Index must be less than or equal to 200% at all times. The leverage is defined as follows:

$$L = \frac{\sum \text{(Purchase Value) over all long positions excluding all cash securities}}{\sum \text{(Purchase Value) over all long positions including all cash securities}} \qquad (3)$$

The purchase value of the relative long position on any stock T will be capped at 5%. The individual cap on this relative long position is then given by:

$$\text{Cap} = \text{Min}\,[5\%;\, 5\% \;/\; L] \qquad (4)$$

The relative long position percentage in a stock T on day d (T_d) is calculated as

$$T_d\% = \sum_{w=1}^{n} Q_{Tw} * Tw \Big/ B(d-1) \qquad (5)$$

Where:

Q_{Tw}: the quantity for a weekly adjustment on the stock T.
Tw: the Monday price of stock T for the week w.
B(d): the value of the Index Basket on date d.

2.9 The Compiler (as defined in chapter 6) retains the right to delay the use of a new price if it believes that this price deviates from the previous price to such an extent that it is necessary to obtain confirmation of the new price.

3. Publication of the Index

3.1 The value of the Index is published on a daily basis.

3.2 The Compiler will release the Index value of day (D), on the first business day following (D) at approximately 10:00 CET.

3.3 The Compiler retains the right to delay the publication of the Index values, or to suspend or discontinue the publication of the Index values, if it believes that there are circumstances which prevent the correct calculation of the Index.

3.4 The Index will not be published if one of the relevant stock exchanges for index constituents closed. Even if the index is not published, the regular adjustments on the open index constituents have to be made. The Index will then be calculated (based on the average prices for the open relevant stock exchanges and on the previous average prices on the closed relevant stock exchanges) but not disseminated.

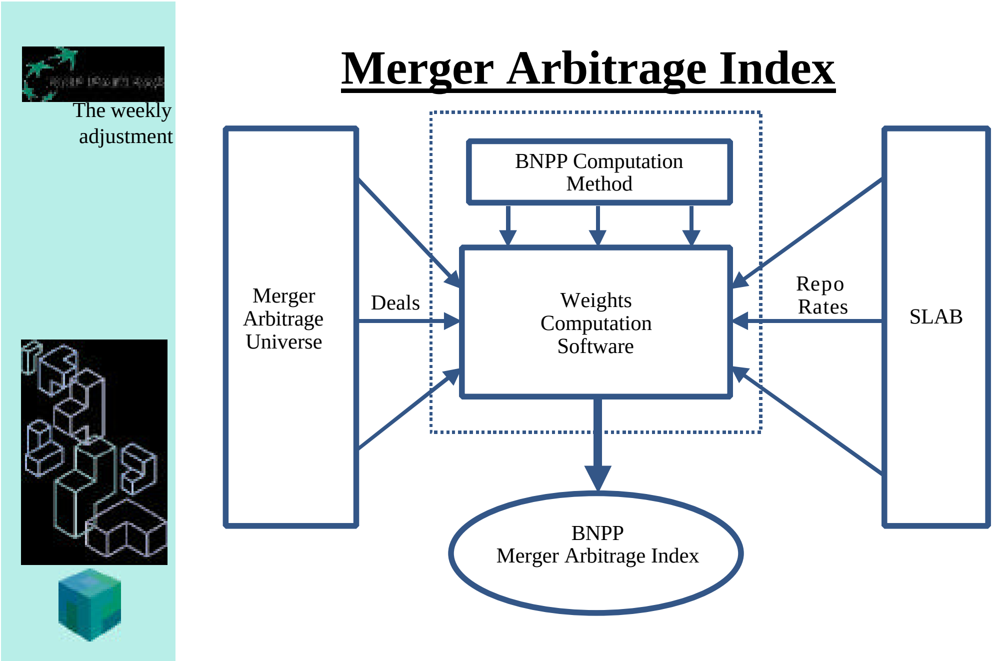
4. Rules for the periodical adjustment of the Index

4.1 The general aim of the Compiler of the Index when periodically adjusting the Index is to ensure that the selection of securities continues to meet the basic principles of the Index (see section 1) and that the Index continues to reflect the value of the underlying share portfolio.

