RS Official Gazette, Nos 46/201, 6/2013, 51/2014 and 85/2016

Pursuant to Articles 21 (3), 23 (4) and 24 (2) of the Law on Banks (RS Official Gazette, Nos. 107/2005 and 91/2010), and Article 15 (1) of the Law on the National Bank of Serbia (RS Official Gazette, No. 72/2003, 55/2004 and 44/2010), the Executive Board of the National Bank of Serbia hereby adopts the following

D E C I S I O N
ON CAPITAL ADEQUACY OF BANKS

C h a p t e r I

BASIC PROVISIONS

1. This Decision governs the method of calculating the capital of banks and their capital adequacy ratio, conditions and manner of obtaining approval for the calculation of capital and capital adequacy ratio of banks, as well as criteria for setting capital adequacy ratio above the prescribed minimum.

2. For the purposes of this Decision, individual terms shall have the following meaning:

1) *public administrative bodies* means public sector entities which are under the supervision of public authorities and which have not been established for commercial purposes;

2) *multilateral development bank* means a legal entity whose majority shareholders are from at least three countries and whose main activity is provision of funding for economic development of all member states or a selected group thereof;

3) *small and medium-sized enterprises* means companies classified, according to the law regulating accounting and auditing, into small or medium-sized legal entities;

4) *credit assessment institution* means a legal entity whose predominant activity is assignment of credit assessments to legal entities and/or financial instruments;

5) *eligible credit assessment institution* means a credit assessment institution whose credit assessments, pursuant to the approval of the National Bank of Serbia, are recognised as eligible for the calculation of capital requirements for credit risk;

6) *nominated credit assessment institution* means an eligible credit assessment institution, the credit assessments of which the bank decided to use to determine credit risk weights for individual exposure classes;

7) *types of credit assessments* include:

– long- and short-term credit assessments,

– credit assessment of an obligor and credit assessment of a financial instrument,

– credit assessments for basic and narrower market segments;

8) *market segment* means:

– basic market segment (public, business and structured finance), or

– narrower segment of legal entities and/or financial instruments, encompassing a set of legal entities for which a credit assessment institution uses the same methodology for determining credit assessments and procedures ensuring the implementation of this methodology;

9) *credit assessments mapping* means a process of assigning individual credit assessments of an eligible credit assessment institution to credit quality steps;

10) *credit risk mitigation technique* means use of credit protection instruments to reduce credit risk to which a bank is exposed on one or several exposures;

11) *credit protection* means transfer of credit risk from the buyer to the provider of that protection;

12) *underlying exposure* means a balance sheet assets position or off-balance sheet item for which credit protection has been obtained;

13) *credit protection instruments* means funded credit protection instruments and unfunded credit protection instruments;

14) *funded credit protection instruments* means instruments by the use of which a bank reduces its credit risk exposure deriving from its right – in the event of default of its obligor or on the occurrence of other specified credit events relating to that obligor:

– to liquidate, or to obtain transfer or appropriation of, or to retain certain assets, or

– to reduce the amount of the exposure by the amount of a claim on the bank, or to replace the amount of exposure with the amount of the difference between the amount of the exposure and the amount of a claim on the bank;

15) *unfunded credit protection instruments* means instruments by the use of which a bank reduces its credit risk exposure where this reduction derives from the undertaking of a third party to pay an amount to the bank in the event of default of the bank's obligor or on the occurrence of other specified credit event relating to that obligor;

16) *credit event* means a contractually specified event or circumstance the occurrence of which entitles the bank to use the instruments of credit protection;

17) *capital market-driven transaction* means a transaction conferring upon the bank the right, during the validity of the agreement, to demand from the obligor, pledgor or other collateral provider additional collateral if the value of the existing collateral (margin) is reduced during the validity of the agreement;

18) *secured lending transaction* means a transaction where the bank does not have the right referred to in item 17) of this point;

19) *credit derivative* means a derived financial instrument, i.e. a contract where the credit protection provider undertakes to pay out to the protection buyer upon occurrence of default of an obligor or another contractually specified credit event the amount equal to one of the following:

– the decline in the value of the reference obligation with respect to the initial value (cash settlement variable),

– the entire notional value of the reference obligation in exchange for the delivery of that obligation or another equivalent financial instrument (deliverable obligation),

– a specified fixed amount (binary payout);

20) *reference obligation* means an obligation used for the purpose of determining cash settlement value of the protection provider's obligation under a credit derivative or an obligation that is transferred to the protection provider under that derivative;

21) *Credit Default Swap* (hereinafter: CDS derivative) means a type of credit derivative under which the credit protection provider undertakes to compensate the protection buyer for the loss in the event of default by the obligor or occurrence of any other specified credit event for which the credit protection buyer pays the protection provider a relevant premium;

22) *Total Return Swap* (hereinafter: TRS derivative) means a type of credit derivative under which the credit protection buyer transfers all cash flows on the underlying exposure to the credit protection provider for which the credit protection provider pays a premium calculated on the basis of reference interest rate increased by a certain spread, as follows:

– where the value of the underlying exposure upon maturity of a TRS derivative exceeds its value at the time of the conclusion of the contract, the credit protection buyer pays the difference in the value of the underlying exposure to the protection provider,

– where the value of the underlying exposure upon maturity of a TRS derivative is less than its value at the time of the conclusion of the contract, the credit protection provider pays the difference in the value of the underlying exposure to the protection buyer,

– in the event of default by the obligor or on the occurrence of other specified credit event, the contract is terminated and the loss is borne by the credit protection provider;

23) *residential real estate property* means a house, an apartment and parts of a residential building intended for dwelling, a garage or a garage place associated with an apartment, as well as a plot of land with a building permit for house construction; vacation homes shall not be considered residential real estate property;

24) *market value of real estate* means the estimated amount for which the property may be sold on the date of valuation, provided the buyer and the seller act voluntarily, knowledgeably, prudently and without coercion; this value shall be transparently and clearly documented and determined by an authorised valuer;

25) *authorised valuer* means a court expert of relevant profession, a legal entity established to perform expertise activities in accordance with the law on requirements for the performance of expertise activities or an authority which, pursuant to the law governing tax procedure and tax administration, is competent for conducting tax proceedings; this person shall not be a person related to the obligor in the manner set forth by the Law on Banks and shall not be involved in the process of lending approval or sale of real estate.

26) *volatility adjustment (haircut)* means a corrective factor that reflects price or exchange rate volatility and is used to adjust the value of exposure or collateral;

27) *internal ratings based approach* (hereinafter: IRB Approach) means an approach where a bank applies internal rating systems to calculate capital requirements for credit risk;

28) *foundation IRB approach* (hereinafter: FIRB Approach) means a type of IRB approach under which a bank uses its own estimates of probability of default (PD parameter) and prescribed estimates of loss given default (LGD parameter), conversion factors and effective maturities (M parameter);

29) *advanced IRB approach* (hereinafter: AIRB Approach) means a type of IRB approach under which a bank uses its own estimates of probability of default (PD), of loss given default (LGD) and conversion factors and, where applicable, own estimates of effective maturities (M);

30) *probability of default* (hereinafter: PD) means the probability of default of a counterparty over a period of one year from the date of estimate;

31) *loss given default* (hereinafter: LGD) means the ratio of the loss on an exposure due to the default of a counterparty to the amount of exposure to that counterparty outstanding at default, where loss means economic loss which takes account of the time value of money (including material discount effects), as well as material direct and indirect costs associated with collection of the claim;

32) *expected loss* (hereinafter: EL) means the ratio of the amount expected to be lost on an exposure from a potential default of a counterparty or dilution of purchased claim over a one year period to the amount outstanding at default;

33) *conversion factor* means the ratio of the currently undrawn amount of an off-balance sheet commitment expected to be drawn and outstanding at default to the currently undrawn amount of the off-balance sheet commitment; the amount of the commitment shall be equal to the advised limit, unless the unadvised limit is higher;

34) *maturity* (hereinafter: M) means the longest possible remaining period in which the obligor is expected to settle his obligation;

35) *settlement/delivery risk* means the possibility of adverse effects on the bank's financial result and capital arising from unsettled transactions or counterparty's failure to deliver in free delivery transactions on the due delivery date;

36) *unsettled transaction* means a transaction relating to securities, currencies or commodities (excluding repurchase and reverse repurchase agreements and securities or commodities lending or borrowing agreements) which is to be settled according to delivery-versus-payment principle, and which has not been settled by the contractual settlement date due to default of the counterparty;

37) *free delivery* means a transaction relating to securities, currencies or commodities (excluding repurchase and reverse repurchase agreements and securities or commodities lending or borrowing agreements) under which payment and delivery are not simultaneous (i.e. it is not settled according to delivery-versus-payment principle), and hence a counterparty can execute payment/delivery before the other counterparty has executed its contractual obligation;

38) *counterparty risk* means the risk that the counterparty to a transaction could default before the final settlement of the transaction's cash flows or settlement of monetary liabilities under that transaction;

39) *core market participant* means a legal entity authorised to enter into sales and purchase transactions the subject of which are contracts traded within one or more financial markets, becoming the buyer to every seller and the seller to every buyer;

40) *long settlement transaction* means a transaction where a counterparty undertakes to transfer or deliver securities, commodities or a foreign exchange amount against cash, other financial instruments, or commodities and where the contractually specified period between the trading date and settlement date is longer than the period which represents the market standard for this particular transaction or longer than five business days after the transaction has been entered into, whichever period is shorter;

41) *margin lending transaction* means a transaction in which a bank extends credit for purchase, sale, transfer or trading of securities;

42) *master netting agreement* means an agreement providing for the netting of mutual claims and liabilities arising from individual legal transactions, terms and conditions of netting when the subjects of these transactions are different, and that default of a party on any of the transactions gives to the non-defaulting party the right to terminate that agreement;

43) *netting set* means a group of transactions with a single counterparty that are subject to bilateral netting arrangements and which fulfils the requirements laid down in points 312 to 319 of this Decision; each transaction that is not subject to these agreements shall be considered as its own netting set,

44) *risk position* is a risk number assigned to a transaction in accordance with the standardized method referred to in points 289 to 295 of this Decision;

45) *hedging set* means a group of risk positions from the transactions within a single netting set for which only their net balance is

relevant for determining the exposure value according to standardised method laid down in item 45) of this point;

46) *margin agreement* means a separate agreement or provision of an agreement under which one counterparty is entitled to demand from the other counterparty additional collateral if its exposure to that other counterparty exceeds a specified limit;

47) *margin threshold* is the largest amount of exposure to a counterparty that remains outstanding until one party has the right to demand additional collateral;

48) *margin period of risk* means the period from the last exchange of collateral covering a netting set of transactions with a defaulting counterparty until that counterparty is closed out and the resulting market risk is re-hedged;

49) *effective maturity of a netting set* with maturity greater than one year, for the purpose of applying the internal model method, means the ratio of the sum of expected exposure over the life of the transactions in the netting set discounted at the risk-free rate of return divided by the sum of expected exposure over one year in a netting set discounted at the risk-free rate; this effective maturity may be adjusted to reflect rollover risk by replacing expected exposure with effective expected exposure for forecasting horizons under one year;

50) *cross-product netting* means the inclusion of transactions related to different product categories within the same netting set, in accordance with points 312 to 319 of this Decision;

51) *current market value*, for the purpose of standardised method application, means the net market value of the portfolio of transactions within the netting set; both positive and negative market values of transactions in that set are used for computing that value;

52) *distribution of market values of transactions* means the forecast of the probability distribution of net market values of transactions within a netting set for some future date, given the realised market value of these transactions up to the date when forecast is made, where the period between these dates is the forecasting horizon;

53) *distribution of exposures* means the forecast of the probability distribution of market values of transactions or exposures that is generated by setting forecast instances of negative net market values equal to zero;

54) *risk-neutral distribution* means a distribution of market values of transactions or exposures at a future time period where the distribution is calculated using implied i.e. derived market values (e.g. derived volatility of a financial instrument is volatility calculated on the basis of market price of that instrument using a specific valuation model);

55) *actual distribution* means a distribution of market values of transactions or exposures at a future time period where the distribution is calculated using historic or realised values (e.g. historic volatility of a financial instrument is volatility calculated using past price or rate changes);

56) *current exposure* means positive value of a transaction of a portfolio of transactions within a netting set (if the value is negative, current exposure is zero) that would be lost upon the default of the counterparty, assuming no recovery on the value of those transactions in case of bankruptcy of the counterparty;

57) *peak exposure* means a high percentile of the distribution of exposures at any particular future date before the maturity date of the longest transaction in the netting set;

58) *expected exposure* (hereinafter: EE) means the average of the distribution of exposures at any particular future date before the longest maturity transaction in the netting set matures;

59) *effective expected exposure* (hereinafter: EEE value) at a specific date means the maximum EE value at that date or the maximum EE value at any prior date, whichever is the higher;

60) *expected positive exposure* (hereinafter: EPE value) means the weighted average over time of EE values where the weights are the proportion of an individual EE value in the sum of all individual EE values of the entire time interval; when calculating the minimum capital requirement, the average is taken over the first year or, if all the transactions within the netting set mature within less than one year, over the time period of the longest maturity transaction in the netting set;

61) *effective expected positive exposure* (hereinafter: EEPE value) means the weighted average over time of EEE values where the weights are the proportion of an individual EEE value in the sum of all individual EEE values of the entire time interval; when calculating the minimum capital requirement, the average is taken over the first year or, if all the transactions within the netting set mature within less than one year, over the time period of the longest maturity transaction in the netting set;

62) *credit valuation adjustment* means an adjustment to the mid-market valuation of the portfolio of transactions with a counterparty; this adjustment may reflect the market value of the credit risk of that counterparty (unilateral adjustment of exposure to a counterparty risk) of the market value of the credit risk of the bank and the counterparty concerned.

63) *rollover risk* means the risk arising when EPE value is understated, under the assumption that future transactions with that counterparty will be conducted on an ongoing basis; the additional exposure generated by those future transactions is not included in calculation of EPE;

64) *general wrong-way risk* means a risk arising when the PD of a counterparty is positively correlated with the general market risk factors;

65) *specific wrong-way risk* is a risk arising when the exposure to a particular counterparty is positively correlated with the PD of the counterparty due to the nature of the transactions with the counterparty; a bank is considered to be exposed to this risk if the future exposure to a specific counterparty is expected to be high when the counterparty’s PD is also high;

66) *convertible security* means a security that grants its holder the right (option) to exchange it for a different security;

67) *identical securities* means securities issued by the same issuer, denominated in the same currency, with the same coupon rate, maturing on the same date and having the same treatment in the event of liquidation or bankruptcy;

68) *covered bonds* means debt securities the issuing of which is subject to a special law, which meet the following conditions:

– their issuer is a bank or a legal entity outside the Republic of Serbia whose predominant activity is receiving deposits and granting loans for its own account and which is, in accordance with that law, under special supervision of the competent public authority designed to protect the rights of the holders of these bonds,

– they are collateralised by assets which provide sufficient coverage for liabilities attaching to these bonds over the entire period until their maturity and proceeds from the sale of these bonds are invested in these assets,

– in the case of bankruptcy or liquidation of the bond issuer, the holders of these bonds, in accordance with that law, have secured right in respect to the assets serving as collateral;

69) *repurchase agreement* means an agreement under which a bank sells securities or commodities subject to a commitment to repurchase these securities or these commodities, or securities or commodities of the same description at a specified price on a future date specified or to be specified by the bank, while a *reverse repurchase agreement* is an agreement under which a bank purchases securities or commodities subject to a commitment to sell back these securities or these commodities, or securities or commodities of the same description at a specified price on a future date specified or to be specified by the seller, provided both repurchase and reverse repurchase agreement meet the following conditions:

– the bank or the counterparty transfers the title over securities or commodities that are the subject of the agreement, and

– the bank may transfer the securities or commodities that are the subject of the agreement to only one counterparty;

70) *securities or commodities lending agreement* means an agreement under which a bank lends securities or commodities to a counterparty against appropriate collateral, subject to a commitment that this counterparty will return these securities or commodities at a specified date or when requested by the bank;

71) *securities or commodities borrowing agreement* means an agreement under which a counterparty lends securities or commodities to a bank against appropriate collateral, subject to a commitment that the bank will return these securities or commodities at a specified date or when requested by that counterparty;

72) *OTC financial derivative* means a financial derivative that is traded over-the-counter;

73) *commodities* means physical products traded on an organised market (e.g. agricultural products, minerals – including oil, precious metals – excluding gold), as well as financial derivatives relating to these products;

74) *commodities financing* means a position in the trading book arising from commodity forward sale, where costs of commodities financing are predetermined and do not change until the date of forward sale;

75) *value at risk (VaR)* means maximum possible loss in the bank's portfolio over a certain period and under predefined confidence interval;

76) *event risk* means a risk of change in the value of the bank's portfolio due to sudden and large swings in market prices (the probability of the occurrence of these events is small, but they may cause significant material losses in the bank's portfolio);

77) *business environment factors* are external factors that influence the operation of a bank;

78) *expected loss for operational risk* is the amount of loss arising from operational risk – for a segment of operation of for the entire bank – calculated for a period of one year;

79) *unexpected loss for operational risk* is the amount of loss exceeding the amount of expected loss – for a segment of operation of for the entire bank – calculated by taking into account risk distribution with 99.9% confidence interval for a period of one year;

80) *self-assessment* means assessment of the existing and potential exposure of the bank to operational risk, based on the knowledge and experience of employees in different organisational units of the bank.

C h a p t e r II

CAPITAL ADEQUACY RATIO

3. Capital adequacy ratio of a bank is the ratio between capital and risk-weighted assets of a bank.

Risk-weighted assets referred to in paragraph 1 of this point is the sum of:

– total assets weighted for credit risk determined in the manner laid down in Chapter IV of this Decision;

– capital requirements for market risks determined in the manner laid down in Chapter V of this Decision and capital requirement for operational risk laid down in Chapter VI of the same Decision, multiplied by the reciprocal value of capital adequacy ratio referred to in paragraph 3 and paragraph 4 respectively of this Decision.

The bank shall maintain its capital adequacy ratio at the level of at least 12%.

A bank whose capital adequacy ratio is higher or, as a result of profit distribution, would be higher than the ratio laid down in paragraph 3 of this point by less than 2.5 percentage points, may distribute profit only into core capital elements.

4. The National Bank of Serbia may set a higher capital adequacy ratio for a bank than the one prescribed in point 3, paragraph 3 of this Decision if, on the basis of prudential supervision and supervision of the legality of the bank's operation, it established that this is necessary for stable and safe operation of the bank and/or fulfilment of obligations to its creditors.

The National Bank of Serbia shall determine that a higher value of capital adequacy ratio of a bank is necessary and shall determine the amount of the increase based on the evaluation of:

– amount of the bank capital necessary for the coverage of all risks the bank is or may be exposed to, in particular risks that are not included in the calculation of this ratio;
– comprehensiveness and reliability of the established risk management system and its compliance with the bank's risk profile;
– significance of the possible influence of irregularities identified in the risk management system on the bank's financial position;
– adequacy of the established internal capital adequacy assessment process, its consistent implementation and results of that assessment;
– impact of significant changes in the business strategy of the bank or in the volume of its operation, as well as effects of departure from this strategy on the bank's risk profile and/or its financial position.

5. In conducting its business activities, the bank shall ensure that the amount of its capital is never below the dinar equivalent of EUR 10,000,000 at the official middle exchange rate.

In addition to compliance with the condition laid down in paragraph 1 above, the bank shall maintain its capital at all times at the level necessary for the coverage of all risks it is or may be exposed to in its operation, at least in the amount of the sum of the following capital requirements:

– capital requirement for credit risk and for counterparty risk in respect of all business activities and capital requirement for settlement/delivery risk for trading-book business (hereinafter: capital requirement for credit risks);

– capital requirement for price risk for trading-book business;
– capital requirement for foreign exchange risk and for commodity risk for all business activities of the bank;
– capital requirement for operational risk for all business activities of the bank.

Capital requirement for credit risks is calculated by multiplying total risk-weighted assets for credit risk determined as laid down in Chapter IV of this Decision with 12%.

Capital requirements for price, foreign exchange and commodity risk shall be calculated as laid down in Chapter V of this Decision; capital requirement for settlement/delivery risk shall be calculated as laid down in Chapter IV, Section 3, Subsection 1 of that Decision, and capital requirement for operational risk – as laid down in Chapter VI of this Decision.

If the National Bank of Serbia, in accordance with point 4 of this Decision, set capital adequacy ratio for a bank higher than the prescribed one, the bank shall be required to maintain its capital at the level equal to the sum of capital requirements referred to in paragraph 2 above calculated using the increased ratio.

6. In addition to maintaining the prescribed capital adequacy ratio and fulfilling minimum capital requirements in accordance with this Decision, the bank shall also carry out internal assessments of capital adequacy in accordance with the decision governing risk management of banks.

C h a p t e r III

CAPITAL OF THE BANK

7. The capital of the bank shall be the sum of its core capital and supplementary capital less deductibles from capital.

In calculating its capital, the bank shall observe restrictions for certain elements of capital prescribed in Section 4 of this Chapter.

Section 1

Core capital

8. The core capital of the bank shall consist of the following elements, less deductibles referred to in point 12 of this Decision:

1) paid-in share capital, excluding cumulative preferential shares;
2) reserves from profit;

3) profit of the bank.

Elements referred to in paragraph 1 above shall be included in core capital if they fulfil the following conditions:

– they do not have a specified maturity and cannot be withdrawn;
– they can be used unconditionally, fully and without delay for the coverage of losses in the course of the regular business operation of a bank;
– the bank is entitled not to pay dividends or to restrict their payment;
– in the event of bankruptcy or liquidation of the bank, the right of owners of instruments included in core capital to participation in the distribution of bankruptcy/liquidation estate is subordinated to the right of other bank creditors and owners of other capital instruments;
– they are reduced by all potential tax liabilities.

9. A bank shall include in its core capital the share capital subscribed and paid in against issued ordinary and preferential shares, excluding cumulative preferential shares, in the amount of:

1) par value of paid-in ordinary and preferential shares, and
2) relevant share premium, i.e. amount paid above par value of subscribed ordinary and preferential shares.

10. Reserves from profit which the bank includes in core capital shall include all types of bank reserves established on the basis of the decision of the bank's general meeting, and debited to the profit after taxation.

11. Profit of the bank included in core capital shall be made up of:

1) retained earnings from previous years free of any future liabilities, to be allocated to core capital according to the decision of the bank's general meeting;
2) profit of the current year if the National Bank of Serbia, on the basis of submitted documentation, is satisfied that the following conditions are met:
– the amount of profit is confirmed by an external auditor authorised for auditing the bank's financial statements;
– the amount of profit is reduced by accrued income tax and all other liabilities payable from profit (liabilities for dividends, other participations in profit distribution, etc.);
– the general meeting of the bank decided to allocate profit in core capital and the amount of bank's current year profit that is included in core capital does not exceed the amount determined on the basis of that decision.

11a. A bank shall submit the application for prior consent of the NBS if it intends to reduce the value of core capital elements under Section 8 of this Decision.

The provisions of this Section shall not apply to the acquisition of the bank's own shares in accordance with the law governing banks.

Along with the application for prior consent of the NBS under paragraph 1 of this Section, a bank shall submit the following documentation:

1) information on reasons for the reduction in the value of core capital elements and concrete activities it intends to undertake;

2) projection of the calculation of the amount of capital, capital elements and capital requirements for the following three years after the reduction in the value of core capital elements, including the projection of such calculation before such reduction and its impact on capital requirements;

3) assessment of risks that a bank is exposed or may be exposed to, and whether the level of its capital is sufficient to cover those risks, carried out in accordance with the decision governing risk management, including the results obtained based on the most recent stress testing, implemented in accordance with that decision, which could indicate potential losses in different scenarios;

4) all other information assessed as relevant by the NBS while making a decision on the application under paragraph 1 of this Section.

The NBS shall decide on the application under paragraph 1 of this Section within 60 days from the day of receiving a due application.

The NBS shall issue to a bank the prior consent under paragraph 1 of this Section on the following condition:

1) before or simultaneously with the implementation of activities reducing the value of core capital elements, a bank shall replace such elements with the elements of the same or better quality, in order to maintain the bank's capacity to make profit and which, where applicable, this does not imply higher costs for the bank than the costs of core capital elements being replaced or

2) following the reduction in the value of core capital elements, the amount of the bank's capital and capital adequacy shall be at the level necessary for the bank's stable and sound operation.

12. Deductibles from the core capital shall be:

1) losses from preceding years;
2) current year loss;
3) intangible assets;
4) acquired own ordinary and preferential shares, excluding cumulative preferential shares, in the amount of their book value (par value increased by share premium);

5) ordinary and preferential shares of the bank, excluding cumulative preferential shares, which the bank received in pledge in the amount equal to the value of receivables secured by pledge of shares, or par value of shares received in pledge increased by relevant share premium, whichever is lower;

6) regulatory value adjustment to international financial reporting standards and/or international accounting standards (hereinafter: IFRS/IAS).

Intangible assets referred to in paragraph 1, item 3) above include goodwill, licenses, patents, brands, trademarks and concessions, as well as other forms of intangible assets measured at fair value in accordance with IFRS/IAS.

Regulatory value adjustments to IFRS/IAS referred to in paragraph 1, item 6) above shall include:

1) unrealized losses on securities available for sale;

2) other net negative revaluation reserves that do not refer to deductibles from core capital or elements included in the bank's supplementary capital;

3) gains on bank liabilities measured at fair value reduced due to the change in the bank's credit assessment;

4) amount of required reserve for estimated losses on balance-sheet assets and off-balance sheet items of the bank.

Section 2

Supplementary capital

13. The supplementary capital of the bank shall consist of the following elements, less deductibles referred to in point 20 of this Decision:

1) paid-in share capital against cumulative preferential shares of the bank;

2) part of positive revaluation reserves of the bank;

3) hybrid capital instruments;

4) subordinated liabilities;

5) overallocation of impairment allowances, provisions and required reserves relative to expected losses – for banks which obtained the approval of the National Bank of Serbia to use the IRB Approach.

14. Cumulative preferential shares shall be included in the supplementary capital of the bank if they fulfil the following requirements:

1) they do not have a specified maturity and cannot be withdrawn;

2) they can be used unconditionally, fully and without delay for the coverage of losses in the course of the regular business operation of a bank;

3) the bank has the right to postpone the payment of dividends;

4) in the event of bankruptcy or liquidation of the bank, the right of owners of these shares to participation in the distribution of bankruptcy/liquidation estate is subordinated to the right of other bank creditors and owners of other capital instruments other than those included in core capital;

5) that they are reduced by all potential tax liabilities.

A bank shall include in its supplementary capital the share capital subscribed and paid in against issued cumulative preferential shares, in the amount of:

1) par value of paid in cumulative preferential shares;

2) relevant share premium, i.e. amount paid above par value of subscribed cumulative preferential shares.

15. Supplementary capital of the bank shall include the part of positive revaluation reserves created on the basis of effects of changes in fair value of fixed assets, securities and other assets which are, in accordance with IFRS/IAS, credited to these reserves, and reduced by effects of tax liabilities.

16. Hybrid capital instruments shall be financial instruments issued by the bank which have the characteristics of equity and debt financial instruments. The bank shall include in supplementary capital those hybrid instruments which fulfil the following conditions:

1) they are fully paid-up;

2) they do not have contractually determined maturity or have determined maturity that is not less than 30 years from the date of payment;

3) repayment to the owners or repurchase by the bank are not possible before the specified maturity date, except in the case of conversion of these instruments into bank shares other than cumulative preferential shares;

4) they can be used unconditionally, fully and without delay for the coverage of losses in the course of the regular business operation of a bank;

5) in the event of bankruptcy or liquidation of the bank, liabilities under these instruments may be settled only after the settlement of all other obligations, including subordinated obligations, except those included in core capital;

6) they are not backed by any collateral issued by the bank or by its related party;

7) the bank may not pay interest or fees on these instruments if its capital adequacy is below the level prescribed by this Decision;

8) the bank may postpone payment of interest and fees on these instruments if it has not paid dividends for the preceding year.

Hybrid instruments of capital which mature in less than twelve months shall be excluded from the calculation of supplementary capital.

17. Subordinated liabilities of the bank shall be included in the supplementary capital of the bank if they meet the following conditions:

1) they are fully paid-up;
2) their agreed maturity is at least five years from the date of payment;
3) repayment to creditors or repurchase of these liabilities is not possible before the agreed maturity date, except in the case of conversion of these liabilities into bank shares other than cumulative preferential shares;
4) they are available for the coverage of losses only in the event of bankruptcy or liquidation of the bank, in other words they are not available for coverage of losses incurred in the course of regular operation of the bank;
5) in the event of bankruptcy or liquidation of the bank, these liabilities may be settled only after the settlement of all other non-subordinated obligations, but before the bank shareholders and owners of hybrid instruments issued by the bank;
6) they are not backed by any collateral issued by the bank or by its related party;
7) the bank's creditor is not at the same time the bank's borrower in respect of its subordinated claim.

The amount of subordinated liability of the bank included in supplementary capital shall be reduced by 20% per year over the last five years before maturity of that liability and hence subordinated liabilities shall not be included in supplementary capital in the last year before their maturity.

18. A hybrid instrument or a subordinated liability may be included in the calculation of supplementary capital only if the bank notified the National Bank of Serbia thereof at least 30 days prior to this inclusion and with that notification submitted the following documentation:

1) documentation relating to issuance of these instruments and/or creation of this liability, as well as other documentation evidencing that the conditions referred to in point 16, paragraph 1, or point 17, paragraph 1 of this Decision are met;
2) description of the fulfilment of conditions referred to in point 16, paragraph 1, or point 17, paragraph 1 of this Decision, with reference to the relevant documentation;
3) description of accounting treatment of this instrument or this liability;
4) calculation of the amount of capital and capital requirements on the last day of the month preceding the month when the notification is submitted, excluding hybrid instrument and/or subordinated liability;

5) projected calculation of the amount of capital and capital requirements for the following three years, including the hybrid instrument and/or subordinated liability.

If the bank submitted incomplete or inadequate documentation referred to in paragraph 1 above, the National Bank of Serbia may, within 20 days from submission of notification or documentation referred to in that paragraph, request the bank to submit proper documentation.

The deadline referred to in paragraph 1 above shall run from the date proper documentation referred to in that paragraph has been submitted.

In the event of changes in conditions referred to in point 16, paragraph 1 and/or point 17, paragraph 1 of this Decision, the bank shall notify the National Bank of Serbia thereof without delay and submit relevant documentation relating to these changes. If these conditions are no longer fulfilled, the bank shall be required to exclude the hybrid instrument and/or subordinated liability from the calculation of capital.

Notwithstanding paragraph 4 of this Section, a bank shall submit the application for prior consent of the NBS if it intends to change the conditions under which a subordinated liability was created within the meaning of Section 17, paragraph 1 of this Decision.

Along with the application for prior consent of the NBS under previous paragraph of this Section, a bank shall submit the following documentation:

1) information on the reasons for the intended change in the conditions that the application relates to;

2) projection of the calculation of the amount of capital, capital elements and capital requirements for the following three years after a change in the conditions that the application relates to, including the projection of such calculation before such change and its impact on capital requirements;

3) assessment of risks that a bank is exposed or may be exposed to, and whether the level of its capital is sufficient to cover those risks, carried out in accordance with the decision governing risk management, including the results obtained based on the most recent stress testing, implemented in accordance with that decision, which could indicate potential losses in different scenarios;

4) all other information assessed as relevant by the NBS while making a decision on the application under paragraph 5 of this Section.

The NBS shall issue to a bank the prior consent under paragraph 5 of this Section on the following condition:

1) before or simultaneously with the implementation of activities changing the conditions under which a subordinated liability was created within the meaning of Section 17, paragraph 1 of this Decision, a bank shall replace such liabilities with the elements of capital of the same or better quality, in order to maintain the bank's capacity to make profit and which, where applicable, does not imply higher costs than the current costs in respect of such subordinated liability or

2) following a change in the conditions under which a subordinated liability was created within the meaning of Section 17, paragraph 1 of this Decision, the amount of the bank's capital and capital adequacy shall be at the level necessary for the bank's stable and sound operation.

19. Overallocation of impairment allowances, provisions and required reserves relative to expected losses referred to in point 13, item 5) of this Decision shall represent a positive difference between total impairment allowances for balance sheet assets and provisions for losses on off-balance sheet items increased by the amount of required reserve for estimated losses on balance sheet assets and off-balance sheet items, on the one hand, and the amount of total expected losses calculated by applying the IRB Approach in accordance with point 258 of this Decision, on the other hand, up to the amount of 0.6% of the total bank credit risk-weighted assets obtained using the IRB Approach.

20. Deductibles from the supplementary capital shall be:

1) acquired own cumulative preferential shares in the amount of their book value;

2) cumulative preferential shares of the bank which the bank received in pledge in the amount equal to the value of receivables secured by pledge of these shares, or par value of shares received in pledge increased by corresponding share premium, whichever is lower;

3) receivables in respect of balance-sheet assets and off-balance sheet items of the bank secured by a hybrid instrument or subordinated liability of the bank up to the amount in which these instruments/liabilities are included in supplementary capital.

Section 3

Deductibles from the capital

21. Deductibles from the bank capital shall be:

1) direct or indirect investment in banks and other financial sector entities that exceed 10% of the capital of such banks and/or other financial sector entities;

2) investment in hybrid instruments and subordinated liabilities of other banks and financial sector entities in which the bank has direct or indirect investment that exceeds 10% of the capital of such entities;

3) total amount of direct and indirect investment in banks and other financial sector entities in the amount of up to 10% of their capital, as well as investment in their hybrid instruments and subordinated liabilities that exceeds 10% of the sum of core and supplementary capital of the bank for which the calculation of capital is made;

4) the amount by which qualified participation in non-financial sector entities has been exceeded;

5) underallocation of impairment allowances, provisions and required reserves relative to expected losses – for banks which received the approval of the National Bank of Serbia for the application of the IRB Approach.

6) the amount of exposure to free deliveries if the counterparty failed to fulfil its obligation within four working days;

7) receivables and potential liabilities toward persons related to a bank or employees in the bank which the bank has negotiated under the terms that are more favourable than the terms negotiated with other parties that are not related to the bank and are not employees of the bank.

22. Underallocation of impairment allowances, provisions and required reserves relative to expected losses referred to in paragraph 1, item 5) above shall represent a positive difference between total expected losses calculated by applying the IRB Approach in accordance with point 258 of this Decision, on the one hand, and total impairment allowances for balance sheet assets and provisions for losses on off-balance sheet items increased by the amount of required reserves for estimated losses on balance sheet assets and off-balance sheet items, on the other hand.

23. Deductibles referred to in point 21 of this Decision shall be deducted from core and supplementary capital of the bank as follows:

– 50% of their total amount shall be deducted from core capital;
– 50% of their total amount shall be deducted from supplementary capital.

By way of derogation from paragraph 1 above, if 50% of the total amount of deductibles exceeds the supplementary capital of the bank, the difference above the amount of supplementary capital shall be deducted from core capital.

24. Investments in the capital of a bank or another financial sector entity that are of temporary nature and are the consequence of provision of financial

assistance for the purpose of restructuring of these entities shall not be deductible from the bank capital. A bank shall forthwith notify the National Bank of Serbia of these investments and provide it all necessary documentation.

Section 4

Restrictions on certain elements of the bank capital

25. A bank shall observe the following restrictions for certain elements of its capital:

1) core capital shall represent at least 50% of the capital;
2) subordinated liabilities included in supplementary capital shall not exceed 50% of core capital;
3) total amount of hybrid instruments, excluding hybrid instruments which due to deteriorating financial condition of the bank may be converted into its shares (except cumulative preferential shares), shall not exceed 35% of the bank's core capital;
4) total amount of all hybrid instruments shall not exceed 50% of the bank's core capital.

C h a p t e r IV

RISK-WEIGHTED EXPOSURE AMOUNTS FOR CREDIT RISK

26. Total risk-weighted exposure amounts for credit risk shall be the sum of risk-weighted exposure amounts for credit risk calculated using the Standardised Approach, or the IRB Approach, and risk-weighted exposure amounts for settlement/delivery risk.

In calculating its risk-weighted exposure amounts for credit risk, the bank shall observe restrictions for certain elements of capital prescribed in Section 1 of this Chapter.

By way of derogation from paragraph 2 above, a bank may use the IRB Approach laid down in Section 2 of this Chapter for the calculation of risk-weighted exposure amounts for credit risk if it obtained the approval from the National Bank of Serbia, under the conditions and in the manner specified in that approval.

Section 1

Standardised Approach

27. Risk-weighted exposure amounts for credit risk represent the sum of the value of the balance-sheet assets positions and off-balance sheet items multiplied by relevant credit risk weights.

The bank may adjust risk-weighted exposure amounts for credit risk for on-balance sheet asset positions and off-balance sheet items on which it has applied credit risk mitigation techniques, by adjusting the value of these positions or by applying relevant weights of this risk in the manner and under conditions laid down in Subsection 4 of this Section.

1. Value of on-balance sheet assets and off-balance sheet items

28. The value of on-balance sheet assets positions, for the purpose of calculating risk-weighted exposure amounts for credit risk, shall be equal to the amount of gross book value of these positions less value adjustments and less required reserve for estimated losses.

29. The value of off-balance sheet items, for the purpose of calculating risk-weighted exposure amounts for credit risk, shall be equal to the amount of gross book value of these items less provisions for losses on off-balance sheet assets and less required reserve for estimated losses, multiplied by the following conversion factors:

1) 0% – if the off-balance sheet item is assigned to a low-risk category;
2) 20% – if the off-balance sheet item is assigned to a medium/low-risk category;
3) 50% – if the off-balance sheet item is assigned to a medium-risk category;
4) 100% – if the off-balance sheet item is assigned to a full-risk category;

Off-balance sheet items shall be assigned to risk categories as follows:

1) Low-risk category shall encompass the following items:
   – undrawn amount of credit lines and other lending which the bank may cancel unconditionally and without prior notice or for which the contract provides for the bank’s right to unilaterally cancel the contract due to deterioration in the borrower's creditworthiness; retail credit lines shall be considered unconditionally revocable if so provided by regulations governing the protection of bank clients – natural persons or by the provisions of the contract,
   – off-balance sheet items in respect of which no payments can be made;
2) medium/low-risk category shall encompass the following items:

– documentary credits in which underlying shipment acts as collateral, as well as other similar off-balance sheet items allowing full settlement from the collateral,

– undrawn amount of credit lines and other lending with effective maturity up to one year, except those that are eligible for classification into the low-risk category;

3) medium-risk category shall encompass the following items:

– documentary credits, except those that are eligible for classification into the medium/low-risk category,

– bid and tender bonds, performance bonds, customs and tax bonds, as well as indemnity bonds,

– irrevocable standby letters of credit that do not serve as collateral,

– undrawn amount of credit lines and other lending with effective maturity of more than one year, except those that are eligible for classification into the low-risk category;

4) full-risk category shall encompass other off-balance sheet items that are not comprised by any other risk category.

Effective maturity referred to in paragraph 2 of this point shall be the originally agreed maturity plus any extensions of that maturity that the bank expects, as well as extensions already implemented.

30. By way of derogation from point 28 and 29 of this Decision, a bank shall apply methods laid down in Section 3 of this Chapter for the calculation of values of on-balance sheet assets positions and off-balance sheet items that refer to:

– financial derivatives listed in Annex 3 to this Decision which is integral thereto;

– credit derivatives (from the trading book);

– transactions in respect of repurchase and reverse repurchase agreements (hereinafter: repurchase and reverse repurchase transactions)

– transactions in respect of securities or commodities lending or borrowing agreements (hereinafter: securities or commodities lending or borrowing transactions)

– margin lending transactions;

– long settlement transactions.

2. Credit risk weights

31. Credit risk weight for each individual on-balance sheet asset position and off-balance sheet item (hereinafter: exposure) shall be determined on the basis of exposure class and its credit quality step.

32. Each exposure from the banking book, exposures from the trading book for which the bank has to calculate capital requirement for counterparty risk, as well as other exposures from the trading book if conditions laid down in point 320, paragraph 4 of this Decision are fulfilled, shall be assigned to one of the following classes:

1) exposures to central governments and central banks;
2) exposures to territorial autonomies and local self-government units;
3) exposures to public administrative bodies;
4) exposures to multilateral development banks;
5) exposures to international organisations;
6) exposures to banks;
7) exposures to corporates;
8) retail exposures;
9) exposures secured on real estate collateral;
10) past due items;
11) high-risk exposures;
12) exposures in the form of covered bonds;
13) exposures in the form of open-end investment funds;
14) other items.

By way of derogation from paragraph 1 above, a bank shall not be required to assign exposures included in the calculation of capital as deductibles from core capital, supplementary capital or capital of the bank to exposure classes referred to in that paragraph.

Detailed criteria for assignment of balance sheet positions and off-balance sheet items to exposure classes referred to in paragraph 1 of this point shall be defined by each bank in its internal acts.

33. Credit quality step of an exposure shall be determined on the basis of credit assessment of the obligor or credit assessment of a financial instrument assigned by the nominated credit assessment institution and their mapping in accordance with Subsection 5 of this Section.

By way of derogation from paragraph 1 above, a bank may use credit assessments by export credit agencies to determine the credit quality step of exposure to central governments and central banks as follows:

– credit assessment of a country determined by mutual agreement of export credit agencies, parties to the Organisation for Economic Cooperation and Development (hereinafter: OECD) *Arrangement on Guidelines for Officially Supported Export Credits*, or

– credit assessment of a country published by an individual export credit agency applying OECD methodology (credit assessment is classified into one of the eight categories of minimum export insurance premiums).

When assigning credit risk weights, the bank shall use credit assessments by a nominated credit assessment institution in the manner prescribed in Subsection 3 of this Section, while the provisions of that Subsection shall also accordingly apply to the assignment of credit risk weights to credit assessments by export credit agencies.

Credit quality step for exposures on repurchase and reverse repurchase transactions and forward contracts for the purchase of property shall be determined on the basis of property underlying the transaction, and not on the credit assessment of the obligor.

a) Exposures to central governments and central banks

34. Where a bank uses credit assessments by a nominated credit assessment institution, exposures to central governments and central banks shall be assigned credit risk weight specified in the following table (Table 1), according to the distribution of credit assessments in appropriate credit quality steps:

Table 1

Credit quality step	**1**	**2**	**3**	**4**	**5**	**6**
Credit risk weight	**0%**	**20%**	**50%**	**100%**	**100%**	**150%**

35. Where a bank uses credit assessments by an export credit agency, exposures to central governments and central banks shall be assigned credit risk weight specified in the following table (Table 2), according to the distribution of credit assessments in the categories of minimum export insurance premiums:

Table 2

Minimum export insurance premium	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**

categories								
Credit risk weight	**0%**	**0%**	**20%**	**50%**	**100%**	**100%**	**100%**	**150%**

36. Exposures to the Republic of Serbia, to the National Bank of Serbia, as well as to Member States of the European Union which have been assigned credit assessment associated with at least credit quality step 3 (investment rank) which are denominated and settled in their national currencies shall be assigned a risk weight of 0%.

