

**DECREE of the  
National Bank of Slovakia**

of 9 September 2008

**on exposure related to financial derivatives**

The National Bank of Slovakia, pursuant to Article 116, paragraph 2, letter b) of the Act No 594/2003 Coll. on collective investments and on amendments to certain other laws, as amended (hereinafter referred to as the "Act"), stipulates:

Article 1

This decree regulates

a) details on what shall be understood by

1. derivative positions,<sup>1)</sup>
  2. exposure pursuant to Article 49, paragraph 5 of the Act, and the method of its calculation,
  3. exposure to another contracting party (hereinafter referred to as "counterparty"), and the method of its calculation,
- b) requirements to be met by internal models used to calculate exposure pursuant to Article 49, paragraph 5 of the Act.

Article 2

A derivative position expresses the value of a claim or liability arising from a financial derivative in mutual fund assets. A derivative position expressing the value of a claim arising from a financial derivative is termed a long position. A derivative position expressing the value of a liability arising from a financial derivative is termed a short position.

Article 3

(1) Pursuant to Article 49, paragraph 5 of the Act, exposure shall be understood as the value of risk to which mutual fund assets are exposed due to their position in the financial derivative.

(2) Pursuant to Article 49, paragraph 5 of the Act, exposure shall be calculated using one of the following methods:

a) liability principle pursuant to paragraph 4 or

b) internal model determining the value-at-risk

(hereinafter referred to as the "internal model") that meets the requirements stipulated in Article 4.

(3) The methods pursuant to paragraph 2 are to be used for a period stipulated by an internal regulation of a management company but no shorter than for a reporting period pursuant to Article 49, paragraph 2 of the Act. If the strategy of investing assets in a mutual fund involves investments in financial derivatives that are a combination of financial derivatives, or in derivatives where, due to their nature, it is not possible to use the method mentioned in paragraph 2, letter a), exposure pursuant to paragraph 1 shall be calculated using the method mentioned in paragraph 2, letter b).

(4) The liability method shall be understood as a procedure for the calculation of exposure pursuant to paragraph 1, where derivative positions are converted to equivalent positions in their underlying instruments according to the nature of the respective financial derivatives. Exposure is then calculated as the sum of the absolute values of all equivalent positions, taking into account the netting of equivalent positions pursuant to paragraphs 6 and 7.

(5) For the purposes of paragraph 4, equivalent positions in the underlying instruments of financial derivatives are to be understood in the following manner:

- a) in futures,<sup>2)</sup> forwards <sup>3)</sup> and swaps<sup>4)</sup>, market values of positions in their underlying instruments on markets that are decisive for the given underlying asset; where no market price exists for a given underlying instrument or where it is impossible to find the same, nominal value or theoretical prices are to be used,<sup>5)</sup>

<sup>2</sup> Article 2, letter h) of the Decree of the National Bank of Slovakia of 13 March 2007 No 4/2007 on banks' own funds of financing and banks' capital requirements and on securities dealers' own capital requirements (Notification No 121/2007 Coll.).

<sup>3</sup> Article 2, letter i) of the Decree No. 4/2007 (Notification No. 121/2007 Coll.).

<sup>4</sup> Article 2, letter j) of the Decree No. 4/2007 (Notification No. 121/2007 Coll.).

<sup>5</sup> Article 1, letter c) of the Decree of the Ministry of Finance of the Slovak Republic No. 611/2003 on the methods of valuation of securities, financial market instruments, and derivatives that are owned by a mutual fund.

<sup>1</sup> Article 5, letter q) of the Act No. 594/2003 Coll. on collective investments and changes and amendments to certain other laws as amended

b) in options<sup>6)</sup> delta equivalents of the respective underlying instruments of these options.<sup>7)</sup>

(6) When using the liability method pursuant to paragraph 4, it shall be possible, following the conversion to equivalent positions in underlying instruments pursuant to paragraph 4, to net

a) long and short equivalent positions in identical underlying instruments; where underlying instruments are interest rates, they shall be considered identical underlying instruments if their mutual deviation does not exceed 15 basis points,

b) short equivalent positions in underlying instruments and the value of assets held as mutual fund assets, providing that the underlying instrument in a financial derivative and assets held as mutual fund assets are identical; for the purposes of the first sentence, interest rates shall be considered identical if their mutual deviation does not exceed 15 basis points.

(7) When using the liability method pursuant to paragraph 4, it shall be possible to net equivalent positions pursuant to paragraph 6 only where the time span between the residual maturities of these positions is

a) zero days, in a shorter residual maturity of one of the equivalent positions of up to one month inclusive,

b) no more than seven days, in a shorter residual maturity of one of the equivalent positions from one month up to one year inclusive,

c) no more than 30 days after the residual maturity of both equivalent positions of more than one year.