4.2 The Index is periodically reviewed on a weekly basis. The adjustment of the Index reflects the change of the merger arbitrage Universe. It can be motivated by the following events:

(a) New M&A deals announced during the week,
(b) New information releases on the current deals,
(c) Change of the market spread.

4.3 Those modifications are taken into account in the BNP Paribas model and lead to a rebalancing of the Index Basket. This adjustment will entail a change of the weights and selection caused by new M&A announcements. The following chart shows the adjustment computation process, where SLAB stands for Stock Lending And Borrowing cost.



4.4 The period in which new deals are taken into account is from Monday 16:00 CET time of the Week before (W–1) to the Monday 16:00 CET of the current Week (W).

4.5 The adjustment is starting on Tuesday of the current week (W) following the adjustment given by the algorithm of BNP Paribas that takes into account both the new deals and the average prices of the Monday (W) (see rule 2.6).

4.6 All adjustments are done at a stock price level defined in rule 2.5.

4.7 **Final provisions for periodical adjustments**

In cases that are not expressly covered in these Rules, periodical adjustments will take place in the spirit of the aim set out in article 4.1. All adjustments must comply with the requirement set out in article 4.1. The Compiler of the Merger Arbitrage Index will submit all periodical adjustments which are not specifically covered in these Rules to the Technical Advisory Board of the Merger Arbitrage Index for approval.

5. Rules for the operational adjustment of the Index

5.1 The aim of the Compiler of the Index when making operational adjustments is to ensure that the basic principles of the Index (see section 1) are maintained and that the Index continues to reflect as closely as possible the value of the underlying portfolio.

5.2 Operational adjustment of the selection of securities

5.2.1 The composition of the portfolio on which the Index is based may change as a result of decisions or events which affect one or more of the constituent securities.

5.2.2 If regular daytime trading in one of the securities included in the Index stops or the security is no longer traded during regular daytime trading in officially listed shares, the Compiler of the Index will in the first instance use the last known price of the security concerned, subject to the provisions of section 2, but will also have the possibility of using prices which were not established during regular daytime trading.

5.2.3 In the event that a company included in the Index is split up, the securities resulting from the split, including the original security where appropriate, will continue to be included in the Index. For the purposes of these Rules a split-up is taken to mean a legal demerger, a spin-off or another situation which the Compiler deems to be similar.

5.2.4 The new weighting for each security will be expressed as the number of shares in the Index. This figure will usually be rounded off to the nearest whole number.

5.3 Adjustments subject to the Four (4) Days Rule

5.3.1 In order to smooth the liquidity problem, the four days rule will be applied. Any adjustment on a deal made under the Four Days Rule will be added to the Index Basket progressively during a period of four (4) business days (the “Execution Period”) excluding the Saturday , Sunday and any “not open” days of the respective countries as defined in the Open Market Table . The addition will be equal to ¼ of the total adjustment every open day starting the day of the adjustment.

5.3.2 Break of a M&A. In this case the specific deal is no longer part of the merger arbitrage Universe and the position on this arbitrage is cancelled in accordance with the Four (4) Days Rule.

A deal is considered broken when one of the two M&A parties (i.e. the two companies that have declared an intention of merger or acquisition), officially declare the end of the M&A process (through the Bloomberg or Reuters news pages).

Every break announced between the previous day (D-1) 16:00 CET and day (D) 16:00 CET is taken into account for the adjustment starting day (D) and following the four days rule (i.e. from day D to Day D+3, ¼ of the position will be unwound). The prices taken into account for day D are the average prices of day D (cf rule 2.5).

5.3.3 If a real market spread was trading for day j under the theoretical spread according to the best view of the Technical Advisory Board on the Mandatory Date (as defined in Appendix 2), the completion of the merger in day j is assumed and the Index Basket will be adjusted in accordance with the Four Days Rule.