Exposures to central governments which are not Member States of the European Union and to their central banks which have been assigned credit assessment associated with at least credit quality step 3 (investment rank) which are denominated and settled in their national currencies shall be assigned a 0% risk weight if the regulations of the state concerned governing banking operation and supervision of banking operation are harmonized with the relevant European Union regulations.

Exposures to the European Central Bank shall be assigned a 0% credit risk weight.

Exposures to central governments and central banks where no credit assessment by the nominated credit assessment institution or export credit agency is available shall be assigned a 100% credit risk weight.

b) Exposures to territorial autonomies and local self-government units;

37. Exposures to autonomous provinces in the Republic of Serbia shall be assigned the same credit risk weight as the one prescribed for the exposure to the Republic of Serbia.

38. Exposures to local self-government units in the Republic of Serbia and exposures to territorial autonomies and local self-government units outside the Republic of Serbia shall be assigned credit risk weights prescribed by this Decision for exposures to banks, except weights referred to in point 46 hereof.

By way of derogation from paragraph 1 above, a bank may assign exposures to territorial autonomies and local self-government units from member states of the European Union a credit risk weight of a state where they have been established provided a competent regulatory body of that state, by a relevant regulation governing the calculation of capital requirement for credit risk through the use of the Standardised Approach, determined that

credit risk weights for exposures to these units shall be determined in the same way as for exposures to the state where they have been established.

By way of derogation from paragraph 1 above, exposures to territorial autonomies and local self-government units from the states that are not member states of the European Union may be assigned a credit risk weight of the state where they have been established provided the regulations of that state governing banking operation and supervision of that operation are harmonised with the relevant European Union regulations and provided the condition under paragraph 2 of that point is fulfilled.

c) Exposures to public administrative bodies

39. Exposures to public administrative bodies in the Republic of Serbia shall be assigned the same credit risk weight as the one prescribed for the exposure to the Republic of Serbia if the following conditions are met:

– the founder of the public administrative body is the Republic of Serbia or its autonomous province;
– the law on the founding of the public administrative body or other relevant legal act sets forth that the founder of this body shall be responsible (shall guarantee) for all liabilities of that body.

40. Public administrative bodies from Member States of the European Union may be assigned:

– credit risk weight of the state where they have been established provided a competent regulatory body of that state, by a relevant regulation governing the calculation of capital requirement for credit risk through the use of the Standardised Approach, determined that credit risk weights for exposures to these administrative bodies shall be determined in the same way as for exposures to the state where they have been established, or
– credit risk weight prescribed by this Decision for exposures to banks, except weight referred to in point 46 hereof – if the competent regulatory authority of the state according to the regulation referred to in the first indent of this paragraph determined that credit risk weights shall be determined in the same way as exposures to banks.

Exposures to public administrative bodies from the states that are not member states of the European Union may be assigned a credit risk weight prescribed by this Decision for the state where they have been established or credit risk weight for banks provided the regulations of that state governing banking operation and supervision of banking operation are harmonised with the relevant European Union regulations and provided the conditions under paragraph 1 of this point are fulfilled.

41. For exposures to public administrative bodies that do not meet the requirements referred to in point 39 and 40 of this Decision, a bank shall assign a 100% credit risk weight or a credit risk weight of 150% if the nominated credit assessment institution or the export credit agency assigned to the country of origin of that body a credit assessment associated with the credit risk weight of 150%.

d) Exposures to multilateral development banks

42. A bank shall assign a 0% credit risk weight to exposures to the following international development banks:

– the International Bank for Reconstruction and Development (IBRD),
– the International Finance Corporation (IFC),
– the Inter-American Development Bank (IADB),
– the Asian Development Bank (ADB),
– the African Development Bank (AFDB),
– the Council of Europe Development Bank (CEB),
– the Nordic Investment Bank (NIB),
– the Caribbean Development Bank (CDB),
– the European Bank for Reconstruction and Development (EBRD),
– the European Investment Bank (EIB),
– the European Investment Fund (EIF),
– the Multilateral Investment Guarantee Agency (MIGA),
– the International Finance Facility for Immunisation (IFFim),
– the Islamic Development Bank (IsDB).

Exposures to multilateral development banks that are not listed in paragraph 1 above shall be risk-weighted as exposures to banks as set out in this Decision, except the weight in point 46 thereof.

e) Exposures to international organisations

43. A bank shall assign a 0% credit risk weight to exposures to the following international organisations:

– the European Union (EU),
– the International Monetary Fund (IMF),
– the Bank for International Settlement (BIS).

f) Exposures to banks

44. The class of exposures to banks, besides exposures to banks with registered office in the Republic of Serbia, shall also include exposures to:

– legal entities with registered office outside the Republic of Serbia the predominant activity of which is receiving deposits and granting loans for their own account (credit institutions);

– legal entities the predominant activity of which is provision of investment services to third parties and performance of investment activities (investment firms);

– other financial sector entities which obtained an operating license from the competent regulatory authority in the country where they are domiciled and which are under the supervision of that authority, provided they meet minimum requirements for risk management and minimum solvency requirements prescribed for banks.

Exposures to financial sector entities that do not meet conditions laid down in paragraph 1 above shall be assigned to the exposure to corporates class.

45. Exposures to banks with a residual maturity of more than three months for which credit assessment by a nominated credit assessment institution is available shall be assigned credit risk weight specified in the following table (Table 3), according to the assignment of credit assessments into the appropriate credit quality step:

Table 3

Credit quality step	**1**	**2**	**3**	**4**	**5**	**6**
Credit risk weight	**20%**	**50%**	**50%**	**100%**	**100%**	**150%**

Exposures to banks with a residual maturity of more than three months for which credit assessment by a nominated credit assessment institution is not available shall be assigned credit risk weight of the country in which the obligor bank has its registered office or a 50% risk weight, whichever is higher.

46. Exposures to banks with a residual maturity of three months or less for which credit assessment by a nominated credit assessment institution is available shall be assigned credit risk weight specified in the following table (Table 4), according to the assignment of credit assessments into the appropriate credit quality step:

Table 4

Credit quality step	1	2	3	4	5	6
Credit risk weight	20%	20%	20%	50%	50%	150%

Exposures to banks with a residual maturity of three months or less for which credit assessment by a nominated credit assessment institution is not available shall be assigned credit risk weight of the country in which the obligor bank has its registered office or a 20% risk weight, whichever is higher.

47. Exposures to banks which represent investments in capital or elements thereof governed by this Decision shall be assigned a 100% credit risk weight, unless such investments represent deductibles from the bank's capital.

g) Exposures to corporates

48. The class of exposure to corporates, in addition to exposures to corporates, shall also include exposures to sole traders and farmers, where farmers imply heads of farm households which are registered in accordance with regulations governing farm households.

Exposures to corporates for which credit assessment by a nominated credit assessment institution is available shall be assigned credit risk weight specified in the following table (Table 5), according to the assignment of credit assessments into the appropriate credit quality step:

Table 5

Credit quality step	1	2	3	4	5	6
Credit risk weight	20%	50%	100%	100%	150%	150%

Exposures to corporates where no credit assessment by the nominated credit assessment institution is available shall be assigned a 100% credit risk weight.

h) Retail exposures

49. Exposures classified in the retail exposure class shall be assigned a 75% credit risk weight if the following conditions are met:

– the exposure is to a natural person;

– the total exposure to a single obligor does not exceed RSD 15,000,000;

– the exposures are sufficiently diversified.

By way of derogation from point 48, paragraph 1 of this Decision, in addition to exposures laid down in paragraph 1, first indent above, exposures to sole traders, farmers, small and medium-sized enterprises which meet the requirements set out in the second and third indent of that paragraph, except claims arising from securities issued by these persons, may also be included in the class of retail exposures.

50. Total exposure to a single obligor, for the purpose of point 49. paragraph 1 of this Decision, shall be equal to the sum of value of all on- and off-balance sheet claims of the bank on the obligor and persons related to the obligor, including past due claims, while exposures secured on residential real estate shall not be included. The bank shall undertake all necessary activities to collect information relating to determination of the total exposure.

For the purpose of point 49, paragraph 1 of this Decision, retail exposures shall be considered sufficiently diversified if the total exposure to any obligor does not exceed 0.2% of the total value of the retail exposures class.

51. Retail exposures which do not meet the criteria set out in point 49 of this Decision shall be assigned a credit risk weight of 100%.

i) Exposures secured by real estate collateral

52. Exposures or part of exposure secured by real estate collateral shall be assigned a 35% credit risk weight if the conditions for recognition and determination of the value of real estate property as eligible collateral laid down in point 264, as well as the following conditions are fulfilled:

1) the subject of mortgage is residential real estate property in which the owner resides or which the owner lets under the lease contract (or intends to reside in it or to let it under the lease contract);

2) the value of residential real estate property which is the subject of mortgage does not materially depend upon the credit quality of the obligor, notwithstanding macro-economic factors that affect both the value of the residential property and the creditworthiness of the obligor;

3) creditworthiness of the obligor does not materially depend on the value of residential real estate property which is the subject of mortgage or cash flows from its use, but rather on the capacity of the obligor to repay the debt from other sources of income;

4) the value of the exposure or part of exposure does not exceed 75% of the market value of residential real estate which is the subject of mortgage.

Exposures or parts of exposures secured by mortgage on real estate property owned by a legal entity shall be assigned a 35% credit risk weight only if the sole owner of that legal entity is the natural person who resides (or intends to reside) in that real estate property and if conditions laid down in paragraph 1 are met.

53. Exposures secured by mortgage on real estate property which do not meet conditions laid down in point 52, paragraph 1 of this Decision, as well as exposures which meet the requirements laid down in that paragraph, except the conditions laid down in item 4), shall be assigned a credit risk weight of 100%.

j) Past due items

54. All individual past due items in respect of which the obligor is in default for more than 90 days in a materially significant amount shall be assigned to the past due items category. Duration of default and material significance of the amount in default shall be determined in the manner laid down by the decision governing the classification of bank balance sheet assets and off-balance sheet items.

55. A past due item or a part thereof that is not secured by eligible credit protection instruments, in accordance with Subsection 4 of this Section, shall be assigned the following credit risk weight:

1) 150% – if the value adjustment increased by the required reserve for estimated losses on that item is less than 20% of its gross book value, or
2) 100% – if the value adjustment increased by the required reserve for estimated losses on that item is equal to or higher than 20% of its gross book value.

56. Exposures from the class of exposures secured by real estate collateral which fulfil conditions for past due items referred to in point 54 of this Decision, shall be assigned to this class of exposures and shall be assigned a risk weight of 100%.

k) High-risk exposures

57. A bank shall classify all on- and off-balance sheet receivables from legal entities where the existence of high risk can be established (e.g. investments in high-profit high-risk projects, in high-risk profile investment

funds, etc.) as high-risk exposures and shall assign them a risk weight of 150%.

l) Exposures in the form of covered bonds

58. Exposures in the form of covered bonds for which there is no available credit assessment of the financial instrument by the nominated credit assessment institution and which are collateralised by assets which meet the requirements referred to in paragraph 2 above shall be assigned a credit risk weight on the basis of the credit risk weight assigned to the issuer of these bonds, in accordance with the following table (Table 6):

Table 6

Credit risk weight of the issuer	**20%**	**50%**	**100%**	**150%**
Credit risk weight for exposures in the form of covered bonds	**10%**	**20%**	**50%**	**100%**

Covered bonds referred to in paragraph 1 above shall be collateralised by any of the following types of assets:

1) claims on the Republic of Serbia or on the National Bank of Serbia and claims secured by their unconditional guarantees payable on first demand;

2) claims on Member States of the European Union, their central banks, territorial autonomies, local self-government units or public administrative bodies, as well as claims secured by their unconditional guarantees payable on first demand;

3) claims on multilateral development banks, international organisations, non-member states of the European Union or their central banks, that have credit assessment associated with credit quality step 1 as set out in this Decision, as well as claims secured by their unconditional guarantees payable on first demand;

4) claims on territorial autonomies, local self-government units or public administrative bodies of countries that are not members of the European Union, that are risk-weighted, pursuant to this Decision, in the manner prescribed for exposures to banks and whose credit assessment is associated with the credit quality step 1, as well as claims secured by their unconditional guarantees payable on first demand;

5) claims on banks that have credit assessment associated with the credit quality step 1 as set out in this Decision, as well as claims on banks with registered office in the Republic of Serbia or Member States of the European Union with original maturity of up to 100 days, whose credit

assessment is associated with the credit quality step 2, provided that the total amount of these claims does not exceed 15% of the nominal amount of issued covered bonds;

6) claims secured on residential real estate property which meet the conditions referred to in point 52 of this Decision – in the amount of principal less all senior claims on the pledged property or 75% of the pledged property value, whichever is lower.

If the sum of claims on a person referred to in paragraph 2, items 3) and 4) of this point does not exceed 20% of the nominal value of issued covered bonds of the issuer concerned – covered bonds may also be collateralised (covered) by claims on these persons secured by their unconditional guarantees payable on first demand if the credit assessment of the person concerned is associated with credit quality step 2.

m) Exposures in the form of open-end investment funds

59. Exposures in the form of open-end investment funds for which credit assessment by a nominated credit assessment institution is available shall be assigned credit risk weight specified in the following table (Table 7), according to the assignment of credit assessments into the appropriate credit quality step:

Table 7

Credit quality step	**1**	**2**	**3**	**4**	**5**	**6**
Credit risk weight	**20%**	**50%**	**100%**	**100%**	**150%**	**150%**

60. Credit risk weights as set out in paragraphs 2 to 4 above may be assigned to exposures in the form of open-end investment funds if the following criteria are met:

1) the fund is managed by a company which is subject to supervision:

– by a competent regulatory body in the Republic of Serbia or a EU Member State, or

– by a competent regulatory body in a non-EU Member State if the supervision is carried out according to EU regulations and if the National Bank of Serbia has adequate cooperation with that body;

2) investment policy and the prospect of the fund or an equivalent document must include:

– the categories of assets in which the fund is authorised to invest,

– if the fund applies investment limits, the individual limits for investments and methodologies to calculate them;

3) the business of the fund is reported on at least annual basis to enable an assessment to be made of the assets and liabilities, income and operations over the reporting period.

Where the bank is aware of the underlying exposures of an open-end investment fund, it shall assign the total exposure to that fund a credit risk weight equal to the weighted average risk weight for individual exposures arising from such investments assigned in accordance with this Subsection.

Where the bank is not aware of the underlying exposures of an open-end investment fund, it shall assign the total exposure to that fund a credit risk weight equal to the weighted average risk weight for assumed individual exposures on such investments assigned in accordance with this Decision. Assumed exposures shall be determined in the following way: exposures to which the highest weight of credit risk applies according to the provisions of this Decision shall be included first, provided the entire limit for investment by this fund defined by investment policy and/or the law governing the operation of collective investment undertakings is used by these exposures. Exposures on which lower credit-risk weights are applicable shall be included after that in descending order until the limit for investment of the open-end investment fund is reached.

A bank may rely on a third party to calculate a credit risk weight for the open-end investment funds in the manner set forth in paragraphs 2 and 3 above, provided that the correctness of the calculation of these weights is reasonably ensured.

61. Exposures in the form of open-end investment funds which do not meet the criteria set out in points 59 and 60 hereof shall be assigned a credit risk weight of 100%.

By way of derogation from points 59 and 60 hereof, investments in open-end investment funds which are, according to point 57 hereof, classified as high-risk exposures, shall be assigned credit risk weight specified for that class of exposure.

n) Other items

62. Cash in hand and cash equivalents held by a bank in its vault and tellers' drawers shall be assigned a 0% credit risk weight, while cash items in the process of collection shall be assigned a 20% credit risk weight.

Gold bouillon held in own vaults or deposited with a third party as security for liabilities of the bank shall be assigned a 0% credit risk weight.

63. Exposures for which the manner of credit risk assignment is not provided for under this Decision shall be assigned to the other items class with a credit risk weight of 100%.

3. Nomination of a credit assessment institution and use of credit assessments for the assignment of credit risk weights

64. Nomination of a credit assessment institution and use of credit assessments for the assignment of credit risk weights in accordance with this Section shall be regulated by the bank's internal bylaws.

A bank shall define classes of exposure for which it will use credit assessments by the nominated credit assessment institution and use them consistently and on a continuous basis over time for all the positions of balance-sheet assets and off-balance sheet items assigned to these classes of exposure.

a) Nomination of a credit assessment institution

65. A bank may nominate one or more credit assessment institutions in accordance with Subsection 5 of this Section the credit assessments of which shall be used to assign credit risk weights set out in Subsection 2 of the same Section.

A bank shall not nominate a credit assessment institution which is its subsidiary or a parent undertaking, or in which its participation, direct or indirect, in voting rights or capital exceeds 10% or where total direct or indirect participation of all banks exceeds 50% of that credit assessment institution's voting rights or capital.

b) Use of credit assessments for the assignment of credit risk weights

66. A bank shall use updated credit assessments by the nominated credit assessment institution published by that credit assessment institution.

A bank shall be required to use solicited credit assessments by the nominated credit assessment institution, where solicited credit assessments imply credit assessments produced by the credit assessment institution based on its own assessment, at the explicit request of the client.

By way of derogation from paragraph 2 above, the bank may also use unsolicited credit assessments by the nominated credit assessment institution provided the National Bank of Serbia gave its approval for their application in accordance with Subsection 5 of this Section.

A bank shall use credit assessments of the nominated credit assessment institutions for assessments relating to total exposure, including principal and accrued interest.

67. If only one credit assessment is available from a nominated credit assessment institution for a rated exposure, that credit assessment shall be used by the bank to determine the credit risk weight.

If two credit assessments are available from nominated credit assessment institutions and the two correspond to different risk weights for a rated item in accordance with the associated credit quality step, the higher credit risk weight shall be used.

If three or more credit assessments are available from nominated credit assessment institutions and they correspond to different risk weights for a rated item in accordance with the associated credit quality step, the higher of the two lowest credit risk weights shall be used.

68. A bank shall use long-term credit assessments of obligors to determine credit risk weight and shall assign that weight to all exposures to that obligor which are not subordinated. Subordinated exposures shall be assigned the higher of the two weights: credit risk weight determined on the basis of the obligor’s long-term credit assessments or a credit risk weight relating to exposures for which no credit assessment is available.

By way of derogation from point 1 above, if credit assessment is available for a financial instrument, the bank shall assign credit risk weight determined on the basis of that assessment.

Where no credit assessment is available for a certain exposure, a bank may assign a credit risk weight on the basis of the credit assessment of the obligor’s financial instrument which is lower than the credit risk weight for exposures for which no credit assessment is available only if the exposures for which no credit assessment is available rank *pari passu* or senior in the case of bankruptcy of that obligor compared with the exposure on that financial instrument.

A bank shall not use the method for assignment of credit risk weights set out in paragraph 3 above if credit assessment is available of that obligor or of any other financial instrument issued by this obligor corresponding to credit risk weight equal to or higher than the credit risk weight for exposures for which no credit assessment is available. In that case it shall assign this weight to all exposures to this obligor for which no credit assessment of a financial instrument is available.

Provisions of paragraphs 2 to 4 above shall not apply to exposures in the form of covered bonds referred to in Section 58 hereof.

69. A bank shall not use credit assessment of an obligor within a group of related parties for assignment of credit risk weights to exposures to other parties within the same group.

c) Use of short-term credit assessments

70. A bank may use short-term credit assessment only to determine credit risk weight of short-term exposures to which that assessment relates and if these exposures are assigned to a class of exposures to banks or to corporates.

Exposures to banks or to corporates for which short-term credit assessment by a nominated credit assessment institution is available shall be assigned credit risk weight specified in the following table (Table 8), according to the assignment of credit assessments into the appropriate credit quality step:

Table 8

Credit quality step	**1**	**2**	**3**	**4**	**5**	**6**
Credit risk weight	**20%**	**50%**	**100%**	**150%**	**150%**	**150%**

If a short-term credit assessment of a financial instrument carries a 150% credit risk weight, a bank shall assign the same weight to all other unrated exposures on the same obligor, including long-term exposures.

If a short-term credit assessment of a financial instrument carries a 50% credit risk weight, no unrated short-term exposure on the same obligor shall be assigned a risk weight lower than 100%.

d) Use of credit assessments for domestic and foreign currency items

71. A credit assessment that refers to an item denominated in the obligor's domestic currency can be used only to derive a credit risk weight for that item, i.e. that credit assessment cannot be used to derive a risk weight for other exposures to the same obligor that are denominated in a foreign currency.

By way of derogation from paragraph 1 above, the credit assessment of the obligor's domestic currency item may be used for determining credit risk weights of foreign-currency items in accordance with this Decision when an exposure arises through a bank's participation in loans extended by a

multilateral development bank which is according to this Decision assigned a 0% credit risk weight.

4. Credit risk mitigation techniques

a) Scope of application of credit risk mitigation techniques

72. A bank may modify the value of risk-weighted exposure amounts for credit risk by the effects of risk mitigation techniques if, for the purpose of reducing that risk, it uses eligible credit protection instruments and if conditions for recognition of credit protection in accordance with the provisions of this Subsection are met. The risk-weighted exposure amounts for credit risk modified by using credit risk mitigation techniques may not exceed the risk-weighted exposure amount for the same risk calculated before that modification.

A bank may not modify risk-weighted exposure amounts for credit risk by the effects of risk mitigation techniques if:

– it already took into account a certain credit protection instrument when calculating the risk-weighted exposure amounts for credit risk,
– the original validity of the credit protection instrument is less than a year and maturity mismatch exists, or
– the residual validity of the credit protection instrument is less than three months and maturity mismatch exists.

73. For credit risk mitigation purposes, a bank may use more than one credit protection instrument to cover a single exposure. In that case it shall divide the exposure into portions, each covered by one credit protection instrument, and shall calculate the risk-weighted exposure amount for each portion separately as set out in this Decision.

b) Eligible credit protection instruments

74. To modify the risk-weighted exposure amounts for credit risk by the effects of risk mitigation techniques, a bank may use the following credit protection instruments:

1) funded credit protection instruments as follows:
   – financial collateral,
   – on-balance sheet netting,
   – master netting agreements,
   – other funded credit protection instruments;
2) unfunded credit protection instruments as follows:

– guarantees, other forms of surety and counter-guarantees (including other similar instruments of unfunded credit protection),

– credit derivatives.

In addition to instruments referred to in paragraph 1 above, cash, securities and commodities purchased, borrowed or received under repurchase and reverse repurchase transactions and securities or commodities lending or borrowing transactions shall also be considered eligible credit protection instruments.

Financial collateral

75. The following shall be considered eligible financial collateral:

1) cash and cash equivalents deposited with a bank;
2) debt securities issued by central governments or central banks, which securities have a credit assessment by a nominated credit assessment institution or an export credit agency associated with credit quality step 4 or above in conformity with points 34 to 36 of this Decision;
3) debt securities issued by banks, which securities have a credit assessment by a nominated credit assessment institution associated with credit quality step 3 or above in conformity with points 44 to 47 of this Decision;
4) debt securities issued by corporates, which securities have a credit assessment by a nominated credit assessment institution associated with credit quality step 3 or above in conformity with point 48 of this Decision;
5) debt securities with a short-term credit assessment by a nominated credit assessment institution associated with credit quality step 3 or above in conformity with point 70 of this Decision;
6) equities or convertible bonds that are included in a main index; and
7) gold.

For the purposes of paragraph 1, item 2) of this point, ‘debt securities issued by central governments or central banks’ shall also include:

– debt securities issued by territorial autonomies and local self-government units, exposures to which are credit risk-weighted, in accordance with point 38 of this Decision, in the manner prescribed for exposures to central governments and central banks;

– debt securities issued by public administrative bodies, exposures to which are credit risk-weighted, in accordance with points 39 to 41 of this Decision, in the manner prescribed for exposures to central governments and central banks;

– debt securities issued by multilateral development banks referred to in point 42, paragraph 1 of this Decision;

– debt securities issued by international organisations referred to in point 43 of this Decision.

For the purposes of paragraph 1, item 3) of this point, ‘debt securities issued by banks’ shall include:

– debt securities issued by entities, exposures to which are classified as exposures to banks in accordance with point 44 of this Decision;
– debt securities issued by territorial autonomies and local self-government units, exposures to which are credit risk-weighted, in accordance with point 38 of this Decision, in the manner prescribed for exposures to banks;
– debt securities issued by public administrative bodies, exposures to which are credit risk-weighted, in accordance with point 40 of this Decision, in the manner prescribed for exposures to banks;
– debt securities issued by multilateral development banks other than those referred to in point 42, paragraph 1 of this Decision.

76. Debt securities issued by banks within the meaning of point 75 which securities do not have a credit assessment by a nominated credit assessment institution shall also be recognized as eligible financial collateral if they fulfil the following criteria:

1) they are listed on a recognised exchange;
2) they qualify as senior debt;
3) all other rated debt securities by the same issuer of the same seniority have a credit assessment by a nominated credit assessment institution associated with credit quality step 3 or above in conformity with points 44 to 47 and point 70 of this Decision;
4) the bank has no information to suggest that these securities would justify a credit assessment below that indicated in item 3) of this point;
5) the bank can demonstrate sufficient market liquidity of these securities.

77. In addition to eligible financial collateral referred to in points 75 and 76 of this Decision, units in open-end investment funds shall be considered eligible if the following conditions are satisfied:

1) they have a daily public price quote;
2) the fund is investing in financial instruments that are considered eligible financial collateral under these points.

If the open-end investment fund referred to in paragraph 1, item 2 of this point is also investing in financial instruments that are not eligible financial collateral under points 75 and 76 of this Decision, investments in its

units may be recognized with the value of the eligible instrument as collateral under the assumption that the investment fund has invested to the maximum extent allowed under its mandate in non-eligible assets. In cases where non-eligible assets can have a negative value due to liabilities or contingent liabilities resulting from ownership, the bank shall calculate the total value of the non-eligible assets and shall reduce the value of the eligible assets by that of the non-eligible assets in case the latter is negative in total.

78. In cases where a debt security referred to in point 75, paragraph 1, items 2) to 5) of this Decision has two or more credit assessments by nominated credit assessment institutions, the bank shall apply the provisions of point 67 of this Decision.

79. Where a bank calculates the effects of credit risk mitigation techniques using Financial Collateral Comprehensive Method laid down in points 103 to 110 of this Decision, in addition to the collateral referred to in points 75 to 77 of this Decision, the following shall also be recognised as eligible:

1) equities or convertible bonds not included in a main index but traded on a recognised exchange;

2) units of open-end investment funds if the following conditions are met:

– they have a daily public price quote,

– the fund is investing only in financial instruments that are considered eligible financial collateral under points 75 and 76 of this Decision and item 1) of this paragraph.

If the condition referred to in paragraph 1, item 2), second indent of this point is not satisfied, a bank may recognise investments in units of an open-end investment fund in the value determined in the manner set forth in point 77, paragraph 2 of this Decision.

On-balance sheet netting

80. An agreement between the bank and its counterparty on netting of reciprocal cash receivables and liabilities arising from loans and deposits shall be recognised as eligible on-balance sheet netting.

Master netting agreements

81. A bilateral agreement covering repurchase or reverse repurchase transactions, securities or commodities lending or borrowing transactions and other capital market driven transactions shall be recognised as eligible master netting agreement if the collateral or securities or commodities under these transactions meet the requirements set out in points 75 to 79 of this Decision.

Only a bank calculating the effects of credit risk mitigation techniques by using Financial Collateral Comprehensive Method may use the agreement referred to in paragraph 1 of this point as an eligible funded credit protection instrument.

Other funded credit protection instruments

82. The following shall be recognized as eligible other funded credit protection instruments:

1) cash and cash equivalents deposited with a third-party bank and pledged to the bank which is one of the contractual parties;
2) life insurance policies pledged to the bank;
3) financial instruments issued by a third-party bank which will be repurchased by that bank on request of their owner.

Guarantees, other sureties and counter-guarantees

83. Guarantees, other sureties and counter-guarantees shall be recognised as eligible unfunded credit protection instruments only if credit protection providers are:

1) central governments and central banks;
2) territorial autonomies and local self-government units;
3) multilateral development banks;
4) international organisations referred to in point 43 of this Decision;
5) public administrative bodies, exposures to which are credit risk-weighted, in accordance with points 39 to 41 of this Decision, in the manner prescribed for exposures to central governments and central banks or exposures to banks;
6) banks;
7) corporates, including the bank's parent company and subsidiaries, which have a credit assessment by a nominated credit assessment institution associated with credit quality step 2 or above, in conformity with point 48 of this Decision.

Credit derivatives

84. CDS derivative and TRS derivative shall be recognised as eligible.

By way of derogation from paragraph 1 above, where a bank records the net payments received on this derivative as income, but does not record offsetting deterioration in the value of the asset concerned as expenditure

(either through reductions in fair value or by an addition to provisions), a TRS derivative shall not be recognised as eligible.

When a bank conducts an internal hedge using a credit derivative, i.e. hedges the credit risk of an exposure in the banking book using credit derivative booked in the trading book, that credit derivative shall be recognized as eligible only if the credit risk transferred to the trading book is transferred out to a third party or parties.

c) Conditions for recognition of credit protection

General conditions

85. In its internal acts a bank shall lay down credit risk mitigation techniques to be used and manner of providing credit protection and it shall also ensure that these instruments are legally effective and enforceable in conformity with the applicable law.

All risks associated with the use of credit protection instruments shall be adequately addressed by the bank's risk management system.

Banks shall adequately document that conditions prescribed for the recognition of credit protection instruments are fulfilled.

Banks shall continuously assess credit risk arising from their exposure regardless of whether they implement credit risk mitigation techniques or not.

By way of derogation from paragraph 4 above, in the case of repurchase and reverse repurchase transactions and securities or commodities lending or borrowing transactions, banks applying credit risk mitigation techniques may assess credit risk arising from net exposure.

86. In order to be eligible for recognition for the purpose of credit risk mitigation, funded credit protection instruments should satisfy the following general conditions:

1) they are sufficiently liquid;
2) their value over time is sufficiently stable to provide appropriate certainty as to the credit protection;
3) the contract under which these instruments have been obtained provides the right of the bank – in the event of default by the obligor, or its bankruptcy, liquidation or on the occurrence of other credit events relating to the obligor and specified in the contract – to liquidate, or to obtain transfer or appropriation of, or to retain, in a timely manner, the assets providing credit protection;

4) the degree of correlation between the value of these instruments and the credit quality of the obligor is not undue.

87. To be eligible for recognition for the purpose of credit risk mitigation, unfunded credit protection instruments should satisfy the following general conditions:

1) the credit protection shall be direct;
2) the extent (amount) of credit protection is clearly defined and incontrovertible;
3) the credit protection contract shall not contain any clause that:
– would allow the protection provider unilaterally to cancel the contract,
– would increase the cost of protection as a result of deteriorating credit quality of the protected exposure,
– could affect the obligation of the protection provider to pay out in a timely manner in the event that the original obligor fails to make any payments due; or
– could allow the maturity of the credit protection to be reduced by the protection provider;
4) they must be legally effective and enforceable in accordance with the applicable law;
5) the bank shall manage potential concentration of risk arising from the use of these instruments and must be able to demonstrate how its strategy in respect of its use of these instruments interacts with its management of its overall risk profile.

Conditions for recognition of financial collateral

88. Financial collateral shall be recognised as eligible for credit risk mitigation if, in addition to conditions laid down in point 86 of this Decision, it meets the following conditions:

1) conditions relating to correlation:
– the credit quality of the obligor and the value of the financial collateral must not have a material positive correlation,
– securities shall not be issued by the obligor or a party related to the obligor, except in the case of covered bonds falling within the terms of point 58 of this Decision which are posted as collateral for repurchase and reverse repurchase transactions;
2) conditions relating to legal certainty:
– banks shall take all necessary steps to fulfil any contractual and statutory requirements in respect of enforceability of the collateral,
– banks shall regularly review the enforceability of the collateral;
3) operational requirements:
– banks shall have relevant documentation for the collateral,

– banks shall define clear and comprehensive procedures for timely liquidation of collateral,

– the bank has established clear and comprehensive procedures for the management of risks arising from the use of collateral (including the risk of failed liquidation of collateral, risk of inadequate valuation, risk associated with the premature termination of the credit protection and concentration risk), as well as interaction of these risks with the bank's overall risk profile,

– the bank has defined the types and amounts of acceptable collateral,

– the bank determines the market value of collateral at least once every six months and at shorter intervals if significant decrease in this value has occurred,

– where the collateral is held by a third party, the bank has obtained relevant assurance that the third party segregates the financial collateral in its books from its own assets.

Where a bank calculates the effects of credit risk mitigation techniques using Financial Collateral Simple Method laid down in points 99 to 102 of this Decision, in addition to the conditions laid down in paragraph 1 above, financial collateral must comply with the requirement that the contractually specified period of protection should be at least equal to the residual maturity of the underlying exposure.

Conditions for recognition of on-balance sheet netting

89. On-balance sheet netting shall be recognised as eligible for credit risk mitigation if, in addition to conditions laid down in point 86 of this Decision, the following conditions are met:

1) the agreements for netting of reciprocal assets and liabilities are enforceable (including in the event of bankruptcy or liquidation of a counterparty) in accordance with the applicable law;

2) the bank is able to determine at any time those assets and liabilities that are subject to the on-balance sheet netting agreement referred to in item 1) above;

3) the bank monitors and controls the risks associated with premature termination of the credit protection:

4) the bank monitors and controls the relevant exposures on a net basis.

Conditions for recognition of master netting agreements

90. Master netting agreements shall be recognised as eligible for credit risk mitigation if, in addition to conditions laid down in point 86 of this Decision, they meet the following conditions:

1) they are enforceable (including in the event of bankruptcy or liquidation of a counterparty) in accordance with the applicable law;

2) they provide for the netting of gains and losses on transactions closed out under a master netting agreement so that a single net amount is owed by one party to the other;

3) in the event of default by one of the parties (including in the event of bankruptcy and liquidation) it gives the non-defaulting party the right to collect the amount referred to in item 2) above;

4) conditions for the recognition of financial collateral set out in point 88 of this Decision are satisfied.

Conditions for recognition of other funded credit protection instruments

91. Cash and cash equivalents referred to in point 82, item 1) of this Decision shall be recognised as eligible for credit risk mitigation if, in addition to conditions laid down in point 86 of this Decision, the following conditions are met:

1) the claim arising from this cash or cash equivalents is enforceable in accordance with the applicable law;

2) the bank holding this deposit, on the basis of relevant documentation, may transfer these funds only to the bank which is the credit protection buyer or to other parties with prior consent of that bank.

92. Life insurance policies referred to in point 82, item 2) of this Decision shall be recognised as eligible for credit risk mitigation if, in addition to conditions laid down in point 86 of this Decision, the following conditions are met:

1) they are pledged to the bank in accordance with the applicable law, hence the insurance company may not pay amounts payable to the beneficiary of insurance without the consent of that bank;

2) the bank has the right to cancel the policy and receive the surrender value in the event of the default of the obligor;

3) the bank is informed of any non-payments under the policy by the policy-holder;

4) they have at least the same maturity as the underlying exposure;

5) their surrender value is declared by the company providing life insurance and is non-reducible;

6) their surrender value is to be paid in a timely manner upon request;

7) their surrender value cannot be paid without the consent of the bank;

8) the insurance company has its registered office in the Republic of Serbia or a Member State of the European Union or in a state that is not a member of the European Union if its regulations governing the operation of insurance companies and supervision of that operation are harmonised with the regulations of the European Union.

93. Financial instruments referred to in point 82, item 3) of this Decision shall be recognised as eligible for credit risk mitigation if, in addition to conditions laid down in point 86 of this Decision, the following conditions are met:

1) they are issued by a bank with available credit assessment by the nominated credit assessment institution associated with credit quality step 1, in conformity with points 44 to 47 of this Decision;

2) the bank can demonstrate sufficient market liquidity of these instruments.

Conditions for recognition of guarantees and other sureties

94. Guarantees and other sureties shall be recognised as eligible for credit risk mitigation if, in addition to conditions laid down in point 87 of this Decision, they meet the following conditions:

1) the bank has the right – in the event of default by the obligor or occurrence of other credit event relating to that obligor – to pursue, in a timely manner, the issuer of the guarantee or the guarantor for any monies due under the underlying exposure, which shall not be subject to the bank first having to pursue the obligor;

2) the guarantee or other surety is an explicitly documented obligation assumed by the issuer of the guarantee or the guarantor;

3) the guarantee or other form of surety covers all types of payments the obligor has to make in respect of the underlying exposure and if, exceptionally, certain kinds of payment are not covered by the guarantee or surety, such limited coverage is clearly indicated.

For exposures in respect of loans secured by residential real estate mortgage – a guarantee or other surety shall be recognised as eligible credit risk mitigation if the conditions referred to in paragraph 1 of this point are satisfied and if the contract specifies that the bank may pursue the issuer of the guarantee or the guarantor within 24 months from the occurrence of default or other specified event if it could not collect its claim by mortgage foreclosure.

Conditions for recognition of counter-guarantees

95. Where an exposure of the bank is protected by a guarantee or other surety which is counter-guaranteed by a central government, a central bank, territorial autonomy, a local self-government unit or a public administrative body which are credit risk-weighted, according to points 39 and 40 of this Decision, in the manner prescribed for exposures to the central government in whose jurisdiction they are established, or where there is counter-guarantee of a multilateral development bank referred to in point 42, paragraph 1 and of an international organization referred to in point 43 of this Decision or a counter-guarantee of a public administrative body which is credit risk-weighted, according to point 40 of this Decision, in the manner prescribed for exposures to banks – such exposure may be treated as exposure protected by a guarantee provided by the entity in question, if the following conditions are satisfied:

1) the counter-guarantee covers all credit risk elements of the claim;
2) both the original guarantee and the counter-guarantee meet the requirements set out in points 87 and 94 of this Decision, except that the counter-guarantee need not be direct;
3) the cover is robust and nothing in the historical evidence suggests that the coverage of the counter-guarantee is less than effectively equivalent to that of a direct guarantee by the entity in question.

Conditions for recognition of credit derivatives

96. Credit derivatives shall be recognised as eligible for credit risk mitigation if, in addition to general conditions laid down in point 87 of this Decision, the following conditions are met:

1) the contract on credit derivative specifies that the credit event occurs in case of:
– the failure to pay the amounts due under the terms of the underlying exposure,
– the failure of the obligor to pay its debts to all creditors (e.g. bankruptcy or other form of inability to pay its debts as they become due – frozen accounts, admission in writing of its inability to pay its debts, etc.),
– the restructuring of the underlying exposure involving forgiveness or postponement of principal, interest or fees that results in loss (e.g. value adjustment or other similar debit to the profit and loss account);
2) in the case of credit derivatives allowing for cash settlement, the bank uses a comprehensive valuation process in order to estimate losses and there is a clearly specified period for obtaining post-credit-event valuations of the underlying obligation;

3) for credit derivatives where the transfer of the underlying exposure to the protection provider is required for settlement, the terms of the underlying exposure shall not contain a provision that would unreasonably prevent such transfer;

4) the identity of the parties responsible for determining whether a credit event has occurred shall be clearly defined, while that determination shall not be the sole responsibility of the protection provider.

5) the protection buyer shall have the right to inform the protection provider of the occurrence of a credit event.

By way of derogation from paragraph 1 above, if the contract on credit derivative does not provide for the occurrence of a credit event in the case of restructuring referred to in item 1, third indent of that paragraph, the credit derivative may be recognised as eligible for credit risk mitigation if its value has been reduced as laid down in point 122, paragraph 2 of this Decision.

97. For credit derivative where there is a mismatch between the reference obligation and/or obligation used for the purposes of determining whether a credit event has occurred, as the case may be, and the reference exposure, in addition to general conditions set out in point 87 and conditions referred to in point 96 of this Decision, the following conditions shall be met:

1) the reference obligation or the obligation used for purposes of determining whether a credit event has occurred is junior to or ranks *pari passu* with the underlying exposure;

2) the reference obligation or the obligation used for purposes of determining whether a credit event has occurred, as the case may be, and the underlying exposure share the same obligor and there are in place cross-default or cross-acceleration clauses.

d) Method of modification of risk-weighted exposure amounts for credit risk by the effects of risk mitigation techniques

Modification of risk-weighted exposure amounts for credit risk by the effects of financial collateral

98. A banks may modify risk-weighted exposure amounts for credit risk by the effects of financial collateral using the Financial Collateral Simple or the Financial Collateral Comprehensive Method, but may not simultaneously use both methods.

By way of derogation from paragraph 1 above, for positions from the trading book on the basis of which the bank is exposed to counterparty risk, only Financial Collateral Comprehensive Method may be used.

(1) Financial Collateral Simple Method

99. Banks modify risk-weighted exposure amounts for credit risk by the effects of financial collateral applying the Financial Collateral Simple Method – collateralised portion of the underlying exposure is assigned a risk weight of the collateral instead of the weight determined in accordance with Subsection 2 of this Section.

Collateralised portion of underlying exposure referred to in paragraph 1 above shall be the value of the underlying exposure determined in the manner laid down in points 28 and 29 of this Decision – up to the market value of the financial collateral.

The value of off-balance sheet items, within the meaning of paragraph 2 above, by way of derogation from point 29 of this Decision, shall be determined by applying conversion factor 100% instead of the conversion factor laid down in that point.

The credit risk weight of the collateral referred to in paragraph 1 above shall be the credit risk weight assigned, in accordance with Subsection 2 of this Section, to exposures arising from financial assets representing collateral and which shall be a minimum of 20% except as specified in points 100 to 102 of this Decision.

100. A risk weight of 0% shall be assigned to the collateralized portion of the exposure arising from repurchase and reverse repurchase transactions and securities or commodities lending or borrowing transactions which fulfil the criteria for the application of volatility factor referred to in point 110 of this Decision. If the counterparty to the transaction fulfils all the criteria set out in point 110 of this Decision, except the condition of item 8) of that point, a risk weight of 10% shall be assigned.

101. A risk weight of 0% shall, to the extent of the collateralisation, be assigned to the exposure arising from OTC financial derivatives determined in Annex 3 collateralised by cash or cash equivalents, where exposure values are determined in accordance with the provisions of Section 3 of this Chapter, provided that the mentioned financial derivatives are subject to daily marking-to-market and that cash or cash equivalent is in the currency in which settlement of these derivatives is contractually agreed.

A risk weight of 10% shall be assigned to the extent of the collateralisation to the exposure values for the derivative instruments referred to in paragraph 1 above, collateralised by debt securities issued by central governments or central banks which are assigned a 0% risk weight in accordance with Subsection 2 of this Section.

Debt securities referred to in paragraph 2 of this this point shall also include:

1) debt securities issued by territorial autonomies and local self-government units, exposures to which are credit risk-weighted, in accordance with points 37 and 38 of this Decision, in the manner prescribed for exposures to central governments and central banks;

2) debt securities issued by multilateral development banks referred to in point 42, paragraph 1 of this Decision;

3) debt securities issued by international organisations referred to in point 43 of this Decision.

102. A 0% risk weight may be assigned to other exposures collateralised by a collateral that has a 0% risk weight, provided both the exposure and the collateral are denominated in the same currency.

Where the collateral is debt security referred to in paragraph 1 above, the ratio between the collateralised part of exposure and the value of the collateral shall be 1:1.20.