#### Article 4

Requirements to be met by internal models used to calculate exposure pursuant to Article 49, paragraph 5 of the Act and pursuant to Article 3, paragraph 2, are as follows:

a) the value-at-risk is calculated on a daily basis,

b) a one-tailed confidence interval of 99 % is used for calculating the value-at-risk,

c) the minimum period for which the value-at-risk is calculated in advance (the holding period) is one month or a shorter period, but with a correction to an equivalent of one month,

d) the historical series of observations of value-at-risk is at least one year,

e) data sets are updated at least once every three months,

f) to calculate value-at-risk, an internal model is used on the basis of, for instance, a covariance-variance matrix of observations, of a historical simulation of data, or Monte Carlo simulation,

g) the internal model precisely calculates the risks relating to options, financial instruments whose nature is similar to that of options, financial instruments with embedded options, and with other financial instruments with non-linear price characteristics, so that it

1. takes into account non-linear price characteristics of positions from these financial instruments,

2. it assesses positions from these financial instruments as positions held for a minimum period of one month,

3. takes into account the set of risk factors expressing the influence of volatility of interest rates and prices of underlying instruments of these financial instruments on their value, i.e., Vega, Delta, and Gamma factors,

h) the exposure is determined daily as the higher of the value-at-risk from the preceding day or the average daily value-at-risk for the preceding 60 working days, multiplied by a multiplication factor pursuant to letter i),

i) the minimum level of the multiplication factor is three; the value of the multiplication factor increases by the value of the plus factor pursuant to a special provision<sup>8)</sup> depending on the number of times of overstepping during the past 250 working days, where overstepping means a one-day change of the portfolio value that is higher than value-at-risk calculated using the internal market risk calculation model,

j) for the purposes of determining the plus factor, instances of overstepping pursuant to letter i) are evaluated at least once in a quarter and are calculated using a back-testing program,

k) the precision and functioning of the internal model are monitored using a back-testing program; for every working day, the back-testing program determines the comparison of a one-day-value-at-risk generated by the internal system with the difference between the theoretical value of mutual fund assets for the following day and the real value of mutual fund assets on a given day,

l) the internal model is improved if it does not provide sufficiently accurate data on the basis of back-testing,

m) rigorous stress testing of the internal model pursuant to Article 5 is carried out on a regular basis, no less than once per year, and the results of this testing are assessed by leading employees responsible for risk management and subsequently taken into account in any changes to working procedures or limit settings,

n) the assessment of the total risk management system is carried out at least once per year,

o) criteria for the specification of market risk factors pursuant to a special regulation,<sup>9)</sup> are taken into account,

p) written documentation is maintained, containing

<sup>6</sup> Article 2, letter f) of the Decree No. 4/2007 (Notification No 121/2007 Coll.)

<sup>7</sup> Article 2, letter n) of the Decree No. 4/2007 (Notification No 121/2007 Coll.)

<sup>8</sup> Article 185, letter i) of the Decree No. 4/2007 (Notification No 121/2007 Coll.)

<sup>9</sup> Article 185 of the Decree No. 4/2007 (Notification No 121/2007 Coll.)

1. the methodology of risk measurement,
2. a description of the internal model and its operational details,
3. the description of methods used for estimations,
4. results of stress testing and the back-testing program which prove that the internal model provides a reliable risk assessment,
5. the history of major changes in the internal model and the description of changes carried out after its most recent reassessment,
6. statistical procedures of the reassessment of the selection of explanatory variables,
7. a description of circumstances under which the internal model does not work efficiently.

#### Article 5

(1) Stress testing which is a prerequisite for the use of the internal model for the purposes of calculating exposure pursuant to Article 3, paragraph 2, includes stress scenarios, stress qualitative tests and stress quantitative tests. Stress testing is used to identify the events and influences that have a major impact on mutual fund assets.

(2) For the purposes of paragraph 1, stress scenarios take into account the factors that may cause losses or profits or that may impede risk management; they include events with a low probability of occurrence in the calculation of all types of market risks as well as the influence of these events on positions with linear or non-linear price characteristics.

(3) For the purposes of paragraph 1, stress qualitative tests identify the possibilities of decrease in risks and in the protection of mutual fund assets against possible losses. For the purposes of paragraph 1, stress quantitative tests identify the possible impacts of fluctuations of real prices, interest rates, volatilities, correlations and other market factors, on mutual fund assets.

#### Article 6

(1) Exposure to a counterparty shall be understood as the maximum amount of a possible loss from financial derivative positions determined with professional care where such counterparty is subject to a bankruptcy proceeding or otherwise becomes unable to pay its obligations arising from a financial derivative, as at the date of calculation of these limits. Exposure to a counterparty is calculated using a method pursuant to a special provision<sup>10</sup>); where the market price does not exist or is impossible to establish, theoretical price shall be used.<sup>5)</sup>

(2) In an exposure pursuant to paragraph 1 it shall be possible to

- a) net financial derivative positions against one counterparty, if the possibility of netting has been agreed upon in a contract that meets the requirements stipulated by a special regulation<sup>11</sup>) and if this contract has been submitted for assessment to the National Bank of Slovakia,
- b) decrease the exposure to a counterparty by the value of a guarantee provided to the benefit of mutual fund assets, provided that the respective financial derivatives operation is settled by means of an operation settlement system operated by a counterparty authorised to carry out the settlement of operations, and that the guarantee:
  1. is in the form of funds, certificates of deposits or securities with a risk weight of 0 % pursuant to a special regulation,<sup>12</sup>)
  2. is valued using market prices and that its value exceeds the value of risk,
  3. is deposited with a person without any links to the respective counterparty, or protected against the consequences of bankruptcy of a counterparty or a third person,
  4. may be, at any time, applied by a management company to the benefit of a mutual fund.

#### Article 7

Herewith, the Decree of the Ministry of Finance of the Slovak Republic No 594/2004 Coll. on the use of techniques and instruments of effective management of investments of assets in a mutual fund and on asset exposure, is cancelled.

#### Article 8

This Decree shall become effective on 1 October 2008.

<sup>10</sup> Article 11 of the Decree No 4/2007 (Notification No. 121/2007 Coll.)

<sup>11</sup> Article 15 of the Decree No 4/2007 (Notification No. 121/2007 Coll.)

<sup>12</sup> Decree No. 4/2007 (Notification No 121/2007)

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