For a cash offer, from day j to day j+3, the adjustment is done by adjusting the Target position by selling ¼ of the total long stock position till the premium is negative. If at date j+2 the premium is trading positive again, the remaining ½ of the long initial position in the Index Basket will be kept.

For a stock and mix offer, from day j to day j+3 the adjustment is made by adjusting the Target position by selling ¼ of the total Target stock position till the premium is negative and adjust the short position in the Acquirer by buying ¼ back every day from j to j+3. If at date j+1 the premium is trading positive again, the remaining ¾ of the initial position in the Index Basket will be kept.

5.4 Adjustments not subject to the Four (4) Days Rule

5.4.1 A change in market conditions may imply a change in the delta of a Collar deal. The change in delta can be explained by a variation of all the variables present in the collar valuation formula (see "Equivalent Option Strategies" in Appendix 2), for example: the Acquirer price, the implied volatility of the underlying options, the time to maturity.

Following these changes, the new number of shares to be used in the Index calculation can be calculated as follows.

$$? n_A(j) = NT(j-1) * (-d (j) + d (j-1)) \qquad (6)$$

Where:

T:	Target stock.
A:	Acquirer stock
NT(j-1):	Number of stocks in the Target T at date j-1.
j:	calculation date.
? n_A(j):	Variation of the number of stock A in the Index Basket at date j due to the change in the collar delta.
d(j):	Collar delta at date j (defined in Appendix 2).

BNP Paribas will provide through any relevant internal software, a matrix woth quantities of stocks of the Acquirer. A matrix will be made for each deal implying a collar. It will present the quantity of stocks needed for the hedge for a range around the average stock price of the Acquirer of the previous day (Ad-1). Interpolation will then result in the number leading to ? n_T(j). Thirteen steps will be calculated:

$$[-50\%;-30\%;-15\%;-10\%;-5\%;-2\%;Aj-1;+2\%;+5\%;+10\%;+15\%;+30\%;+50\%] \qquad (7)$$

This matrix leads to ? n_T(j).

5.4.2 The completion of a M&A deal.

In this rule the following notation will be used:

Mandatory Date (Md):	the date at which the M&A is declared effective by one or the other of the companies concerned with M&A.
Delivery date (Dd):	the date at which the cash or the stock implied by the M&A is effectively paid or delivered.
Ot:	Offer price of the Target.
Rs(j):	Overnight rate at date j, s = t: currency of Target, or a: Acquirer.
NSt (j):	Quantity of stock of the Target owned by the Index Basket at date j.
NSa (j):	Quantity of stock of the Acquirer owned by the Index Basket at date j.

Ps (j):	Price of the stock S at date j , s = t : Target or a: Acquirer.
$LCs(t_i)$ (resp. $SCs(t_i)$):	The Long Cash share (resp. Short Cash share) n the currency of stock s, s = T: Target or A: Acquirer.
t_{i-1} and t_i	two consecutive reference dates.
fs	the financing spread.

(a) In case of a Cash offer, the Index is adjusted at day Md+1 by selling the long Target position at the Cash offer price proposed by the Acquirer. From day Md to day Dd the Index will be charged daily of the Cost of carry (CCt (j)) at EONIA (the day to day Euro rate) plus the financing spread.

$$CCt(j) = NSt(Md) * Ot * (SCt(j) / SCt(j-1) - 1), \text{ for } Md <= j <= Dd \quad (8)$$

(b) In case of a Stock offer, the Index is adjusted at day Md+1 by selling the long Target position at zero (0) and by buying back the short Acquirer position at zero. From day Md to day Dd the Index will be charged daily of the Cost of Carry for the long leg plus Carry Gain (GCa (j)) on the short leg minus the repo financing (Rca (j)).

$$CCt(j) = NSt(Md * Pt(Md) * (SCt(j) / SCt(j-1) -1), \text{ for } Md <= j <= Dd \quad (9)$$
$$CGa(j) = NSa(Md) * Pa(Md) * (LCa(j) / LCa(j-1) -1) \text{ for } Md <= j <= Dd \quad (10)$$
$$RCa(j) = NSa(Md) * Pa(j) * Ra(j) / 360 * \text{Number of days } (j-1;j) \quad (11)$$

(c) In case of collar, the theoretical parity at date Md+1 will be taken and the Index will be adjusted at date Dd.