(2) Financial Collateral Comprehensive Method

103. Banks shall modify risk-weighted exposure amounts for credit risk by the effects of financial collateral using the Financial Collateral Comprehensive Method by applying risk weights of the underlying exposure determined in accordance with Subsection 2 of this Section to:

– fully adjusted value of the underlying exposure for balance sheet positions instead of to the value of these positions determined in accordance with point 28 of this Decision;

– fully adjusted value of the underlying exposure for off-balance sheet items instead of to the value of that exposure determined in accordance with point 29 of this Decision;

The fully adjusted value of the underlying exposure referred to in paragraph 1 above shall be equal to the difference between adjusted values of the underlying exposure and collateral, and if the difference is negative – it shall be equal to zero:

$$E^* = \max \{0, [E_{VA} - C_{VAM}]\},$$

where:

E***** = fully adjusted value of the underlying exposure,

E_{VA} = adjusted value of the underlying exposure referred to in point 104 of this Decision,
C_{VAM} = adjusted value of the collateral referred to in point 105 of this Decision.

104. The adjusted value of the underlying exposure is calculated by adjusting the value of the exposure by the volatility adjustment determined as set out in points 106 to 110 of this Decision appropriate for the underlying exposure, according to the following formula:

$$E_{VA} = E \times (1+H_E),$$

where:

E = the value of balance sheet positions and off-balance sheet items constituting the underlying exposure, as determined in point 28 of this Decision for balance sheet positions and in point 29 of this Decision for off-balance sheet items, before the application of the conversion factor set out in that point,
H_E = the volatility adjustment appropriate to the underlying exposure.

105. The adjusted value of the collateral for all transactions shall be calculated by adjusting the market value of the financial collateral by:

– the volatility adjustment appropriate to the collateral, as calculated under points 106 to 110 of this Decision;
– the volatility adjustment appropriate to currency mismatch, as calculated under first indent of this point;
– the maturity mismatch adjustment, as calculated under point 124 of this Decision,

according to the following formula:

$$C_{VAM} = C \times (1-H_C-H_{FX}) \times H_{M,}$$

where:

C = market value of the collateral,
H_C = the volatility adjustment appropriate to the collateral,
H_{FX} = the volatility adjustment appropriate to currency mismatch,
H_M = the maturity mismatch adjustment

106. In case of daily revaluation of exposure and/or collateral, the adjusted value of the underlying exposure and collateral shall be calculated

by using supervisory volatility adjustments set out in the following tables (Tables 9, 10, 11 and 12):

Table 9

Credit quality step with which the credit assessment of the debt security is associated	Residual Maturity	Volatility adjustments for debt securities set out in point 75, paragraph 1, item 2)			Volatility adjustments for debt securities set out in point 75, paragraph 1, items 3) and 4)		
		20-day liquidation period (%)	10-day liquidation period (%)	5-day liquidation period (%)	20-day liquidation period (%)	10-day liquidation period (%)	5-day liquidation period (%)
1	≤ 1 year	0.707	0.5	0.354	1.414	1	0.707
	>1 ≤ 5 years	2.828	2	1.414	5.657	4	2.828
	>5 years	5.657	4	2.828	11.314	8	5.657
2-3	≤ 1 year	1.414	1	0.707	2.828	2	1.414
	>1 ≤ 5 years	4.243	3	2.121	8.485	6	4.243
	>5 years	8.485	6	4.243	16.971	12	8.485
4	≤ 1 year	21.213	15	10.607	-	-	-
	>1 ≤ 5 years	21.213	15	10.607	-	-	-
	>5 years	21.213	15	10.607	-	-	-

Table 10

Credit quality step with which the credit assessment of a short-term debt security is associated	Volatility adjustments for debt securities set out in point 75, paragraph 1, item 2) with short-term credit assessments			Volatility adjustments for debt securities set out in point 75, paragraph 1, items 3) and 4) with short-term credit assessments		
	20-day liquidation period (%)	10-day liquidation period (%)	5-day liquidation period (%)	20-day liquidation period (%)	10-day liquidation period (%)	5-day liquidation period (%)
1	0.707	0.5	0.354	1.414	1	0.707
2-3	1.414	1	0.707	2.828	2	1.414

Table 11

Other collateral or exposure types	20-day liquidation period (%)	10-day liquidation period (%)	5-day liquidation period (%)
Main Index Equities, Main Index Convertible Bonds	21.213	15	10.607
Other Equities or Convertible Bonds listed on a recognised exchange	35.355	25	17.678
Cash	0	0	0
Gold	21.213	15	10.607

Table 12

Volatility adjustment for currency mismatch		
20-day liquidation period (%)	10-day liquidation period (%)	5-day liquidation period (%)
11.314	8	5.657

Volatility adjustments under this point shall apply for the following liquidation periods:

– 20 business days for secured lending transactions;
– 10 business days for capital market-driven transactions;
– 5 business days for repurchase transactions and reverse repurchase transactions (except the transactions involving commodities) and securities lending or borrowing transactions.

For debt securities issued by banks which meet the requirements under point 76 of this Decision, the volatility adjustment is the same as provided under this point for securities issued by banks or corporates having credit assessment associated with credit quality step 2 or 3.

For units in collective investment undertakings that are recognised as eligible collateral banks shall apply:

– volatility adjustment that is the weighted average volatility adjustment that would apply, having regard to the liquidation period as specified in paragraph 2 above, to the assets in which the fund has invested, or
– if the assets in which the fund has invested are not known to the bank, the volatility adjustment is the highest volatility adjustment that would apply to any of the assets in which the fund has the right to invest in accordance with its investment policy and the law governing investment undertakings.

107. For non-eligible securities or for commodities lent or sold under repurchase transactions or securities or commodities lending or borrowing transactions that do not meet eligibility requirements under this Sub-section, the volatility adjustment shall be the same as provided under point 106 for non-main index equities listed on a recognised exchange.

108. By way of derogation from points 106 and 107 of this Decision, a bank may use its own volatility estimates for calculating the volatility adjustments to be applied to underlying exposures and collateral, with the prior approval of the National Bank of Serbia, and subject to the following conditions:

1) volatility adjustments are estimated for each individual debt security and for each individual collateral and such estimates are only exceptionally made on a group basis for debt securities having a credit assessment by a nominated credit assessment institution associated with credit quality step 3 or above; if the bank makes this estimate on group basis, that estimate shall be representative of securities included in a specific category, where the

relevant categories of these securities shall be determined by taking into account the type of issuer of the security, the credit rating of the securities, their residual maturity and their modified duration.

2) volatility adjustment of the collateral or foreign exchange mismatch is estimated without taking into account any correlation between the unsecured exposure, collateral and/or exchange rates;

3) in calculating volatility adjustments, a 99^{th} percentile confidence interval is used;

4) in calculating the volatility adjustments the bank uses periods listed in point 106 of this Decision and only exceptionally makes these estimates using shorter or longer liquidation periods, scaled up or down to the liquidation periods set out in that point using the following formula:

$$H_M = H_N \sqrt{T_M / T_N} ,$$

where:

H_M = volatility adjustment under the relevant liquidation period in point 106 of this Decision,
H_N = volatility adjustment based on the liquidation period T_N,
T_M = liquidation period set out in point 106 of this Decision,
T_N = liquidation period which is shorter or longer than the liquidation period under point 106 of this Decision;

5) the bank scales up the liquidation period for lower-quality collateral due to their reduced liquidity, as well as where historical data may understate potential volatility; such cases should be dealt with by means of a stress scenario;

6) historical observation period for calculating volatility adjustments is a minimum length of one year and where the bank uses simple weighting or similar method within that period – the weighted average observation period is not less than six months;

7) the bank regularly updates its data sets and reassesses volatility adjustments at least once every three months or in shorter intervals in case of material changes in market prices;

8) estimated volatility adjustments are used in the day-to-day risk management process, as well as in determining exposure limits;

9) the bank has regulated by its internal acts the manner and procedures for estimation of volatility adjustments and their use in risk management and has established such a system of internal controls which ensures consistent implementation of these acts;

10) the bank regularly, at least once a year, carries out internal audit of the system for volatility adjustment estimation, which shall particularly include:

– integration of that assessment into daily risk management,

– the validation of any significant change in the process of that estimation,

– the verification of the consistency of the period used and reliability of data sources for that estimation, including the independence of such data sources,

– the accuracy and appropriateness of the assumptions used for that assessment.

When applying to the National Bank of Serbia for the approval specified in paragraph 1 above, the bank shall submit relevant documentation as evidence of compliance with the requirements set out in that paragraph.

A bank which obtained the approval under paragraph 1 above shall use its own estimates of volatility adjustments for the calculation of adjusted value of all exposures and collaterals, except for the group of exposures which are not materially significant and for which it shall use supervisory volatility adjustments set out in point 106 of this Decision.

The National Bank of Serbia may revoke the approval under paragraph 1 above if it establishes that requirements laid down in that paragraph are no longer complied with.

109. Where a bank does not implement daily revaluation of its exposures and/or collateral, to calculate the adjusted value of underlying exposure or collateral it shall scale up the volatility adjustments laid down in points 106 to 108 of this Decision, using the following formula:

$$H = H_M \sqrt{\frac{N_R + (T_M - 1),}{T_M}}$$

where:

H = the volatility adjustment to be applied,
H_M = the volatility adjustment where there is daily revaluation of exposure/collateral,
N_R = actual number of business days between revaluations of exposure/collateral,
T_M = liquidation period set out in point 106 of this Decision.

110. In relation to repurchase transactions, reverse repurchase transactions and securities or commodities lending or borrowing transactions that are not subject to a master netting agreement, where a credit institution uses the volatility adjustments calculated under points 106 to 108 of this Decision it may, instead of applying the said volatility adjustments, apply a 0% volatility adjustment provided that the following conditions are satisfied:

1) both the exposure and the collateral are cash or debt securities issued by central governments or central banks with available credit assessment by the nominated credit assessment institution or export credit agency associated with credit quality step 4 or better under points 34 to 36 of this Decision;

2) both the exposure and the collateral are denominated in the same currency;

3) either the maturity of the transaction is no more than one day or both the exposure and the collateral are subject to daily marking-to-market or daily remargining;

4) the time between the last marking-to-market (before a failure to remargin) and the liquidation of the collateral shall be no more than four business days;

5) the transaction is settled across a settlement system proven for that type of transaction;

6) the enclosed documentation is standard market documentation for repurchase transactions, reverse repurchase transactions or securities of commodities lending or borrowing transactions;

7) the transaction is governed by documentation specifying that if the counterparty fails to satisfy an obligation to deliver cash or securities or to deliver margin or otherwise defaults, then the transaction is immediately terminable;

8) the counterparty is:

– an entity who is an issuer of securities mentioned in point 75, paragraph 1, item 2) and paragraph 2 of this Decision exposures to which are assigned a 0% credit risk weight under Subsection 2 of this Section,

– a bank,

– a legal entity mentioned in point 44, paragraph 1, third indent of this Decision exposures to which are assigned a 20% credit risk weight under Subsection 2 of this Section,

– an open-end investment fund management company that is subject to supervision by the competent regulatory authority which lays down minimum solvency requirements,

– a pension fund management company that is subject to supervision by the competent regulatory authority,

– a recognised clearing house (e.g. a clearing house on a recognised exchange).

Modification of risk-weighted exposure amounts for credit risk by the effects of on-balance sheet netting

111. For the purpose of modification of risk-weighted exposure amounts for credit risk by the effects of on-balance sheet netting, claims and liabilities arising from loans and deposits subject to on-balance sheet netting shall be treated as cash collateral.

Banks shall modify risk-weighted exposure amounts for credit risk by the effects of on-balance sheet netting as set out in points 99 to 102 of this Decision for Financial Collateral Simple Method.

By way of derogation from paragraph 1 above, where there is a maturity mismatch between the claims and liabilities arising from loans and deposits referred to in paragraph 1 above, a bank shall modify risk-weighted exposure amounts for credit risk by the effects of on-balance sheet netting as set out in points 103 to 110 of this Decision for the Financial Collateral Comprehensive Method.

Modification of risk-weighted exposure amounts for credit risk by the effects of master netting agreements

112. Banks shall modify risk-risk-weighted exposure amounts for credit risk by the effects of master netting agreements as set out in points 103 to 110 of this Decision for the Financial Collateral Comprehensive Method, where securities or commodities sold, lent or provided under that agreement represent the exposure of the bank, while securities or commodities purchased, borrowed or received under that agreement represent the collateral.

113. The fully adjusted value of the underlying exposure subject to master netting agreements shall be calculated according to the following formula:

$$E^* = \max\left\{0, \left[\left(\sum(E) - \sum(C)\right) + \sum\left(\left|net\ \ position\ \ in\ \ a\ \ particular\ \ type\ \ of\ \ \text{sec}urity\right| \times H_{\text{sec}}\right) + \left(\sum\left|E_{fx}\right| \times H_{fx}\right)\right]\right\}$$

,

where:

E***** = fully adjusted value of the underlying exposure,
E = exposure value for each separate exposure under the master netting agreement under points 28 and 29 of this Decision that would apply in the absence of the credit protection,
Σ(E) = the sum of all Es under the master netting agreement,
C = the value of the securities or commodities purchased, borrowed or received or the cash borrowed or received in respect of each exposure,
Σ(C) = the sum of all Cs under the master netting agreement,
H_{sec} = the volatility adjustment appropriate to a particular type of security,
net position in a particular type of security = difference between the total value of the securities or commodities of that type sold, lent or provided under the master netting agreement and the total value of identical securities or commodities of that type purchased, borrowed or received under that agreement,

E_{fx} = the net position (positive or negative) in a given currency (other than the settlement currency of the master netting agreement), calculated as a difference between the total value of securities denominated in that currency sold, lent or provided under the master netting agreement (added to the amount of cash in that currency lent or transferred under that agreement) and the total value of securities denominated in that currency purchased, borrowed or received under that agreement (added to the amount of cash in that currency borrowed or received under that agreement),
H_{FX} = the volatility adjustment appropriate to currency mismatch.

114. Subject to the approval of the National Bank of Serbia, a bank may use an Internal Models Approach to modify risk-weighted exposure amounts for credit risk by the effects of master netting agreements.

A bank using an Internal Models Approach referred to in paragraph 1 above must use this approach for all counterparties and securities, excluding immaterial portfolios where it may use the Supervisory Volatility Adjustments Approach as set out in points 106 and 110 of this Decision or the Own Estimates Volatility Adjustments Approach as set out in points 108 and 109 of this Decision.

A bank using an Internal Models Approach referred to in paragraph 1 above has to take into account correlation effects between security positions subject to the master netting agreement as well as the liquidity of the instruments concerned. It shall also provide estimates of the potential change in value of the unsecured exposure amount (ΣE – ΣC).

A bank may use an Internal Models Approach referred to in paragraph 1 above for margin lending transactions if the transactions are covered under master netting agreements that meet the requirements set out in points 314 and 315 of this Decision.

A bank which obtained the approval from the National Bank of Serbia to use internal models for the calculation of capital requirements for market risk under Chapter V, Section 6 of this Decision may use these models to modify risk-weighted exposure amounts for credit risk by the effects of master netting agreements without prior approval referred to in paragraph 1 above if the models meet the requirements laid down in paragraphs 2 to 4 of that point.

115. The National Bank of Serbia may grant a bank an approval for use of the Internal Models Approach referred to in point 114 of this Decision provided the bank has in place a comprehensive, reliable and uniform system for managing the risks arising on the transactions covered by the master netting agreement and if the following conditions are met:

1) the internal risk measurement model used for the calculation of potential price volatility for transactions fulfils the requirements referred to in point 116, is closely integrated into the daily risk management process of the bank and serves as the basis for reporting risk exposures to the management;

2) the bank has a risk control unit that is independent from business trading units and reports directly to senior management, produces and analyses daily reports on the output of the internal risk measurement models and proposes appropriate measures to be taken in terms of position limits;

3) the daily reports prepared by the risk control unit are reviewed by a level of management with authority to enforce restrictions or reductions in the total exposures of the bank to risks and of positions taken by traders;

4) the bank has sufficient staff of adequate qualification, skilled in the use of sophisticated models, in the risk control unit;

5) the bank has established procedures for monitoring and ensuring compliance with the internal acts and controls concerning the overall operation of the risk measurement system;

6) the bank has a proven track record of historical reliability and accuracy of the internal risk measurement model demonstrated through the back-testing or testing of model outputs against outcomes, implemented at least once a year;

7) the bank regularly conducts stress-testing and the results of these tests are reviewed by bank management and reflected in the internal acts and the limits it sets:

8) an internal audit of the bank shall conduct, at least once a year, an independent review of the market risk management system, encompassing both the activities of the business trading units and of the risk control unit;

9) at least once a year, the bank shall conduct a review of its risk management system;

10) the internal model shall meet the requirements set out in point 311 of this Decision,

A bank may use empirical correlations within risk categories and across risk categories only if its system for measuring these correlations is estimated to be reliable and comprehensive, as specified in the approval referred to in paragraph 1 above.

When applying to the National Bank of Serbia for the approval specified in paragraph 1 above, the bank shall submit relevant documentation as evidence of compliance with the requirements set out in that paragraph.

The National Bank of Serbia may revoke the approval under paragraph 1 above if it establishes that requirements laid down in point 114 and conditions in that paragraph are no longer complied with.

116. The calculation of the potential change in value referred to in paragraph 115, item 1) of this Decision shall be subject to the fulfilment of the following conditions:

1) at least daily calculation of the potential change in value,
2) a 99th percentile, one-tailed confidence interval;
3) a 5-day equivalent liquidation period for repurchase and reverse repurchase transactions or securities or commodities lending or borrowing transactions, and a 10-day equivalent liquidation period for all other transactions;
4) an effective historical observation period of at least one year except where a shorter observation period is justified by a significant upsurge in price volatility;
5) three-monthly data set updates or as needed in shorter intervals, particularly in the case of significant changes in market prices.

In calculating the potential changes in value referred to in paragraph 1 above, the bank shall ensure that the internal model captures a sufficient number of risk factors in order to capture all material price risks.

117. The fully adjusted exposure value of banks using the Internal Models Approach shall be calculated according to the following formula:

$$E^{*} = \max\left\{0, \left[\left(\sum E - \sum C\right) + \left(VaR \ \ \text{int}\, ernal \ \ \ \text{mod}\, el \ \ output\right)\right]\right\},$$

where:

E***** = fully adjusted value of the exposure,
E = exposure value for each separate exposure under the master netting agreement determined under Section 3, Subsection 2 of this Decision that would apply in the absence of the credit protection,
Σ(E) = the sum of all Es under the master netting agreement,
C = the value of the securities or commodities purchased, borrowed or received or the cash borrowed or received in respect of each exposure,
Σ(C) = the sum of all Cs under the master netting agreement.

A bank shall use the fully adjusted exposure value (E*) as calculated under points 112 to 116 of this Decision as the value of exposures arising from transactions subject to master netting agreements.

In calculating risk-weighted exposure amounts for credit risk using the Internal Models Approach, a bank shall use the previous business day’s model output.

Modification of risk-weighted exposure amounts for credit risk by the effects of other funded credit protection instruments

118. Banks shall modify risk-weighted exposure amounts for credit risk by the effects of cash and cash equivalents as set out in point 82, item 1) of this Decision through analogous application of points 121 and 122 of this Decision, where cash and cash equivalents shall be treated as guarantee or surety of the bank where they are deposited.

119. Risk-weighted exposure amounts for credit risk shall be modified by the effects of life insurance policies referred to in point 82, item 2) of this Decision by assigning to the secured part of the underlying exposure credit risk weights listed in paragraph 2 below, where secured part of the underlying exposure is considered to be equal to the value of that exposure up to the amount of surrender value of life insurance policy.

The following risk weights shall be assigned to the secured part of the underlying exposure:

1) 20% – where the senior unsecured exposure to the company providing life insurance is assigned a risk weight of 20%;
2) 35% – where the senior unsecured exposure to the company providing life insurance is assigned a risk weight of 50%;
3) 70% – where the senior unsecured exposure to the company providing life insurance is assigned a risk weight of 100%;
4) 150% – where the senior unsecured exposure to the company providing life insurance is assigned a risk weight of 150%;

Where there is any currency mismatch between the exposure and the recognised credit protection referred to in paragraph 1, calculation laid down in point 122 of this Decision shall apply.

120. Banks shall modify risk-weighted exposure amounts for credit risk by the effects of financial instruments as set out in point 82, item 3) of this Decision through analogous application of points 121 and 122 of this Decision, where these instruments shall be treated as a guarantee or surety of the issuing bank.

The value of financial instruments referred to in paragraph 1 of this point shall be the following:

1) where the instrument will be repurchased at its face value, the value of the protection shall be that amount, or

2) where the instrument will be repurchased at market price, the value of the protection shall be the value of the instrument valued in the same way as debt securities as specified in point 76 of this Decision.

Modification of risk-weighted exposure amounts for credit risk by the effects of unfunded credit protection instruments

121. Banks shall modify risk-weighted exposure amounts for credit risk by the effects of unfunded credit protection by assigning to the secured part of the underlying exposure a risk weight of the protection provider determined in accordance with Subsection 2 of this Section instead of the credit risk weight of this exposure determined in accordance with that Subsection.

Secured part of the underlying exposure referred to in paragraph 1 above shall be equal to:

– the value of this exposure calculated as set out under points 28 and 29 of this Decision – when the value of unfunded credit protection instrument referred to in point 122 of that Decision is equal to or higher than that value, or

– the value of unfunded credit protection instrument referred to in point 122 of this Decision – when this value is lower than the value of the underlying exposure calculated as set out under points 28 and 29 of that Decision and the protection buyer and the protection provider have equal seniority.

Where the exposure referred to in paragraph 2 above is an off-balance sheet item, its value shall be calculated using conversion factor 100% instead of conversion factors set out in point 29 of this Decision.

Risk-weighted exposure amounts for credit risk modified by the effects of unfunded credit protection instruments shall be calculated according to the following formulas:

1) in case under paragraph 2, first indent above:

$$E \times g,$$

where:

E = the exposure value,
g = the credit risk weight assigned to exposures to the credit protection provider as specified in Subsection 2 of this Section;

2) in case under paragraph 2, second indent above:

$$(E-G_A) \times r + G_A \times g,$$

where:

E = the exposure value,
G_A = the value of unfunded credit protection instrument calculated as laid down in point 122 of this Decision,
r = the credit risk weight of the underlying exposure assigned in accordance with Subsection 2 of this Section,
g = the credit risk weight assigned to exposures to the credit protection provider as specified in Subsection 2 of this Section;

122. The value of an unfunded credit protection instrument shall be equal to the face value of the credit protection (the amount that the provider of that protection undertook to pay to the bank in case of default or non-payment by the bank obligors or due to occurrence of other contractually agreed credit events) corrected by:

– volatility adjustment for currency mismatch,
– volatility adjustment for maturity mismatch,

according to the following formula:

$$G_A = G \times (1-H_{fx}) \times H_M,$$

where:

G_A = the value of the funded credit protection instrument;
G = face value of credit protection,
H_{fx} = the volatility adjustment appropriate to currency mismatch, as calculated under points 106 and 107 of this Decision or $H_{fx} = 0$ if the currency of the exposure and the currency of credit protection are the same,
H_M = the maturity mismatch adjustment, as calculated under point 124 of this Decision.

In case of credit derivatives where the credit events do not include the restructuring of the underlying exposure involving forgiveness or postponement of principal, interest or fees that results in a loss (e.g. value adjustment or other similar debit to the profit and loss account), the bank shall adjust the face value of credit protection referred to in paragraph 1 above in the following way:

1) where the amount that the protection provider has undertaken to pay is not higher than the exposure value – the value of the credit protection shall be reduced by 40%, or

2) where the amount that the protection provider has undertaken to pay is higher than the exposure value – the value of the credit protection shall be no higher than 60% of the exposure value.

e) Maturity mismatch

123. A maturity mismatch between the unfunded credit protection instrument and the underlying exposure exists when the residual maturity of this instrument is shorter than effective maturity of the underlying exposure.

The effective maturity of the underlying exposure referred to in paragraph 1 above shall be expressed in years and shall not be longer than five years.

The residual maturity of credit protection instrument referred to in paragraph 1 above shall be the period until the earliest date when the credit protection may cease to be valid, expressed in years, where the earliest date shall imply in particular:

– the earliest date when the protection provider is allowed to use the agreed option to unilaterally terminate this protection;

– the earliest date when the protection buyer is allowed to use the agreed option to unilaterally terminate this protection.

A bank modifying its risk-weighted exposure amounts for credit risk by the effect of funded credit protection instruments using Financial Collateral Simple Method shall not be allowed to modify that exposure for the effects of instruments where there exists maturity mismatch in respect of the underlying exposure.

124. The maturity mismatch adjustment referred to in points 105 and 122 of this Decision shall be calculated according to the following formula:

$$H_M = (t-t^*)/(T-t^*),$$

where:

H_M = the maturity mismatch adjustment,
T = effective maturity of the underlying exposure,
t = the value of T or the number of years remaining to the maturity date of the credit protection, whichever is lower,
$t^* = 0.25$.

5. Conditions and manner of granting approval for the use of credit assessments provided by credit assessment institutions

125. The National Bank of Serbia shall grant approval for eligibility of credit assessments provided by a credit assessment institution for the calculation of capital requirements for credit risk of banks.

An application for granting approval referred to in paragraph 1 above shall be submitted to the National Bank of Serbia by the credit assessment institution which shall enclose with the application:

1) statement of one or more banks of its/their intention to use credit assessments assigned by this credit assessment institution for the calculation of capital requirement for credit risk, as well as a statement that the conditions for the nomination of that institution as specified in point 65, paragraph 2 of this Decision are fulfilled;

2) documentation containing information listed in Annex 1 which is an integral part of this Decision, evidencing the compliance with the conditions in respect of methodology, credit quality assessment and individual credit assessments as laid down in points 126 to 132 of this Decision.

The National Bank of Serbia shall grant approval referred to in paragraph 1 above if it is satisfied that conditions laid down in paragraph 2, item 2) of this point are met.

By way of derogation from paragraph 3 above, the National Bank of Serbia may grant approval referred to in that paragraph without the assessment of whether the conditions in respect of methodology and credit quality assessment are fulfilled if the credit assessment institution is registered in a Member State of the European Union and if it submitted evidence of such registration issued by the competent authority of the state concerned.

By way of derogation from paragraph 3 above, the National Bank of Serbia may grant approval referred to in that paragraph without the assessment of whether the conditions referred to in paragraph 2, item 2) of the same point are fulfilled if such approval has been granted by at least two competent regulatory bodies with which the National Bank of Serbia has an agreement on cooperation and if the institution concerned submitted relevant evidence to this effect (appropriate legal act granting such approval issued by the bodies concerned and the appropriate act in respect of mapping of credit assessments made by the bodies concerned). The credit assessment

institution shall not enclose the documentation referred to in that item with the application, unless requested so by the National Bank of Serbia.

Documentation referred to in this point shall be submitted in the original or certified copy, in the Serbian language, and if it is in a foreign language, translation into Serbian certified by authorised court interpreter shall be submitted as well.

In the process of reviewing the application for granting of the approval referred to in paragraph 1 above, the National Bank of Serbia may request additional relevant documentation and data.

a) Conditions in respect of methodology and credit quality assessment

126. The methodology employed by the credit assessment institution for the assessment of credit quality for a certain market segment (hereinafter: methodology of the credit assessment institution) shall comply with the requirements of objectivity, ongoing monitoring and transparency.

127. Conditions relating to objectivity of the methodology of the credit assessment institution imply that this methodology is based on the principle of prudence and that it is systematic, and its application continuous and consistent, that it encompasses all relevant factors of a certain market segment and that it is based on adequate data on default rates for every credit assessment and on transition matrices (matrices of probability of moving from one credit assessment to the other within a certain period).

The credit assessment institution shall apply its methodology to all legal entities and their financial instruments belonging to a certain market segment, shall regularly undertake validation, as well as verification and adjustment of this methodology based on historical data.

For the assessment of compliance with the criterion of objectivity, the credit assessment institution shall particularly provide:

– a documented quantitative evidence on reliability of credit quality assessments by the credit assessment institution within a specified period, for each market segment;

– documentation demonstrating that the credit assessment institution has processes in place to assess factors driving creditworthiness of rated legal entities and/or their financial instruments, as well as processes to incorporate these factors into the methodology of the credit assessment institution;

– procedures enabling that the methodology of the credit assessment institution is applied consistently and continuously to all legal

entities and their financial instruments which belong to a certain market segment.

128. Conditions relating to ongoing monitoring of credit assessments imply that such monitoring is laid down in the methodology of the credit assessment institution, that it should also specify review and adjustment of credit assessments to changes in financial conditions following any significant event that may affect the credit risk assessment and at least once a year.

In the course of evaluating compliance with requirements laid down in paragraph 1 above, the National Bank of Serbia shall particularly assess the following:

– procedures for back-testing of the credit assessment institution;
– regular internal verifications of credit assessments;
– cooperation with the administrative and management bodies of rated entities.

A credit assessment institution shall, for each market segment, verify the outcomes of credit assessments on the basis of actual values (back-testing).

Regular internal verifications of credit assessments conducted by the rating institution shall encompass all changes in internal and external factors for every legal entity rated by this institution. Credit assessments shall be revised after any significant change in these factors, at least once a year.

At the request of the National Bank of Serbia the credit assessment institution shall submit information on the manner of cooperation with the administrative and management bodies that are rated by this credit assessment institution, as well as on the intensity of that cooperation.

129. Conditions relating to transparency of the methodology of credit assessment institution imply that the latter publishes the main principles and assumptions on which this methodology is based, in order to make all information necessary for the assessment of adequacy of that methodology available to any interested party.

The National Bank of Serbia shall assess the transparency of the methodology of the credit assessment institution on the basis of the volume and contents of the published information referred to in paragraph 1 above and on the manner these information have been published.

The information published under paragraph 1 above shall in particular contain clear and comprehensible description of credit risk for each market

segment, as well as all significant changes in the methodology of the credit assessment institution used.

The credit assessment institution shall ensure that information referred to in paragraph 1 above are available and free of charge and that they are appropriately published (e.g. on its web page).

130. Conditions relating to independence and adequacy of assessment of credit quality imply that this assessment is independent of political influences or restrictions and also free of economic pressures. For the assessment of compliance with this condition, the National Bank of Serbia shall in particular examine the adequacy of ownership and organisational structure of the credit assessment institution, adequacy of its funding structure, its staffing and expertise, as well as development of corporate governance of the credit assessment institution.

The ownership and organisational structure of the credit assessment institution is considered adequate if it prevents the influence of the owner of the institution and/or political and economic pressures on the assessment of credit risk. Activities of the credit assessment institution in respect of credit risk assessment are functionally and organisationally separated from its other activities.

The funding structure of the credit assessment institution is adequate if it ensures stable and long-term sources of financing of the institution, as well as its independence from clients in order to prevent their influence on the objectivity of credit risk assessment.

The credit assessment institution shall have the number of staff with adequate level of skill, expertise and professional experience that would enable it to perform all its relevant activities, including continuous cooperation with clients in order to obtain information used in the methodology of this institution. In addition, credit quality assessment should involve at least one employee with adequate professional experience exceeding three years.

Salaries/wages and/or benefits of employees involved in the process of credit quality assessment shall not in any way depend on the income generated by the credit assessment institution nor on the value of assessment assigned.

Development of corporate governance in the credit assessment institution shall imply:

– establishment of an independent internal audit function;

– elaboration of procedures and other internal acts to ensure integrity of the credit risk assessment process;

– ensuring the process and establishment of procedures for identification, prevention and elimination of actual and potential conflicts of interest that could impair the production of independent, objective and high-quality credit assessments;

– publishing relevant information on the operation of this institution, including those relating to actual and potential conflicts of interest.

b) Conditions in respect of individual credit assessments

131. Individual credit assessments by a credit assessment institution are of such a nature that market participants use them and consider them to be credible and reliable.

The National Bank of Serbia shall assess credibility of individual credit assessments by a credit assessment institution in particular on the basis of the following factors:

– market share of that credit assessment institution across different market segments;

– amount and composition of revenues and sources of assets of that institution;

– existence of any correlation between the price of service provided and credit assessment awarded;

– use of these credit assessments by at least two domestic or foreign banks for bond issuing and/or assessing credit risks.

With regard to credit assessments relating to structured finance instruments, the credit assessment institution shall make publicly available the explanation how the changes in the quality of pool of assets affect its credit assessments.

The National Bank of Serbia may assess the credibility of individual credit assessments on the basis of other factors depending on the specifics of the market segment concerned.

132. The credit assessment institution shall make its individual credit assessments available to all interested domestic and foreign entities, including banks, under the same terms.

c) Mapping of credit assessments

133. The National Bank of Serbia shall map credit assessments by a credit assessment institution in the following way:

1) using direct mapping in accordance with points 134 to 136 of this Decision, or

2) using indirect mapping – in accordance with mapping done by a competent regulatory body of a European Union Member State.

The National Bank of Serbia shall continuously monitor the adequacy of mapping of credit assessments referred to in paragraph 1 above, as well as changes in mapping and if it assesses that the mapping is no longer adequate, it shall directly re-map.

The National Bank of Serbia shall use a three-year cumulative default rate (hereinafter: three-year CDR) and other quantitative and qualitative data to map credit assessments.

134. In mapping long-term credit assessments, the National Bank of Serbia shall compare a ten-year average of the three-year CDR for all legal entities assigned the same long-term credit assessment by the credit assessment institution with the long-term reference three-year CDR for the relevant credit quality step, in accordance with the following table (Table 13):

Table 13

Credit quality step	**1**	**2**	**3**	**4**	**5**
Long-term reference three-year CDR	**0.10%**	**0.25%**	**1.00%**	**7.50%**	**20.00%**

In mapping referred to in paragraph 1 above, the two most recent three-year CDRs for all legal entities assigned the same long-term credit assessment by the credit assessment institution shall be compared with the monitoring level benchmark and the trigger level benchmark of the three-year CDR for the relevant credit quality step, in accordance with the following table (Table 14):

Table 14

Credit quality step	**1**	**2**	**3**	**4**	**5**
Monitoring level three-year CDR benchmark	**0.8%**	**1.0%**	**2.4%**	**11.0%**	**28.6%**
Trigger level three-year CDR benchmark	**1.2%**	**1.3%**	**3.0%**	**12.4%**	**35.0%**

By way of derogation from paragraph 1 above, if the credit assessment institution does not have a sufficiently long series of default rates, it shall

estimate a ten-year average of the three-year CRD, as well as other quantitative parameters used in credit assessments mapping.

The National Bank of Serbia shall first map long-term credit assessments by comparing the actual or estimated ten-year average of the three-year CDR assigned to the long-term credit assessment with the long-term reference three-year CDR for the appropriate credit quality step, as laid down in Table 13. This mapping is confirmed using the monitoring level three-year CDR benchmark and the trigger level three-year CDR benchmark for the relevant credit quality step, in accordance with Table 14, in the following way:

1) when the most recent three-year CDR of assigned credit assessment is above the relevant monitoring level benchmark, the National Bank of Serbia shall assign a less favourable credit quality step than the one associated with credit assessment assigned by the credit assessment institution if it establishes that the credit assessment by that credit assessment institution is of poorer quality than the assessments by other relevant credit assessment institutions;

2) when the two most recent three-year CDRs of assigned credit ratings are above the relevant trigger level, the National Bank of Serbia shall assign a less favourable credit quality step than the one associated with credit assessment assigned by the credit assessment institution.

If the National Bank of Serbia, under paragraph 4 above, assigned a less favourable credit quality step, and the credit assessment institution subsequently proves that the default rates relating to a particular credit assessment by that agency no longer markedly differ from the reference rates, the National Bank of Serbia may assign the original credit quality step.

In mapping long-term credit assessments, the National Bank of Serbia, in addition to the three-year credit assessments, also analyses other data it deems necessary.

135. The National Bank of Serbia shall map short-term credit assessments based on the results of long-term assessments mapping, as well as on the results of short-term credit assessments mapping that the credit assessment institution made on the basis of long-term credit assessments.

136. The National Bank of Serbia shall map eligible credit assessments of open-end investment funds based on the results of long-term assessments mapping, as well as on the results of short-term credit assessments mapping that the credit assessment institution made on the basis of long-term credit assessments.

For the purpose of paragraph 1 above an eligible credit assessment of open-end investment funds shall be a credit assessment which largely depends on the credit quality of the assets of these funds with fixed rate of return, where other factors that may affect the credit assessment (quality of management, sensitivity of the fund to changes in the market, degree of diversification and maturity match between the assets and liabilities of the fund) are taken into account only if materially significant.

d) A list of eligible credit assessment institutions

137. The National Bank of Serbia shall publish on its website a list of eligible credit assessment institutions.

The list referred to in paragraph 1 above shall contain the following data:

– business name and head office of the eligible credit assessment institution;
– manner of granting approval referred to in point 125 of this Decision;
– market segment for which the approval referred to in point 125 of this Decision has been granted;
– exposure classes under Subsection 2 of this Section for which banks may use credit assessments of the eligible credit assessment institution;
– references of eligible credit assessments and their mapping into credit quality steps;
– data on eligibility of unsolicited credit assessments by the credit assessment institution.

The National Bank of Serbia shall make modifications and/or amendments to the list referred to in paragraph 1 of this point relating to:

– addition to the list of every credit assessment institution immediately following the issuance of the decision granting the approval referred to in point 125 of this Decision;
– deletion from the list of every credit assessment institution immediately following the issuance of the decision revoking the approval referred to in point 125 of this Decision;
– information on the consequences of partial revocation of the approval referred to in point 125 of this Decision;
– information on mapping and changes in the mapping of credit assessments of eligible credit assessment institutions.

e) Monitoring of eligible credit assessment institutions

138. A credit assessment institution shall meet the requirements referred to in points 126 to 132 of this Decision on a continuous basis.

The National Bank of Serbia shall monitor the compliance with the requirement referred to in paragraph 1 above.

The National Bank of Serbia may request from the credit assessment institution any documentation and information relevant for the monitoring and re-examination of the compliance with the requirement referred to in paragraph 1 above.

f) Repealing the decision granting approval for the use of credit assessments assigned by a credit assessment institution

139. The National Bank of Serbia may fully repeal the decision granting approval referred to in point 125 of this Decision if:

1) in the case of granting such approval, it determines by its assessment that the requirements under that paragraph are no longer fulfilled for all market segments;
2) in the case of granting such approval on the basis of the application referred to in paragraph 4 of that point, the credit assessment institution is deleted from the register in the Member State of the European Union;
3. in the case of granting such approval on the basis of application referred to in paragraph 5 of that point, the relevant legal act granting approval to the credit assessment institution concerned or recognising its eligibility, issued by the competent regulatory body of the Member State of the European Union, ceased to be valid;
4) the credit assessment institution failed to provide information and data in accordance with point 138 of this Decision;
5) no bank is using credit assessments provided by the credit assessment institution concerned for the calculation of its capital requirements for credit risk.

The National Bank of Serbia may repeal the decision granting approval referred to in paragraph 1 above in the part relating to an individual market segment if:

1) on the basis of its review it establishes that the credit assessment institution concerned no longer complies with the conditions for a specific market segment, or
2) the relevant legal act referred to in point 125, paragraph 5 of this Decision ceased to be valid in the part relating to a specific market segment.

The National Bank of Serbia may repeal the decision granting approval referred to in paragraph 1 above for unsolicited credit assessments if:

1) that these credit assessments are inferior to solicited credit assessments, or
2) that the nominated credit assessment institution is using these assessments to induce legal entities to which it provided its unsolicited credit assessment to request from the same institution to obtain a solicited credit assessment.

Section 2

IRB Approach

1. Approval for the use of an IRB Approach

140. A bank may use an IRB Approach for the calculation of risk-weighted exposure amounts for credit risk subject to the approval of the National Bank of Serbia (hereinafter: approval for IRB Approach).

The bank shall submit an application to the National Bank of Serbia for the approval to use the IRB Approach, enclosing the documentation evidencing the compliance with the minimum requirements for the application of that approach referred to in Subsection 5 of this Section, and in particular:

1) the main information on the internal rating system;
2) an IRB Approach implementation plan;
3) a self-assessment of the readiness to implement the IRB Approach;
4) documentation demonstrating that in the process of risk management, for the exposure classes for which the application is submitted, it has been using internal rating systems and its own assessments of risk parameters complying with the minimum requirements for the application of IRB Approach set out in that Subsection for at least three years prior to submitting the application.

If the bank is the ultimate parent company in a banking group in the Republic of Serbia, it shall submit a joint application referred to in paragraph 1 above for all members of the group.

The National Bank of Serbia shall decide on the application for approval referred to in paragraph 1 above within six months from the date of receiving such application.

When deciding on the application referred to in paragraph 1 above, the National Bank of Serbia may request additional relevant documentation and data.

The National Bank of Serbia shall grant the approval for the use of the IRB Approach if the bank has an adequate system for risk management and assignment of credit risk assessments and if, in accordance with Subsection 5 of this Section, the following requirements are met:

1) the bank's internal rating system provides for a meaningful assessment of obligor and transaction characteristics, a meaningful differentiation of risk and accurate and consistent quantitative estimates of risk;

2) internal ratings and default and loss estimates used by the bank in the calculation of capital requirements and associated systems and processes play an essential role in the risk management and decision-making process, in particular in the credit approval, internal capital allocation and corporate governance of the bank;

3) the bank has established a credit risk control unit independent from other organisational units in the bank that is responsible for its internal rating systems and free from undue influence that could impair its independence;

4) the bank collects and stores all relevant data to provide effective support to the management process, and to its credit risk measurement in particular;

5) the bank adequately documents its rating system, including the reasons for its design and characteristics, and regularly validates this system.

If the bank, after obtaining approval to use the IRB approach, ceases to meet the requirements under this point, it shall without delay submit to the National Bank of Serbia a plan for compliance with these requirements within a specified period or evidence that the consequences of non-compliance are not materially significant. If the bank submitted the plan referred to in this paragraph, it shall forthwith notify the National Bank of Serbia that it has complied with the said requirements within the deadline specified in that plan.

The National Bank of Serbia may revoke the approval for the IRB Approach if it establishes that the bank does not meet the requirements referred to in this point and the consequences of such non-compliance are materially significant, if the bank failed to submit the plan referred to in paragraph 6 of that point, if it submitted an inadequate plan or fails to act in accordance with the submitted plan.

If the National Bank of Serbia has revoked the approval for IRB Approach, the bank shall be required to use the Standardised Approach for the calculation of risk-weighted exposure amounts for credit risk.

141. A bank using the IRB Approach to calculate risk-weighted exposure amounts may move to the use of the Standardised Approach referred to in Section 1 of this Chapter only for demonstrated good cause and subject to the prior approval of the National Bank of Serbia.

A bank using the AIRB Approach to calculate risk-weighted exposure amounts may move to the use of the FIRB Approach only for demonstrated good cause and subject to the prior approval of the National Bank of Serbia.

When applying to the National Bank of Serbia for the approval specified in paragraphs 1 and 2 above, the bank shall submit relevant documentation as evidence of good cause set out in these paragraphs.