(d) In case of mix offer (cash plus stock), the Rules on Cash offers and Stock offers are applied for their respective percentage of the Target.

(e) In case of an election process (a process that allows the Target owner to choose the offer), the theoretical election offer will be used, fixed by the Acquirer to apply the rule for a mix offer.

5.5 Operational adjustment of the number of shares of securities

5.5.1 The composition of the portfolios on which the Index is based may change as a result of steps taken by an issuer of securities included in the Index.

5.5.2 The Index Basket will not be adjusted to take account of periodical cash dividends on constituent securities, on the understanding that the Compiler may decide otherwise. If this power is used for a particular stock, the number of shares of this stock in the Index Basket will be adjusted so that the value of the Index, calculated on the same reference prices, remains unchanged.

5.5.3 The Index will not be adjusted for periodical stock dividends on constituent securities. In this context a dividend with a stock option is also taken to mean a stock and/or cash dividend if the shareholders are able to opt for one of the dividends or a combination of them before the dividend is declared.

5.5.4 In the event of a non-periodical stock dividend, bonus dividend or bonus issue, the number of shares of the security in question which are included in the Index will not be adjusted.

5.5.5 In the event of a rights issue the number of shares of the relevant security which are included in the Index will not be adjusted.

5.5.6 The procedure set out in article 5.5.5 will also be followed if a value can be attributed to a subscription right for convertible bonds, bonds with warrants or warrants with preferential rights for shareholders.

5.5.7 In order to ensure that the level of the Index remains the same after a split-up, the weighting of the original security after a split-up will be adjusted as follows. After the split of the original security, all the resulting securities, including the original security where appropriate, will be included in the Index Basket. The existing weighting of the original security will be allocated to these securities so that the value of the Index calculated on the same reference prices remains unchanged.

5.5.8 If the issuer of a security included in the Index changes its capital structure, old shares will be replaced by new shares.

5.5.9 In the event of a share split the number of shares in the security concerned will be multiplied by the factor used for the split at that time.

5.6 Final provisions for operational adjustments

5.6.1 In cases which are not expressly covered in these Rules, operational adjustments will take place in the spirit of the aim set out in article 5.1. Operational adjustments may also take place if, in the opinion of the Compiler of the Index, it is desirable to do so to maintain a fair and orderly market in derivatives on this Index and / or this is in the best interests of the investors in these products and / or the proper functioning of the markets.

5.6.2 In the event that a company included in the Index is vis-à-vis BNP Paribas, or any of the entities of the BNP Paribas Group, in a situation which leads to a conflict of interests, the Compiler has to withdraw the shares of the said company of the composition of the Index, upon the request of the head of BNP Paribas Investment Banking Compliance. Any stock concerned by this rule (5.6.2) will be removed from the Universe.

5.6.3 Within the objectives set in this Rules, the Compiler may choose the companies the securities of which compose the Index. However, this choice is subject to the laws and regulations of the country which govern the issuing company.

6. Final provisions

6.1 The Merger Arbitrage Index is governed by the following bodies: the scientific committee (as defined in rule 6.2), the technical advisory board (as defined in rule 6.3) and is calculated by the Compiler (as defined in rule 6.4).

6.2 The Merger Arbitrage Index Scientific Committee (the “Committee”) is responsible for maintaining the conceptual quality of the Index, and hence has the following responsibilities: to validate the Rules; to validate amendments related to the Rules as they may be proposed from time to time; to set up the working principles of the Technical Advisory Board; and to initiate an external audit on the Proprietary Model of BNP Paribas.