2. Scope of implementation of the IRB Approach

142. A bank shall implement the IRB Approach for all exposures within the scope determined by the approval for the use of that approach.

A bank which is a member of a banking group shall meet the minimum requirements for the implementation of the IRB approach on an individual basis.

If the bank is the ultimate parent undertaking in a banking group, it shall ensure that all members of the group which are banks or other entities falling within the category of exposures to banks comply with minimum requirements for IRB Approach.

By way of derogation from paragraphs 2 and 3 above, the National Bank of Serbia, in cooperation with other competent authorities, may recognise that a bank meets certain minimum requirements for IRB approach at the level of the parent undertaking and subsidiary undertaking considered together, where the parent undertaking which is a bank or a financial holding from the Republic of Serbia or the European Union and their subsidiaries calculate the risk-weighted assets for credit risk by using the IRB Approach at the level of the banking group.

143. The National Bank of Serbia may within the approval for IRB Approach allow the use of different types of this approach (FIRB Approach or AIRB Approach) for different classes of exposures.

By way of derogation from paragraph 1 above, the bank shall not be use the FIRB Approach for the retail exposure class.

If it obtained an approval for IRB Approach, the bank shall apply this approach for the class of equity investments exposures, unless the approval concerned authorises it to apply the Standardised Approach for these exposures, in accordance with point 144, paragraph 1, items 6) and 7) of this Decision.

144. If the bank requested in its application and the National Bank of Serbia stated in its approval for the use of the IRB Approach, the bank may use the Standardised Approach referred to in Section 1 of this Chapter for one or more of the following exposures:

1) exposures to central governments and central banks, where the number of material counterparties in this class of exposures is limited and it would be unduly burdensome for the bank to implement the rating system for these clients:

2) exposures to banks, under the conditions of item 1) above;

3) exposure to non-significant members of the banking group as well as exposure classes that are not materially significant in terms of size and perceived risk profile;

4) exposures to the Republic of Serbia or a Member State of the European Union and to their territorial autonomies, local self-government units and public administrative bodies, provided that:

– there is no difference in risk between these exposures,

– exposures to central government are assigned a 0% risk weight under Section 1 of this Chapter;

5) exposures of a bank to a counterparty which is its parent undertaking, its subsidiary, a subsidiary of its parent undertaking or an undertaking linked by management on a unified basis, provided that the counterparty is a bank, a financial holding company or a financial sector person which obtained an operating license from the competent regulatory body of the state where it has its registered office and is subject to the supervision of that body, where it must meet minimum requirements for risk management method and minimum solvency requirements set forth for banks;

6) equity investments exposures to legal persons which qualify for a 0% risk weight under that Section, including public administrative bodies;

7) equity exposures incurred under government support programmes to promote specified sectors of the economy that provide significant subsidies for the investment to the bank and involve adequate government oversight over the implementation of these programmes (including restrictions on the equity investments), provided those exposures are limited to an aggregate of 10% of the capital of the bank or of the banking group;

8) exposures secured by government-issued guarantees and counter-guarantees in accordance with point 95 of this Decision,

For the purpose of paragraph 1, item 5) above, management on a unified basis shall be based on a contract concluded by persons referred to in that item or provisions in the memorandum or articles of association of those persons or shall exist when the administrative and/or management bodies of the persons concerned consist for the major part of the same persons in office.

3. Sequential implementation of the IRB Approach

145. Subject to the explicit provision to this effect in the approval for the IRB Approach, a bank may implement this approach sequentially:

– across different classes of exposure within the same member of the banking group, or
– across different classes of exposure within different members of the banking group.

For classes of exposure to central governments and central banks, corporates and banks a bank may sequentially move from the FIRB Approach to the AIRB Approach, subject to the explicit provision to this effect in the approval for the IRB Approach.

In the case of retail exposure class, implementation of the IRB Approach may be carried out sequentially across the sub-classes referred to in point 151, paragraph 1 of this Decision.

By way of derogation from paragraph 1 above, the implementation of the IRB Approach may not be carried out sequentially for the equity investments exposure class.

Where a bank intends to exercise the options referred to in paragraphs 1 to 3 above, it shall state this and explain in detail in the application for the approval to use the IRB Approach The implementation plan which is enclosed with this application shall include the timeframe for the sequential implementation, the order of implementing the IRB Approach across exposure classes and the percentage of the portfolio covered by the IRB Approach.

A bank which sequentially implements the IRB Approach shall, at the time of introduction of this approach, cover at least 75% of the risk-weighted exposure amounts for credit risk of the bank, or the banking group, by that approach. In that case, the bank shall implement the provisions of this Section in respect of exposures for which it uses or applies for the use of the IRB Approach, while for the other exposures it shall implement the provisions

of Section 1 of this Chapter. Exposures to other assets shall not be included in the calculation of the risk-weighted exposure amounts for credit risk.

The sequential implementation of the IRB Approach, in accordance with the approval to use the IRB Approach, shall be carried out over a period of maximum seven years for the class of retail exposures and maximum five years for other exposure classes from the date indicated in the approval as the date of beginning of the implementation of the IRB Approach.

A bank shall inform the National Bank of Serbia on the execution of the implementation plan referred to in paragraph 5 above and on any variation in the execution of that plan. If the bank does not implement the plan in accordance with the approval granted, the National Bank of Serbia may take appropriate measures or revoke the approval to use the IRB Approach.

4. Exposure classes

146. In order to implement the IRB Approach, according to its methodology, a bank shall assign each exposure from the banking book, exposures from the trading book for which it has to calculate capital requirement for counterparty risk, as well as other exposures from the trading book if conditions laid down in point 320, paragraph 4 of this Decision are fulfilled, into one of the following classes:

1) exposures to central governments and central banks;
2) exposures to banks;
3) exposures to corporates;
4) retail exposures;
5) exposures arising from equity investments;
6) exposures arising from other investments;

Any exposure to a legal person not assigned to any of the classes referred to in paragraph 1, items 1), 2), 4) and 5) of this point shall be assigned to the class of exposures to corporates.

The methodology used by the bank for assigning exposures into classes is based on the characteristics of exposures and shall be consistently implemented over time.

147. *The class of exposures to central governments and central banks* shall also include:

– exposures to territorial autonomies and local self-government units or to public administrative bodies which are, in accordance with Section

1 of this Chapter, assigned the same credit risk weight as exposures to the state where they have been established;

– exposures to multilateral development banks and international organisations which are, in accordance with the Section referred to in the first indent of this point, assigned a 0% risk weight.

148. *The class of exposures to banks*, in addition to exposures which are assigned to this class under Section 1 of this Chapter, shall also include exposures for which, in accordance with that Section, credit risk weights are assigned as for exposures to banks.

149. Within the *corporate exposure class*, banks shall separately identify as specialised lending exposures, exposures which possess the following characteristics:

1) the exposure is to a legal person which was created specifically to finance and/or operate physical assets;

2) the contractual arrangements give the bank a substantial degree of control over the assets and the income that they generate;

3) the primary source of repayment of the obligation is the income generated by the assets being financed, rather than the cash flows generated by the legal person referred to in item 1) above by its overall operation independently from these assets.

Specialised lending exposures shall include the following sub-classes:

1) project finance – a method of funding where the repayment obligation depends primarily or exclusively on the proceeds generated by the project to be funded;

2) finance of income-producing real estate – a method of funding where the repayment obligation is met primarily or exclusively from the income produced by the real estate, such as income under a lease contract or the sale of the real estate;

3) object finance – a method of funding where the repayment obligation depends primarily or exclusively on the proceeds generated by the assets that serve as collateral for the loan;

4) commodities finance – a method of funding where the repayment obligation is met primarily or exclusively from the proceeds of the sale of goods;

If the bank applies the treatment referred to in point 204 of this Decision to purchased receivables within the exposures to corporates class, it shall separate the exposures arising from these receivables within that class.

150. A bank may allocate individual exposures to the *class of retail exposures* if the following conditions are met:

1) the exposure is to a natural person, a farmer, an entrepreneur or a small or medium-sized enterprise and the total exposure to a single obligor does not exceed RSD 15,000,000;
2) within the risk management process, the bank treats these exposures in the same or similar manner;
3) within the risk management process, the bank does not treat these exposures on an individual basis as exposures within the exposures to corporates class;
4) none of these exposures is materially significant within the relevant group of exposures.

Total exposure to a single obligor under paragraph 1, item 1) above shall include total exposure of the bank to the obligor and persons related with the obligor prior to the implementation of credit risk mitigation techniques, including receivables due and excluding exposures secured by residential real estate collateral.

The bank may include the present value of retail payments under the lease contract into the retail exposures class if the lessee is a natural person. Lease payments shall include all payments that the lessee is or can be required to make under the lease contract, including the right to purchase the leased asset if on conclusion of that contract it may be reasonably assumed that this right will be exercised. If the lease contract does not provide for the right to purchase the leased asset or on conclusion of the contract it cannot be reasonably assumed that this right will be exercised, the bank may include in the lease payments the residual value of the leased asset provided a guarantee meeting the requirements laid down in points 83 and 94 of this Decision has been issued.

151. A bank shall divide the retail exposure class into the following sub-classes:

1) retail exposures secured by real estate collateral;
2) qualifying revolving retail exposures;
3) other retail exposures.

Exposures shall qualify as qualifying revolving retail exposures if they meet the following conditions:

1) the obligor is a natural person;
2) the exposures are revolving and unsecured, where revolving exposures are defined as those where customers' outstanding balances are

permitted to fluctuate based on their decisions to borrow and repay, up to a limit established by the contract. The undrawn commitments may be considered as unconditionally cancellable by the bank, without prior notice, provided it is permitted under the applicable regulations and the contract;

3) the maximum exposure to a single person in a portfolio does not exceed RSD 1,500,000;

4) the bank uses correlations referred to in point 246, paragraph 2 of this Decision only for sub-portfolios that have exhibited low volatility of loss rates relative to the average level of loss rates of the portfolio, especially within the low PD bands. At the request of the National Bank of Serbia, the bank shall deliver information on major characteristics of these rates, including on the relative volatility of these rates, across the qualifying revolving retail sub-portfolios, as well as the aggregate qualifying revolving retail portfolio;

5) the treatment of these exposures is consistent with the underlying risk characteristics of the sub-portfolio.

For the purposes of paragraph 2, item 2) above, credit facilities linked to a wage account shall be considered as unsecured exposures. In this case amounts recovered from that account shall not be taken into account in the LGD estimate.

Within the retail exposures class, a bank shall separately identify exposures in respect of purchased receivables.

152. The exposures to small and medium-sized enterprises shall be classified as retail exposures or exposures to corporates according to the criteria to be laid down in the bank's internal acts. The bank shall continuously monitor the compliance with requirements laid down in point 150, paragraph 1, item 1) of this Decision and shall prescribe in its acts what constitutes temporary or constant exceeding of exposure amount under that provision and shall regulate the action to be taken when the limit is exceeded in temporary circumstances.

If the exposure to a certain person constantly exceeds the limit, the bank shall assign it to the corporate exposure class.

153. Exposures arising from equity investments in securities, stakes and interests, hybrid instruments and debt securities with similar characteristics shall be assigned to the *equity exposure class*.

154. *The class of exposures arising from other investment* shall include balance-sheet assets and off-balance sheet items that are not assigned to other classes of exposures, including the residual value of the leased asset

where it is not included in the exposures arising from leasing as specified under point 150, paragraph 3 of this Decision

5. Minimum requirements for the application of the IRB Approach

a) Internal rating system

155. The internal rating system shall comprise:

1) methods, processes, activities and data collection control that are relevant for the assessment of credit risk;
2) information systems providing support for the assessment of credit risk;
3) method of assignment of exposures to grades or pools;
4) methods and processes for quantification of default and loss estimates for a certain type of exposure.

If a bank uses multiple rating systems, the rationale for the choice of criteria used for assigning an obligor or a transaction to a rating system shall be documented and applied in a manner that appropriately reflects the level of risk.

The bank shall prescribe in its internal acts the manner of conducting periodic reviews of criteria and processes used in the assignment of obligors and transactions to the rating systems to determine whether they remain appropriate for the current portfolio and external conditions.

Structure of rating systems

156. A bank shall ensure that the rating system reflects obligor risk and transaction type risk and shall encompass all their characteristics.

If the bank uses direct estimates of risk parameters, these may be seen as the outputs of grades on a continuous rating scale and may be used for the calculation of risk-weighted exposure amounts for credit risk.

For the purposes of paragraph 1 above, the direct estimate shall be an estimate obtained directly from the model the bank uses, for each obligor or type of transaction individually.

157. A bank shall ensure that the rating system has a rating scale for obligors within the classes of *exposures to central governments and central banks, corporates and banks*, which reflects exclusively quantification of the risk of obligor default. This scale shall have a minimum of seven grades for non-defaulted obligors and one for defaulted obligors.

An obligor grade referred to in paragraph 1 above shall mean a risk category within a rating system's obligor rating scale to which obligors are assigned on the basis of specified and distinct rating criteria, from which estimates of PD are derived. A bank shall document the relationship between obligor grades in terms of the level of default risk each grade implies and the criteria used to distinguish that level of default risk.

Banks with portfolios concentrated in a particular market segment and range of PD parameter shall have enough obligor grades within that range to avoid undue concentrations of obligors in a particular grade. Significant concentrations within a single grade shall be supported by convincing empirical evidence that the obligor grade covers a reasonably narrow PD band and that the default risk posed by all obligors in the grade falls within that band.

By way of derogation from paragraph 1 above, banks using the methods set out in point 224 of this Decision for assigning risk weights for specialised lending exposures are exempt from the requirement to have an obligor rating scale which reflects exclusively quantification of the risk of obligor default for these exposures. For these exposures it shall have at least four grades for non-defaulted obligors and at least one grade for defaulted obligors.

158. A bank using the AIRB Approach shall incorporate in its rating system a distinct facility rating scale which exclusively reflects LGD-related transaction characteristics.

A facility grade shall mean a risk category within a rating system's facility scale, to which exposures are assigned on the basis of specified and distinct rating criteria, from which own estimates of LGD are derived. The grade definition shall include both a description of how exposures are assigned to the grade and of the criteria used to distinguish the level of risk across grades.

Significant concentrations within a single facility grade shall be supported by convincing empirical evidence that the facility grade covers a reasonably narrow LGD band and that the risk posed by all exposures in the grade falls within that band.

159. For the class of *retail exposures* a bank shall use the obligor approach or the exposure approach.

The choice of approach referred to in paragraph 1 above shall be consistent with the characteristics of the risk management process in respect of the retail exposure class.

If the bank uses the obligor approach, it shall have distinct obligor rating scale and facility rating scale and if it uses the exposure approach, it shall assign exposures in this class to appropriate pools.

160. The level of risk differentiation shall ensure that the number of exposures in a given grade or pool is sufficient for meaningful quantification and validation of the loss characteristics at the grade or pool level. The distribution of exposures and obligors across grades or pools shall be such as to avoid excessive concentrations.

Banks shall demonstrate that the process of assigning exposures to grades or pools provides for a meaningful differentiation of risk drivers, provides for a grouping of sufficiently homogenous exposures, and allows for accurate and consistent estimation of loss characteristics at grade or pool level. For purchased receivables the grouping shall reflect the seller's underwriting practices and the heterogeneity of its customers.

Banks shall consider the following risk drivers when assigning exposures to grades or pools:

1) obligor risk characteristics;
2) transaction risk characteristic, including both product and collateral types. They shall explicitly address cases where several exposures benefit from the same collateral;
3) delinquency.

Assignment of exposures to grades or pools

161. A bank shall have specific definitions, processes and criteria for assigning exposures to grades or pools within the rating system and shall ensure that the following conditions are met:

1) the grade and pool definitions and criteria for assignment shall be sufficiently detailed to allow those charged with assigning ratings to consistently assign exposures posing similar risk to the same grade or pool. This consistency shall exist across lines of business, departments and geographic locations;
2) the documentation of the rating process shall be clear enough to allow third parties to understand the assignments of exposures to grades or pools, to replicate grade and pool assignments and to evaluate the appropriateness of the assignments to a grade or a pool;

3) the criteria shall also be consistent with the bank's internal lending standards and its policies for handling troubled obligors and facilities.

A bank shall take all relevant information into account in assigning obligors and facilities to grades or pools. Information shall be current and shall enable the bank to forecast the future performance of the exposure. The less relevant information a bank has, the more conservative shall be its assignments of exposure to obligor and facility grades or pools.

162. The bank shall ensure that every exposure within the *class of exposures to central governments and central banks, corporates and banks* is assigned to the obligor grade as part of the credit approval process.

Banks using the AIRB Approach shall also assign each exposure referred to in paragraph 1 above to a facility grade as part of the credit approval process.

Banks using the method set out in point 244 of this Decision for assigning risk weights for specialised lending exposures shall assign each of these exposures to risk category under Annex 2 to this Decision and integral thereto.

163. Each separate legal person to which the bank is exposed shall be separately rated. Internal acts of the bank shall also regulate the assignment of individual obligors and groups of persons related to the obligor into individual grades and the effect of their connectedness on their assignment.

All exposures to the same obligor shall be assigned to the same obligor grade, irrespective of any differences in the nature of each specific transaction. By way of derogation, separate exposures are allowed to result in multiple grades for the same obligor in the following cases:

1) where there is a country transfer risk, this being dependent on whether the exposures are denominated in local or foreign currency;
2) where the treatment of associated guarantees to an exposure may be reflected in an adjusted assignment to an obligor grade.

164. The bank shall ensure that every exposure within the *retail exposures class* is assigned to a grade or a pool as part of the credit approval process.

165. For grade and pool assignments, banks shall specify by internal acts the situations in which human judgment may override the inputs or outputs of the assignment process. They shall also document every override undertaken and the personnel responsible for approving these overrides.

Banks shall analyse the performance of the exposures whose assignments have been overridden. This analysis shall include assessment of the performance of exposures whose rating has been overridden by a particular person, accounting for all the responsible personnel.

Integrity of the assignment process

166. Assignment and periodic reviews of assignments to the *class of exposures to central governments and central banks, corporates and banks* shall be completed or approved by an independent organisational unit within the bank independent from other organisational units, which does not participate in decisions to extend the credit.

Banks shall update obligor assignments referred to in paragraph 1 above at least annually. High risk obligors and problem exposures shall be subject to more frequent review. Banks shall establish procedures governing the frequency of assignment reviews and undertaking of new assignments if material information on the obligor or exposure becomes available.

A bank shall have an effective process to obtain and update relevant information on obligor characteristics referred to in paragraph 1 above that affect PDs, and on transaction characteristics that affect LGDs and/or conversion factors.

167. A bank shall at least annually update obligor and facility assignments or review the loss characteristics and delinquency status for each risk pool in the *retail exposures class*. It shall also at least annually review in a representative sample the status of individual exposures within each pool as a means of ensuring that exposures continue to be assigned to the correct pool.

Use of models

168. If a bank uses statistical and other mathematical models and methods to assign exposures to obligors or facilities to grades or pools, then:

1) the bank shall demonstrate that the model has good predictive power and that capital requirements are not distorted as a result of its use. The input variables shall form a reasonable and effective basis for the resulting predictions. The model shall not have material biases;

2) the bank shall have in place a process for vetting data inputs into the model, which includes an assessment of the accuracy, completeness and appropriateness of the data,

3) the bank shall demonstrate that the data used to build the model is representative of the population of the bank's actual obligors or exposures;

4) the bank shall have a regular cycle of model validation that includes monitoring of model performance and stability; review of model specification; and back-testing;

5) The bank shall complement the statistical model by expert judgement and expert oversight to review model-based assignments and to ensure that the models are used appropriately. Review procedures shall aim at finding and limiting errors associated with model weaknesses. Expert judgements shall take into account all relevant information not considered by the model. The bank shall document how expert judgement and model results are to be combined.

Documentation of rating systems

169. The bank shall document the design and operational details of its rating systems. The documentation shall evidence compliance with the minimum requirements for the use of IRB Approach under this Subsection, and address in particular the assignment of exposures to grades, rating criteria, responsibilities of employees that rate exposures, frequency of assignment reviews, and management oversight of the rating process.

The bank shall document the rationale for and analysis supporting its choice of rating criteria. A bank shall document all major changes in the internal rating system.

A bank shall establish procedures governing the organisation of the rating assignment including the process of rating assignment and internal control.

Banks shall lay down the specific definitions of default and risk parameters used internally and demonstrate consistency with the definitions set out in point 2, items 31) to 35) and point 175 of this Decision.

170. If the bank employs statistical models in the rating process, it shall document their methodology. This material shall:

– provide a detailed outline of the theory, assumptions and/or mathematical and empirical basis of the assignment of estimates to grades, individual obligors, exposures, or pools, and the data source(s) used to estimate the model;

– provide a description of the statistical process (including out-of-time and out-of-sample performance tests) for validating the model;

– indicate any circumstances under which the model does not work effectively.

The bank shall ensure compliance with all requirements in respect of the rating system under this Decision where the bank uses a model or any element of that system obtained from a third-party vendor that claims proprietary technology.

Data collection and maintenance

171. Banks shall collect and store data on aspects of their internal ratings, including those it is required to disclose in accordance with the decision governing disclosure of data and information by banks.

172. Banks using the IRB Approach for exposures to central governments and central banks, corporates and banks shall collect and store:

1) complete rating histories on obligors and guarantors;
2) the dates the ratings were assigned;
3) the key data and methodology used to derive the rating;
4) data on the employees responsible for the rating assignment;
5) the identity of obligors and exposures that defaulted;
6) the date and circumstances of such defaults;
7) data on the PDs and realised default rates associated with rating grades and ratings migration.

Banks using the FIRB Approach for exposure classes referred to in paragraph 1 above shall collect and store data on comparison of realised LGDs to the values as set out in point 221 of this Decision and the data on realised conversion factors to the values as set out in point 234 of that Decision.

Banks using the AIRB Approach for exposures referred to in paragraph 1 above, shall collect and store:

1) complete histories of data on the facility ratings and LGD and conversion factor estimates associated with each rating scale;
2) the dates the ratings were assigned and the estimates were done;
3) the key data and methodology used to derive the facility ratings and LGD and conversion factor estimates;
4) data on employees who assigned the facility rating and on employees who provided LGD and conversion factor estimates;
5) data on the estimated and realised LGDs and conversion factors associated with each defaulted exposure;
6) data on the LGD of the exposure before and after evaluation of the effects of a guarantee or credit derivative, for those banks that reflect the credit risk mitigating effects of guarantees or credit derivatives through LGD;

7) data on the components of loss for each defaulted exposure.

173. Banks using the IRB Approach for retail exposures shall collect and store:

1) data used in the process of allocating exposures to grades or pools;
2) data on the estimated PDs, LGDs and conversion factors associated with grades or pools of exposures;
3) the identity of obligors and exposures that defaulted;
4) for defaulted exposures, data on the grades or pools to which the exposure was assigned over the year prior to default and the realised outcomes on LGD and conversion factor;
5) data on loss rates for qualifying revolving retail exposures.

Stress testing

174. A bank shall have in place a sound stress testing process for use in the assessment of its capital adequacy. Stress testing shall involve identifying possible events or future changes in economic conditions that could have unfavourable effects on the bank's credit exposures and assessment of the bank's ability to withstand such changes.

A bank shall perform a credit risk stress test at least annually, and with greater frequency as needed, to assess the effect of assumptions of the stress test on its total capital requirements for credit risk. The stress test to be employed shall be one chosen by the bank, subject to review by the National Bank of Serbia. These tests shall be based on meaningful and conservative assumptions and shall at least encompass the effects of economic recession scenarios. The bank shall assess migration in its ratings under the stress test scenarios. Stressed portfolios shall contain the vast majority of the bank's total exposure.

Banks using the adjustment set out in point 242 of this Decision shall consider as part of their stress-testing framework the impact of a deterioration in the credit quality of protection providers, in particular the impact of protection providers falling outside the eligibility criteria as set out in points 260, 262 and 268 hereof.

b) Risk quantification

Definition of default

175. A default occurs when either or both of the following events take place:

– the bank considers that the obligor is unlikely to pay its credit obligations to the bank in full, without recourse by the bank to actions such as realising security;

– the obligor is past due more than 90 days on any material credit obligation to the bank.

Days past due and materiality of credit obligation referred to in paragraph 1 above shall be determined as laid down in the decision governing the classification of bank balance sheet assets and off-balance sheet items.

In addition to the definition in paragraph 1 above, the bank may in its internal acts specify other elements to be used in assessing the probability that the obligor will settle his obligation to the bank in full.

All exposures to the same obligor shall be assigned to the same obligor grade, irrespective of any differences in the nature of each specific transaction. By way of derogation, banks using the exposure approach for retail exposures may apply the definition of default at the individual exposure level.

For credit facilities linked to a personal current account or for personal current account overdrafts, days past due commence once the obligor has breached the advised limit, has been advised a limit smaller than current outstanding, or has drawn credit without authorisation and the underlying amount is material.

Banks that use external data that is not itself consistent with the definition of default shall demonstrate that appropriate adjustments have been made to achieve equivalence with the definition of default.

If the bank considers that a previously defaulted exposure is such that no trigger of default continues to apply, it shall rate the obligor or facility as it would for a non-defaulted exposure. Should the definition of default subsequently be triggered, another default would be deemed to have occurred.

Overall requirements for estimation of risk parameters

176. A bank’s own estimates of the risk parameters PD, LGD, conversion factor and EL shall incorporate all relevant data, information and methods. The estimates shall be derived using both historical experience and empirical evidence, and not based purely on judgemental considerations. The estimates shall be plausible and intuitive and shall be based on the material

drivers of the respective risk parameters. The less data a bank has, the more prudent it shall be in its estimation (greater margin of conservatism).

For the estimation of risk parameters a bank may use:

– data collected in the course of its business (internal data),
– data collected from other parties (external data),
– data from pooled data sources,
– a combination of data sources referred to in the fist, second and third indent of this paragraph.

If a bank for the estimation of risk parameters uses data that is pooled across banks, it shall demonstrate that:

1) the rating systems and criteria of other banks in the pool are similar to its own;
2) the pool is representative of the portfolio for which the pooled data is used;
3) the pooled data is used consistently over time by the bank for its estimates.

177. The bank shall demonstrate that its estimates of risk parameters are representative of long run experience. The bank shall provide a breakdown of its loss experience in terms of default frequency, LGD, conversion factor, or loss where EL estimates are used, by the factors it sees as the major drivers of the respective risk parameters.

Any changes in lending practice or the process for pursuing recoveries over the observation period referred to in points 179, 188, 189, 192 and 193 of this Decision shall be taken into account. Bank’s estimates shall reflect the implications of technical advances and new data and other information, as it becomes available. Banks shall review their estimates when new information comes to light but at least on an annual basis.

The population of exposures represented in the data used for estimation, the lending standards used when the data was generated and other relevant characteristics shall be comparable with those of the bank’s exposures and standards. The bank shall also demonstrate that the economic or market conditions that underlie the data are relevant to current and foreseeable conditions. The number of exposures in the sample and the data period used for quantification shall be sufficient to provide the accuracy and robustness of estimates.

178. For purchased receivables the estimates shall reflect all relevant information available to the bank regarding the quality of the underlying

receivables, including data for similar pools provided by the seller of receivables, from other external sources or by the bank itself. The bank shall evaluate any data relied upon which is provided by the seller.

A bank shall add to its estimates a margin of conservatism that is related to the expected range of estimation errors. Where methods and data are less satisfactory and the expected range of errors is larger, the margin of conservatism shall be larger.

If the bank uses different estimates for the calculation of risk weights and for internal purposes, it shall be documented and their reasonableness shall be demonstrated.

Requirements for PD estimation

179. PD estimation shall be based on the observation period of at least five years for at least one data source. If the available observation period spans a longer period for any source, this longer period shall be used. In case of retail exposures, a bank need not give equal importance to historic data if it can demonstrate that more recent data is a better predictor of loss rates.

By way of derogation from paragraph 1 above, the National Bank of Serbia may allow banks to have, when they implement the FIRB Approach, relevant data covering a period of two years. The period to be covered shall increase by one year each year until relevant data cover a period of five years.

The provisions of this point shall also apply to the PD/LGD Approach to equity investments exposures.

180. For *exposures to central governments and central banks, corporates and banks*, a bank shall estimate PDs by obligor grade from long run averages of one-year default rates.

Banks shall use PD estimation techniques for exposures referred to in paragraph 1 above only with supporting analysis. In the process of combining the results of different techniques and in making adjustments to estimates due to limitation of techniques and information used, the bank shall take into account the opinion of a person with adequate expertise and experience relating to these techniques.

181. For purchased corporate receivables banks may estimate ELs by obligor grade from long run averages of one-year default rates.

If the bank derives long run average estimates of PDs and LGDs for purchased corporate receivables from an estimate of EL, it shall ensure that the process for estimating total losses meets the overall standards for risk quantification referred to in points 176 to 178 of this Decision and that the outcome is consistent with the provisions of point 184 hereof.

182. To the extent that a bank uses data on internal default experience for the estimation of PDs for exposures referred to in point 180, paragraph 1 of this Decision, it shall demonstrate in its analysis that the estimates are reflective of the relevant policies and procedures and of any differences in the rating system that generated the data and the current rating system. Where those policies and procedures or rating systems have changed, the bank shall add a greater margin of conservatism in its estimate of PD.

To the extent that a bank maps its internal grades to the scale used by a credit assessment institution and then attributes the default rate observed for the credit assessment institution's grades to the bank's grades, mappings shall be based on a comparison of internal rating criteria to the criteria used by the credit assessment institution and on a comparison of the internal and external ratings of any common obligors. The bank shall determine the manner of mapping and undertake all necessary measures to avoid biases or inconsistencies in the mapping process or underlying data. The credit assessment institution's criteria underlying the data used for quantification shall be oriented to default risk only and not reflect transaction characteristics. The bank's analysis shall include a comparison of the default definitions used by the bank and the credit assessment institution, in accordance with point 175 of this Decision. The bank shall document the basis for the mapping.

To the extent that a bank uses statistical default prediction models it is allowed to estimate PDs for exposures referred to in point 181, paragraph 1 of this Decision as the simple average of default-probability estimates for individual obligors in a given grade, subject to requirements under point 168 hereof.

183. Banks shall estimate PDs for *retail exposures* by obligor grade or pool from long run averages of one-year default rates.

Notwithstanding paragraph 1 above, where exposure approach is applied, PD estimates may also be derived from realised losses and appropriate estimates of LGD.

If the bank derives long run average estimates of PDs and LGDs from an estimate of EL, it shall ensure that the process for estimating total losses meets the overall standards for risk quantification under this Subsection and that the outcome is consistent with the provisions of point 184 hereof.

A bank shall make sure that the primary source of information for estimating risk parameters are its internal data for the assignment of *retail exposures* to rating grades or exposure pools. A bank may use external data, including pooled data, or statistical models for quantification, provided a strong link can be demonstrated between:

1) the bank's process of assigning exposures to grades or pools and the process used by the external data source;

2) the bank's internal risk profile and external data.

For purchased retail receivables, banks shall use all relevant available sources of data.

A bank shall identify and analyse expected changes of risk parameters over the life of retail exposures (seasoning effects).

Requirements for own LGD estimates

184. Banks shall estimate LGDs by facility rating grades or exposure pools, on the basis of average realised LGDs by facility grade or pool using all observed defaults within the data sources (default weighted average).

Banks shall use LGD estimates that are appropriate for an economic downturn if those are more conservative than the long-run average. To the extent a rating system is expected to deliver realised LGDs at a constant level by grade or pool over time, banks shall make adjustments to their estimates of risk parameters by grade or pool to limit the capital impact of an economic downturn.

185. A bank shall consider any dependence between the risk of the obligor with that of the collateral or collateral provider. Cases where there is a significant degree of dependence shall be addressed in a conservative manner.

Currency mismatches between the underlying obligation and the collateral shall be treated exceptionally conservatively in the bank's own estimates of LGD.

To the extent that LGD estimates take into account the existence of collateral, banks must establish internal procedures and processes for collateral management and fulfil the requirements relating to these assets as set out in Subsection 10 of this Section. These assessments shall not solely be based on the collateral's estimated market value, but shall take into account the effect of potential inability of the bank to expeditiously gain control of the collateral and liquidate it.

To the extent that a bank recognises collateral for determining the exposure value for counterparty credit risk by applying the Standardised Method or the Internal Models Method, in accordance with Section 3 of this Chapter, any amount expected to be recovered from the collateral shall not be taken into account in the LGD estimates.

186. For the specific case of exposures already in default, the bank shall use as LGD its best estimate of expected loss for each exposure (EL_{BE}), given current economic circumstances and exposure status, increased by possible additional unexpected losses during the recovery period.

187. To the extent that unpaid late fees have been capitalised in the bank's income statement, they shall be added to the bank's measure of exposure and loss.

188. Estimates of LGD for *exposures to central governments and central banks, corporates and banks* shall be based on historical data encompassing a period of at least five years. The period to be covered shall increase by one year each year until relevant data cover a period of seven years, for at least one data source. If the available observation period spans a longer period for any source, and the data is relevant, this longer period shall be used.

189. Notwithstanding point 184, paragraph 1 of this Decision, where exposure approach is applied, LGD estimates for *retail exposures* may be derived from realised losses and appropriate estimates of PDs.

Banks may include future drawings in their own LGD estimates unless they are already included in accordance with point 193.

For purchased retail receivables banks may use external and internal reference data to estimate LGDs.

Estimates of LGD for *retail exposures* shall be based on historic data encompassing a period of at least five years. A bank need not give equal importance to historic data if it can demonstrate that more recent data is a better predictor of loss rates.

Notwithstanding paragraph 4 above, a bank may be allowed to use relevant data covering a period of two years if this is specified in the approval for IRB Approach. The period to be covered shall increase by one year each year until relevant data cover a period of five years.

Requirements for own conversion factor estimates

190. Banks shall estimate conversion factors by facility grade or exposure pool, on the basis of average realised conversion factors by facility grade or pool using all observed defaults within the data sources (default weighted average).

Banks shall use conversion factor estimates that are appropriate for an economic downturn if those are more conservative than the long-run average. To the extent a rating system is expected to deliver realised conversion factors at a constant level by grade or pool over time, banks shall make adjustments to their estimates of risk parameters by grade or pool to limit the capital impact of an economic downturn.

191. Banks' estimates of conversion factors shall reflect the possibility of additional drawing by the obligor up to and after the time a default event is triggered. The conversion factor estimate shall incorporate a larger margin of conservatism where a stronger positive correlation can reasonably be expected between the default frequency and the magnitude of conversion factor.

In arriving at estimates of conversion factors banks shall consider their specific policies and procedures relating to accounting policies and monitoring of collections. Banks shall also consider their ability and willingness to prevent further drawings in circumstances short of payment default, (such as covenant violations or other technical default events).

Banks shall have adequate systems and procedures in place to monitor facility amounts, current outstandings against committed lines and changes in outstandings per obligor and per grade. It shall monitor outstanding balances on a daily basis.

If the bank uses different estimates of conversion factors for the calculation of risk-weighted exposure amounts and for internal purposes, it shall be documented and their reasonableness shall be demonstrated.

192. Estimates of conversion factors for *exposures to central governments and central banks, corporates and banks* shall be based on historic data encompassing a period of at least five years. The period to be covered shall increase by one year each year until relevant data cover a period of seven years, for at least one data source. If the available observation period spans a longer period for any source, and the data is relevant, this longer period shall be used.

193. Banks may include future drawings in their own conversion factor estimates for *retail exposures* unless they are already included in accordance with point 189, paragraph 2 of this Decision.

Estimates of conversion factors for *retail exposures* shall be based on historic data encompassing a period of at least five years.

A bank need not give equal importance to historic data if it can demonstrate that more recent data is a better predictor of loss rates.

Notwithstanding paragraph 2 above, a bank may be allowed to use relevant data covering a period of two years if this is specified in the approval for IRB Approach. The period to be covered shall increase by one year each year until relevant data cover a period of five years.

Requirements for assessing the effect of guarantees and credit derivatives

194. Banks using AIRB Approach shall not take into account the effects of guarantees by central governments and central banks, banks and corporates referred to in point 83, paragraph 1, item 7) of this Decision in the own estimates of LGD if they apply standardised approach to credit risk for exposures to these entities. In that case, banks shall apply provisions under Section 1, Subsection 4 of this Chapter.

If it uses retail guarantees, when assigning exposures to grades or pools and when estimating PDs, the bank shall comply with requirements under points 195 to 197 of this Decision.

195. Banks shall have clearly specified and detailed criteria for the type of guarantors they recognise for the calculation of risk-weighted exposure amounts. Provisions of points 161 to 167 of this Decision shall apply to recognised guarantors.

The guarantee referred to in paragraph 1 above shall be evidenced in writing, non-cancellable on the part of the guarantor, in force until the obligation guaranteed is satisfied in full and legally enforceable in conformity with the applicable law.

Where a bank intends to recognise guarantees prescribing conditions under which the guarantor may not be obliged to perform (conditional guarantees), it shall state this in the application to use the IRB Approach. The bank shall demonstrate that the assignment criteria adequately address any potential reduction in the risk mitigation effect. It shall also prescribe in detail criteria for the recognition and monitoring of such guarantees.

196. A bank shall have clearly specified criteria for adjusting grades, pools or LGD estimates. In the case of retail exposures and exposures in respect of purchased receivables it shall also determine the criteria relating to

the process of allocating exposures to grades or pools, to reflect the impact of guarantees for the calculation of risk weighted exposure amounts. These criteria shall comply with the requirements set out in points 161 to 167 of this Decision.

The criteria referred to in paragraph 1 above shall be plausible and intuitive and shall address:

– the guarantor's ability and willingness to perform under the guarantee;
– the likely timing of any payments from the guarantor;
– the degree to which the guarantor's ability to perform under the guarantee is correlated with the obligor's ability to repay;
– the level of residual risk.

197. The minimum requirements for guarantees under points 194 to 196 of this Decision shall apply also for single-name credit derivatives. In relation to a mismatch between the underlying obligation and the reference obligation of the credit derivative or the obligation used for determining whether a credit event has occurred, the provisions under point 97 of this Decision shall apply. For retail exposures and exposures in respect of purchased receivables, provisions of point 97 of this Decision shall also apply to the process of allocating exposures to grades or pools.

The criteria shall address the payout structure of the credit derivative and conservatively assess the impact this has on the level and timing of recoveries.

When using credit derivatives, the bank shall determine the extent to which residual risk remains.

Requirements for purchased receivables

198. For all exposures in respect of purchased receivables, the following conditions shall be met:

– legal certainty;
– effectiveness of the system for monitoring the quality of the purchased receivables;
– effectiveness of the system for early detection of problem purchased receivables;
– effectiveness of the system for managing the purchased receivables;
– compliance with the bank's policies and procedures.

199. The contract on the purchase of receivables shall ensure that under all foreseeable circumstances the bank has ownership and control of all cash remittances from the receivables.

When the obligor makes payments directly to a seller or servicer, the bank shall verify regularly that payments are forwarded completely and within the contractually agreed terms. Servicer shall mean an entity that manages a pool of purchased receivables or the underlying credit exposures on a day-to-day basis.

A bank shall have procedures to ensure that ownership over the receivables and cash receipts is protected against bankruptcy and liquidation or legal challenges that could materially delay the possibility of liquidating or assigning the receivables or retaining control over cash receipts.

200. The bank shall monitor both the quality of the purchased receivables and the financial condition of the seller and servicer. It shall in particular:

1) assess the correlation among the quality of the purchased receivables, on the one hand, and the financial condition of both the seller and servicer, on the other;
2) have in place policies and procedures that provide adequate safeguards to protect against any contingencies and regulate the assignment of an internal risk rating for each seller and servicer;
3) establish clear and effective policies and procedures for determining seller and servicer eligibility. The bank shall also conduct periodic reviews of sellers and servicers in order to verify the accuracy of reports from the seller and servicer, detect fraud or operational weaknesses and verify the quality of their business policies and practice and collection procedures. The findings of these reviews shall be documented;
4) assess the characteristics of the purchased receivables pools, including payment terms, any overadvances, past due receivables, bad debts and bad debt allowances;
5) establish adequate policies and procedures for monitoring single-obligor concentrations both within and across purchased receivables pools;
6) ensure that it receives from the servicer timely and sufficiently detailed reports of receivables ageings and dilutions to ensure compliance with the bank’s eligibility criteria and advancing policies governing purchased receivables;
7) provide adequate means with which to monitor and confirm the seller's terms of sale and dilution.

201. The bank shall have a system for detecting deteriorations in the seller’s financial condition and purchased receivables quality at an early

stage, and for addressing emerging problems proactively. In particular, the bank shall have clear and effective policies, procedures, and information systems to monitor covenant violations, and effective policies and procedures for initiating legal actions and dealing with problem purchased receivables.

202. The bank shall have internal regulations governing the control of purchased receivables, credit and cash, which cover all material elements of the purchased receivables, including any discounts, eligible collateral, necessary documentation, concentration limits, and the way cash receipts are to be handled.

Elements referred to in paragraph 1 above shall take account of all relevant and material factors, including the seller and servicer's financial condition, risk concentrations, and trends in the quality of the purchased receivables and the seller's customer base. The bank shall ensure that funds are advanced only against specified supporting collateral and documentation.

203. The bank shall have effective processes for assessing compliance of receivables purchase with all internal policies and procedures. This shall as minimum include:

1) regular audits of all phases of the receivables purchase programme;
2) verification that duties and responsibilities of employees who assess the financial condition of the seller and servicer are clearly separated from those of employees conducting periodic checks of the seller and servicer;
3) evaluation of back office operations, with particular focus on qualifications, experience, staffing levels, and supporting automation systems.

204. A bank may treat purchased corporate receivables in the same way as retail exposures if, in addition to requirements set out in points 198 to 203, the following conditions are met:

1) these receivables are purchased from a party which is not related to the bank and the bank has not participated, directly or indirectly, in the creation of these receivables;
2) purchased receivables are created under regular market conditions between parties which are not related and do not include reciprocal claims between the obligor and creditor which may be offset;
3) the bank has the right to all receipts from purchased receivables or their proportionate share;
4) the portfolio of purchased receivables is sufficiently diversified.

205. The bank shall comply with minimum requirements for purchased receivables set out in points 198 to 203 of this Decision.

For exposures in respect of purchased corporate receivables the bank shall comply with the minimum requirements for the rating system and risk quantification set out in Subsection 5 of this section which relate to the corporate exposures class.

By way of derogation from paragraph 2 above, for exposures which meet the requirements set out in point 204 of this Decision and where it would be unduly burdensome to use the risk quantification standards which relate to the corporate exposure class, a bank may instead use risk quantification standards for retail exposure class as set out in Subsection 5 of this Section and derive PD and LGD estimates from an estimate of expected loss in accordance with the provisions of point 218, paragraph 3 hereof.

c) Validation of internal estimates

206. A bank shall have adequate systems in place to validate the accuracy and consistency of rating systems, processes, and the estimation of all relevant risk parameters. A bank shall demonstrate that the internal validation process enables it to assess the performance of internal rating and risk estimation systems consistently and meaningfully.

207. Banks shall regularly compare realized default rates with estimated PDs for each grade and, where realised default rates are outside the expected range for that grade, banks shall specifically analyse the reasons for the deviation. Banks using own estimates of LGDs and/or conversion factors shall also perform analogous analysis for these estimates. Such comparisons shall make use of historical data that cover as long a period as possible. The bank shall document the methods and data used in such comparisons. These analyses and documentation shall be updated at least annually.

In addition to the analysis referred to in paragraph 1 above, banks shall also use other quantitative validation tools and comparisons with relevant external data sources. The analyses shall be based on data that are appropriate to the portfolio, are updated regularly and cover a relevant observation period. Bank’s internal assessments of the performance of their rating systems shall be based on as long a period as possible.

The methods and data used for quantitative validation shall be consistent through time and their changes shall be documented (both in terms of data sources and periods covered).

208. Banks shall have clear policies and procedures for situations where deviations in realised PDs, LGDs, conversion factors, total losses and expected losses (where they are used) from expectations become significant enough to call the validity of the estimates into question. These policies and procedures shall take account of business cycles and similar systemic variability in default experience. Where realised values continue to be higher than expected values, the bank shall revise estimates upward to reflect its default and loss experience.

d) Minimum requirements for IRB Approach for equity investments exposures

Capital requirements and risk quantification

209. For the purpose of calculating capital requirements for equity investments exposures banks shall meet the following requirements:

1) the estimate of potential loss shall be robust to adverse market movements relevant to the long-term risk profile of the bank’s equity holdings;

2) the data used to represent return distributions shall reflect the longest sample period for which data is available and meaningful in representing the risk profile of the bank's specific equity exposures. The data used shall be sufficient to provide conservative, statistically reliable and robust loss estimates that are not based primarily on subjective considerations;

3) the bank shall demonstrate that the shock employed provides a conservative estimate of potential losses over a relevant long-term business cycle;

4) the bank shall combine empirical analysis of available data with adjustments based on a variety of factors in order to attain more realistic and comprehensive model outputs;

5) in constructing VaR (Value at Risk) models estimating potential quarterly losses, banks may use quarterly data or convert shorter horizon period data to a quarterly equivalent using an analytically appropriate method supported by empirical evidence and through a well-developed and documented thought process and analysis. Such an approach shall be applied conservatively and consistently over time. Where only limited relevant data is available the bank shall add appropriate margins of conservatism;

6) the models used shall be able to capture adequately all of the material risks embodied in equity returns including both the general market risk and specific risk exposure of the bank's equity portfolio. The internal models shall adequately explain historical price variation, capture both the magnitude and changes in the composition of potential concentrations, and be robust to adverse market environments. The population of risk exposures represented in the data used for estimation shall be closely matched to or at least comparable with those of the bank's equity exposures;

7) the internal model shall be appropriate for the risk profile and complexity of a bank's equity portfolio. Where a bank has material holdings with values that are highly non-linear in nature the internal models shall be designed to capture appropriately the risks associated with such instruments;

8) mapping of individual positions to market indices and risk factors shall be plausible, based on relevant assumptions and clear;

9) banks shall demonstrate through empirical analyses the appropriateness of risk factors, including their ability to cover both general and specific risk;

10) the estimates of the return volatility of equity exposures shall incorporate relevant and available data, information and methods. Independently reviewed internal data or data from external sources (including pooled data) shall be used;

11) a rigorous and comprehensive stress-testing programme shall be in place.

Risk management process and controls

210. With regard to the use of internal models for the calculation of capital requirements for equity investments exposures, banks shall establish policies, procedures and controls to ensure the integrity of the model and modelling process, which shall include the following:

1) full integration of internal models into:
   – overall management information systems of the bank
   – management of the banking book equity portfolio,
   – risk management system, particularly if they are used in measuring and assessing equity portfolio performance, including the risk-adjusted performance,
   – allocation of internal capital to equity exposures;
   – evaluation of overall capital adequacy,
   – investment management process;

2) established management systems, procedures, and control functions for ensuring the periodic and independent review of all elements of the internal modelling process, including approval of model revisions, vetting of model inputs, and review of model results (such as direct verification of risk computations). These reviews shall assess the accuracy, completeness, and appropriateness of model inputs and results and focus on both finding and limiting potential errors associated with known weaknesses and identifying unknown model weaknesses. Such reviews may be conducted by an internal independent unit, or by an independent external third party;

3) adequate systems and procedures for monitoring investment limits and the risk exposures of equity investments exposures;

4) the unit responsible for the design and application of the model shall be functionally independent from the units responsible for managing individual investments;

5) persons responsible for any aspect of the modelling process shall be adequately qualified. Bank's management shall allocate sufficient skilled and competent staff to the modelling function.

Model validation and documentation

211. Banks shall have a robust system in place to validate the accuracy and consistency of their internal models and modelling processes. All material elements of the internal models and the modelling process and validation shall be documented.

Banks shall use the internal validation process to assess the performance of their internal models and processes in a consistent and meaningful way.

The methods and data used for quantitative validation shall be consistent through time. Changes in estimation and validation methods and data (both data sources and periods covered) shall be documented.

212. Banks shall regularly compare actual equity returns (computed using realized and unrealized gains and losses) with model estimates. Methods and data used in such comparisons shall be documented. Such comparisons shall make use of historical data that cover as long a period as possible. This analysis and documentation shall be updated at least annually.

Banks shall make use of other quantitative validation tools and comparisons with the data from external sources that are appropriate to the portfolio, are updated regularly and cover a relevant observation period. Banks' internal assessments of the performance of their rating systems shall be based on as long a period as possible.

Banks shall have sound policies and procedures for situations where comparison of actual equity returns with the models estimates calls the validity of the estimates or of the models as such into question. These policies and procedures shall take account of business cycles and similar systematic variability in equity returns. All adjustments made to internal models in response to model reviews shall be documented and consistent with the bank's model review standards.

The internal model and the modelling process shall be documented, including the responsibilities of all persons involved in the modelling, model approval and model review processes.

e) Governance and oversight

Governance

213. All material aspects of the rating and estimation processes shall be approved by the bank's managing board or a designated committee thereof and by the executive board. These parties shall possess an understanding of the bank's rating systems' structure and operation and shall be familiar with the reports relating to these systems.

The executive board shall notify the managing board or the designated committee referred to in paragraph 1 of all material changes or exceptions from established policies that might materially impact the operation of the bank's rating systems.

The executive board shall ensure, on an ongoing basis, that the rating systems are operating properly. Organisational unit in charge of credit risk control shall keep the executive board regularly informed about the performance of the rating process, areas needing improvement, and the status of efforts to improve previously identified deficiencies.

214. Internal ratings-based analysis of the bank's credit risk profile shall be an essential part of the bank's management reporting. This reporting shall at least include:

– risk profile by grade;
– migration across grades;
– estimation of the relevant risk parameters per grade;
– comparison of realised default rates against expectations and stress-test results;
– comparison of realised LGDs and realised conversion factors against expectations and stress-test results, to the extent the bank uses own estimates of these losses and factors.

Reporting frequencies for the purpose of this point shall depend on the significance and type of information and the level of the recipient.

Credit risk control

215. The credit risk control unit shall be clearly independent in organisational and operational terms from the risk origination function. The

credit risk control unit shall report directly to the bank’s executive board. It shall be responsible for the design or selection, implementation, oversight and performance of the rating system. It shall regularly produce and analyse reports on the output of that system.

The areas of responsibility for the credit risk control unit referred to in paragraph 1 shall at least include:

1) design or selection of the rating system, as well as implementation, oversight and performance of that system;
2) testing and monitoring grades and pools;
3) production and analysis of reports relating to the bank’s rating systems;
4) implementing procedures to verify that grade and pool definitions are consistently applied across departments and geographic areas;
5) reviewing and documenting any change to the rating process, including the reasons for the changes;
6) reviewing the rating criteria to evaluate if they remain predictive of risk. Changes to the rating process, criteria or individual rating parameters shall be documented;
7) active participation in the design or selection, implementation and validation of models used in the rating process;
8) oversight and supervision of models used in the rating process;
9) ongoing review of models used in the rating process and any alterations thereto.

Notwithstanding paragraph 2 above, banks using pooled data according to point 176, paragraph 3 of this Decision may outsource the following tasks:

1) production of information relevant to testing and monitoring grades and pools;
2) production of reports relating to the bank’s rating systems;
3) production of information relevant to review of the rating criteria to evaluate if they remain predictive of risk;
4) documentation of changes to the rating process, criteria or individual rating parameters;
5) production of information relevant to the ongoing review of models used in the rating process and any alterations thereto.

Banks outsourcing activities referred to in paragraph 3 above shall ensure that the National Bank of Serbia has access to all relevant information necessary for examining compliance with the minimum requirements under this Subsection, including the possibility to perform on-site examination of

business books and other documentation of these parties, in the same manner and to the same extent as within the bank.

Internal audit

216. Internal audit shall review at least annually the bank's rating systems and ancillary activities, including the operations of the risk origination function and estimation of PDs, LGDs, ELs and conversion factors. Areas of review shall include adherence to all applicable minimum requirements set out in this Subsection.

6. Assessment of risk parameters

217. PD, LGD and M parameters for the calculation of risk-weighted exposure amounts and expected loss amounts shall be estimated by the bank in accordance with the minimum requirements for IRB Approach as set out in Subsection 5 of this Section and in this Subsection.

a) Probability of default (PD)

PD of exposures to central governments and central banks, corporates and banks

218. The PD of an exposure to a corporate or a bank shall be at least 0.03%

The PD of an exposure to an obligor in default shall be at least 100%

For exposures in respect of purchased corporate receivables, where the bank cannot demonstrate that its PD estimates meet the minimum requirements for PD estimates set out in points 176 to 183 of this Decision, the PD shall be determined according to the following method:

– for senior claims on purchased corporate receivables PD shall be the bank's estimate of expected loss divided by LGD for these receivables;
– for subordinated claims on purchased corporate receivables PD shall be the bank's estimate of expected loss.

In the calculation of risk-weighted exposure amounts for dilution risk of purchased corporate receivables, PD shall be set equal to EL estimate for dilution risk.

If a bank is using the AIRB Approach for exposures in respect of purchased corporate receivables, and its own estimates of expected losses for default and dilution risk can be decomposed into PDs and LGDs in a reliable and satisfactory manner, it may use the estimated PD.

A bank may use unfunded credit protection by adjusting PDs in accordance with point 276 of this Decision. A bank using the AIRB approach for default risk or dilution risk in respect of purchased corporate receivables may recognise unfunded credit protection by adjusting PDs in accordance with point 222, paragraph 2 of this Decision.

PD for retail exposures

219. For exposures within the retail exposures class, the PD of an obligor or of an exposure shall be at least 0.03%, and of obligors and exposures in default 100%.

For dilution risk of purchased retail receivables, PD shall be set equal to EL estimates for dilution risk. If the bank can decompose its EL estimate for dilution risk of purchased retail receivables into PDs and LGDs in a reliable and satisfactory manner, it may use the PD estimate.

A bank may use unfunded credit protection when adjusting PDs in accordance with point 223 of this Decision. For dilution risk of purchased retail receivables, if the bank does not use own estimates of LGDs, it shall implement provisions under Subsection 10 of this Section.

PD for equity investments exposures subject to PD/LGD method

220. For equity exposures subject to PD/LGD method, PD shall be determined according to the methods for corporate exposures, as set out in point 218 of this Decision. The following minimum PDs shall apply:

1) 0.09% – for exchange traded equity exposures where the investment is part of a long-term customer relationship;
2) 0.09% – for non-exchange traded equity exposures where the returns on the investment are based on regular and periodic cash flows not derived from capital gains;
3) 0.40% – for exchange traded equity exposures including other short positions as set out in point 248, paragraph 2 of this Decision;
4) 1.25% – for all other non-exchange traded equity exposures including other short positions as set out in point 248, paragraph 2 of this Decision.

b) Loss given default (LGD)

LGD of exposures to central governments and central banks, corporates and banks

221. Banks using the FIRB Approach shall use the following LGD values for exposures to central governments and central banks, corporates and banks:

1) for senior exposures without eligible collateral – 45%
2) for subordinated exposures without eligible collateral – 75%;
3) for senior purchased corporate receivables exposures where the bank cannot demonstrate that its PD estimates meet the minimum requirements set out in points 176 to 183 of this Decision – 45%
4) for subordinated purchased corporate receivables exposures where the bank cannot demonstrate that its PD estimates meet the minimum requirements set out in points 176 to 183 of this Decision – 100%
5) for dilution risk of purchased corporate receivables – 75%.

The bank referred to in paragraph 1 above may assign an LGD value of 12.5% to covered bonds as defined in point 58 of this Decision.

The bank referred to in paragraph 1 may adjust the LGD referred to in that paragraph for the effects of funded and unfunded credit protection subject to requirements laid down in Subsection 10 of this Section.

222. To calculate risk-weighted exposure amounts for dilution and default risk, a bank applying the AIRB Approach for purchased corporate receivables may use LGD estimates for these exposures if it can decompose its EL estimates into PDs and LGDs in a reliable and satisfactory manner.

For exposures to central governments and central banks, corporates and banks, the bank referred to in paragraph 1 above may recognise unfunded credit protection by adjusting PD and/or LGD subject to requirements set out in points 176 to 183 of this Decision and if it is specified in the approval for the use of IRB approach. A bank shall not assign to secured exposures an adjusted PD or LGD such that the adjusted risk weight would be lower than that of a comparable, direct exposure to the protection provider.

Notwithstanding point 221 of this Decision and paragraph 2 above, for the calculation of risk-weighted exposure amounts for credit risk in accordance with point 242 of this Decision, a bank may use as LGD of a comparable direct exposure to the protection provider this parameter associated with an unhedged facility to:

– protection provider– if in the event both the protection provider and obligor default during the life of the hedged transaction, available evidence and the structure of the credit protection indicate that the amount

recovered would primarily depend on the financial condition of the protection provider, or

– the obligor – if in the event both the protection provider and obligor default during the life of the hedged transaction, available evidence and the structure of the credit protection indicate that the amount recovered would primarily depend on the financial condition of the obligor.

LGD for retail exposures

223. Banks shall provide own estimates of LGDs subject to minimum requirements as specified in Section 2, Subsection 5 of this Decision.

To calculate risk-weighted exposure amounts for dilution risk of purchased retail receivables, an LGD value of 75% shall be used. If the bank can decompose its EL estimates for dilution risk of purchased receivables into PDs and LGDs in a reliable and satisfactory manner, it may use the LGD estimate.

A bank may use unfunded credit protection when adjusting PD and/or LGD for individual exposure or a pool of exposures subject to requirements set out in points 194 to 197 of this Decision and if it is specified in the approval for the use of IRB Approach. A bank shall not assign to secured exposures an adjusted PD or LGD such that the adjusted risk weight would be lower than that of a comparable, direct exposure to the protection provider.

Notwithstanding paragraph 3 above, for the calculation of risk-weighted exposure amounts for credit risk of exposures referred to in point 246, paragraph 1 of this Decision, a bank may use as LGD of a comparable direct exposure to the protection provider this parameter associated with an unhedged facility as specified in point 222, paragraph 3 hereof.

LGD for equity exposures subject to PD/LGD method

224. A bank may assign an LGD of 65% to non-exchange traded equity exposures contained in sufficiently diversified portfolios. All other equity exposures shall be assigned an LGD of 90%.

In the estimation of LGD referred to in paragraph 1 above, the bank may use funded and unfunded credit protection subject to requirements laid down in Subsection 10 of this Section.

c) Effective maturity (M)

M for exposure to central governments and central banks, corporates

and banks

225. Bank using the FIRB Approach shall assign to exposures arising from repurchase and reverse repurchase transactions or securities or commodities lending or borrowing transactions a maturity value (M) of half a year and to all other exposures an M of two and a half years.

For the purpose of point 242 of this Decision – M value shall be the maturity of credit protection. The maturity shall be one year at least.

226. Bank using the AIRB Approach for exposures to central governments and central banks, corporates or banks shall calculate M for each of these exposures as set out in items 1) to 6) of this paragraph and in line with points 227 and 228 of the Decision. In all cases M shall be no greater than 5 years – in the following manner:

1) for an instrument subject to a repayment schedule, M shall be calculated according to the following formula:

$$M = MAX\left\{1;\ MIN\left\{\frac{\sum_t t \times CF_t}{\sum_t CF_t},\ 5\right\}\right\},$$

where CF_t denotes the cash flows (principal, interest payments and fees) contractually payable by the obligor in period t;

2) for derivatives subject to a master netting agreement, M shall be the weighted average remaining maturity of the exposure, where M shall be at least 1 year. The notional amount of each exposure shall be used for weighting the maturity;

3) for exposures arising from fully or nearly-fully collateralised derivative instruments transactions listed in Annex 3 and fully or nearly-fully collateralised margin lending transactions which are subject to a master netting agreement, M shall be the weighted average remaining maturity of the transactions, where M shall be at least 10 days. For exposures arising from repurchase and reverse repurchase transactions, securities or commodities lending or borrowing transactions subject to a master netting agreement, M shall be the weighted average remaining maturity of the transactions where M shall beat least 5 days. The notional amount of each transaction shall be used for weighting the maturity;

4) if a bank uses its own PD estimates for purchased corporate receivables, for drawn amounts under a committed purchase facility, M shall equal the purchased receivables exposure weighted average maturity, where M shall be at least 90 days. The M value calculated in this same manner shall also be used for undrawn loan amounts, provided there are effective covenants in place (like the possibility of early write-offs) that protect the bank

against a significant deterioration in the quality of the future receivables required to be purchased over the facility's term. In the absence of such effective protections, M for undrawn loan amounts shall be calculated as the sum of the maturities of the longest-dated potential receivable under the purchase agreement and the remaining maturity of the purchase facility, where M shall be at least 90 days;

5) for any other instrument or when a bank is not in a position to calculate M as set out in item 1) of this paragraph, M shall be the maximum remaining time (in years) that the obligor is permitted to take to fully discharge its contractual obligations, where M shall be at least 1 year;

6) for exposures to which the Internal Model Method set out in points 296 to 311 of this Decision is applied and where the maturity of the longest-dated contract contained in the netting set is greater than one year, M shall be calculated according to the following formula:

$$M = MIN\left\{\frac{\sum_{k=1}^{tk\le 1\ year} Effective\ \ EE_k \times \Delta t_k \times df_k + \sum_{tk>1\ year}^{maturity} EE_k \times \Delta t_k \times df_k}{\sum_{k=1}^{tk\le 1\ year} Effective\ \ EE_k \times \Delta t_k \times df_k}; 5\right\},$$

where df represents the risk-free discount factor for future time period t_k, and the remaining values are defined in Section 3 of this Chapter.

By way of derogation from paragraph 6, item 1), when a bank uses Internal Models to calculate a one-sided credit valuation adjustment, it may, subject to the approval for the use the IRB Approach, use the effective credit duration estimated by the Internal Model as M.

For netting sets in which all contracts have an original maturity of less than one year, the formula in paragraph 1, item 1) of this Article shall apply.

227. By way of derogation from Article 226, points 1) to 5) of this Decision, in the event of daily re-margining and daily revaluation, and if, in the event of default or failure to re-margin, provisions that allow for the prompt liquidation of collateral have been agreed, M shall be at least one day for:

– fully or nearly-fully collateralised financial derivatives listed in Annex 3;

– fully or nearly-fully collateralised margin lending transactions;

– repurchase transactions, reverse repurchase transactions, securities or commodities lending or borrowing transactions.

In the event of maturity mismatch, bank shall apply provisions of Subsection 10 of this Section to calculate M.

M for equity exposures
subject to PG/LGD method

228. M assigned to all equity exposures shall be 5 years.

7. Calculation of exposure value (EAD)

a) *Calculation of exposure to central governments and central banks, corporate entities, banks and retail exposures*

229. Bank shall calculate the exposure value of on-balance sheet exposures gross of value adjustments.

For receivables purchased at discount or premium, the exposure value shall be the nominal value of the exposure, without adjustment for the amount of discount or premium.

The exposure value for the calculation of risk-weighted exposure amounts of purchased receivables shall be the outstanding amount minus the capital requirements for dilution risk prior to the application of credit protection instruments.

230. In the case of financial derivatives listed in Annex 3, the exposure value shall be determined in accordance with the methods set out in Section 3 of this Chapter.

231.Where a bank uses master netting agreements in relation to repurchase transactions, reverse repurchase transactions or securities or commodities lending or borrowing transactions, the exposure value shall be calculated in accordance with the provisions set out in Article 274 herein.

For on-balance sheet netting of receivables and liabilities arising from loans and deposits, for the calculation of the exposure value the bank shall use exposure value calculated in accordance with the provisions set out in Article 274.

232. Where an exposure takes the form of repurchase of reverse repurchase transactions, securities or commodities lending or borrowing transactions, long settlement transactions and margin lending transactions, the bank may determine the exposure value in accordance with Section 3 of this Chapter or points 113 to 117 and 274 of the Decision.

Where an exposure takes the form of securities or commodities sold, lent or posted under repurchase and reverse repurchase transactions or

securities or commodities lending or borrowing transactions, long settlement transactions and margin lending transactions, the exposure value shall be the value of the securities or commodities determined in line with the provisions of the law governing accounting and auditing procedures.

By way of derogation from paragraph 2 above, where the Financial Collateral Comprehensive Method is used in line with Subsection 10 of this Section, the exposure value shall be increased by the volatility adjustment appropriate to such securities or commodities.

By way of derogation from this point, the exposure value for a core market participant shall be determined in accordance with point 285, paragraph 3 of this Decision, provided that the conditions specified therein are met.

233. The exposure value for leases shall be the present value of a lease payment.

234. Bank shall apply conversion factors set out in point 29 above to off-balance sheet items.

By way of derogation from paragraph 1 above, the exposure value shall be calculated as the committed but undrawn amount multiplied by the following conversion factors:

1) 0% - for undrawn credit line amounts (including credit lines with purchase of receivables) that are unconditionally cancellable at any time by the bank without prior notice, or that effectively provide for automatic cancellation due to deterioration in an obligor's creditworthiness, provided that the bank actively monitors the financial condition of the obligor, and that their internal control systems enable it to immediately detect a deterioration. Undrawn retail credit lines may be considered as unconditionally cancellable if so provided for in consumer protection regulations or if the terms of contract permit the bank to cancel them to the full extent; 2) 20% - for confirmed short-term letters of credit arising from the delivery of goods, for both the issuing and confirming bank;

3) 75% - for other credit lines not covered by item 1) above.

By way of derogation from 1 from paragraphs 1 and 2 above, subject to the permission to use the IRB Approach, a bank may use its own estimates of conversion factors.

Where the bank’s contractually undertaken off-balance sheet commitment refers to the extension of another commitment, the lower of the

two conversion factors associated with the individual commitment shall be used.

b) Calculation of exposure value of equity and other assets

235. Exposure value of equity and exposure value of other assets shall be the values presented in financial statements. The value of these exposures shall be determined in the following manner:

1) for investments held at fair value - the exposure value is the fair value presented in financial statements;
2) for investments held at cost or at the lower of cost or market value, the exposure value is the cost or market value presented in financial statements.

8. Calculation of risk-weighted assets for credit risk

236. The risk-weighted assets for credit risk for exposures to central governments and central banks, corporates, banks and retail customers, and equity exposures shall be calculated as set out in points 241 to 250 of the Decision, unless they represent deductibles from own funds.

By way of derogation from paragraph 1 above, the risk-weighted assets for credit risk for exposures in the form of purchased receivables represent a sum of the following:

– the assets amounts calculated as set out in points 241 to 246 herein, and
– the assets amount for dilution risk calculated as set out in point 252 herein.

Where a bank has full recourse in respect of purchased receivables to the seller of the purchased receivables, it need not calculate risk-weighted assets amounts for dilution risk. It may treat purchased receivables as collateralized exposures subject to the fulfilment of conditions set out in point 265 herein.

237. The bank shall calculate risk-weighted assets for credit risk based on the relevant risk parameters: PD, LGD, M and exposure values. PD and LGD may be considered separately or jointly, in accordance with Subsection 6.

By way of derogation from paragraph 1 herein, risk-weighted assets for credit risk for all exposures belonging to the equity exposure class shall be calculated by using one of the approaches set out in points 247 to 250 of the Decision. Bank may use the Internal Models Approach set out in point 250 if it meets the minimum requirements set out in points 209 to 212 of this Decision and if so stipulated in the approval for the use of the IRB Approach.

By way of derogation from paragraph 1 above, the risk-weighted assets for credit risk for specialised lending exposures may be calculated in accordance with point 244 of this Decision. The manner of assigning exposures and relevant risk weights are prescribed in Annex 2. The bank shall prescribe the methodology for assigning these exposures.

238. For exposures belonging to the exposure classes to central governments and central banks, corporates and banks, bank shall provide its own estimates of PDs which meet the requirements specified in Subsection 5.

For exposures belonging to the exposure classes to central governments and central banks, and exposures to banks, the bank shall use LGD values set out in point 221 of the Decision and conversion factor set out in items 1) or 3) of point 234.

By way of derogation from paragraph 2 above, for all exposures belonging to the exposure classes from paragraph 2, the National Bank of Serbia may, by granting approval for the IRB Approach, allow a bank to use its own LGD and conversion factor estimates which meet the requirements specified in Subsection 5 of this Section.

For exposures belonging to the exposure classes to retail customers, a bank shall provide its own LGD and conversion factor estimates which meet the requirements specified in Subsection 5.

Where the bank does not meet the conditions specified in this Section for using the methods set out in paragraph 1 above, risk-weighted assets for credit risk and expected loss amounts for total or partial exposure set out in paragraph 1 shall be calculated in the following manner:

1) for underlying exposures belonging to the equity exposure class – by using the Simple Risk Weight Approach. If the bank is unable to differentiate between private equity, exchange-traded and other equity exposures, it shall treat the exposures concerned as other equity exposure. If the sum of these (indirect) exposures and direct exposures in this class is not materially significant within the meaning of point 144, paragraph 3 of the

Decision, the bank may, if provided for in the IRB Approach approval, implement point 144, paragraph 1 of this Decision;

2) for all other underlying exposures assigned to the non-rated exposure class or class with the lowest credit quality step, a risk-weight for credit risk is assigned in accordance with Section 1 of this Chapter multiplied by factor 2. The resulting risk weight shall not be higher than 1250%;

3) for all other underlying exposures a risk-weight for credit risk multiplied by factor 1.1 is assigned, and the resulting risk weight shall be at least 5%.

240. Where conditions set out in the first paragraph of point 60 of the Decision are not met, or the bank is not aware of the underlying exposures of the open-end investment fund, the bank shall look through to the underlying exposures and calculate risk-weighted assets amounts for credit risk and expected loss amounts in accordance with the Simple Risk Weight Approach.

If the bank is unable to differentiate between private equity, exchange-traded and other equity exposures, it shall treat the exposures concerned as other equity exposures. Non-equity exposures are assigned to one of the subclasses referred to in point 248 of the Decision, and unknown exposures are assigned to other equity exposures class.

By way of derogation from the first and second paragraph of this point, to calculate and report the average risk-weighted exposure amounts, the bank may calculate this average itself or it may use risk weights of an open-end investment fund calculated by a third party based on the fund's underlying exposures, in accordance with the approaches referred to in paragraph 2 of point 239.

a) Calculation of risk-weighted exposure amounts for credit risk for exposures to central governments and central banks, corporates and banks

241. The risk-weighted exposure amounts for credit risk for exposures to central governments and central banks, corporates and banks shall be calculated according to the following formulae*:*

$$R = 0.12 \times \frac{1-e^{-50PD}}{1-e^{-50}} + 0.24 \times \left(1 - \frac{1-e^{-50PD}}{1-e^{-50}}\right),$$

$$b = (0.11852 - 0.05478 \times \ln(PD))^2$$

$$RW = \left[LGD \times N\left(\frac{G(PD)}{\sqrt{1-R}} + \sqrt{\frac{R}{1-R}} \times G(0.999)\right) - PD \times LGD\right] \times \left(\frac{1+(M-2.5)\times b}{1-1.5\times b}\right) \times 12.5 \times 1.06$$

$$RWA = RW \times EAD,$$

where:

R is the correlation for exposures to central governments and central banks, corporate entities and banks and represents a measure of systematic risk;
Factor b = denotes the maturity adjustment smoothed over PDs;
N(x) denotes the cumulative distribution function for a standard normal random variable (i.e. the probability that a normal random variable with expected zero value and variance of one is less than or equal to x);
G(z) denotes the inverse cumulative distribution function for a standard normal random variable (i.e. the value x such that N(x) = z);
RW = risk-weight;
RWA = risk-weighted exposure amounts for credit risk;
EAD = exposure value.

For PD = 0, RW shall be 0%.

For PD = 1, for defaulted exposures:

– where the bank applies the LGD value set out in point 221, RW shall be 0%,
– where the bank applies own LGD estimates:

$$RW = Max\{0; 12.5\times(LGD-EL_{BE})\},$$

where EL_{BE} shall be the bank's best estimate of expected loss for the defaulted exposure in accordance with point 186 of the Decision.

242. The risk-weighted exposure amounts for credit risk for exposures secured by credit protection instruments which meet the requirements set out in points 262 and 268 of the Decision may be adjusted according to the following formula:

$$RWA = RW \times EAD \times (0.15 + 160\times PD_{pp}),$$

where PD_{pp} = PD of the protection provider.

RW shall be calculated using the relevant risk weight formula set out in point 241 of the Decision. Input parameters are the PD of the obligor and the LGD of a comparable direct exposure to the protection provider. The maturity factor (b) shall be calculated using the lower of the PD of the protection provider and the PD of the obligor.

243. For the calculation of risk-weighted exposures to corporate entities where the total annual sales for the consolidated group of which the entity is a part is less than EUR 50 million in dinar counter-value, bank may use the following formula:

$$(R) = 0.12 \times \frac{1-e^{-50PD}}{1-e^{-50}} + 0.24 \times \left(1 - \frac{1-e^{-50PD}}{1-e^{-50}}\right) - 0.04 \times \left(1 - \frac{S-5}{45}\right),$$

where S is expressed as total annual sales in millions of euros, with EUR 5 million ≤ S ≤ EUR 50 million. If reported sales are less than EUR 5 million, S shall be equivalent to that amount. For purchased receivables the total annual sales shall be the weighted average by individual exposures of the pool.

Bank shall substitute total assets of the consolidated group for total annual sales when total assets are a more meaningful indicator of company size than the total annual sales. Bank shall document the criteria under which the substitution was made for each substitution.

244. For specialised lending exposures in respect of which a bank cannot demonstrate that its PD estimates meet the minimum requirements set out in subsection 5 of this Section, it shall assign risk weights to these exposures based on risk categories specified in Annex 2, according to the following table (Table 15):

Table 15

Remaining maturity	Risk category 1	Risk category 2	Risk category 3	Risk category 4	Risk category 5
< 2.5 years	**50%**	**70%**	**115%**	**250%**	**0%**
≥ 2.5 years	**70%**	**90%**	**115%**	**250%**	**0%**

Risk category 5 in Table 15 refers to defaulted obligors.

In assigning risk weights to specialised lending exposures, banks shall take into account the following factors: project's cost-effectiveness, political and legal environment, project and/or asset characteristics, financial strength and experience of project participants, including any public-private partnership income stream, and credit protection factors.

To exposures with a remaining maturity equal to or more than 2.5 years, the bank may assign the following preferential risk weights specified in

Table 15: 50% to exposures in category 1 and a 70% risk weight to exposures in category 2 – provided that it can demonstrate strong practices, policies and approval procedures in place and appropriate exposures risk management system, and that it has been authorised by the approval for the use of the IRB Approach.

Calculation of risk-weighted exposure amounts
for credit risk
for retail exposures

245. The risk-weighted exposure amounts for credit risk for retail exposures shall be calculated according to the following formulae*:*

$$R = 0.03 \times \frac{1 - e^{-35PD}}{1 - e^{-35}} + 0.16 \times \left(1 - \frac{1 - e^{-35PD}}{1 - e^{-35}}\right)$$

$$RW = \left[LGD \times N\left(\frac{G(PD)}{\sqrt{1-R}} + \sqrt{\frac{R}{1-R}} \times G(0.999)\right) - PD \times LGD\right] \times 12.5 \times 1.06$$

RWA = RW × EAD,

where:

R is the correlation for retail exposures and represents a measure of systematic risk;
N(x) denotes the cumulative distribution function for a standard normal random variable (i.e. the probability that this variable with expected zero value and variance of 1 is less than or equal to x);
G(z) denotes the inverse cumulative distribution function for a standard normal random variable (i.e. the value x such that N(x) = z);
RW = risk-weight;
RWA = risk-weighted exposure amounts for credit risk;
EAD = exposure value.

If PD = 1, for defaulted exposures and bank applies own LGD estimates, then:

$$RW = \text{Max}\{0;\ 12.5 \times (LGD - EL_{BE})\},$$

where EL_{BE} shall be the bank's best estimate of expected loss for the defaulted exposure in accordance with point 186 of the Decision.

246. The risk-weighted exposure amounts for each exposure to SMEs belonging to the retail exposure class, if the requirements set out in points

262 and 268 of the Decision are met, may be calculated in accordance with point 242 of this Decision.

For retail exposures secured by mortgage on real estate, bank shall not apply the correlation (R) formula set out in point 245 of the Decision. A correlation of 0.15 shall apply instead, and for qualified revolving retail exposures a correlation of 0.04 shall be used instead of the correlation formula specified therein.

For pools of purchased retail receivables, where purchasing bank cannot separate exposures secured by mortgage on real estate and qualifying revolving retail exposures from other retail exposures, the highest risk weight for those exposures shall apply.

c) Calculation of risk-weighted exposure amounts for credit risk for equity exposures

247. Risk-weighted exposure amounts for credit risk for the class of equity exposures may be calculated by using one of the following approaches:

1) Simple Risk Weight Approach,
2) PG/LGD Approach,
3) Internal Models Approach.

By way of derogation from paragraph 1 above, the National Bank of Serbia may allow a bank, in accordance with the approval for the use of the IRB Approach, to employ different approaches set out in paragraph 1 above, if the Bank estimates that the choice is made consistently, that it is in compliance with the bank's risk management system and that the choice was not made based on reduced capital requirements.

Simple Risk Weight Approach

248. When a bank uses the Simple Risk Weight Approach, the risk-weighted exposure amounts for credit risk shall be calculated according to the following formula*:*

$$RWA = RW \times EAD,$$

where the following risk-weights are applied:

1) 190% - for private equity non-exchange traded exposures in sufficiently diversified portfolios;
2) 290% - for private equity exchange traded exposures;

3) 370% - for all other equity exposures.

Short cash positions and financial derivatives held in the trading book are permitted to offset long positions in the same individual stocks provided that these derivatives have been explicitly designated as hedges of specific equity exposures and that they provide a hedge for at least another year. Other short positions are to be treated as if they are long positions with the relevant risk weights assigned multiplied by the absolute value of each position. In the context of maturity mismatched positions, the method used is that for corporate exposures as set out in point 277 of the Decision.

When using the approach set out in paragraph 1 above, bank may apply unfunded credit protection instruments for equity exposures provided that requirements set out in Subsection 10 are met.

PG/LGD Approach

249. The risk-weighted exposure amounts for credit risk shall be calculated according to the formulae in point 241 of this Decision. If bank does not have sufficient information to use the definition of default set out in point 175 of the Decision, a scaling factor of 1.5 shall be assigned to the risk weights.

The sum of the expected loss (EL) for a particular exposure multiplied by 8.33 and the risk-weighted exposure amount for that exposure shall not exceed the amount of exposure multiplied by 8.33.

When using the approach set out in this point, bank may apply unfunded credit protection instruments provided that requirements set out in subsection 10 are met, where an LGD on the exposure to the protection provider shall be 90%. Private equity non-exchange traded exposures in sufficiently diversified portfolios may be assigned an LGD of 65%. For the purposes of this paragraph, M shall be 5 years.

Internal Models Approach

250. The risk-weighted exposure amounts shall be the potential loss on the bank's equity exposures, as derived using internal VaR models subject to the 99% one-tailed confidence interval of the difference between quarterly returns and an appropriate risk-free rate computed over a long-term period, multiplied by 8.33.

For all equity exposures for which risk-weighted exposure amounts are calculated by using the Internal Models Approach, bank shall also calculate risk-weighted exposure amounts by using the PD/LGD Approach. The risk-

weighted exposure amounts at the equity portfolio level under the Internal Models Approach shall not be less than the sum of minimum risk-weighted exposure amounts calculated under the PD/LGD Approach and the corresponding expected loss amounts multiplied by 8.33 and calculated on the basis of the corresponding PD and LGD values set out in point 220, item 1) and point 224, paragraph 1 of this Decision.

When using the approach set out in this paragraph, the bank may apply unfunded credit protection instruments for equity investments exposures.

d) Calculation of risk-weighted exposure amounts for credit risk for other assets

251. The risk-weighted exposure amounts for credit for other assets risk shall be calculated according to the following formula:

$$RWA = 100\% \times EAD.$$

By way of derogation from paragraph 1 above, the risk-weighted exposure amounts for credit risk for the following exposures shall be calculated:

1) for cash and cash equivalent items in the treasury or cash vaults or in the process of collection, the rules set out in point 62, paragraph 1 of this Decision shall apply;
2) for gold bullions held in own vaults or on an allocated basis (only to the extent backed by bullion liabilities), the rules set out in point 62, paragraph 2 of this Decision shall apply;
3) for residual value of leased property- in the following manner:

$$RWA = 1/t \times 100\% \times EAD,$$

where t = max (1, the remaining rounded number of years of the lease contract term).

e) Calculation of risk-weighted exposure amounts for dilution risk

252. Risk weights for dilution risk of purchased corporate and retail receivables shall be calculated according to the formula in point 241 of this Decision. PG and LGD are determined pursuant to Subsection 6, the exposure amount is determined under Subsection 7, and the M shall be 1 year. If a bank, along with the application for the approval to use the IRB Approach, files documents demonstrating that the dilution risk is immaterial,

the IRB approval may determine that the bank is not under obligation to calculate those risk-weighted exposure amounts.

9. Calculation of expected losses (EL)

253. The expected loss amounts for classes of exposures to central governments and central banks, banks, corporates and retail exposures, and for equity investments exposure class shall be calculated in accordance with points 254 to 257 of this Decision.

The calculation of expected loss amounts shall be based on the same input figures of PD, LGD and the exposure value for each exposure as being used for the calculation of risk-weighted exposure amounts in accordance with Subsection 8 herein. Where a bank uses its own LGD estimates, the expected loss for the defaulted exposure is the best estimate of the bank's expected loss for the defaulted exposure ( ) pursuant to point 186 of the Decision.

The expected loss amounts for exposures belonging to the class of other assets shall be 0.

The expected loss amounts for dilution risk shall be calculated as set out in point 257 of this Decision, and exposures to open-end investment undertakings shall be calculated as set out in points 254 to 257 of the Decision.

a) Calculation of expected loss amounts

254. The expected loss amounts for exposures to central governments and central banks, corporate entities, banks and for retail exposures shall be calculated according to the following formulae*:*

$$EL = PD \times LGD \text{ и}$$

$$\text{amount } EL = EL \times EAD.$$

Where a bank uses the AIRB Approach, for the defaulted exposures (where PD=1) is the expected loss, that is, the best estimate of the bank's expected loss for the defaulted exposure pursuant to point 186 of the Decision.

For exposures subject to the treatment set out in point 242 of this Decision, EL shall be 0.

255. For specialised lending exposures where risk weights are assigned pursuant to point 244 of the Decision, the bank shall assign expected loss rates according to the following table (Table 16):

Table 16

Remaining maturity	**Risk category 1**	**Risk category 2**	**Risk category 3**	**Risk category 4**	**Risk categor y 5**
< 2.5 years	0%	0,4%	2,8%	8%	50%
≥ 2.5 years	0,4%	0,8%	2,8%	8%	50%

If so envisaged in the approval for the use of the IRB Approach, to exposures with a remaining maturity equal to or more than 2.5 years, to which the following preferential risk weights set out in Table 15 have been assigned: 50% to exposures in category 1, and 70% to exposures in category 2, the bank may assign more favourable EL rates, which shall be 0% for exposures in category 1, and for exposures in category 2 it shall be 0.4%.

256. When a bank uses the Simple Risk Weight Approach to calculate the risk-weighted exposure amounts for credit risk, the expected loss amount for equity exposures shall be calculated according to the following formula*:*

$$\text{amount EL} = \text{EL} \times \text{EAD},$$

where the following expected loss rates shall be applied:

– 0.8% - for private equity non-exchange traded exposures in sufficiently diversified portfolios;
– 0.8% - for private equity exchange-traded exposures;
– 2.4% - for all other equity exposures.

The expected loss amounts for equity exposures where the risk-weighted exposure amounts for credit risk are calculated according to the PD/LGD Approach shall be calculated according to the following formulae*:*

$$\text{EL} = \text{PD} \times \text{LGD and}$$

$$\text{amount EL} = \text{EL} \times \text{EAD}.$$

Where the risk-weighted exposure amounts for credit risk are calculated according to the Internal Models Approach, the expected loss amounts for equity exposures shall be 0%.

257. The expected loss amounts for dilution risk of purchased receivables shall be calculated according to the following formulae*:*

$$EL = PD \times LGD \text{ and}$$

$$\text{amount } EL = EL \times EAD.$$

b) Treatment of expected loss amounts

258. The total expected loss amounts calculated in accordance with points 254, 255 and 257 of the Decision shall be subtracted from the sum of value adjustments and provisions and required reserves for estimated losses related to these exposures, and the resulting difference shall be used for the calculation of capital as set out in points 19 and 22 of the Decision, depending on whether the resulting amount is positive or negative.

In accordance with point 229, paragraph 2, discounts on balance sheet exposures purchased when in default shall be treated as value adjustments.

10. Credit risk mitigation techniques for the IRB Approach

a) Scope of application of credit risk mitigation techniques for the FIRB Approach

259. Bank using the FIRB Approach may modify the risk-weighted exposure amounts and expected loss amounts for the risk mitigation techniques, if for the purposes of risk reduction it uses eligible credit protection instruments, provided that the requirements for the recognition of such protection have been met, in accordance with the provisions of this Subsection.

b) Eligible credit protection instruments

260. Bank using the FIRB Approach may, for the purposes of modifying the risk-weighted exposure amounts for credit risk and expected loss amounts for the risk mitigation techniques, use eligible credit protection instruments in accordance with points 74 to 84 of the Decision.

In addition to instruments specified in paragraph 1 above, a bank using the FIRB Approach may, for the purpose of modifying the risk-weighted exposure amounts and expected loss amounts for the risk mitigation, also use eligible funded and unfunded credit protection instruments set out in paragraphs 261 and 262 of the Decision.

261. Eligible funded credit protection instruments specified in point 260, paragraph 2 of the Decision are the following:

1) mortgage on residential real estate – if the requirements set out in point 52 have been met;

2) receivables arising from business transactions from regular operations or transactions with an agreed maturity not exceeding one year, except for claims that are associated with credit derivatives or receivable from related persons;

3) other funded credit protection instruments, if the following requirements have been met:

– that there is a liquid market for the disposal of this property in an expeditious manner and at a reasonable price,

– that there are reliable and publicly available market prices for the property, and the bank has to prove that the net price it receives from liquidation of collateral does not deviate significantly from current market prices;

4) exposures arising from leasing transactions - if the requirements set out in point 267 of this Decision have been met and if the required minimum level specified in paragraph 2 of point 272 has been reached, in which case these exposures shall be treated the same as loans collateralised by the type of property leased.