6.3 The Merger Arbitrage Index Technical Advisory Board (the “Board”) acts as a supervisor of the Index and has the responsibility of validating the re-balancing of the Index Basket; validate other amendments to the Index due to corporate events and initiating an internal audit on the data that form the basis of the Index.

6.4 The BNP Paribas Merger Arbitrage Compiler (the “Compiler”) is responsible for the day-to-day calculation and dissemination of the Index. In cases not covered by the Rules, the Compiler refers to the Board who makes the decision.

6.5 These Rules may be supplemented, amended in whole or in part, revised or withdrawn at any time. Supplements, amendments, revisions and withdrawals may also lead to changes in the way the Index is compiled or calculated or affect the Index in another way. The Compiler and The Board will submit all proposals regarding supplementing, amending, revising or withdrawing these Rules to the Committee for recommendations and approval. All decisions will be published immediately. A period of at least one month should pass between the date a proposed change is published and the date this comes into effect, unless the change is not in conflict with the interests of an affected party. No liability can be accepted for any losses resulting from supplementing, amending, revising or withdrawing the Rules for the Index.

6.6 The Compiler, the Board and the Committee of the Index will ensure the accuracy of the composition, calculation, publication and adjustment of the Index in accordance with relevant Rules. However, the Compiler, the Board and the Committee cannot accept any liability for any inaccuracy in share prices, calculations and the publication of the Index, the information used for making adjustments to the Index and the actual adjustments.

6.7 BNP Paribas owns all intellectual and other property rights to the Index, including the name, the composition and the calculation of the Index.

6.8 Disclaimer

6.8.1 Accuracy of the Index

The Compiler, the Committee and the Board will make their best effort to ensure the accuracy of the composition, calculation, publication and adjustment of the Index in accordance with the relevant Rules. However, the Compiler, the Board and the Committee cannot guarantee the accuracy of share prices, calculations or publication of the Index, nor the accuracy or completeness of the information used for making adjustments to the Index and actual adjustments.

6.8.2 Change in the methodology for calculation of the Index

The Compiler, the Committee, the Board, BNP Paribas SA and BNP Paribas Arbitrage, a subsidiary of BNP Paribas S.A., sponsor of the Index, cannot be held liable for any modification or change in the methodology used in calculating the Index set under Section 2 of the Rules for the Index.

6.8.3 Suspension and interruption in the publication of the Index

The Compiler, the Committee, the Board, BNP Paribas SA and BNP Paribas Arbitrage are under no obligation to continue the calculation, publication or dissemination of the Index and cannot be held liable for any suspension or interruption in the calculation of the Index.

6.8.4 Level of the Index

The Compiler, the Committee, the Board, BNP Paribas SA and BNP Paribas Arbitrage, sponsor of the Index, decline any liability in connection with the level of the Index at any given time. Neither the Compiler, the Committee, the Board, BNP Paribas SA nor BNP Paribas Arbitrage can be held liable for any loss whatsoever, directly or indirectly related to the Index.

6.8.5 Products derived from the Index

These Rules contain no provisions relating to any product derived from the Index. Should any product derived from the Index be issued, provisions relating to a possible liability with respect to such product will be dealt with in a separate document.

Appendix 1 Index calculation method

The value of the Index Basket on day (D) is the sum of the following elements:

(a) the value of the previous day basket, valued on (D) day prices

$$B_i(D-1) = \sum_{i=1}^{N} N_i(D-1)S_i(D)X_i(D) \tag{A1}$$

(b) the impact of day (D) stock additions, subtractions, merger completions

For the variation in the positions, one has to distinguish between market transactions and completions of relevant merger deals. Market transactions are a result of normal basket rebalancings and are done, as explained above, at the reference prices. Completion of a merger deal results in the Target (resp. the Acquirer) share being sold (resp. bought back) at the final conditions of the offer.

Impact of purchases on day (D):

$$P(D) = \sum_{i=1}^{N} ?_{+i}(D)(S_i(D) - S_{i,A}(D)(1+c))X_i(D) \tag{A2}$$

Impact of sales on day (D):

$$S(D) = \sum_{i=1}^{N} ?_{-i}(D)(S_i(D) - S_{i,B}(D)(1-c))X_i(D) \tag{A3}$$

Impact of merger completions on day (D):

$$M(D) = \sum_{i=1}^{N} E_{+i}(D)(S_i(D) - S_{i,M}(D))X_i(D) - \sum_{i=1}^{N} E_{-i}(D)(S_i(D) - S_{i,M}(D))X_i(D) \tag{A4}$$

(c) the net dividends detached in day (D)

$$Div(D) = \sum_{i=1}^{N} N_i(D-1)d_i(D)X_i(D) \tag{A5}$$

(d) the cost of stocks borrowing between (D-1) and (D)

$$SB(D) = \sum_{Ni(d-1)<0} N_i(D-1)S_i(D)r_i(D-1)dt(D)X_i(D) \tag{A6}$$

(e) the impact of fees between (D-1) and (D) (as defined in Appendix 2).

Adding up formulas (A1) to (A6), leads to the Index value calculation formula:

$$B(D) = B(D\text{-}1) + P(D) + S(D) + SB(D) + M(D) + Div(D) - Fees(D) \tag{A7}$$

Finally, the corresponding Index value is the relative performance of the Index Basket since the Launch Date:

$$I(D) = B(D)/B(0) \tag{A8}$$

Where:

$S_i(D)$	Price of stock i retained for valuation on day (D).
$S_{i,A}(D)$	Ask price of stock i retained for additions on day (D).
$S_{i,B}(D)$	Bid price of stock i retained for subtractions on day (D).
$N_i(D)$	Number of stocks i in the Index Basket on day (D). It can be positive for long positions or negative for short positions.
B(0)	The initial value B(0) of the Basket on the Launch date. The number effectively held in each stock is thus proportional to B(0), which plays effectively the role of a scale factor.
$X_i(D)$	Rate of the denomination currency of stock i against EUR retained for valuation on day (D).
? $_+N_i(D)$	Number of stocks i added on day (D) (>0).
? $_-N_i(D)$	Number of stocks i subtracted on day (D) (<0).
$E_-N_i(D)$	Number of stocks of Target i exchanged for cash (stock 0) or for Acquirer j shares by a merger completion.
$SM_i(D)$	Reference price for Target (or Acquirer) i on day (D) on merger completion.
$E_+N_i(D)$	Number of stocks of Acquirer j (or of cash) created by a merger completion on day (D).
$r_i(D)$	repo rate applied to a short position on stock i on day (D).
$d_i(D)$	net dividend detached by stock i on day (D).
c	Transaction costs.
dt(D)	(number of calendar days between (D-1) and (D)) / 365

Stocks in the Index Basket are indexed by 1,....,n,...N. This set includes all the cash securities in the various currencies.

Appendix 2 Definitions

Acquirer
The Acquirer is the company that, involved in a Merger Arbitrage deal, is offering its stock or cash to acquire another company. In case of doubt (merger of equal, new company) the board will decide which company is the Acquirer.

Board
The Technical Advisory Board referred to in Rule 6.3.

C.E.T.
Central European Time (or Greenwich Mean Time + 1 hour).

Eligible countries, relevant stock exchanges and CET fixing time per zone

Zone	*Country*	*Market place*	*Relevant CET*
1	Austria	Vienna (Xetra)	16:00-16:30-17:00
	Belgium	Belgium	16:00-16:30-17:00
	Denmark	Copenhagen	16:00-16:30-17:00
	Finland	Helsinki	16:00-16:30-17:00
	France	Paris	16:00-16:30-17:00
	Germany	Frankfurt (Xetra)	16:00-16:30-17:00
	United Kingdom	London	16:00-16:30-17:00
	Ireland	Ireland (Xetra)	16:00-16:30-17:00
	Italy	Milano	16:00-16:30-17:00
	Netherlands	Amsterdam	16:00-16:30-17:00
	Portugal	Lisbon	16:00-16:30-17:00
	Spain	Madrid	16:00-16:30-17:00
	Sweden	Stockholm	16:00-16:30-17:00
	Switzerland	Zurich	16:00-16:30-17:00
	Canada	Toronto	16:00-16:30-17:00
	United States	Amex	16:00-16:30-17:00
		Nasdaq	16:00-16:30-17:00
		Nyse	16:00-16:30-17:00
2	Greece	Athens	15:00-15:30-16:00
	Luxembourg	Luxembourg	15:00-15:30-16:00
	Norway	Oslo	15:00-15:30-16:00
3	Hong Kong	Hong Kong	8:00-8:30-9:00
	Singapore	Singapore	8:00-8:30-9:00
4	Japan	Tokyo	5:00-5:30-6:00
	Australia	Sydney	5:00-5:30-6:00