262. Eligible unfunded credit protection instruments set out in point 260, paragraph 2 of this Decision include guarantees, other guarantee forms, counter guarantees and credit derivatives, according to which credit protection providers are legal persons which, according to point 44 of the Decision, belong to the class of exposures to banks and export credit agencies – if such instruments fulfil the following conditions:

– the protection provider has sufficient experience in providing unfunded credit protection;

– the protection provider is a financial sector person licensed and supervised by the competent regulatory body of the state where it is registered. It is mandatory for the provider to meet the minimum requirements for risk management and minimum solvency requirements prescribed for banks, or that at the time the credit protection is being provided, its credit assessment by a nominated credit assessment institution is associated with credit quality step 3 or above for the class of corporate entities in accordance with point 48 herein;

– the protection provider has, at the time the credit protection is being provided, an internal rating with a PD equivalent associated with credit quality step 2 or above for the class of corporate entities in accordance with point 48 herein. This quality step is determined based on a credit assessment by a nominated credit assessment institution.

If an unfunded credit protection instrument provided by an export credit agency is secured by a central government counter-guarantee, the latter shall not be taken into account when calculating the effects of credit protection.

c) Special requirements for credit protection recognition

263. Bank may use funded and unfunded credit protection instruments specified in points 261 and 262 of this Decision if the requirements set out in points 264 to 268 have been met.

Requirements for the recognition of mortgage on residential real estate as collateral

264. Mortgage on residential real estate shall be recognized for credit risk mitigation if the following conditions have been met:

1) that the mortgage is valid in accordance with applicable law and registered in the land register, cadastre or other appropriate registry. The contractual provisions and appropriate legal actions shall enable the bank to realize the value of the protection within a reasonable timeframe;
2) that the bank regularly monitors the value of real estate, where statistical methods may be used to monitor this value and to identify property that needs revaluation;
3) that the bank reviews the property valuation by an authorized valuer at least every three years or more often, if the real estate market conditions changed significantly or the physical condition of the property changed;
4) that the bank adopted and implemented policies, procedures and other internal acts which determine the types of residential real estate accepted as collateral, as well as loan approval terms and conditions for loans collateralized by residential real estate property;
5) that the bank has established clear and overall procedures for establishing and monitoring that the real estate property serving as collateral is adequately insured against damage.

Requirements for the recognition of receivables as collateral

265. Receivables specified in point 261, paragraph 1, item 2) of the Decision shall be recognized for credit risk mitigation if the following conditions have been met:

1) it has been agreed that the bank is entitled to the proceeds from sale or collection of receivables;
2) the bank is taking all necessary legal actions to collect claims and has priority in their collection;

3) the bank regularly reviews the possibility of settlement from the value of the pledged receivable;

4) bank has properly documented collateral arrangements and established clear and overall policies and procedures for the timely collection of receivables, as well as procedures for monitoring the conditions required for declaring the default of the borrower and timely instigation of the pledged collateral collection process.;

5) in the event of the borrower's financial distress or default, it has been agreed that the bank has legal authority to sell or assign the receivables to other parties without prior consent of the receivables obligors;

6) the bank has established and implemented clear overall procedures for determining credit risk associated with the receivables pledged as collateral (such procedures shall also include the analysis of the borrower's business operations and industry and the types of customers with whom the borrower does business);

7) where the bank relies on the borrower to ascertain the credit risk associated with the receivables from third parties, it must review the borrower's legal approval practices implemented when creating those receivables, to ascertain their soundness and credibility;

8) the amount of exposure includes the value of the receivables and all relevant factors, including the cost of collection, concentration within the receivables pool pledged by an individual borrower, and potential concentration risk within the bank’s total exposures;

9) the receivables pledged by a borrower are diversified and have a low degree of correlation between their values and the credit quality of the bank's debtor. Where there is a high degree of correlation, the attendant risks shall be taken into account in the setting of margins for the collateral pool as a whole;

10) pledged receivables are not from persons related to the borrower (including its employees);

11) the bank has set up appropriate procedures for collecting receivables in distressed situations, as well as collection facilities for all debtors.

Requirements for the recognition of other funded credit protection instruments

266. Other funded credit protection instruments specified in point 261, paragraph 1, item 3) of the Decision shall be recognized for credit risk mitigation if the following conditions have been met:

1) that the collateral arrangements are legally effective and enforceable and enable the bank to realize the value of the collateral within a reasonable timeframe;

2) the bank has the priority over all other creditors to the realized proceeds of the collateral;

3) the value of the property serving as collateral is monitored on an ongoing basis and at a minimum once every year. More frequent monitoring is required where market conditions changed significantly;

4) the loan agreement includes a detailed description of collateral and specifications of the manner and time frames for collateral valuation;

5) that the bank adopted and implemented procedures and internal acts pertaining to the loan approval, which determine the types of property accepted as collateral, as well as procedures defining the acceptable relation between the value of the each type of collateral relative to the exposure amount;

6) that the bank's loan approval policy, by loan types, defines mandatory collateral requirements relative to the exposure amount, the ability to liquidate the collateral readily, the ability to establish objectively its price or market value, the frequency with which the value can readily be obtained (including a professional valuation), and the volatility or a proxy of the volatility of the value of the collateral;

7) that both the initial valuation and revaluation take fully into account any deterioration of the quality of collateral, as well as the effects of the passage of time on its value;

8) that the bank has the right to directly inspect the collateral and that it has established procedures for carrying out this inspection;

9) the bank’s internal acts and procedures regulate the monitoring process and ensure that the property serving as collateral is adequately insured against damage.

Requirements for treating lease exposures as collateral

267. For exposures arising from leasing transactions treated as collateral, the provisions hereof governing the exposures secured by the type of property being leased shall apply, if the following conditions are met:

1) conditions specified in points 264 and 266 hereof, depending on the leased property and the ability that property specified in those points is leased in accordance with applicable law;

2) the lessor has established appropriate risk management system that monitors the value of leased property, the use to which the leased property is put and amortization for the period of use;

3) the lessor has legal ownership of the leased asset and the ability to exercise its rights as owner in a timely fashion under the conditions defined by law;

4) where this has not already been included in the calculation of the LGD level, the difference between the value of the non-depreciated amount

and the market value of the leased property must not exceed the credit protection effects arising from leased property serving as collateral.

Requirements for the recognition of guarantees and credit derivatives

268. A guarantee or credit derivative shall be recognized for credit risk mitigation in accordance with point 242 herein, if the following conditions are met:

1) the underlying obligation is:

– exposure to corporates belonging to corporate exposures class, excluding insurance and reinsurance undertakings,

– an exposure to a local and regional self-government unit or public sector entity which is not treated as an exposure to a central government in which they are established, in accordance with points 37 to 41 of this Decision.

– an exposure to SMEs, entrepreneurs and agricultural producers which have been classified as a retail exposure according to point 49 of this Decision;

2) the underlying obligors under item 1) are not be members of the same group of related persons as the protection provider;

3) the exposure is hedged by single-name credit derivatives or single - name guarantees;

4) the credit protection meets the requirements set out in points 87, 94 and 96 of the Decision;

5) the risk weight that is associated with the exposure prior to the application of the treatment set out in that point has not already been adjusted by credit protection effects;

6) a bank expects to collect receivables from the protection provider without having to take legal action in order to pursue the counterparty for payment and, to the extent possible, the bank shall take steps to monitor the ability of the protection provider to settle its obligations promptly following the credit event occurrence;

7) credit protection includes all credit losses incurred on the hedged exposure that arise due to the occurrence of credit events;

8) if a full payment of underlying obligation has been agreed in exchange for delivering that obligation or other equivalent financial instrument (deliverable obligation), there is a legal certainty regarding this delivery, and when a bank intends to deliver an obligation other than the underlying obligation – it shall ensure that that it can dispose the obligation in accordance with the contract;

9) the terms and conditions of credit protection arrangements are legally confirmed in writing by both the protection provider and the bank;

10) a bank has procedures in place to detect excessive correlation between the creditworthiness of a protection provider and the obligor of the

underlying exposure due to their performance being dependent on common factors, other than the systematic risk factor;

11) in the case of protection against dilution risk, the seller of purchased receivables is not be a member of the same group of related persons as the protection provider.

d) Manner of adjusting risk-weighted exposure amounts and expected loss amounts for the effects of credit risk mitigation techniques

269. Bank may adjust risk-weighted exposure amounts and expected loss amounts for the risk mitigation techniques' effects by applying the Financial Collateral Comprehensive Method set out in points 103 to 110 of the Decision.

By way of derogation from paragraph 1 above, in case it is has obtained the approval for the use of the IRB Approach which enables sequential implementation of the approach, the bank may use the Financial Collateral Simple Method specified in points 99 to 102 of the Decision and the Financial Collateral Comprehensive Method specified in paragraph 1 above only if the bank also supplied documentation proving that these methods are not used selectively with the purpose of achieving reduced capital requirements.

Adjustment of risk-weighted exposure amounts and expected loss amounts for the effects of use of financial collateral

270. Bank may adjust risk-weighted exposure amounts and expected loss amounts for the effects of use of financial collateral set out in points 75 to 79 of the Decision by applying the effective LGD calculated according to the following formula:

$$LGD^* = LGD \times (E^*/E),$$

where:

LGD* = the effective LGD,
LGD = the LGD that would, in accordance with this Section, apply to the exposure as if the exposure was not collateralised,
E = exposure value that would be determined under the IRB Approach as if the exposure was not collateralised, before the conversion factor is applied,
E* = effective exposure value specified in point 103 of the Decision.

Bank may also use volatility adjustment of 0% in accordance with point 110 herein when other contractual party whose exposures, in case the bank

uses the IRB Approach and these parties do not have credit assessment by a nominated credit assessment institution, are assigned a PD equal to the one associated with the nominated credit assessment institution's credit quality step 2 or above for the class of corporate entities in accordance with point 48 of the Decision.

Adjustment of risk-weighted exposure amounts and expected loss amounts for the effects of use of eligible funded credit protection instruments set out in point 261 of the Decision

271. Bank may adjust risk-weighted exposure amounts and expected loss amounts for the effects of use of funded credit protection instruments set out in point 261 of the Decision and adjust them in the manner determined in point 272, where the value of these instruments shall be determined as follows:

1) for residential real estate- the market value of the real estate reduced as appropriate to reflect the results of the monitoring under point 264, item 2) of this Decision and all claims having priority over the mortgaged property;
2) for receivables - the value of the collateral shall be the amount receivable;
3) for other funded credit protection instruments- market value of the collateral;
4) exposures arising from leasing transactions - the value of the collateral shall be determined in accordance with items 1) or 3) of this point depending on the type of property leased.

272. Where the ratio of the value of the collateral (C) to the exposure value (E) is below a required minimum collateralization level for exposure (C*), as laid down in Table 17 of this point, the effective LGD shall be the LGD for uncollateralized exposures to the counterparty, in accordance with this Section. To calculate off-balance sheet exposures the bank shall use a conversion factor of 100%.

Where the ratio of the value of the collateral (C) to the exposure amount (E) exceeds a required minimum collateralization level for exposure to receive full LGD recognition (C**), as laid down in Table 17 of this point – the bank shall use the effective LGD specified in that Table.

Where the ratio of the value of the collateral (C) to the exposure amount (E) exceeds a required collateralization level C* and is below the collateralization level C** – the bank shall consider this exposure to be two separate exposures: the exposure in respect of which the required level of collateralization C** is achieved and the remainder, i.e. exposure

representing the difference between full exposure and the exposure for which the required level of collateralization has been achieved.

Table 17 sets out the applicable LGD* and required collateralization levels that the bank must apply:

Table 17

Minimum LGD for the secured parts of exposures

	LGD for senior claims or contingent claims	LGD for subordinate claims or contingent claims	Required minimum collateralization level of the exposure (C*)	Required minimum collateralization level for the exposure to receive full LGD recognition (C**)
Receivables	**35%**	**65%**	**0%**	**125%**
Residential real estate	**35%**	**65%**	**30%**	**140%**
Other funded collaterals	**40%**	**70%**	**30%**	**140%**

Adjustment of risk-weighted exposure amounts and expected loss amounts in the case of various types of credit protection

273. Where an exposure is secured with various types of credit protection, the bank shall be required to subdivide the volatility-adjusted value of the exposure (i.e. the value after the application of the volatility adjustment as set out in points 103 to 106 of this Decision) into parts each covered by only one type of credit protection (e.g. part covered by eligible financial collateral, the portion covered by receivables, the portions covered by residential real estate, the part covered by other eligible types of funded credit protection) and the unsecured portion.

For each portion of exposure specified in paragraph 1, the Bank shall calculate the effective LGD separately in accordance with points 270 and 271 of this Decision.

Adjustment of risk-weighted exposure amounts and expected loss amounts forthe effects of using on-balance sheet netting and master netting agreements

274. Bank may adjust the risk-weighted exposure amounts and expected loss amounts for the effects of using on-balance sheet netting and master netting agreements as specified in points 111 to 117 of the Decision.

For the purposes of paragraph 1 above, the exposure is considered as the value of an individual exposure arising from the master netting agreement as if the exposure was not secured.

Adjustment of risk-weighted exposure amounts and expected loss amounts forthe effects of using other funded credit protection instruments

275. Bank may adjust risk-weighted exposure amounts and expected loss amounts for the effects of using other funded credit protection instruments set out in point 82 of the Decision in the manner specified in points 118 to 120 of the Decision, but instead of applying the risk weight set out in point 119, paragraph 2 of this Decision, an LGD of 40% is assigned to the secured part of the underlying exposure.

Adjustment of risk-weighted exposure amounts and expected loss amounts forthe effects of using unfunded credit protection instruments

276. Bank may adjust risk-weighted exposure amounts and expected loss amounts for the effects of using unfunded credit protection instruments, where these instruments are evaluated in the manner specified in point 121, paragraph 4 of the Decision.

For the secured portion of the exposure (based on the adjusted value of the credit protection), bank may use the PD of the protection provider, or a PD value between that of the borrower and that of the protection provider if a full substitution is deemed not to be fully warranted. In case of subordinated exposures secured by unfunded credit protection instruments which are not subordinated, the LGD to be applied may be that associated with senior claims.

For any unsecured portion of the exposure, the bank shall use the PD of the borrower and the LGD of the underlying exposure.

For the purpose of paragraph 1 above, the exposure value which would be determined for an unsecured exposure is used, and the conversion factor of 100% is used for the calculation of exposure value of off-balance sheet items.

e) Maturity mismatch

277. When adjusting risk-weighted exposure amounts and expected loss amounts for the effects of using credit protection instruments, in the event of mismatch the provisions of points 123 and 124 of this Decision shall apply.

Section 3

Settlement / delivery risk and counterparty risk

1. Settlement / delivery risk

278. The bank shall calculate the capital requirement for settlement/delivery risk for transactions listed in the trading book related to securities, commodities and foreign currencies, excluding repurchase and reverse repurchase agreements and securities or commodities lending or borrowing transactions.

a) Unsettled transactions

279. The bank shall calculate its capital requirement for settlement/delivery risk arising from unsettled transactions if its counterparty has not settled their transactions within four business days after their due settlement/delivery dates.

Capital requirement for settlement/delivery risk arising from unsettled transactions shall be calculated by multiplying the exposure calculated in accordance with paragraph 3 of this point by the appropriate capital requirement factor from the following Table (Table 18):

Table 18

Number of business days following the agreed settlement/delivery date	Capital requirement factor
5 – 15	**12%**
16 – 30	**50%**
31 – 45	**75%**
46 or more	**100%**

The exposure to settlement/delivery risk arising from unsettled transactions shall be calculated as the difference between the agreed settlement price for the debt instrument, equity security, commodity or foreign currency in question and its current market value, only where the difference involves a loss for the bank. This loss is incurred when:

– the current market price is higher that the agreed – when the bank is selling a security, currency or commodity, or
– the current market price is lower that the agreed – when the bank is buying a security, currency or commodity.

280. Bank shall calculate the risk-weighted exposure amount for settlement/delivery risk arising from unsettled transactions by multiplying the capital requirement referred to in point 279, paragraph 2 by 8.33.

b) Free deliveries

281. The risk-weighted exposure amount for settlement/delivery risk arising from free deliveries shall be calculated according to Section 1 and/or Section 2 of this Chapter for exposure equal to realized payment amount if:

– it has paid for securities, foreign currencies or commodities before receiving them from the counterparty, or it has delivered securities, foreign currencies or commodities before receiving payment for them from the counterparty; or

– in the case of cross-border transactions – at least one day has elapsed since it has made the payment or delivery described in the first indent of this paragraph.

The bank shall calculate exposure amount specified in paragraph 1 above from the settlement/ delivery date up to the fourth business day following the settlement/delivery date agreed with the counterparty.

Where the counterparty has not fulfilled its obligation from the settlement/delivery date up to the fourth business day after the agreed settlement/delivery date, bank shall reduce capital for the amount of effected payment/delivery increased by the loss amount determined according to point 279, paragraph 3 hereof.

282. When assigning credit risk weights for free delivery exposures specified in point 281, paragraph 1 above, the bank using the IRB Approach may assign to exposures in question PDs on the basis of the counterparty's external rating assigned by a nominated credit assessment institution, if there are no other exposures to that counterparty in the banking book.

Where a bank uses its own LGD estimates, it may apply LGDs set out in point 221 hereof to exposures specified in paragraph 1 above, provided that the same LGD is applied to all exposures arising from free delivery.

By way of derogation from paragraphs 1 and 2 of this point, for exposures specified in paragraph 1 the Bank may apply risk weights as set out in Section 1 of this Chapter, provided that the said approach is applied consistently to all exposures arising from free deliveries, or it may apply a 100% risk weight to all such exposures.

2. Counterparty risk

283. Bank shall calculate the credit risk-weighted assets for counterparty risk exposures due to the following trading and banking book positions*:*

– financial derivatives specified in Annex 3;
– credit derivatives (in the trading book);
– repurchase and reverse repurchase transactions;
– securities or commodities lending or borrowing transactions;
– margin lending transactions;
– long settlement transactions.

The amount of risk-weighted assets in paragraph 1 above is calculated by applying risk weights, determined for the counterparty's exposure class and defined as prescribed in the provisions of Section 1 and 2 of this Chapter, to exposure amounts determined using the method specified in point 284 hereof.

By way of derogation from paragraph 2 above, a bank using the IRB Approach may, in order to calculate the risk-weighted assets arising from long settlement transactions, apply risk weights determined as set out in Section 1 of this Chapter, provided that the said approach is applied consistently to all exposures arising from long settlement transactions.

284. To calculate the amount of exposures arising from financial derivatives specified in point 283 of this Decision, the bank uses one of the following methods:

– Current Exposure Method,
– Original Exposure Method,
– Standardized Method,
– Internal Model Method.

By way of derogation from paragraph 1 above, bank shall not use the Original Exposure Method if:

1) does not comply with conditions set out in point 320, paragraph 4 of the Decision, or
2) if it calculates the amount of exposures arising from the financial derivatives specified in point 3 of Annex 3.

The bank shall calculate exposures due to the items referred to in point 283, paragraph 1, second indent using the Current Exposure Method, Standardized Method or Internal Model, and for exposures arising from transactions specified in third to fifth item of that paragraph – the Internal Model Method or the Financial Collateral Comprehensive Method prescribed in points 103 to 110 and/or points 231 and 232 of the Decision.

To calculate the amount of exposures arising from transactions specified in the indent 6) paragraph 1 of point 283, bank may use any of the methods set out in paragraph 1 above.

For the purposes of calculating exposures in accordance with the Current Exposure Method and the Original Exposure Method, the bank shall use notional amounts which reflect an appropriate degree of counterparty risk.

The exposure to counterparty shall be the sum of exposures calculated in each netting set with that counterparty. Netting of the trading book positions on the basis of the Master Netting Agreements relating to the repurchase and reverse repurchase transactions, or securities or commodities lending or borrowing transactions or other capital market-driven transaction - shall be recognized only if the requirements laid down in point 313 of the Decision have been met.

A combined use of methods for calculating the value of exposures for items set out in point 283, paragraph 1 this Decision shall be allowed only at the bank group level for the same type of transaction, i.e. it is not allowed at the individual bank level, except for transactions specified in point 295, paragraph 3 of the Decision, where a bank may use a combination of the Current Exposure Method and the Standardized Method.

285. If the bank purchases credit derivative protection which meets the requirements set out in point 84, paragraph 3, against a credit exposure or counterparty credit exposure included in the banking book, the bank shall compute its risk-weighted amounts for these exposures in accordance with points 121 and 122, and point 242 of this Decision. In this case, the exposure value for counterparty credit risk exposure for those credit derivatives equals zero.

The amount of counterparty risk exposure arising from the sale of a CDS derivative entered in the banking book equals zero if this derivative fulfils the conditions set out in point 84, paragraph 3 of the Decision and if the capital requirement for credit risk is calculated in aggregate notional amount.

The amount of counterparty risk exposure and core market participant credit risk exposure arising from financial derivatives transactions, repurchase or reverse repurchase transactions, securities or commodities lending or borrowing transactions, margin lending transactions and long settlement transactions equals zero, provided that the core market participant has not refused their execution and that these exposures are fully collateralized on a daily basis.

For the purpose of calculating capital requirement for the counterparty risk arising from repurchase or reverse repurchase transactions, securities or commodities lending or borrowing transactions included in the trading book, as the eligible credit protection a bank may use all financial instruments and commodities which meet requirements for the inclusion in the trading book, and in the case of OTC derivatives exposures included in the trading book, it may use commodities which meet the requirements for the trading book inclusion.

If it uses the prescribed volatility adjustment, for financial instruments and commodities specified in paragraph 4 of this point which do not meet the eligibility requirements set out in Subsection 4 of Section 1, and Subsection 10 of Section 2 of this Chapter, the bank is required to apply the same treatment as the one applied to shares not included in the main stock index and listed on a recognized stock exchange.

When a bank uses its own volatility adjustment estimates, it shall calculate volatility adjustment for each individual position in financial instruments and commodities specified in paragraph 5 above.

When the Internal Model Method is applied for the calculation of effective exposure, in accordance with points 114 to 117 hereof, the same method may be used for the trading book.

a) Current Exposure Method

286. In accordance with the Current Exposure Method, a bank shall calculate exposure amount as the sum of:

1) current exposure under contract whose value is positive, representing its current market value (for contracts whose value is negative, the current exposure is equal to zero), and

2) potential future credit exposure (PFE) for the period remaining until the contractual obligations due date, calculated by multiplying the notional principal amount of each individual contract as of the date of calculation by the appropriate volatility adjustment specified in Table 19:

Table 19

Residual maturity	Interest rate contracts	Contracts concerning foreign exchange rates and gold	Contracts concerning equities	Contracts concerning precious metals, except gold	Contracts concerning commodities other than precious metals
≤ 1 year	0%	1%	6%	7%	10%

>1 ≤ 5 years	**0.5%**	**5%**	**8%**	**7%**	**12%**
> 5 years	**1.5%**	**7.5%**	**10%**	**8%**	**15%**

By way of derogation from paragraph 1 above, in case of single currency swaps with floating interest rates, only the current exposure arising from the contract referred to therein is calculated. In this case the potential exposure is not calculated.

For contracts which do not fall within any of the five categories indicated in Table 19, the bank shall use volatility adjustments from the category of contracts concerning commodities other than precious metals in accordance with their residual maturity.

For financial derivatives with multiple exchanges of payments, the bank shall multiply volatility adjustment values indicated in Table 19 by the number of remaining payments, in accordance with the provisions of the contract.

For contracts that are structured to settle outstanding exposure following specified future payment dates and where the terms are reset on that dates (the market value of the contract is zero on these dates), the residual maturity shall be the time until the next payment date i.e. the reset date. For interest rate contracts with residual maturity period exceeding one year, the bank shall use a volatility adjustment not lower than 0.5% regardless of the residual maturity until the next reset date.

287. Potential exposure arising from total return swaps and credit default swap derivatives shall be the contractual nominal amount multiplied by the following percentage:

– 5%, if the underlying obligation meets the criteria for qualifying items referred to in point 346 of this Decision, or
– 10%, if the underlying obligation does not meet the criteria for qualifying items referred to in the first indent of this paragraph.

For the purposes of calculating potential exposure for CDS derivatives, the protection provider may use a figure of 0%, except when it has been agreed for contractual obligation to become due because of the insolvency of the credit protection user, even though the underlying obligation has not yet defaulted.

b) Original Exposure Method

288. When applying the Original Exposure Method, the exposure of an individual contract shall be the notional principal amount of that contract multiplied by the appropriate percentage given in Table 20:

Table 20

Original maturity	Interest rate contracts	Contracts concerning foreign exchange rates and gold
≤ 1 year	**0.5%**	**2.0%**
>1 ≤ 2 years	**1.0%**	**5.0%**
Additional allowance for each additional year	**1.0%**	**3.0%**

c) Standardized Method

Exposure value calculation

289. In accordance with the Standardized Method, the exposure value shall be calculated separately for each netting set as follows*:*

$$\text{exposure value} = \beta \times \max\left(\text{CMV} - \text{CMC}; \sum_{J}\left|\sum_{i}\text{RPT}_{ij} - \sum_{l}\text{RPC}_{lj}\right| \times \text{CCRM}_{j}\right),$$

where:

CMV = the current market value of the portfolio of transactions within the netting set with the counterparty (gross of collateral) where:

$$CMV = \sum_{i} CMV_{i} ,$$

where:

CMVi= the current market value of transaction *i,*
CMC = the current market value of the collateral assigned to the netting set:

$$CMC = \sum_{l} CMC_{l} ,$$

where:

= the current market value of collateral *l*;
i = index designating transaction *i*;
l = index designating collateral l;

j = index designating hedging set category (these hedging sets correspond to risk factors for which risk positions of opposite sign can be offset to yield a net risk position on which the exposure measure is then based);
RPTij = risk position from transaction *i* for the purposes of calculating the net risk position of the hedging set *j;*
RPClj = risk position from collateral *l* for the purposes of calculating the net risk position of the hedging set *j*;
CCRMj = counterparty credit risk multiplier set out in point 295 (Table 22) with respect to hedging set *j*;
β = 1.4.

For the purposes of calculating the exposure value using the Standardized Method, collateral received from a counterparty shall have a positive sign, and collateral posted to a counterparty shall have a negative sign. A collateral shall be deemed eligible only if it complies with the requirements set out in points 75 to 79 of the Decision, and point 285, paragraphs 4,5 and 6 thereof.

290. For OTC derivative transactions with a linear risk profile, the part of the transaction which is settled by a cash payment is referred to as the payment leg and is stated as contractually agreed gross amount (including the notional amount of transaction). For the purposes of calculating the exposure value under this method, the bank shall disregard the interest rate risk from the payment leg with a remaining maturity of less than one year.

The bank may treat transactions that consist of two payment legs that are denominated in the same currency (such as interest rate swaps) as a single aggregate transaction and apply the same treatment as in the case of individual payment legs of the transaction.

Transaction specified in paragraph 1 above, consisting of cash settlement between two contractual parties in different currencies (including forward foreign exchange contracts) shall be treated as interest rate risk position for each payment leg.

Transactions specified in paragraph 1 above relating to equities (including stock indices), gold, other precious metals or other commodities shall be mapped to a risk position in the respective instrument and to an interest rate risk position for the payment leg. If the payment leg of the transaction is denominated in a foreign currency, it is additionally mapped to a risk position in the respective currency.

Transaction specified in paragraph 1 above, with a debt security as the underlying instrument, shall be mapped to an interest rate risk position for the debt security and another interest rate risk position for the payment leg. If the

underlying debt instrument, i.e. the payment leg, is denominated in a foreign currency, the debt instrument is mapped to a risk position in this currency. The exposure value assigned to a foreign exchange basis swap transactions is zero.

Determining risk position

291. The size of a risk position from an OTC transaction with linear risk profile shall be determined by the effective notional value, which represents the market price multiplied by the number of underlying financial instrument (i.e. quantity in case of commodities), denominated in domestic currency. The size of the risk position excludes debt securities.

For debt securities and for payment legs, the risk position is the effective notional value of the outstanding gross payments multiplied by the modified duration of the debt instrument or payment leg of the transaction. Modified duration of the debt instrument is determined according to point 351 herein.

The risk position of a CDS derivative is the notional value of the reference debt security multiplied by the remaining maturity of the derivative.

The risk position of OTC derivatives with a non-linear risk profile, which includes options and swaptions, is equal to the delta equivalent of the notional value of the underlying financial instrument, except in the case of an underlying debt security.

The risk position of an OTC derivative from paragraph 4 above where the underlying is a debt instrument or a payment leg, is equal to the delta equivalent effective notional value of the derivative or payment leg multiplied by the modified duration of the debt security, or payment leg, respectively.

For the purposes of determining the size of a risk position, the collateral received from a counterparty shall be treated as a due claim on the counterparty under a derivative contract (long position), while the collateral posted by the bank shall be treated as an obligation due (short position) to the counterparty under the derivative contract.

292. For the purposes of determining the size and sign of risk positions for financial instruments, a bank shall use formulae specified under this point and in accordance with point 291 of the Decision.

For all financial instruments other than debt securities, the size of risk position is equal to their effective notional value or delta equivalent notional value:

$$\text{risk position size} = \mathbf{p}_{\mathbf{ref}} \frac{\partial \mathbf{V}}{\partial \mathbf{p}},$$

where:

p_{ref} = price of the underlying instrument, expressed in the reference currency
V = value of the financial instrument (in case of an option it is the option price, in case of linear risk profile transactions - the value of the underlying instrument itself);
p = price of the underlying instrument, expressed in the same currency as V.

For financial instruments relating to a debt security and the payment legs of all transactions-size of a risk position equals the effective notional value multiplied by the modified duration, or delta equivalent in notional value multiplied by the modified duration:

$$\frac{\partial \mathbf{V}}{\partial \mathbf{r}},$$

where:

V = value of the financial instrument (in the case of an option it is the option price, and in case of linear risk profile transactions - the value of the underlying instrument or the payment leg);
r = interest rate.

If V is denominated in a currency other than the reference currency, the bank shall convert the financial derivative into the reference currency by applying the relevant exchange rate.

293. The bank shall group risk positions into appropriate hedging sets and calculate its net risk position for each hedging set. The net risk position represents the absolute value amount of the sum of individual risk positions (arising from transactions and collateral instruments in one netting set) in an individual hedging set and shall be calculated according to the following formula:

$$\text{net risk position} = \left| \sum_{i} \mathbf{RPT}_{ij} - \sum_{l} \mathbf{RPC}_{lj} \right|,$$

Risk positions from money deposits received from a counterparty as collateral, from payment legs and from underlying debt securities to which, according to Table 24 in point 344 of the Decision, a risk weight of 1.6% or

less is applied, shall be assigned by the bank to one of the hedging sets for each currency as set out in Table 21:

Table 21

Reference interest rate/ Remaining maturity	Government referenced interest rate	Non-government referenced interest rates
≤ 1 year	Hedging set (≤1.D)	Hedging set (≤1.O)
>1 ≤ 5 years	Hedging set (>1≤5.D)	Hedging set (>1≤5.O)
> 5 years	Hedging set (>5.D)	Hedging set (>5.O)

For risk positions from the underlying debt instrument or payment leg of the transaction, for which the interest rate is linked to a reference interest rate (e.g. EURIBOR, LIBOR etc.) the remaining maturity is the length of the time interval up to the next re-adjustment of the interest rate. In all other cases, the remaining maturity is the remaining life of the underlying debt instrument or in the case of a payment leg, the remaining life of the transaction.

294. The bank shall assign risk positions from an underlying debt instrument of CDS derivative to separate hedging sets for each issuer.

Risk positions from the underlying debt instruments or money deposits that are posted with a counterparty as collateral, to which according to Table 24 in point 344 of this Decision a risk weight of more than 1.60% is assigned, shall be assigned to separate hedging sets for each issuer.

Risk positions from payment legs emulating a debt security shall be assigned to separate hedging sets for each issuer.

Risk positions from debt securities specified in paragraphs 1, 2 and 3 of this point may be assigned to the same hedging set.

Risk positions from financial instruments, other than debt instruments, shall be assigned to the same hedging sets only if these instruments are identical or similar. In other cases the bank shall assign them to separate hedging sets. The similarity of financial instruments is established as follows:

1) for equities, if they were issued by the same issuer (an equity index is treated as a separate issuer);
2) for precious metals, similar instruments are those of the same metal (a precious metal index is treated as a separate precious metal);
3) for electric power, similar instruments are those delivery obligations that refer to the same peak or off-peak load time interval within any 24-hour interval;

4) for commodities, similar instruments are those of the same commodity (a commodity index is treated as a separate commodity).

Counterparty credit risk multiplier (CCRM)

295. The counterparty credit risk multipliers (CCRM) for the different hedging set categories are set out in Table 22 below:

Table 22

	Hedging set categories	CCRM
1.	Interest rates	0.2%
2.	Interest rates for risk positions from an underlying debt security for a CDS derivative to which a risk weight of 1.60% or less applies under Table 24.	0.3%
3.	Interest rates for risk positions from debt securities or reference debt instruments to which a risk weight of more than 1.60% applies under Table 24.	0.6%
4.	Exchange rate	2.5%
5.	Electricity	4%
6.	Gold	5%
7.	Equities	7%
8.	Precious metals (except gold)	8.5%
9.	Other commodities (excluding precious metals and electricity)	10%
10.	Underlying instruments of OTC derivatives that cannot be classified under any of the above categories	10%

Underlying instruments of OTC derivatives belonging to category 10 of Table 22 shall be assigned to separate individual hedging sets for each category of underlying instrument.

For transactions with a non-linear risk profile or for payment legs and transactions with debt securities as underlying instrument, for which the bank cannot determine the delta equivalent in notional value or the modified duration by using the Internal Model for market risks that the National Bank of Serbia has approved as specified in point 392 of the Decision, the bank shall use the Current Exposure Method. Netting shall not be recognized and the exposure value shall be determined on the basis of a netting set that comprises just the individual transaction.

The bank shall have procedures in place to verify that a particular transaction is covered by netting contracts in accordance with the provisions of points 312 to 319 of this Decision, prior to including a transaction in a hedging set.

If a bank makes use of collateral to mitigate counterparty risk, it shall have procedures in place to verify that, prior to recognizing the effect of collateral in its calculations, the collateral meets the requirements set out in subsection 4 of Section 1, and/or Subsection 10 of Section 2 of this Chapter.

d) Internal Model Method

296. A bank may use the Internal Model Method to calculate its exposure to counterparty credit risk and capital requirement if it obtained the prior approval of the National Bank of Serbia. A bank shall not be required to apply this method to trading book exposures that are immaterial in size and risk.

Subject to the approval specified in paragraph 1 above, the bank may carry out the implementation of the Internal Model sequentially across different transaction types. During this period the bank may, for the purposes of calculating the exposure value, use Current Exposure Method or Standardized Method in accordance with that approval.

For all OTC derivative transactions and for long settlement transactions for which a bank has not received approval from paragraph 1 above to use the Internal Model Method, the bank shall use the Current Exposure Method or the Standardized Method.

Approval of the National Bank of Serbia for the Internal Model Method

297. The National Bank of Serbia shall grant approval to use the Internal Model for the calculation of capital requirement or exposure to counterparty credit risk, if the bank meets:

– the requirements for exposure calculation in accordance with points 299 and 300 of the Decision;
– the minimum requirements for the EPE model referred to in points 301 to 310 of this Decision; and
– the EPE model validation requirements referred to in point 311 of this Decision

For the purposes of obtaining approval referred to in paragraph 1 of this point, the bank shall submit to the National Bank the application and enclose the following:

– list of types of transactions for which it intends to use the Internal Model Method, the plan for the sequential implementation of the model (if the

bank plans to implement the model sequentially) and general information on the model;

– documentation verifying compliance with the requirements specified in that paragraph.

When granting approval referred to in paragraph 1 above, the National Bank of Serbia shall set out a timeframe for the implementation and sequential implementation of the Internal Model. If the bank cannot implement this model within the defined timeframes, it shall promptly submit request for their extension.

If the bank which has been granted the approval referred to in paragraph 1 above ceases to comply with the conditions set out thereof, it shall either present to the National Bank of Serbia a plan for a timely return to compliance or demonstrate that the effect of non-compliance is immaterial. If the bank has submitted the plan under this paragraph, it shall promptly notify the National Bank of Serbia of its compliance with the specified conditions within the planned timeframe.

If, following the granting of approval referred to in paragraph 1 above, the bank intends to apply the Internal Model Method to transactions to which this approval does not refer or it ceases to apply this Method to some transactions which have been approved, it shall submit to the National Bank of Serbia an application to amend the obtained approval. This application shall also be submitted in the event that the bank no longer intends to use its own α parameter assessment specified in point 299 of the Decision.

A bank that has been granted approval specified in paragraph 1, may submit an application to revert to the use of the Current Exposure Method or the Standardized Method, provided that such application is supported with relevant documentation demonstrating good cause for their use. Following the granting of approval to revert to other method, the previously obtained approval for the Internal Model use ceases to be valid.

298. The National Bank of Serbia may withdraw the approval specified in point 297, paragraph 1 of the Decision if it determines that the bank ceased to comply with the conditions set out in that paragraph and the effects of non-compliance are material, if it failed to submit the plan specified in point 297, paragraph 4, if the submitted plan is inadequate or if its actions were not in compliance with the plan.

The bank whose approval specified in paragraph 1 above has been withdrawn by the National Bank of Serbia, shall, for the calculation of exposure to counterparty risk, use the Current Exposure Method or the Standardized Method.

Conditions for the calculation of exposure value

299. A bank shall calculate the exposure value for each netting set. The internal model used by the bank for exposure calculation shall specify the forecasting distribution for changes in the market value of the netting set attributable to changes in market variables (interest rates, foreign exchange rate). For exposure value calculation purposes, the bank shall use Internal Model Method for forecasting distribution based on changes in market variables. This model ensures that the exposure for each netting set is calculated at each future date. For margined transactions, the model may also capture expected future collateral movements.

The bank may include in its forecasting distributions for changes in the market value of the netting set financial collateral recognized as eligible in accordance with points 75 to 79 and point 285, paragraphs 4, 5 and 6 of this Decision.

The exposure value shall be calculated as the product of α times effective EPE, as follows:

exposure value = α × *effective* EPE

where α = 1.4.

In the course of supervision of safety and soundness and legal compliance of activities of the bank, the National Bank of Serbia may require the bank to apply α higher than 1.4 in accordance with its risk profile.

Effective EPE shall be computed by estimating expected exposure (EEt) as the average exposure at future date t, where the average is taken across possible future values of market risk factors. The internal model estimates expected exposure (EE) at a series of future dates (t_1, t_2, t_3 etc.).

Effective EE at a certain date shall be computed as:

$$\text{Effective } EEt_k = \max(\text{effective } EEt_k\text{ -1}; EEt_k),$$

where the current date is denoted as t_0, and effective EEt_0 equals current exposure.

Pursuant to paragraph 6 hereof, the effective EPE equals the average effective EE computed for the next year. If all transactions in the netting set mature within less than one year, EPE is the average of all EEs in the period equal to the maturity of transaction in the netting set with the longest remaining maturity. Effective EPE is equal to the weighted average of effective EEs:

$$effective\ \ EPE = \sum_{k=1}^{\min(1\ year;\ maturity)} effective\ \ EEt_k \times \Delta t_k ,$$

where weight $\Delta t_k = t_k - t_{k-1}$ represent periods between future dates at which exposure is calculated, and is applied when future exposure is calculated at dates that are not equally spaced over time.

The bank shall calculate expected exposure (EE) or peak exposure based on a distribution of exposures that accounts for possible non-normality of the distribution of exposures.

300. The bank may apply a more conservative method of exposure calculation, i.e. that the effective EPE is higher than the value set out in point 299, paragraph 3 of the Decision.

By way of derogation from point 299, paragraph 3, the National Bank of Serbia may grant the approval to bank to use its own estimates of α, subject to a floor of 1.2, where α shall equal the ratio of internal capital from a full simulation of counterparty credit risk exposure and internal capital based on EPE. When applying for this permission, bank shall supply evidence that internal capital from a simulation captures material sources of stochastic dependency of distribution of market values of transactions or of portfolios of transactions across all counterparties. For the calculation of internal capital based on EPE - the EPE used shall be the fixed outstanding amount of the counterparty. Internal estimates of α shall take account of the granularity of portfolios.

A bank shall ensure that the internal capital referred to in paragraph 2 above, and/or α are computed in a consistent fashion with respect to the modelling methodology, parameter specifications and portfolio composition. If it uses its own estimates of α based on internal capital approach, the bank shall document them and ensure their independent review and assessment. This review shall be performed on at least a quarterly basis, and more frequently when the composition of the portfolio varies over time. Bank shall also assess the model risk.

The National Bank of Serbia may revoke the approval referred to in paragraph 2 above it the bank ceases to comply with the conditions set out therein and in paragraph 3.

Where appropriate, volatilities and correlations of market risk factors used in the joint simulation of market and credit risk should be conditioned on the credit risk factor to reflect potential increases in volatility or correlation in an economic downturn.

If the netting set is subject of a margin agreement, bank shall use one of the following EPE measures:

– effective EPE without taking into account the margin agreement;
– the margin threshold (if positive), under the margin agreement plus an add-on that reflects the potential increase in exposure over the margin period of risk. The add-on is computed as the expected increase in the netting set's exposure beginning from the current exposure of zero over the margin period of risk. A floor of five business days for netting sets consisting only of repurchase, reverse repurchase agreements and securities and commodities lending or borrowing transactions which are subject to daily remargining and daily current exposure determining, and ten business days for all other netting sets;
– EE measure, computed using the Internal Model for the calculation of exposure amount which the bank uses directly in the equation in point 299, paragraph 6 of this Decision, if the model captures the effects of margining when estimating the EE.

Under the Internal Model Method, all netting sets with the same counterparty may be treated as a single netting set if upon the calculation of EE the value assigned to individual netting sets with negative market value is zero.

Minimum requirements for EPE model

301. For the purpose of meeting minimum requirements for the use of the EPE model, the bank shall, within a unified risk management system, manage the counterparty risk, which includes the following:

– internal acts regulating counterparty risk management;
– appropriate organizational structure;
– counterparty risk management process;
– internal control and audit.

302. The bank’s internal acts regulating counterparty risk management shall take account of market, credit, operational and liquidity risks that can be associated with counterparty credit risk.

The bank shall not undertake business with a counterparty without assessing its creditworthiness and shall take due account of its exposure to settlement risk.

The bank shall manage the risk referred to in paragraphs 1 and 2 above as comprehensively as practicable at the counterparty level -

aggregating CCR exposures with other credit exposures, and at the bank-wide level.

303. Within competencies defined in the Law on Banks, the bank's board of directors and executive boards shall be actively involved in the counterparty credit risk control process and shall assure the setting up of an adequate organizational structure which enables the management of this risk. Executive board members shall be aware of the limitations and assumptions of the Internal Model used and the impact these can have on the reliability of the output. They shall also consider the effects of the market environment and business practice and be aware of how these are reflected in the model.

The bank shall have an organizational unit that is responsible for the counterparty credit risk management. It shall be independent of unit/units responsible for assuming that risk. This organizational unit shall report directly to the senior management, and the bank shall ensure that it is adequately staffed in terms of number, professional experience and competence.

The work of this unit shall be closely integrated into the bank's day-to-day credit risk management process, and its results shall be an integral part of the process of planning, monitoring and controlling of the bank's overall risk profile. This organizational unit shall be responsible for the following:

– data collection for the internal model, control of integrity of input data, timely and appropriate input into the model, as well as storing data in the database;
– review and validation of prices supplied by organizational units responsible for assuming that risk;
– initial and ongoing validation of the model;
– production and analysis of reports on the output of bank's risk measurement model, including the evaluation of the relationship between measures of risk exposure and credit and trading limits

304. The process of managing counterparty risk, in addition to elements of this process included in the decision on the bank's risk management, also includes measurement of usage of credit lines (by integrating exposure to counterparty risk and other credit risk exposures) and internal capital distribution. The bank's measurement of counterparty credit risk shall include measuring daily and intra-day usage of credit lines. The bank shall measure current exposure gross and net of collateral. At portfolio and counterparty level, the bank shall calculate and monitor peak exposure or potential future exposure (PFE) at a confidence interval chosen by the bank. The bank shall monitor large exposures and concentration of exposures by groups of related counterparties, by industry, by market and other relevant criteria.

The bank’s counterparty credit risk management system shall be used in conjunction with internal credit and trading risk limits. These limits shall be related to the bank’s risk measurement model in a manner that is consistent over time and that is well understood by credit approval officers, traders and senior management.

A bank shall have a routine in place for ensuring efficient implementation of established policies, controls and procedures concerning the counterparty credit risk management and it shall ensure that these are well documented, including an explanation of the techniques and models used to measure CCR exposure.

Organizational unit specified in point 303, paragraph 3 of this Decision shall submit daily reports on the counterparty credit risk exposure to those bank managers that have the authority to limit and reduce the potential exposure of the bank arising from transactions that have been agreed by credit approval officers or those authorized to execute market transactions, as well for limiting and reducing the bank's total exposure to this risk.

A bank shall have a routine and rigorous program of stress testing in place as an integral part of the counterparty risk management. The results of this stress testing shall be reviewed periodically by the executive board and shall be reflected in the CCR policies and limits. Where stress tests reveal particular vulnerability to a given set of circumstances, prompt steps shall be taken to manage those risks appropriately and prevent new vulnerabilities from appearing.

305. The bank's internal audit shall conduct a regular review of its counterparty credit risk management system, which includes audit of activities of both the organizational units responsible for establishing and controlling counterparty credit risk management process and of the units responsible for arranging market transactions. This review shall take place at regular intervals, at least once a year and shall specifically address:

1) the adequacy of the documentation concerning the counterparty credit risk management system;
2) the organization of the unit specified in point 303, paragraph 3 of this Decision;
3) the integration of measuring counterparty risk into daily risk management;
4) the selection process for models and exposure valuation systems used by front and back-office personnel and accounting records of agreed transactions;

5) any significant change in the counterparty credit risk measurement process and its validation;

6) the scope of counterparty credit risk captured by the risk measurement model;

7) the integrity of the management reporting system;

8) the accuracy and completeness of counterparty credit risk reporting;

9) the verification of the consistency, timeliness and reliability of data sources used to run models, including the independence of such data sources;

10) the accuracy and appropriateness of volatility and correlation assumptions;

11) the accuracy of risk valuation;

12) the verification of the model's sustainability through frequent back-testing.

306. The distribution of exposure generated by the internal model used to calculate effective EPE shall be closely integrated into the day-to-day counterparty credit risk management process. The internal model's output shall accordingly play an essential role in credit approval, counterparty credit risk management, internal capital allocation and corporate governance of the bank.

The bank shall demonstrate that it has sufficient experience in using the Internal Model Method to calculate exposure to counterparty credit risk and that it has been using this Model to calculate the distributions of exposures upon which the EPE calculation is based at least one year prior to applying for the approval of the National Bank of Serbia.

The bank shall make the model used to generate a distribution of exposures to counterparty credit risk a part of a counterparty credit risk management process. In addition to EPE calculation, the bank shall measure and manage current exposures, where possible, on both gross and net basis in relation to the collateral. The use of this model is considered appropriate if the bank uses other counterparty credit risk measures (peak exposure or PFE) based on the distribution of exposures generated by the internal model to compute EPE.

The bank shall estimate EE daily, unless it has previously informed the National Bank of Serbia and submitted documentation demonstrating that its exposures to counterparty credit risk warrant less frequent calculation. The bank shall compute EE along a time period that adequately reflects the time structure of future cash flows and maturity of transactions and in a manner that is consistent with the materiality and composition of the exposures.

The bank shall measure, monitor and control exposures over the life of all transactions in the netting set (not just to the one year horizon) and have in place procedures to manage counterparty risk where the exposure rises beyond the one-year horizon. The expected increase in exposure shall be an input into the bank’s internal capital model.

307. The bank shall have in place a sound stress-testing process for use in the internal assessment of capital adequacy for counterparty credit risk. These stress test results shall be compared with EPE and considered by the bank as part of the process of assessment and maintenance of the adequate level of internal capital. Stress testing shall also involve identifying possible events or future changes in economic conditions that could have unfavourable effects on the bank’s credit exposures, and an assessment of the credit institution's ability to adapt to such changes.

The bank shall stress-test its counterparty credit risk exposures, at the same time including stressing market and credit risk factors. These tests shall include concentration risk (to a single counterparty or groups of counterparties), correlation risk across market and credit risk, and the risk that the liquidation of the counterparty's positions could cause significant market movements. Stress tests for counterparty credit risk shall also consider the impact on the bank’s own positions of all significant market moves and integrate that impact in its assessment of that risk.

308. The bank shall give due consideration to exposures that give rise to a significant degree of general wrong-way risk and it shall have procedures and processes in place to identify, monitor and control cases of specific wrong-way risk, beginning at the inception of a transaction and continuing through life of the transaction.

309. The bank shall use a model that reflects transaction terms and specifications in a timely, complete and conservative fashion. Such specifications shall include at least minimum nominal (notional) amounts from the corresponding contract, maturity, reference assets, margining arrangements and netting agreements.

The bank shall maintain specifications of each individual transaction in a database that is subject to periodic audit. A signoff by legal staff shall be required to verify the legal enforceability of the netting agreement in order to enter it into the database.

The bank shall have in place the internal model’s input data integrity process to clean the database of erroneous data and observed irregularities.

The bank’s internal model shall insure that all inputs of the model reflect economic factors relevant for the calculation of the bank's exposure to counterparty risk (e.g. business cycle phases).

The bank shall use the internal model which employs current market data to compute current exposures. When using historical data to estimate volatility and correlations, the bank shall use at least three years of historical data and update them quarterly or more frequently if market conditions warrant.

To the extent that the model relies on assumed market data values, including those for new products, where three years of historical data may not be available, the bank’s internal acts shall identify assumed market values and demonstrate that the assumed values provide a conservative representation of the underlying risk under adverse market conditions. If the model includes the effect of collateral on changes in the market value of the netting set, the bank shall have adequate historical data to model the volatility of the collateral.

310. The bank shall establish adequate validation procedure and process for the Internal Model validation. In the validation process, the bank shall specify the kind of testing needed to ensure the model’s integrity and reliability and identify conditions under which assumptions are violated and may result in an understatement of EPE. The validation process shall include a review of the comprehensiveness of the model.

The bank shall monitor relevant counterparty credit risks and have processes in place to adjust its estimation of EPE when those risks become significant. This includes the following:

– the bank shall identify and manage the specific wrong-way risk;
– for exposures with a rising risk profile after one year, the bank shall compare on a regular basis the estimate of EPE over one year with the estimate of EPE over the life of the exposure; and
– for exposures with a residual maturity below one year, the bank shall compare on a regular basis the current market value (current exposure) and the risk exposure profile, and/or store data that allow or would allow such a comparison.

The bank shall have in place procedures to verify that, prior to including a transaction in a netting set, the transaction is covered by an appropriate master netting agreement that meets the requirements set out in points 312 to 315 of this Decision.

The bank that makes use of collateral to mitigate its counterparty credit risk shall have in place internal procedures to verify that, prior to recognizing the effects of collateral in its exposure-related calculations, the collateral meets the legal certainty standards set out in Subsection 4, Section 1, and/or Subsection 10, Section 2 of this Chapter.

EPE model validation requirements

311. The bank's internal model for the calculation of exposure to counterparty risk (hereinafter: EPE model) shall ensure the following:

1) model validation requirements set out in points 399 and 400 of this Decision;

2) long term forecasts of interest rates, foreign exchange rates, equity prices, commodities, and other market risk factors. Model shall be validated over a long time horizon;

3) the EPE model testing used to calculate counterparty credit risk exposure for a given scenario of future shocks to market risk factors is tested as part of the model validation process. Option pricing models shall take into account the non-linearity of option value with respect to market risk factors;

4) the EPE model takes into account transaction-specific information in order to aggregate exposures at the level of the netting set. The bank verifies that the transactions are assigned to the appropriate netting set within the model;

5) the EPE model also includes transaction-specific information to capture the effects of margining. It takes into account both the current amount of margin and margin that would be passed between counterparties in the future (including the smallest such amount), provisions of margin agreements (unilateral or bilateral), the frequency of margin calls, the margin period of risk, the minimum threshold of unmargined exposure the credit institution is willing to accept, and the daily collateral valuation or its valuation in accordance with provisions of Subsection 4, Section 1 or Subsection 10, Section 2 of this Chapter;

6) static and historical back-testing is part of the model validation process conducted at regular basis on a number of representative counterparty portfolios (actual or hypothetical), where these representative portfolios are chosen based on their sensitivity to the material risk factors and correlations to which the bank is exposed.

If back-testing indicates that the EPE calculation model is not sufficiently accurate, the National Bank of Serbia may revoke approval specified in point 297, paragraph 1 hereof or it may impose appropriate measures to ensure that the model is improved promptly, or it can require the bank to increase capital.

e) Contractual netting

312. For counterparty credit risk mitigation purposes, a bank may use contracts under which mutual claims and obligations are automatically amalgamated (hereinafter: the netting agreement). The following types of agreements shall be recognized:

– contracts for novation between a bank and its counterparty, under which mutual claims and obligations are automatically amalgamated thus creating a legally binding, single new contract extinguishing former contracts which refer to these claims and obligations;
– other netting agreements between a bank and its counterparty;
– contractual cross-product netting agreements –if the bank has obtained the prior approval specified in point 297, paragraph 1 hereof, for transactions falling under the scope of the internal model. Netting across transactions entered by members of the same banking group is not recognized for the purposes of calculating capital requirements.

Agreement specified in the third indent of paragraph 1 above covers several bilateral master netting agreements and transactions belonging to different product categories, based on which, following an overall netting, a counterparty obligation is created.

For the purposes of cross product netting referred to in the third indent of paragraph 1, the following shall be regarded as different product categories:

– repurchase transactions, reverse repurchase transactions, securities or commodities lending or borrowing transactions;
– margin lending transactions;
– financial derivatives specified in Annex 3.

313. Master netting agreement, which covers repurchase transactions, reverse repurchase transactions, securities or commodities lending or borrowing transactions and/or other capital market transactions, used for mutual netting of the banking book and trading book positions - shall be recognized for the calculation of capital requirements for the counterparty credit risk only if the transactions satisfy the following requirements:

– all transactions are valuated daily as per their current market value;
– all assets that have been borrowed, purchased or received under these transactions are eligible as collateral in the form of financial

assets in accordance with Subsection 4, Section 1, and/or Subsection 10, Section 2 of this Chapter.

Conditions for netting agreement recognition

314. The bank may recognise contractual netting for the purposes of counterparty risk mitigation and for the calculation of capital requirement for that risk only under the following conditions:

1) netting agreements cover all included transactions, so that, in the event of a counterparty's failure to perform owing to default, bankruptcy, winding-up or any other similar circumstance, the bank would have a claim to receive (positive market value) or an obligation to pay (negative market value) only in the amount of the net sum of market values of included individual transactions;

2) the bank obtained a written and reasoned independent legal opinion confirming that, in case the occurrence of events referred to in item 1) of this paragraph, the bank' claims and obligations would be limited to the net sum from that item and that the netting agreements have been concluded in line with applicable laws;

3) the bank has procedures in place to ensure regular monitoring of the impact of changes in the relevant regulations on the validity of netting agreements;

4) the netting agreement and accompanying documents are in a written form and kept appropriately;

5) the effects of contractual netting are factored into the bank's measurement of aggregate counterparty risk exposure and the bank manages its counterparty risk on such a basis;

6) credit risk exposure to each counterparty is aggregated to arrive at a single exposure across transactions. This aggregation shall be factored into the determination of credit limits and calculation of internal capital.

Contract containing a provision which permits a non-defaulting counterparty to make limited payments only, or no payments at all, to the estate of the defaulter, even if the defaulter is a net creditor (the "walkaway" clause), shall not be recognized for the purposes of counterparty risk mitigation and capital requirement calculation.

315. In addition to the conditions referred to in point 314 of this Decision, for contractual cross-product netting agreements the following criteria shall be met:

– the net sum referred to in item 1), paragraph 1 of point 314 of this Decision shall be the net sum of the positive and negative close-out

values of any included individual master netting agreement and of the positive and negative market values of individual transactions;

– the legal opinion referred to in point 314, paragraph 1, item 2) shall analyze the impact of the netting arrangement on the material provisions of any included individual master netting agreement;

– the bank shall have procedures in place to verify that any transaction which is to be included in a netting set is covered by an independent legal opinion;

– for each master netting agreement and each individual transaction included in the netting contract the bank shall comply with the requirements for the recognition of master netting agreements, as well as risk mitigation requirements set out in Subsection 4, Section 1, and Subsection 10, Section 2 of this Chapter.

Effects of recognition

316. Where a bank uses the Standardized Method, or the Internal Model Method – contractual netting shall be recognised in accordance with the provisions of points 289 to 295, and points 296 to 311 of this Decision.

317. For the purposes of the Current Exposure Method, the bank may calculate the current and nominal contractual values by using the net exposure amounts set in contracts for novation.

For the purposes of Original Exposure Method, the bank may calculate nominal principal value using the net amount set out in paragraph 1 above, using the percentages defined in Table 20 of point 288.

318. For the purposes of the Current Exposure Method, for netting agreements set out in indent 2), paragraph 1, point 312, the bank may calculate current market value by taking account of the notional net market value which results from these agreements. In the case where netting leads to a net obligation for the bank calculating the net market value, the current market value shall be zero.

When it calculates the current market value referred to in paragraph 1 above, the bank reduces the figure for potential exposure for all contracts included in agreements specified therein according to the following formula:

$$PCE_{red} = 0.4 \times PCE_{gross} + 0.6 \times NGR \times PCE_{gross,}$$

where:

PCE_{red} = the reduced figure for potential exposure for all contracts with a given counterparty included in agreements specified in paragraph 1 above;
PCE_{gross} = the sum of figures for potential exposures for all transactions with a given counterparty which are included in agreements specified in paragraph 1 above and are calculated by multiplying their notional amounts by the percentages set out in Table 19 in point 286 of this Decision;
NGR (*net-to-gross ratio*) = net/gross indicator calculated as:

– separate calculation - the quotient of the net and gross market value for all transactions included in agreements referred to in this point,

– aggregate calculation - the quotient of the sum of the net market values calculated on a bilateral basis for all counterparties taking into account the transactions included in agreements specified in this point and the gross market value for all transactions included in those agreements.

For the purposes of calculating the potential exposure according to the formula referred to in paragraph 2 of this point, the bank shall treat forward foreign exchange contracts or similar contracts in which a notional principal is equivalent to cash flows (if the cash flows fall due on the same value date and are fully or partly in the same currency), and which are included in the agreements specified therein, as a single agreement with a notional principal equivalent to the net receipts.

319. For the purposes of the Original Exposure Method, the bank may treat forward foreign exchange contracts or similar contracts from point 318, paragraph 3, included in the agreement specified in the second indent of paragraph 1 of point 312, as a single agreement with a notional principal equivalent to the net receipts, where the notional principal amounts are multiplied by the percentages given in Table 20 in point 288 of this Decision. For all other agreements included in the agreement specified in the second indent of paragraph 1 of point 312, the bank may reduce the percentages as indicated in the following table (Table 23):

Table 23

Original maturity	Interest rate contracts	Contracts concerning foreign exchange rates and gold
≤ 1 year	**0.35%**	**1.50%**
>1 ≤ 2 years	**0.75%**	**3.75%**
Additional allowance for each additional year	**0.75%**	**2.25%**

C h a p t e r V

CAPITAL REQUIREMENT FOR MARKET RISKS

320. Capital requirement for market risks equals the sum of:

1) capital requirements for position risk for trading book activities,
2) capital requirements for foreign exchange risk for all business activities,
3) capital requirements for commodities risk for all business activities.

The bank shall calculate capital requirement for market risks in accordance with provisions of Sections 2 to 5 of this Chapter.

By way of derogation from paragraph 2 above, the bank may use the Internal Models Approach for the calculation of capital requirements for position risk, foreign exchange risk and commodities risk, subject to the prior approval of the National Bank of Serbia, in accordance with the provisions of Section 6 of this Chapter.

By way of derogation from paragraphs 2 or 3 above, the bank shall calculate capital requirements for position risk in accordance with the provisions of Chapter IV of this Decision, if the following conditions are met:

1) trading book positions do not exceed 5% of its total business operations for longer than three days in one calendar month;
2) trading book positions do not exceed RSD 1.5 bn for longer than three business days in one calendar month;
3) trading book positions never exceed 6% of its total business operations;
4) trading book positions never exceed RSD 2 bn.

The bank shall promptly notify the National Bank of Serbia in case of any non-compliance or exceeded limits specified in paragraph 4 of this point and calculate the capital requirement for position risk in the manner set out in paragraph 2 and paragraph 3 of that point.

The value of total business, within the meaning of paragraph 4 of this point, represents the sum of net on- and off-balance sheet assets reduced by provisions for losses arising from off-balance sheet assets denominated in dinars by using the mean exchange rate as of the calculation date.

When calculating the portion of value of trading book positions in the value of its total business (the material significance of the trading book), within the meaning of paragraph 4, items 1) and 3) above, the off-balance

sheet items shall be multiplied by an appropriate conversion factor, debt securities shall be valued at their nominal or market prices, equities shall be valued at their market prices and financial derivatives according to the nominal or market values of the underlying financial instrument or commodity, and long and short positions shall be summed up regardless of their respective sign.

Section 1

Trading book

1. Inclusion of the positions in the trading book and the banking book

321. Bank shall include all on-balance and off-balance sheet items in the trading or the banking book, taking into account their characteristics and purpose.

322. The trading book of a bank shall consist of all positions in financial instruments and commodities held either with trading intent or in order to hedge an exposure arising from positions in other financial instruments of the trading book and which are free of any restrictive covenants on their tradability or the ability to be hedged.

On-balance and off-balance positions not included in the trading book shall be classified in the banking book.

Positions in financial instruments and commodities held by the bank with trading intent are those held intentionally for short-term resale and/or with the intention of benefiting from actual or expected short-term price differences between buying and selling prices or from other price or interest variations.

Positions from paragraph 3 above shall include proprietary positions and positions arising from client servicing and market making.

Positions referred to in paragraph 3 can be included in the bank’s trading book if the following criteria are met:

1) they were acquired with a trading intent;
2) by its internal acts the bank has set up a trading strategy for positions or portfolios, approved by the bank’s executive board and including their expected holding horizon;
3) there are clearly defined policies and procedures in place for the active management of these positions, which include:

– determining the scope of organizational units authorized to enter positions (trading desks),

– determining individual position limits, continuous monitoring of their utilization and possible limit exceedances, and periodic review of their appropriateness,

– authorization of some employees to enter into positions within specified limits and in line with the approved trading strategy,

– setting up a system of reporting to executive board members on trading book positions, as an integral part of the bank's risk management system,

– active monitoring of positions with reference to market information sources and an assessment made of the marketability or hedge-ability of the position or its component risks, including the assessment of the quality and availability of market inputs for the valuation process, level of market turnover and sizes of positions traded in the market;

4) there are defined policies and procedures to monitor the position against the bank’s trading strategy, including the monitoring of turnover and limited marketability positions.

2. Trading book management and the valuation of trading book positions

323. The bank shall establish trading book management policies and procedures that shall include at least:

– the activities the bank considers to be trading, or an constituting part of the trading book for the purposes of the calculation of capital requirements for market risks, as well as the criteria in line with point 322 hereof, for including a position into the trading book;

– establishing the extent to which a position can be marked-to-market daily by reference to a liquid market;

– the possibility to identify all material risks arising from positions marked to the model, the possibility to hedge these positions in a liquid market, as well as deriving reliable estimates for the key assumptions and parameters used in the model;

– the manner in which the bank can generate valuations for the position that should be subject to the external validation by the person not connected to the bank;

– the possibility and manner in which legal and other restrictions influence short term protection or closing of the position;

– the manner in which bank actively manages risks arising from trading book positions;

– the manner in which the bank may transfer risk or positions between the trading and banking book and *vice versa,* the extent and the criteria for such transfers.

Policies and procedures referred to in paragraph 1 of this point, as well as their implementation, shall be subject to regular internal audit.

324. Positions arising from repurchase agreements, reverse repurchase agreements and securities or commodities lending or borrowing transactions may be included in the trading book for the purposes of calculating capital requirements for market risks, if both legs of the said transactions are in the form of cash or securities transactions, where the requirements set out in point 322 are met and all positions arising from such transactions are included in the trading book on a consistent basis.

325. The bank shall establish and maintain systems and controls sufficient to provide prudent and reliable estimates of trading book position values, which are based on current market values and in particular include policies and procedures for the process of valuation of these positions. Systems and controls shall include the following elements:

– clearly defined responsibilities of organizational units involved in the valuation process;
– valuation methods for individual positions in the trading book in accordance with points from 326 to 329 of this Decision, selection criteria for these methods, as well as manner and frequency of review of their appropriateness;
– sources of market information used in the valuation process and the review of their appropriateness;
– the frequency of position valuation performed by employees of the organizational unit responsible for valuation;
– timing of closing prices and other market information used for valuation purposes;
– procedures used for adjustments of valuation methods.

Systems and controls set out in paragraph 1 above include the reporting lines between the unit accountable for valuation process and the executive board.

The bank’s organizational unit referred to in paragraph 2 above shall be independent of the unit accountable for assuming market risks.

326. The bank shall valuate all trading book positions according to current market value (mark-to-market), which implies at least daily valuation of positions at readily available close out prices that are sourced independently (e.g. data obtained from eligible exchanges).

When marking to market, the more prudent estimate shall be used, i.e. the more prudent side of bid/offer price shall be used, unless the institution is a significant market maker in the particular type of financial instrument or commodity in question and it can close out at mid market.

327. Bank shall use models for the valuation of trading book positions (mark-to-model) if independent sources of market information are unavailable, if the bank doubts their objectivity or in cases of less liquid positions in the trading book.

Valuation of trading book positions based on the model specified in paragraph 1 above may be carried based on a benchmark value, extrapolation or otherwise by using market inputs.

Less liquid positions may arise from market events or bank-related situations (e.g. concentrated positions and / or positions of limited marketability).

A bank which uses the models set out in paragraph 1 above shall comply with the following requirements:

– it shall ensure that all qualitative and quantitative assumptions of the model are documented properly; – it shall identify all material risks arising from trading book positions for which the bank uses these models;

– executive board members shall be aware of the trading book positions that are subject to these models and shall understand the uncertainty this creates in the reporting of the risks that bank is or might be exposed in is activities, as well as performance of its trading activities;

– market inputs shall be, where possible, in line with market prices, and the appropriateness of the market inputs of the particular position and the parameters of the model shall be assessed on a regular basis; –

where available, valuation methodologies which are the accepted market practice for particular financial instruments or commodities shall be used;

– where the valuation model is developed by the bank itself, it shall be developed by the qualified staff of organizational units independent of the units responsible for the active management of trading book positions, and the model shall be based on appropriate assumptions assessed by an organizational unit which did not participate in the development of the model,

active management of trading book positions, including the validation of the appropriateness of mathematical formulae, assumptions and the model application;

– there shall be formal change control procedure in place regulating the change of models, and a secure copy of the model shall be held and periodically used to check valuations of the model;

– the organizational unit of the bank responsible for risk management shall be aware of the weaknesses of the model used in order to assess their impact on the results obtained using this model;

– the model shall be subject to periodic review to determine its appropriateness, including the assessment of the continued appropriateness of assumptions, analysis of profit and loss versus risk factors, comparison of actual close out values to model outputs.

328. The bank shall perform valuation of trading book position using the model specified in point 327 hereof, taking into account the following:

– general factors: credit spreads, close-out costs, operational risks, early termination of positions, investment and financing costs, future administrative costs and model risk;

– factors relating to the assessment of liquidity of individual positions: the amount of time it would take to hedge out a position or risk within the position, the volatility and average of bid/offer spreads, the availability of market quotes, possibility of identifying market makers, the volatility and average of trading volumes, market concentrations and the time of holding individual positions.

329. In addition to the valuation of trading book positions in accordance with points 326 and 327 of this Decision, regular independent price verifications, i.e. verifications of accuracy and objectivity of market prices and model inputs, shall be performed

3. Internal hedges

330. An internal hedge is a position that materially or completely offsets individual risks of a banking book position or a set of positions.

Positions arising from internal hedges may be included in the trading book, provided that such positions are held with trading intent in line with the provisions of point 322 hereof, if the bank applies valuation methods in accordance with provisions of points 326 to 329 of the Decision and provided that all of the following criteria are met:

– internal hedges shall not be primarily intended to reduce capital requirements;

– internal hedges shall be properly documented, approved by the executive board or a person authorized by the board and subject to prescribed internal audit procedures;

– the internal hedging transactions shall be entered into at market conditions;

– market risks that are generated by the internal hedge shall be managed in the trading book within the framework of existing position limits;

– the bank shall have in place a system of monitoring internal hedging transactions.

Including the positions arising from internal hedges into the trading book, within the meaning of paragraph 2 above, shall not effect the calculation of capital requirement for that leg of the internal hedging transaction which is related to banking book position or a set of positions.

By way of derogation from paragraph 2 of this point, if a bank hedges an exposure to credit risk arising from a banking book position or a set of positions using a credit derivative booked in its trading book, the banking book exposure is deemed to be hedged for the purposes of calculating capital requirements only if the bank purchases from an eligible protection seller a credit derivative meeting the requirements set out in point 84, paragraph 3 of the Decision.

With regard to paragraph 4 above, internal hedging with credit derivatives shall not be included in the trading book for the purposes of calculating capital requirement.

Section 2

Capital requirement for position risk

331. Capital requirements for position risk equal the sum of capital requirements for risks arising from debt securities and equity.

When calculating capital requirements for position risk, the net position in each individual security in the bank’s trading book shall be calculated as the difference between long (equity or purchase) and short (borrowing from other persons or sale) position in that instrument.

Netting of long and short positions shall be allowed only for identical securities.

All net positions denominated in foreign currency shall be converted into dinars at the official middle exchange rate as at the calculation date.

1. Financial derivatives and other financial instrument in the trading book

332. For the purposes of calculating capital requirements for position risk, positions in financial derivatives shall be broken down into notional positions or positions in the underlying security, as follows:

1) if the underlying instruments are interest rates or debt securities:
   – into long and short positions in a debt security that is the subject of the contract (hereinafter: the underlying debt instrument),
   – into notional long and short positions in the risk-free debt security, or a zero coupon government bond (hereinafter: notional debt instrument), or
   – into long and short positions in the underlying debt instrument and the notional debt instrument together;
2) if underlying instruments are equities:
   – into long and short positions in the equity that is subject of the contract, equity portfolios or stock exchange indices of those equities (hereinafter: the underlying equity);
   – into long and short positions in the underlying debt instrument;
3) if the underlying instruments are commodities:
   – into long and short positions in the underlying commodity;
   – into long and short positions in the notional debt instrument.

333. For futures and forward contracts relating to debt securities or interest rates – long position is a position where the bank is paid the agreed interest rate or a security is transferred to it, a short position is a position where the bank pays the agreed interest rate or transfers the security.

A long (short) position in the interest rate futures or forward contract shall be treated as a combination of a long (short) position in a notional debt instrument with maturity date equal to that of the delivery/settlement date plus the maturity period of the underlying instrument and a short (long) position in the notional debt instrument with the maturity period equal to that of the delivery/settlement.

Forward commitment to buy (sell) debt securities shall be treated as a combination of a long (short) position in an underlying debt security with its remaining maturity and short (long) position in the notional debt instrument with a maturity date equal to that of a forward contract.

A long (short) position in the equity futures or forward contract shall be treated as a combination of a long (short) position in the underlying equity

instrument and a short (long) position in a notional debt instrument with a maturity date equal to that of a the contract.

A long (short) position in a currency forward contract shall be treated as a combination of a long (short) position in a notional debt instrument in purchased currency and a short (long) position in a notional debt instrument in currency sold, with maturity equal to that of the contract

334. Positions in swap contracts shall be treated as a combination of notional positions in underlying securities with equivalent maturities:

1) interest rate swaps – shall be treated as the combination of a long and short position in notional debt instruments with a floating interest rate (maturity equals the following interest rate readjustment date) and/or fixed interest rate (and maturity equal to that of the contract);

2) currency interest rate swaps – shall be treated as the combination of long and short position in notional debt instruments in particular currency, in accordance with item 1) of this point, depending on whether the interest rate for that currency if fixed or floating;

3) equity swaps - as the combination of the following:

– long (short) position in an underlying equity instrument under which the bank receives (pays) an amount based on the change in price of that equity instrument, and

– long (short) position in an underlying equity instrument or underlying debt instrument under which the bank receives (pays) an amount based on the change in price of that equity instrument.

335. The positions in convertible securities may be treated as positions in equity securities when:

– the period until the first possible conversion date is shorter than three months or, if this first date already passed, the period until the next date shorter than one year;

– market value of the security is less than 10% higher that the corresponding amount of market value of a security which may be obtained by conversion.

If the conditions listed above have not been met, positions in convertible securities shall be treated as positions in debt securities.

Positions in convertible securities may be netted against opposite positions in debt or equity securities only if the bank has sufficient capital to cover possible conversion-related losses.

336. Positions in trading book securities arising from repurchase transactions or securities lending transactions shall be reported as the

combination of a long position in a temporarily sold or lent debt or equity security and a notional short position in government bond with matching maturity and coupon rate equal to yield.

The positions specified in paragraph 1 above may be netted against opposite positions in identical securities.

Positions in trading book securities arising from reverse repurchase transactions or securities borrowing transactions shall be reported as notional long positions in government bonds with appropriate maturity and coupon rate equal to the yield.

337. For options on interest rates, swaps, debt and equity securities, stock exchange indices, futures and forwards, as well as warrants relating to debt and equity securities the provisions of Section 5 of this Chapter shall apply.

338. The Bank shall include positions in securities, which are the subject of the contract and which represent a result of breaking down of positions in financial derivatives, in the calculation of capital requirements for specific and general position risk arising from debt or equity securities and in the amount of the market value of these securities.

Positions in notional debt instruments shall be included in the calculation of capital requirements for general position risks arising from debt securities. When calculating capital requirements for specific position risks, positions in notional debt instruments shall be included in the category to which a specific risk weight of 0% is assigned.

339. Unless otherwise provided for in this Decision, when calculating the capital requirement for position risks the protection seller shall use notional amount of credit derivatives. For the purposes of calculating capital requirements for specific position risk, other than for total return swaps, the maturity of positions shall be determined pursuant to the maturity of the credit derivative contract, instead of the maturity of the liability.

The protection seller shall treat a total return swap as a combination of a long position in the reference obligation (for the purposes of calculating the capital requirement for general and specific position risk) and a short position in government bonds with maturity equivalent to the period until the next interest rate adjustment (for the purposes of calculating the capital requirement for general position risk).

The protection seller shall treat a credit default swap (CDS derivative) as a long synthetic position in the reference obligation (for the purposes of calculating the capital requirement for specific position risk). The capital requirement for general position risk shall not be calculated. Exceptionally, where a CDS has been rated externally by a nominated credit assessment institution and if the conditions from point 356 of this Decision have been met, the protection seller shall treat the CDS derivative as a long position in the given derivative instrument. If premium or interest payments are due under the CDS derivative, these cash flows shall be treated as positions in notional debt instruments with maturity date equal to that of the contract.

For the purposes of calculating capital requirements for position risks, the protection buyer shall treat positions arising from the credit derivative contract the same way as the protection seller but with the opposite positions. If a credit derivative has a call option in combination with a step-up at a certain moment in time, such moment shall be treated as the maturity of the protection.

2.
Sensitivity models

340. Banks which mark to market and manage credit risks of financial instruments covered in point 333, 1, 2, 3. paragraphs 1, 2, 3 and 5, and point 334, items 1) and 2) and point 237 of this Decision on a discounted future cash‑flow basis may use sensitivity models to calculate the positions in those instruments, as well as for bonds which are amortized over its residual life (rather than via one final repayment of principal), with a prior permission of the National Bank of Serbia.

Positions determined in this manner shall be included in the calculation of capital requirements for general position risk.

The National Bank of Serbia may allow a bank to use sensitivity models, if the bank complies with the following conditions:

– positions obtained under the model have the same sensitivity to interest rate changes as the underlying cash flows;

– this sensitivity is assessed with reference to independent movements in sample interest rates across the yield curve, with at least one sensitivity point in each of the maturity bands set out in table 25 of point 348 of the Decision.

For the purposes of obtaining approval referred to in paragraph 1 of this point, the bank shall submit the following documentation to the National Bank of Serbia:

– types of financial instruments to which the sensitivity model is to be applied;
– basic characteristics and assumptions of the sensitivity model;
– documentation evidencing compliance with the conditions set out in paragraph 3 of that point.

If the bank which has been granted the approval referred to in paragraph 1 above ceases to comply with the conditions set out in paragraph 3, it shall either promptly present to the National Bank of Serbia a plan for a timely return to compliance or demonstrate that the effect of non-compliance is immaterial. If the bank has submitted the plan under this paragraph, it shall promptly notify the National Bank of Serbia of its compliance with the specified conditions within the planned timeframe.

The National Bank of Serbia may withdraw the approval specified in paragraph 1 of this point if it determines that the bank ceased to comply with the conditions set out in paragraph 3 thereof and the effects of non-compliance are material, if it failed to submit the plan specified in paragraph 5 of this point, if the submitted plan is inadequate or if its actions are not in compliance with the plan.

341. Banks which do not use sensitivity models under point 340 of this Decision may, for the purposes of calculating the capital requirement for general position risk, and before breaking down positions in derivatives into positions in securities which are the subject of the contract, offset long and short positions in identical instruments referred to in paragraph 1 of this point if the following conditions are met:

1) the positions are of the same nominal value and denominated in the same currency;
2) the reference rate (for floating-rate positions) or coupon rate (for fixed-rate positions) are the same or closely matched;
3) the next interest-fixing dates (for floating-rate positions) or maturity dates (for fixed-rate positions) correspond with the following limits:
– these dates are identical for positions where next interest fixing and maturity dates are less than one month,

– these dates are within 7 days for positions where the next interest-fixing dates and maturity dates are between one month and one year,

– within 30 days for positions where these dates are over one year.

3. Position risk on debt securities

342. Position risk on debt securities is the risk of a price change in the instrument due to interest rate changes and it includes specific risk or general risk.

Specific position risk on debt security is the risk of a price change in the security concerned due to factors related to its issuer or, in the case of a financial derivative, the issuer of the underlying security.

General position risk on debt securities is the risk of a price change in this security due to change in the general level of interest rates.

343. Capital requirement for position risk on debt securities equals the sum of capital requirements for specific and general position risk on these securities, multiplied by 1.5.

Net positions in each security shall be classified according to the currency in which they are denominated and the bank shall calculate capital requirement for general and specific risk in each currency separately.

All net positions in debts securities shall be presented daily in dinars by applying the official middle exchange rate as at the calculation date.

a) Specific position risk on debt securities

344. The bank shall classify its trading book net positions from point 343, paragraph 2 of this Decision into the appropriate categories on the basis of their issuer/obligor, external or internal credit assessment and residual maturity, and then multiply them by the prescribed weights in line with the following table (Table 24):

Table 24

Category	Risk weight

Category	Risk weight
Debt securities issued or guaranteed by central governments, issued by central banks, international organisations, multilateral development banks, regional governments and local authorities which qualify for credit quality step 1 or which are assigned a 0% risk weight under Section 1 of Chapter IV of this Decision.	0 %
Debt securities issued or guaranteed by central governments, issued by central banks, international organisations, multilateral development banks, regional governments and local authorities which qualify for credit quality steps 2 or 3 under Section 1 of Chapter IV of this Decision. Debt securities issued or guaranteed by a bank which qualifies for credit quality steps 1 or 2 under Section 1 of Chapter IV of this Decision. Debt securities issued or guaranteed by a corporate entity which qualifies for credit quality steps 1 or 2 under Section 1 of Chapter IV of this Decision. Qualifying items as defined in point 346 of this Decision.	0.25 % (residual term to final maturity 6 months or less) 1.00 % (residual term to final maturity is greater than 6 and up to and including 24 months) 1.60 % (residual term to final maturity is exceeding 24 months)
Debt securities issued or guaranteed by central governments, issued by central banks, international multilateral development banks, local or regional governments and local authorities which qualify for credit quality steps 4 or 5 under Section 1 of Chapter IV of this Decision. Debt securities issued or guaranteed by a bank which qualifies for credit quality steps 3, 4 or 5 under Section 1 of Chapter IV of this Decision. Debt securities issued or guaranteed by a corporate entity which qualifies for credit quality steps 3 or 4 under Section 1 of Chapter IV of this Decision. Exposures for which credit assessment by a nominated credit assessment institution is not available.	8.00 %
Debt securities issued or guaranteed by central governments, issued by central banks international multilateral development banks, local or regional governments and local authorities, which qualify for credit quality step 6 under Section 1 of Chapter IV of this Decision. Debt securities issued or guaranteed by a bank which qualifies for credit quality step 6 under Section 1 of Chapter IV of this Decision. Debt securities issued or guaranteed by a corporate entity which qualifies for credit quality steps 5 or 6 under Section 1 of Chapter IV of this Decision.	12.00 %

For the purposes of calculating capital requirements for specific position risk, the bank shall sum its weighted positions calculated according to Table 24, regardless of whether they are long or short.

A bank shall not calculate specific risk for own debt securities included in the trading book

345. A bank that applies IRB Approach shall determine the credit quality step of the debtor/issuer for the purpose of assigning debt securities into appropriate categories from Table 24 under point 344 of the Decision, established according to its internal rating with and appropriate PD parameter. The PD shall be equivalent or lower than that which would be assigned to the appropriate credit quality step specified in point 48 hereof.

In accordance with Table 24 above, the bank shall assign risk weight of 8% or 12% to debt securities which are not qualifying items within the meaning of point 346 of this Decision.

If the National Bank of Serbia in the course of the supervision of safety and soundness and legal compliance of activities of the bank establishes that some debt securities referred to in paragraph 2 above are riskier than the bank has previously estimated, it may require the bank to apply a higher risk weights or to disallow the possibility of offsetting for the purposes of calculating the capital requirement for general position risk of debt securities.

346. Qualifying items shall include the following:

1) long and short positions in debt securities which have external credit assessment corresponding to the investment grade;

2) long and short positions in debt securities which, based on the credit quality of the issuer in accordance with Section 2 of Chapter IV hereof, have a PD which is not higher than that assigned to debt securities under item 1) of this paragraph;

3) long and short positions in debt securities which have no external credit assessment and which meet the following conditions:

– bank considers them to be sufficiently liquid,

– according to the bank’s assessment, their credit quality is equivalent to or higher than the credit quality of debt securities under item 1) of this paragraph,

– they are listed on at least one recognized stock exchange;

4) long and short positions in debt securities issued by banks that calculate capital requirements as specified in this Decision or in the EU regulations governing the calculation of capital requirements (i.e. regulations that are aligned with the regulations of the European Union), which are considered by the bank concerned to be sufficiently liquid and whose credit

quality is, according to the bank's own assessment, at least equivalent or higher than that of the debt securities referred to under item 1) of this paragraph;

5) long and short positions in debt securities issued by other corporate entities that, according to Section 1 of Chapter IV hereof, belong to the exposure to bank's exposure class and whose credit quality, in line with the provisions of that Section, is equivalent to or higher than that associated with credit quality step 2 or above.

By way of derogation from point 344 of this Decision, the National Bank of Serbia may, during the supervision of safety and soundness and legal compliance of activities of the bank, require the bank to assign a higher risk weight to the position under paragraph 1 above, if it considers that exposure to the specific risk is greater than that the bank estimated.

b) General position risk of debt securities

347. For the purposes of calculating the capital requirement for general risk on debt securities, a bank shall use a maturity-based approach, or, with a prior notification of the National Bank of Serbia, a duration-based approach. The bank shall adhere to the chosen approach.

The bank shall calculate capital requirements for each currency separately by applying methods set out in paragraph 1 above. Total capital requirement for general position risk of debt securities equals the sum of capital requirements for each individual currency calculated in RSD counter-value at the official middle exchange rate at the date of calculation.

Maturity-based approach

348. The bank shall classify its net positions in debt securities into maturity bands and zones - based on the residual maturity (i.e. on the basis of the period until the interest rate is next set in the case of securities with variable interest rate) and coupon (interest) rate, applying the following table:

Table 25

Zone	Maturity band		Weight in %
	Coupon of 3% or more	Coupon of less than 3%	
One	0 ≤ 1 month	0 ≤ 1 month	0.10
	>1 ≤ 3 months	>1 ≤ 3 months	0.20
	>3 ≤ 6 months	>3 ≤ 6 months	0.40

	>6 ≤ 12 months	>6 ≤ 12 months	0.70
Two	>1 ≤ 2 years	>1 ≤ 1.9 years	1.25
	>2 ≤ 3 years	>1.9 ≤ 2.8 years	1.75
	>3 ≤ 4 years	>2.8 ≤ 3.6 years	2.25
Three	>4 ≤ 5 years	>3.6 ≤ 4.3 years	2.75
	>5 ≤ 7 years	>4.3 ≤ 5.7 years	3.25
	>7 ≤ 10 years	>5.7 ≤ 7.3 years	3.75
	>10 ≤ 15 years	>7.3 ≤ 9.3 years	4.50
	>15 ≤ 20 years	>9.3 ≤ 10.6 years	5.25
	> 20 years	>10.6 ≤ 12 years	6.00
		>12 ≤ 20 years	8.00
		> 20 years	12.50

The bank shall multiply each position by the weight appropriate for that maturity band. For each maturity band the bank shall then work out the sum of the weighted long positions and the sum of the weighted short positions.