The price of day (D) for stock (S) is the average price of this stock on the corresponding zone relevant CET times (cf rule 2.5).

Committee
The Scientific Committee referred to in rule 6.2

Compiler
The Compiler referred to in rule 6.4

Contingent Value Right
The Contingent Value Right (CVR) is a right issued by a company which guarantees the owner the value of the stock of the company between two levels of stock prices of this company. It is analysed as being long or short of an option strategy issued by the company (example the right to sell the stock of a company XYZ at 20 between stock prices included in [15;20]).

Equivalent Options Strategies of a collar

A collar in a deal means that the pay-out ratio is a linear function of the share price of the Acquirer subject to a lower and an upper bound. Suppose Company B is acquiring Company A. Holders of A shares receive a number of B shares which is a function of the reference price of share B at the end of the pricing period. This reference price is an average of closing prices of share B over a certain number of days preceding the end of the deal. If B* represents the reference price of share B and B_1/B_2 the lower and upper bounds, than the number of B shares for one A share for a single collar is:

$$\alpha \text{ if } B^* > B_2 \text{ at the end of the pricing period} \quad (A9)$$
$$\alpha\,(B_2 \;/\; B^*) \text{ if } B_1 <= B^* <= B_2 \text{ at the end of the pricing period} \quad (A10)$$
$$\beta = \alpha\,(B_2 \;/\; B_1) \text{ if } B^* < B_1 \text{ at the end of the pricing period.} \quad (A11)$$

A single deal can contain several collars, each of them having its own interval.

Every single collar can in fact be expressed as a combination of options. Indeed, holders of A shares are protected (although to a limited extent) against a drop in the price of B shares. In exchange for this protection, they accept to limit their participation in a rise of B shares. In case of success of the merger, holders of A shares have a long position in a put on B and a short position in a call on B. Because the number of shares depends on the average of closing prices during the pricing period, these options are of Asian type (option on average). Their valuation can only be obtained by using numerical schemes like Monte-Carlo pricing. The value of the equivalent option (EOS) strategy at time 0 with an initial stock value B_0 is:

$$EOS = \beta \text{ Put } (B_1, t, T, s_B, r, B_0) - \alpha \text{ Call } (B_2, t, T, s_B, r, B_0) \quad (A12)$$

The ratio of the collar is then defined by:

$$\text{Collar ratio} =_{def} d(\, EOS\,) / dB_0 = \text{DELTA of the strategy} = d \quad (A13)$$

Where:

B_0	the price of the stock B at time
[T - t, T]	the pricing period
B_2 (resp. B1)	the strike of the call (resp. of the put)
s_B	the implied volatility of options on B share (strike price and maturity being chosen as close as possible to the current option).
R	the risk-free rate in the denomination currency of stock B until the end of the pricing period

Call (B_2, t, T, s_B, r, B_0) or Put (B_1, t, T, s_B, r, B_0): the price of the call or the put on the underlying stock B with the predescribed elements using a securized standard valuation model.

No closed formula being available for this kind of options, the d quantity is obtained numerically.

Four Days Rule

The rule as defined in article 5.3.1

Index Basket

A theoretical basket underlying the performance of the Index. The Index Basket is described as a number of shares (positive for long positions, negative for short positions) of all the securities included in the Index Universe. The number in each share is defined up to a scale factor. An initial Index Basket size will therefore be set at the inception of the Index. Its value is currently € 500 million.

Launch date

The Launch date is the date, determined by the Board on its first meeting, at which the Index will officially be launched

Maturity
The Maturity of a Merger Arbitrage Deal is the estimated completion date (the Mandatory date) of the Merger. This maturity is deduced by BNP Paribas, based on all publicly available official press releases.

Mandatory Date
The date on which the M&A is declared effective by one or the other of the companies concerned with the M&A.

Merger Arbitrage deal
An arbitrage based on an announced merger or a take-over between two or more quoted companies. The goal of the arbitrage is to capture the difference between the market spread and the theoretical spread.

Open Market Table
This table is a calendar specifying which market is open and which is not for all the specific countries implied in the Index. The open market is furnished by either the Compiler or BNP Paribas and is based on the official closed stock market days provided by the respective regulatory authority.

Portfolio Management Fees
The following fees will be included in the calculation:

(a) Balance Sheet Fees: 1.5 % per annum of the market value of the long positions in the Index Basket.
(b) Financing spread: -0.25% (resp. +0.25%) per annum applied to the position held in the long (resp. short) cash share.
(c) Net Asset Value Fees: 0.50 % p.a of the Index value.
(d) Short Stocks Fees: 0.50 % p.a added to the repo rate on every short position in the Index Basket.
(e) Execution Costs: 0.15% flat on each transaction (except for the cash securities for which there are no costs).
(f) Incentive fees: 15% of the moving average of the performance of the Index in excess over the overnight EONIA.

The impact of the management fees is calculated as follows:

$$NAV_{\text{after fees}}(t) = NAV(t) - FixedFees(t-1,t) - IF(t-1, t) \qquad \text{(A14)}$$

Where:

NAV(t)	Index level Before Fees (both fixed and incentive) at t, with NAV(0) = 100%.
FixedFees	Fees (a) to (e).
IF	Incentive fees (fees (f)). The incentive fees between t-1 and t are calculated as follows:

$$IF(t-1, t) = TI(MMRI(t) - MMRC(t)) \qquad \text{(A15)}$$

with TI=15%. The outcome can be positive (when the Index is over performing the cash) and negative.

LC(t)	Value of the cash asset at day t, with C(0) = 100% , 0 being the conventional starting date.
MMRC(t)	The moving average of the non annualised return of the cash asset. This is calculated as follows:

$$MMRC(t) = k\left(\frac{C(t)}{C(t-1)} - 1\right) + (1-k)MMRC(t-1) \qquad \text{(A16)}$$

Where MMRC(0)= 0% and *k* is a fixed number equal to 5%.

MMRI(t) The non annualised return Index moving average, calculated as follows:

$$\mathrm{MMRI(t)} = \mathrm{k}\left(\frac{\mathrm{NAV(t)}}{\mathrm{NAV(t-1)}} - 1\right) + (1-\mathrm{k})\mathrm{MMRI(t-1)} \tag{A17}$$

Where MMRI(0) = 100% and *k* is a fixed number equal to 5%.

Pricing Period
The pricing period is the period during which the exact ratio of a merger/take-over will be determined by the Acquirer.

Proprietary Model
The CARAT software as developed by BNP Paribas. This model is used to determine the number of shares included in the Index calculation. This produces values on a daily basis.

Rules
The rules for the Merger Arbitrage Index®.

Stub
Any type of financial instrument issued as a part of the merger consideration.

Target Company
The Target is the company that, implied in a Merger Arbitrage deal, is being acquired by the Acquirer. In case of doubt (merger of equal, new company) the board will decide which company is the Target

Universe
The global merger arbitrage stock market which results after application of articles 1.2, 1.3, 1.4, 1.5, 1.6 and 1.7.

Appendix 3 Mnemo of the index

Full name:	Merger Arbitrage Index
Index-code:	BMAI
ISIN-code:	NL0000266526