The matched weighted position in a maturity band is the sum of the weighted long positions or the sum of the weighted short positions in a given maturity band, whichever amount is smaller. The unmatched weighted (long or short) position for the same band shall be the residual amount, i.e. the difference between those two sums.

For each zone bank shall compute the totals of the unmatched weighted long positions for the bands included and the totals of the unmatched weighted short positions for those bands. The sum of the unmatched weighted long positions or the sum of all unmatched weighted short positions for the same zone, whichever amount is smaller, shall be the matched weighted position for that zone. The residual amount, i.e. the difference between the two sums, shall be the unmatched (long or short) weighted position for that zone.

Having calculated the matched and unmatched positions for each zone, the bank shall match the amount of the unmatched weighted positions in zones one and two, and then it shall match the residual amount of the unmatched weighted position in zone two and the unmatched weighted position in zone three. The bank may reverse the order of matching so as to start by matching unmatched weighted positions between zones two and three before matching positions between zones one and two. The remainder of the unmatched weighted position in zones one and three shall then be matched.

Following these matching calculations between zones, the amount of the remainder of the unmatched weighted position shall be calculated as the sum of all remaining unmatched positions across all zones.

349. According to the maturity-based approach, capital requirement for general risk of debt securities shall be calculated as the sum of:

– 10 % of the sum of the matched weighted positions in all maturity bands,
– 40 % of the matched weighted position in zone one,
– 30% of the matched weighted position in zone two,
– 30% of the matched weighted position in zone three,
– 40 % of the matched weighted position between zones one and two,
– 40 % of the matched weighted position between zones two and three,
– 150% of the matched weighted position between zones one and three,
– 100 % of the residual unmatched weighted positions between zones.

Duration - based approach

350. If applying the duration-based approach, a bank shall take the market value of each debt security and then calculate its yield to maturity. In the case of floating‑rate securities, the assumption is that the principal is due when the interest rate can next be set.

If in the course of performing supervision of safety and soundness and legal compliance of activities of the bank, the National Bank of Serbia establishes that the bank is not applying the duration-based approach in accordance with paragraph 1 above and points 351 to 353 of the Decision, it may require the bank to apply the maturity-based approach.

351. The bank shall allocate each debt security to the appropriate zone in accordance with the following table (Table 26):

Table 26

Zone	Modified duration (in years)	Assumed interest change (in %)
1	> 0.0 ≤ 1.0	1.00
2	> 1.0 ≤ 3.6	0.85
3	> 3.6	0.70

The bank shall calculate the duration‑weighted position for each debt security by multiplying its market price by its modified duration and by the appropriate assumed interest‑rate change in line with Table 26.

The modified duration of each debt security shall be calculated on the basis of the following formula:

$$D_{\mathrm{mod}} = \frac{D}{(1+r)}$$

$$D = \frac{\sum_{t=1}^{m} \frac{tC_t}{(1+r)^t}}{\sum_{t=1}^{m} \frac{C_t}{(1+r)^t}},$$

where:

$D_{\mathbf{mod}}$ = modified duration
D = duration,
r = yield to maturity,
C_t = cash payment in time t,
M = total maturity,
t = time.

352. The bank shall calculate duration-weighted long and duration-weighted short positions within each zone. The sum of all duration-weighted long positions or all duration-weighted short positions within each zone, whichever amount is smaller, shall be considered the matched duration-weighted position for that zone. The unmatched duration-weighted (long or short) position for the same zone shall be the residual amount, i.e. the difference between those two sums.

Having calculated the matched and unmatched duration-weighted positions for each zone, the bank shall match the amount of the unmatched duration-weighted positions in zones one and two, and then it shall match the residual amount of the unmatched weighted position in zone two and the unmatched duration-weighted position in zone three. The bank may reverse the order of matching so as to start by matching positions between zones two and three before matching zones one and two. The remainder of the unmatched duration-weighted position in zones one and three shall then be matched.

Following these matching calculations between zones, the remainder of the unmatched duration-weighted position shall be calculated as the sum of all remaining unmatched duration-weighted positions across all zones.

353. According to the duration-based approach, capital requirement for general risk of debt securities shall be calculated as the sum of:

– 2% of the matched duration-weighted position for each zone,
– 40% of the matched duration-weighted positions between zones one and two,
– 40% of the matched duration-weighted positions between zones two and three,
– 150% of the matched duration-weighted positions between zones one and three,
– 100% of the residual unmatched duration-weighted positions.

4. Position risk of equity instruments

354. Position risk of equity instruments is the risk of a price change in the instrument.

Position risk of equity instruments can be specific risk or general risk.

Specific position risk of equity instruments is the risk of a price change in the equity instrument concerned due to factors related to its issuer or, in the case of a financial derivative, the issuer of the underlying equity instrument.

General position risk of equity instruments is the risk of a price change in this instrument due to change in the general price levels of these equities.

355. Capital requirement for position risk of equity instruments equals the sum of capital requirements for specific and general position risk of these instruments, multiplied by 1.5.

Equities shall be allocated to national markets where these equities are listed and/or traded. Financial derivatives shall be allocated to national markets where the underlying equity is listed and/or traded.

Capital requirement for position risk of equity instruments shall be calculated for each national market and currency separately.

356. The bank shall calculate its net (long or short) position in each equity.

The bank may offset its long and short positions in equity only when such equities are considered the same.

The bank’s overall gross position in equities shall be equal to the sum of absolute values of net long and short positions in equities.

The bank’s overall net position in equities shall be equal to the absolute value of the difference between the net long and net short positions.

a) Specific position risk of equity instruments

357. Capital requirement for specific position risk on equity instruments shall total 4% of the bank's overall gross position in those equity instruments.

By way of derogation from paragraph 1 above, when calculating the capital requirement for specific position risk for diversified equity portfolios, the bank may apply a 2% weight, if the following conditions are met:

– the equities are not those of issuers which have issued only debt instruments that, according to Table 24 in point 344, are assigned a risk weight of 8 % or 12 %, or a lower risk weight because they are guaranteed or secured;
– the equities are highly liquid and included in the securities index and traded on recognized exchanges;
– no individual position shall comprise more than 5 % of the value of the bank’ whole equity portfolio.

By way of derogation from the third indent of paragraph 2 of this point, individual positions may comprise up to 10 % of the value of the bank’ whole equity portfolio provided that the total of such positions does not exceed 50 % of the portfolio.

b) General position risk of equity instruments

358. Capital requirement for general position risk of equity instruments shall total 8% of the bank's overall gross position in those equity instruments.

c) Stock indices

359. The positions in stock indices shall be treated as positions in individual equity instruments which are the constituent equities of the stock

index. Positions in those equity instruments may be netted against opposite positions in identical equity instruments.

Positions in stock indices shall be included in the calculation of capital requirements for specific and general position risks of equity instruments.

Stock-index forwards and futures shall be treated as a combination of a long (short) position in equity instruments which are the constituent equities of the stock index and a short (long) position in a notional debt instrument with the maturity date equal to that of the contract.

By way of derogation from the provisions of this point, when calculating the capital requirement for specific position risk, the bank may exclude stock-index positions which are exchange traded and broadly diversified, if these indices are not broken down into constituent equities. These positions shall be included in the calculation of capital requirements for general position risk of equity instruments, individually for each state as a unique position in the index. Position in these stock indices shall be included in the calculation of net position from point 356, paragraph 4 of the Decision, but not in the calculation of the gross position from point 356, paragraph 3.

5. Underwriting

360. The Bank shall calculate capital requirements for position risks arising from underwriting agreements (securities underwriting agreement), including agreements under which the bank agreed to place the previously issued securities onto a new market.

The bank shall calculate net position by deducting the amount of total liabilities under the underwriting agreement by positions which are subscribed or sub-underwritten by third parties. The bank shall reduce the obtained net position by the reduction factors in Table 27:

Table 27

Working day	Reduction factors for equity and debt instruments (specific risks)
Business day 0	100%
Business day 1	90%
Business day 2 or 3	75%
Business day 4	50%
Business day 5	25%
After business day 5	0%

Working day 'zero' shall be the working day on which the bank becomes unconditionally committed to accepting a known quantity of securities at an agreed price.

The bank shall ensure sufficient capital against the risk of loss which exists between the time of the initial commitment and 'working day 1'.

Capital requirement for position risk under the securities underwriting agreement shall be calculated by using the reduced net positions in line with the provisions of this point.

6. Treatment of trading book positions hedged by credit derivatives

361. For the trading book position hedged by a credit derivative the bank shall calculate capital requirement for specific position risk arising from this position and the position arising from this derivative.

Where the values of these positions always move in the opposite direction and approximately to the same extent, the bank may exclude both positions referred to in paragraph 1from the calculation of the capital requirement for specific risk. This will be the case in the following situations:

– positions refer to completely identical instruments; or
– a trading book position is hedged by a position in TRS and there is an exact match between the reference obligation and the underlying exposure arising from the trading book position. The exact match shall not refer to the maturity of those positions (which may be different).

The bank may mitigate the exposure to specific position risk by offsetting 80% of the amount of transferred risk by the position with the higher risk weight, and by excluding the second positions from the calculation of capital requirement for specific position risk, provided that the following conditions are met:

– the positions always move in opposite directions;
– there is an exact match between the reference obligation and the underlying exposure from the trading book;
– maturity of the reference obligation and credit derivative are the same;
– the key features of the credit derivative do not cause the value of derivative to materially deviate from the value of the trading book position.

The bank may mitigate the exposure to specific position risk by excluding the position with a lower risk weight from the calculation of capital requirement for specific position risk. This treatment shall be allowed if:

– positions in trading book are hedged by a position in the TRS derivative, but there is a mismatch between the reference obligation and the exposure arising from the trading book position, where a) the reference obligation ranks *pari passu* with or is junior to the underlying exposure from the trading book, b) both share the same obligor, and c) have cross-default or cross-acceleration clauses;

– positions refer to completely identical instruments or the conditions specified under paragraph 3 of this point have been met, but there is a currency or maturity mismatch between the credit protection and the trading book position (currency mismatches should be included in the calculation of the capital requirement for foreign exchange risk in accordance Section 3 of this Chapter); or

– positions meet the conditions referred to in paragraph 3 of this point, but there is a mismatch between the reference obligation and the underlying exposure in the trading book, where it is agreed that this exposure may be transferred to the protection provider.

7. Treatment of units in open-end investment funds in the trading book

362. The capital requirement for specific and general position risk for units in open-end investment funds allocated in the trading book shall total 32% of the position's value. The sum of capital requirements for position risks and foreign exchange risk for these units in the trading book shall not exceed 40% of their value, unless otherwise stipulated in points 369 and 395 of this Decision.

Unless otherwise provided for in this Decision, no netting shall be permitted between positions specified in paragraph 1 above and other bank's.

363. The bank may calculate capital requirement for position risk arising from investments in open-end investment funds in accordance with points 364 to 367 herein, if the following conditions are met:

1) the fund is managed by a corporate entity supervised by:

– a competent regulatory body in the Republic of Serbia, or a Member State, or

– a competent regulatory body of a non-Member State, if the supervision is performed in compliance with the EU regulations and if the National Bank of Serbia has established cooperation with that body;

2) the fund's prospectus or equivalent document containing all relevant elements of the prospectus includes the following:

– the categorises of assets the open-end investment fund is authorised to invest in,

– if investment limits apply, the relative limits and the methodologies to calculate them,

– if leverage is prescribed or allowed, the maximum level of leverage;

– if investment in over-the-counter financial derivatives or repurchase agreements, reverse repurchase agreements, securities or commodities lending and borrowing agreements is allowed, a policy to limit counterparty risk arising from these transactions;

3) the performance of open-end investment fund is reported in semi-annual and annual reports to enable an assessment to be made of the assets and liabilities, income and operations over the reporting period;

4) the units of the open-end investment fund are redeemable in cash on a daily basis at the request of the unit holder;

5) investments in the open-end investment fund are segregated from the assets of the fund's managing undertaking;

6) the bank performs its own risk assessment of the fund.

364. Where the bank is aware of the underlying investment structure of the open-end investment fund on a daily basis, it may treat units in these funds as positions in securities which comprise these investments and calculate the capital requirement for position risks in accordance with the provisions of this Section, or, subject to a prior approval of the National Bank of Serbia, by applying the internal model in compliance with Section 6 of this Chapter. In that case netting shall be permitted between these and other positions, as long as the bank holds a sufficient quantity of units which can be expressed as positions in securities which underlie this investment.

365. The bank may treat investments in open-end investment funds as notional positions in stock indices or fixed basket of equities or debt securities and calculate the capital requirement for position risks in accordance with the provisions of this Sections, or, subject to the prior approval of the National Bank of Serbia, by applying the internal model in compliance with Section 6 of this Chapter, subject to the following conditions:

– the purpose of the open-end investment fund's mandate is to replicate the composition and performance of a particular stock index or fixed basket of equities or debt securities;

– the correlation between the daily price movements of the investment unit and the stock index or fixed basket of equities or debt securities shall be at least 0.9 over a minimum period of six months. 'Correlation' in this context means the correlation coefficient between daily

returns on the unit in the investment fund and on the stock index or fixed basket of equities or debt securities whose structure and performance it tracks.

366. Where the bank is not aware of the underlying investment structure of the open-end investment fund on a daily basis, it may calculate the capital requirement for position risk in accordance with the provisions of this Section.

With regard the calculation referred above, the bank shall assume that the open-end investment fund first invests to the maximum extent allowed under its mandate in the securities that attract the highest capital requirement for position risk, and then continues making investments in other asset classes in descending order to which lower capital requirements are applied, until the maximum total investment limit defined in the fund's prospectus or equivalent document is reached. The bank shall take account of the maximum indirect exposure that it could achieve from underlying investment of the fund, by proportionally increasing the position in the fund up to the maximum exposure to the individual assumed investment in accordance with the prospectus or equivalent document of the fund.

Should the capital requirement for position risk which is calculated in accordance with paragraph 2 of this point exceed the capital requirement calculated in accordance with point 362 of this Decision, the bank shall use the latter capital requirement.

367. Bank may rely on a third party calculation of capital requirements for position risks based on the underlying exposure structure of the open-end investment fund provided that the correctness of the calculation is adequately ensured in line with the rules set out in points 364 and 366 of this Decision.

Section 3

Capital requirement for foreign exchange risk

368. Foreign exchange risk is the risk of potential adverse effects on the bank's financial result and equity due to changes in the exchange rate. This exposure is arising from the positions in the banking book and the trading book.

Within the meaning of this Decision, foreign exchange assets and liabilities shall include all foreign exchange assets and liabilities denominated in foreign currency, assets and liabilities denominated in dinars with a currency clause, where the currency clause is a contractual provision indexing the agreed amount to some other currency.

Dinar counter-value of assets and liabilities denominated in a foreign currency shall be calculated at official middle exchange rate as at the date of calculation of the bank's foreign exchange position. Dinar value of assets and liabilities in gold is determined according to the latest price of fine ounce of gold in the London Stock Exchange.

The bank shall calculate capital requirement for foreign exchange risk if the sum of its overall open foreign exchange position and its net position in gold, calculated in accordance with the provisions of Chapter III hereof, exceeds 2% of its total own funds.

The capital requirement for foreign exchange risk shall be calculated by multiplying the sum of its overall open foreign exchange position and its open net position in gold by 12%.

369. The bank shall calculate its open foreign exchange position in each individual currency and open net position in gold as the sum of following elements:

– the net spot position, which is the difference between foreign exchange assets (minus value adjustments) and foreign exchange liabilities in currency (including unmatured interest), i.e. assets less liabilities in gold;
– the net forward position, which is the difference between all amounts to be received and all amounts to be paid under forward exchange contracts (or forward gold contracts), including currency futures (or gold futures) and the notional amount on currency swaps not included in the spot position;
– irrevocable guarantees, uncovered letters of credit and similar off-balance sheet items that are certain to be called and likely to be irrecoverable;
– the net delta equivalent of all foreign-currency and gold options;
– the market value of other non-foreign-currency and non-gold options whose underlying instrument is expressed in foreign currency.

Net future income/expenses not yet accrued but already fully hedged by forward foreign‑exchange or similar contracts may be included in net open foreign exchange position in a particular currency, provided that such treatment is consistently applied in compliance with the IFRS / IAS.

For the purposes of calculating its net open foreign exchange position in each currency, the bank shall include positions that are related to investments in investment units of investment funds, in accordance with their currency structure. When calculating these investments the bank may rely on

third party reporting of the investment fund currency structure, where the correctness of this calculation is adequately ensured

If the bank is not aware of the investment fund's currency structure, it shall be assumed that the fund invests in foreign exchange positions up to the maximum extent allowed in accordance with the prospectus or equivalent document of the fund.

370. The bank has a net long foreign exchange position in a particular currency or in gold when the sum of elements listed in point 369 of this Decision in that currency or in gold is positive, and when it is negative - the bank has a net short foreign exchange position in that currency or gold.

Total long foreign exchange position is a sum of all net long foreign exchange position in individual currencies.

Total short foreign exchange position is a sum of all net short foreign exchange position in individual currencies.

The total net open foreign exchange position of the bank is the absolute value of total long foreign exchange position or total short foreign exchange position, whichever absolute value is greater.

For the purposes of calculating its open foreign exchange positions, the bank may break down net position in composite currency into the component currencies according to the structure of the composite currency.

371. The indicator of foreign exchange risk is the ratio between the total net open foreign exchange position (including the absolute value of the net open position in gold) and the bank's capital calculated in accordance with the provisions of Chapter III of this Decision.

Regardless of whether the internal models from Section 6 of this Chapter are applied, the bank shall maintain the foreign currency risk indicator at no more than 20% at the end of each business day.

If foreign currency risk indicator on two consecutive business days exceeds 20%, the bank shall notify the National Bank of Serbia the next business day at latest.

Reports on the foreign exchange risk indicator shall be submitted to the National Bank of Serbia in the manner, form and within time limits prescribed by the Bank Reporting Guidelines.

Section 4

Capital requirement for commodities risk

372. The bank shall calculate the capital requirement for commodity risk using the Simplified Approach or, subject to the prior notification of the National Bank of Serbia, the Maturity Ladder Approach. The bank shall apply the same approach for each individual type of commodity within one reporting period, while for different commodities it may apply different approaches.

Each position in a commodity shall be expressed in terms of the standard unit of measurement. Spot price for each type of commodity shall be translated to dinar counter-value at official middle exchange rate as at the date of calculation.

The capital requirement for market risk on gold and financial derivatives related to gold shall be calculated under the rules for calculating capital requirement for foreign exchange risk in the manner prescribed in Section 3 of this Chapter, or by applying internal models in line with Section 6 of that Chapter.

The bank may exclude positions arising from stock financing from the calculation of the capital requirement for commodities risk, but it shall calculate other capital requirements for those positions, in accordance with this Decision.

The bank shall include all positions that give rise to the position risk or foreign exchange risk (e.g. positions in financial derivatives relating to commodities, positions arising from commodities repurchase and reverse repurchase agreements and commodities lending and borrowing agreements) which are not included in the calculation of the capital requirement for commodity risk in accordance with the provisions of this Section, in the calculation of the capital requirement for general position risk and foreign exchange risk in accordance with Sections 2 and 3 of this Chapter.

If the bank has a short position in a commodity which falls due before the long position in the same commodity, it shall take into account the possibility of a shortage of liquidity in relevant markets.

For the purposes of calculating positions in individual commodities, the following positions may be regarded as positions in the same commodity:

– positions in different sub-categories of commodities in cases where the sub-categories are deliverable against each other;

– positions in similar commodities if they are close substitutes and if a minimum correlation of 0.9 between daily price movements can be clearly established over a minimum period of one year.

1. Financial derivatives relating to commodities and other financial instruments in the trading book

373. A long (short) position in the commodity futures or forward contracts shall be treated as a combination of a long (short) position in the underlying commodity expressed in standard unit of measurement for that commodity and a short (long) position in a notional debt instrument with a maturity date equal to that of the delivery/settlement date.

374. Position in a commodity swap shall be treated as a long position in the commodity if the bank pays a fixed price and receives a floating price based on current market values, or a short position in the commodity if the bank receives a fixed price and pays a floating price based on current market values.

If the bank uses the Maturity Ladder Approach, the commodity swap shall be treated as a series of positions equal to the notional amount of the contract, with each position corresponding with one payment on the swap and slotted into the maturity ladder set out in Table 28 in point 379 of this Decision.

Commodity swaps relating to different types of commodities shall be included in the table referred to in paragraph 2 above in accordance with the underlying commodity.

375. Trading book positions in commodities repurchase agreements, or commodities lending agreements shall be treated as a combination of a long position in underlying commodity and a notional short position in a government bond with matching maturity and coupon rate equal to the rate of return of these agreements.

Trading book positions in commodities reverse repurchase transactions or commodities borrowing transactions shall be treated as notional long positions in government bonds with appropriate maturity and coupon rate equal to the rate of return of these agreements.

376. Options on commodities and on commodity financial derivatives shall be treated as described in Part 5 of this Chapter.

Warrants relating to commodities shall be treated in the same way as the options referred to in paragraph 1) of this point.

2. Simplified Approach

377. When for the purposes of calculating the capital requirement for commodity risk the Simplified Approach is used, bank shall calculate net and gross positions for each individual commodity.

Net position in a commodity shall be the absolute value of the difference between long and short positions in that commodity.

Gross position in a commodity shall be the sum of the absolute values of long and short positions in that commodity.

378. The capital requirement for each commodity shall be calculated as the sum of:

– 15% of the net position multiplied by the spot price for the commodity and
– 3% of the gross position, multiplied by the spot price for the commodity.

The capital requirement for commodity risk under this approach shall be calculated as the sum of capital requirements for commodity risk relating to each commodity calculated in accordance with paragraph 1 above and multiplied by 1.5.

3. Maturity Ladder Approach

379. When for the purposes of calculating capital requirement for commodity risk the bank applies the Maturity Ladder Approach, it shall assign all positions in that commodity to appropriate maturity bands in accordance with Table 28.

Table 28

Maturity band	Spread rate
0 ≤ 1 month	1.5%
>1 ≤ 3 months	1.5%
>3 ≤ 6 months	1.5%
>6 ≤ 12 months	1.5%
>1 ≤ 2 years	1.5%
>2 ≤ 3 years	1.5%
> 3 years	1.5%

Positions in physical stocks shall be assigned to the maturity band of up to one month, specified in Table 28.

If in the course of supervision of safety and soundness and legal compliance of activities of the bank, the National Bank of Serbia establishes that the bank is not applying the Maturity Ladder Approach in accordance with paragraph 1 above and points 380 to 382 of the Decision, it may require the bank to apply the Simplified Approach.

380. The bank may offset and assign positions in the same commodity to the appropriate maturity bands, in accordance with Table 28 on a net basis, if one of the following conditions is met:

– positions mature on the same date, or
– positions mature within 10 days of each other and the agreements from which they arise are traded on markets which have daily delivery dates.

381. The bank shall calculate the sum of the long positions and the sum of the short positions in each maturity band specified in Table 28. The matched position in a maturity band shall be the sum of long positions which are matched by the sum of short positions in that maturity band. The residual amount (the difference between those two values) shall be the (long or short) unmatched position for the same maturity band and shall be matched by the unmatched position for a maturity band further out.

The amount of the unmatched long (short) position for a given maturity band that is matched by the unmatched short (long) position for a maturity band further out shall be the matched position between two maturity bands. The residual amount shall be the long or short unmatched position between the two maturity bands.

382. The capital requirement for each commodity shall be calculated as the sum of the following:

– the sum of absolute amounts of the matched long and short positions for all individual bands multiplied by the appropriate spread rate in accordance with Table 28 of point 379 of the Decision and by the spot price for that commodity;
– the absolute amount of the matched position between two maturity bands for each maturity band to which the unmatched position from the previous maturity band is carried forward, multiplied by 0.6% carry rate and by the spot price for that commodity;
– the absolute amount of the residual unmatched position multiplied by 15% and by the spot price for that commodity.

The capital requirement for commodity risk under the Ladder Approach shall be calculated as the sum of capital requirements for each commodity calculated in accordance with paragraph 1 above and multiplied by 1.5.

Section 5

Treatment of options

383. For the purposes of calculating initial capital requirements for position risks, positions in trading book options shall include debt securities and equities options, stock indices, forwards, futures, swaps and interest rate options.

For the purposes of calculating capital requirements for foreign exchange risk, trading book and banking book positions shall include currency options, gold options and options on foreign currency forwards, futures, swaps and gold.

For the purposes of calculating capital requirements for commodity risk, trading book or banking book positions shall include commodity options, options on commodity forwards, futures and swaps.

The provisions of paragraphs 1 to 3 of this point also apply to embedded options, securities similar to options - warrants, cap options, floor options, simultaneous purchase (put options) and sale (call options) –the collar, as well as all other financial instruments with non-linear risk.

384. For the calculation of capital requirements for position risks, foreign exchange risk and commodity risk the bank shall use the Simplified Method only when purchasing options. When a bank has a position in written options, it shall calculate capital requirements for these risks by applying the delta plus method. Exceptionally, if the bank has a small position in a written option which is completely hedged by the identical position in a purchased option, they shall be excluded from the calculation of capital requirements for position risks, foreign exchange risk and commodity risk. The size of the position shall be viewed individually for each risk.

By way of derogation from paragraph 1 above, capital requirements for position risks, foreign exchange risk and commodity risk from positions in options may be calculated using the internal models in accordance with point 391 of this Decision.

The capital requirement for position risks, foreign exchange risk and commodity risk equals the amount of the requirement calculated according to methods set out in paragraphs 1 or 2 above and multiplied by 1.5.

1. Simplified Method

385. For purchased call or put options, the capital requirement shall be the lower of:

– the market value of the underlying security, commodity or foreign currency, where in the case of securities options the market value is multiplied by the sum of specific and general risks weights, for currency options this value is multiplied by 8% and by 15% in the case of commodity options, or
– the market value of the option.

For positions which are a combination of purchased put options and long position in the underlying, or for positions which are a combination of purchased call options and short positions in the underlying, the capital requirement shall be the market value of the underlying multiplied by adequate weights less the amount for which the option is in the money. For securities options the market value of the underlying shall be multiplied by the sum of specific and general risk weights, for currency option it shall be multiplied by 8% and for commodity options by 15%.

2. Delta Plus Method

386. When calculating capital requirements for position, foreign exchange and commodity risk, the bank shall treat positions in options as a combination of notional long and short positions, or it shall break them down to positions in the underlying securities, commodities or foreign currencies. Positions in these securities, commodities or foreign currencies multiplied by the option delta coefficient shall be the delta weighted value of the option.

The option delta (δ) is a percentage of a change in an option price arising from a small (incremental) price change of the underlying instrument:

δ = δ of option price / δ of price of the underlying instrument,

where:

δ = first partial derivative of the function of the option price with respect to the price of the underlying instrument.

For exchange-traded options the bank shall use the delta coefficient calculated by that exchange. For over-the-counter options, the bank shall use

delta coefficient calculated by using its own internal model in accordance with point 391 hereof.

By way of derogation from paragraph 3 above, the National Bank of Serbia may define delta coefficients for certain instruments.

387. Delta-weighted value of the position in a security, commodity of foreign currency shall be included in the calculation of capital requirements for position, foreign exchange and commodity risk as follows:

– purchased call options as long positions;
– written call options as short positions;
– purchased put options as short positions;
– written put options as long positions.

Delta value of the position in a security, commodity of foreign currency may be offset against the opposite position in identical security, commodity or foreign currency. Net positions calculated in this manner shall be included in the calculation of capital requirements for position, commodity of foreign currency risk.

388. In addition to capital requirement referred to in point 386 hereof, the bank shall calculate additional capital requirement for the gamma risk and vega risk on options.

Within the meaning of this Decision, gamma risk (γ) is the sensitivity parameter that expresses the rate of change of the option's delta for small changes in the price of underlying securities, commodities or foreign currency, and vega risk (Λ) is a sensitivity parameter that measures the sensitivity of option price to small changes in the volatility of prices of underlying securities, commodities or foreign currency.

For exchange-traded options the bank shall use gamma and vega coefficients calculated by that exchange. For over-the-counter options, the bank shall use the coefficients calculated by using the internal model in accordance with point 391 hereof.

In order to calculate capital requirement for gamma and vega risk of the overall options positions, individual option positions shall be grouped by risk categories. The bank may offset gamma and vega effects of individual positions only within an individual risk category, which shall be the following:

– each individual currency pair and gold – for foreign currency or gold options;

– each national market – for options on equity instruments (where an equity instrument is listed at several national markets, the reference market shall be determined according to the country where the issuer has its registered office);

– each maturity band (according to the maturity-based approach), or each zone (according to the duration-based approach) – for options on debt securities and interest rate options;

– each commodity – for commodity options.

a) Capital requirement for gamma risk of options

389. For the purposes of calculating the capital requirement for gamma risk of the overall option positions, the bank shall calculate the gamma effect for each individual option by approximating the option price with a Taylor series:

$$\mathrm{gamma\ effect} = \frac{1}{2}\mathrm{gamma} \times N \times (\Delta B)^2,$$

where:

gamma = the second partial derivative of the function of the option price with respect to the price of the underlying instrument,
N = number of the underlying instruments,
ΔB = the variation of the underlying instrument price.

The variation of the underlying instrument price (ΔB) shall be calculated as follows:

1) for options on debt securities and interest rates - the market value of the underlying instrument shall be multiplied by the appropriate weights laid down in Table 25 from point 348 of this Decision or with the appropriate interest rate change laid down in Table 26 in point 351 of this Decision, depending on the approach used by the bank;

2) for options on equity instruments - the market value of the underlying instrument shall be multiplied by 8%;

3) for options on foreign currency or gold options - the market value of the underlying instrument shall be multiplied by 8%;

4) for commodity options - the market value of the underlying commodity is multiplied by 15%.

For the purpose of calculating capital requirement for gamma risk of the overall option positions, individual gamma effects shall be summed up for each risk category. Thus obtained net gamma effects for each individual risk

category may be positive or negative. The sum of absolute values of all negative net gamma effects by each risk category represents the capital requirement for gamma risk of the overall option position.

b) Capital requirement for vega risk of options

390. For the purposes of calculating the capital requirement for vega risk of the overall option positions, the bank shall calculate the vega effect for each individual option by approximating the option price with a Taylor series:

$$\mathbf{vegaeffect} = vega \times \mathbf{N} \times \frac{\mathbf{volatility}}{\mathbf{4}},$$

where:

vega = the first partial derivative of the function of option price with respect to the price volatility of the underlying instrument,
N = number of the underlying instruments.

For the purposes of calculating vega effects the assumed change in volatility is one quarter of current volatility (+/-25%).

For the purposes of calculating the capital requirement for vega risk of the overall option positions, individual vega effects shall be summed up for each risk category. Thus obtained net vega effects for each individual risk category may be positive or negative. The sum of absolute values of all negative net vega effects by each risk category represents the capital requirement for vega risk of the overall option position.

c) Internal models for the calculation of delta, gamma and vega coefficients

391. For the purposes of calculating the delta, gamma and vega coefficients, the bank may use its own internal model subject to the prior approval of the National Bank of Serbia. The approval shall be granted if the bank demonstrates that it has established a reliable and adequate risk management system which is implemented with integrity and that the qualitative standards referred to in point 394 of this Decision have been met.

For the purposes of obtaining approval referred to in paragraph 1 of this point, the bank shall submit the following documentation to the National Bank of Serbia:

– general information on the internal option pricing model and the internal act regulating the option trading strategy, mitigation techniques for option related risks, as well as the planned option trading volume;

– documentation verifying compliance with the qualitative standards referred to in point 394 of this Decision;

– specification and verification of assumptions used in the internal option pricing model;

– description of the method for assessment of the parameters of the internal option pricing model.

The bank that has been granted the approval specified in paragraph 1 above shall use the internal option pricing model on an ongoing basis.

If the bank which has been granted the approval referred to in paragraph 1 above ceases to comply with the conditions set out in that paragraph, it shall promptly notify the National Bank of Serbia and either submit a plan for a timely return to compliance or demonstrate that the effect of non-compliance is immaterial. If the bank has submitted the plan under this paragraph, it shall notify the National Bank of Serbia of its compliance with the specified conditions within the planned timeframe.

The National Bank of Serbia may withdraw the approval specified in paragraph 1 of this point if it establishes that the bank ceased to comply with the conditions set out in this point and the effects of non-compliance are material, if it failed to submit the plan specified in paragraph 4 of this point, if the submitted plan is inadequate or if its actions are not in compliance with the plan.

Section 6

Internal Model Approach

392. For the purposes of calculating the capital requirement for position risks, foreign exchange risk and commodity risk, the bank may use the Internal Model Approach or a combination of this approach and methods set out in Parts 2 to 5 of this Chapter, if it obtained the prior permission of the National Bank of Serbia.

The bank may use a combination of approaches specified in paragraph 1 above only for different types of risks, whereas only one approach shall be allowed for the calculation of capital requirement for individual risks.

The bank using a combination of approaches referred to in paragraph 1 above shall calculate the overall capital requirement for position risks, foreign exchange risk and commodity risk as the sum of capital requirements

calculated in accordance with Sections 2, 3, 4 or 5 of this Chapter and the capital requirement calculated by using the Internal Models.

1. Conditions for the use of the Internal Model Approach

393. The bank may use the Internal Models Approach for the calculation of capital requirements for position risks, foreign exchange risk and commodity risk or the combination of internal models approaches and approaches set out in Sections 2 to 5 of this Chapter, if it meets the following requirements:

– qualitative standards referred to in points from 394 to 396 of this Decision;
– quantitative standards referred to in point 397 of this Decision;
– additional requirements set out in point 398 of this Decision if it intends to use the Internal Models Approach for specific position risk,
– internal model verification and the back-testing programme are conducted in accordance with the provisions of points 399 and 400 of this Decision.

a) Qualitative standards

394. The bank that wishes to use the Internal Models Approach in accordance with point 392 of this Decision shall establish a reliable and adequate risk management system and implement it with integrity, and shall meet the following general qualitative standards:

1) the internal risk-measurement model is closely integrated into the daily risk management process of the bank and serves as the basis for reporting existing and potential risk exposures to the executive board;
2) the bank has an independent unit which reports directly to the executive board and which is responsible for managing market risk, in particular:
– for designing and implementing the part of the bank's risk management system related to market risks,
– for producing and analyzing daily reports on the output of the internal risk-measurement model and on the appropriate measures to be taken in terms of trading limits,
– for conducting the initial and on-going validation of the internal model;
3) the bank’s board of directors and executive board are actively involved in the risk-control process. Daily reports produced by the risk management unit referred to under item 2) above are analysed by the management level which has sufficient authority to enforce both limitations

and reductions of open positions taken by individual traders, as well as of the bank's overall risk exposure;

4) the bank has sufficient number of professional staff skilled in the use of sophisticated models for arranging market transactions, managing market risks, transaction bookkeeping and auditing;

5) the bank has established procedures for monitoring and ensuring compliance with internal bylaws and controls concerning the overall operation of the risk-measurement system;

6) the bank has documentation regarding the reliability and accuracy of the applied internal risk-measuring model;

7) the bank conducts a programme of stress-testing on an ongoing basis and the results of these tests are reviewed by the executive board of the bank and are reflected in the bank's trading limits and internal bylaws;

8) organizational unit specified in item 2) of this paragraph conducts back-testing of the internal risk-measuring model on an ongoing basis;

9) at least once a year, the bank shall conduct a review of its overall market risk-management process, which includes both the activities of the business trading unit and the unit specified in item 2) of this paragraph, in particular the review of the following:

– the adequacy of the documentation on the risk-management process,

– the process and the organisation of the unit specified in item 2) of this paragraph,

– integration of the results of internal market risk measuring model into daily risk-management and the integrity of the management reporting system,

– the process employed by the bank for approving risk-pricing models and valuations systems that are used by the organizational unit responsible for business trading, the unit referred to in item 2) of this paragraph, and the back office unit,

– the comprehensiveness of the market risk-measurement models and the appropriateness of validation of any significant changes in the risk-measurement process,

– the accuracy and completeness of position data, the accuracy and appropriateness of volatility and correlation assumptions, and the accuracy of valuation and risk sensitivity calculations,

– the verification process the bank employs to evaluate to consistency, timeliness and reliability of data sources used in the Internal Model, including the independence of such data sources;

– the process the bank uses to review the back-testing that is conducted to assess the model.

The stress-testing process referred to in item 7) of paragraph 1 of this point shall address illiquidity of markets in stressed market conditions, concentration risk, one way markets, event and jump-to-default risks, non-

linearity of products, deep out-of-the-money positions, positions subject to the gapping of prices and other risks that may not be captured appropriately in the Internal Model. Stress-testing conducted by the bank shall reflect the nature of the portfolio and the time it could take the bank to hedge out or manage risks under severe market conditions.

395. The bank shall improve the Internal Model in accordance with the model's market development and good business practice.

The bank's Internal Model shall include all materially significant risks related to options and option-like instruments (non-linear risks). All risks not captured by the Internal Model shall be covered adequately with the bank's own funds.

The Internal Model used by the bank shall capture a sufficient number of risk factors, depending on the level of activity of the institution in the different markets, in particular:

1) for interest rate risk: a set of risk factors corresponding to interest rates in each currency in which the bank has interest rate sensitive on- or off-balance sheet positions. The bank shall model the yield curves using one of the generally accepted approaches and for material exposures to interest rate risk in the major currencies and markets, the yield curve shall be divided into a minimum of six maturity segments, to capture the variations of volatility of rates along the yield curve (Internal Model also captures the risk of less than perfectly correlated movements between different yield curves, i.e. correlation coefficient is less than 1);

2) for foreign exchange risk: risk factors corresponding to gold and to the individual foreign currencies in which the bank's positions are denominated and actual foreign exchange positions in investment units. The bank may rely on third party reporting of the investment fund's currency structure provided that the correctness of this report is adequately ensured, and if it cannot determine this structure, the bank shall treat these positions in accordance with point 366 of this Decision;

3) for equity risk: one risk factor at least for each of the national equity markets in which the bank holds significant positions;

4) for commodity risk: a separate risk factor at least for each commodity in which the bank holds significant positions. The Internal Model shall also capture the risk of less than perfectly correlated movements between similar commodities and the exposure to changes in forward prices arising from maturity mismatches. The model shall also take account of market characteristics, notably delivery dates and market limitations provided to traders authorized for transactions.

396. The bank may use empirical correlations within risk categories and across risk categories if its system for measuring correlations is reliable and comprehensive.

b) Quantitative standards

397. A bank that wishes to use the Internal Models Approach in accordance with point 392 hereof shall have to demonstrate that the calculation of the value-at-risk measure is subject to the following quantitative standards:

– at least daily calculation of the value-at-risk measure;
– a one-tailed confidence interval of 99%;
– a 10-day equivalent holding period (when calculating the VaR the bank shall use factors that reflect price volatility over a 10-day period);
– an effective historical observation period of at least one year is used for the VaR calculation, except where a shorter observation period is justified by a significant upsurge in price volatility; and
– three-monthly data set updates.

c) Additional requirements for specific position risk

398. Where the bank intends to use the Internal Models Approach for specific position risk associated with traded debt and equity positions, it shall ensure that the Internal Model meets the following requirements:
– it explains the historical price variation in the portfolio;
– it captures concentration in terms of magnitude and changes of composition of the portfolio – it operates in adverse environment;
– it is validated through back-testing aimed at assessing whether specific position risk is being accurately captured;
– it captures name-related basis risk, that is, the Internal Model is sensitive to material idiosyncratic differences between similar positions;
– it captures event risk.

In addition to the requirements set out in paragraph 1 above, the Bank shall also comply with the following conditions:

– where a bank is subject to event risk that is not reflected in its VaR measure because it is beyond the 10-day holding period and the 99% confidence interval, it shall ensure that the impact of such events is factored into its internal capital assessment;
– the bank’s Internal Model shall conservatively assess the risk arising from less liquid positions and positions with limited price transparency in regular market conditions;

– the Internal Model of the bank shall meet minimum data quality standards, and the assumed values shall be conservative and may be used by the bank only where available market data is insufficient or is not reflective of the true volatility of a position or portfolio.

In addition to the requirements specified in paragraphs 1 and 2 of this point, the bank shall have a method in place to capture, in the calculation of its capital requirements, the incremental risk of its trading book positions, which has not been incorporated into the value-at-risk measure. Where the bank calculates the capital requirement for this risk, it shall have in place the assessment methodology for that risk.

The bank shall ensure that the incremental risk referred to in paragraph 3 above is captured in compliance with the provisions of Section 2 of Chapter IV of this Decision, under the assumption of a constant level of risk, and adjusted where appropriate to reflect the impact of liquidity, concentrations, hedging and optionality.

The bank that has not established a model to include incremental risk set out in paragraph 3 above in the capital requirement calculation, shall calculate the surcharge using approach comparable to the approach set out in Sections1 or 2 of Chapter IV of this Decision.

d) Internal model validation and back-testing

399. The purpose of the Internal Model validation is to ensure that it is reliable and that it captures all material risks.

The bank shall ensure that the Internal Model validation process is performed by appropriately skilled and experienced bank employees who did not participate in the design and development of this model.

The validation shall be conducted when the Internal Model is initially developed and when any significant changes are made to it. The validation shall also be conducted on a periodic basis, especially where there have been any significant structural changes in the market or changes to the composition of the portfolio.

Internal Model validation shall include at least the following:

– tests to demonstrate that any assumptions made within the Internal Model are appropriate and that their inclusion in the model ensures accurate risk assessment (they do not underestimate or overestimate the risk);

– back-testing which corresponds to the structure and risks of the portfolio;

– the use of hypothetical portfolios to verify that the Internal Model accounts for potential structural changes to the portfolio (for example, basis risks and concentration risk).

400. For the purpose of continuous monitoring of the Internal model's accuracy, the bank shall be conducting a back-testing programme, which has to provide for each working day a comparison of the one-day value-at-risk measure generated by the bank's model for the portfolio's end-of-day positions to the one-day change of the portfolio's value by the end of the previous and/or subsequent working day.

The bank shall perform back-testing on both actual changes (excluding fees, commissions and net interest income) and hypothetical changes in the portfolio. Back testing on hypothetical changes in the portfolio shall be conducted by comparing the portfolio's end-of-day value and its value at the end of the subsequent day, assuming its structure is unchanged.

If during the supervision of safety and soundness and legal compliance of activities of the bank the National Bank of Serbia establishes any inadequacies in the back-testing programme, the bank shall promptly undertake appropriate measures to improve the back-testing programme.

2. Calculation of capital requirement

401. The capital requirements for position risk, foreign exchange and commodities risk calculated by using the Internal Models Approach shall be the result of the coefficient 1.5 multiplied by the higher of the following values:

– its value-at-risk measure calculated by the end of the previous working day increased, if appropriate, by capital requirement for the risk under point 398, paragraph 3 hereof, or

– an average of the daily value-at-risk measures on each of the preceding 60 business days, multiplied by the factor of at least 3 increased by a plus-factor in accordance with Table 29 below, if appropriate increased by the capital surcharge specified in point 398, paragraph 3 hereof.

The multiplication factor multiplied by the average VaR referred to in the second indent of paragraph 1 above, shall be increased by a plus-factor depending on the number of overshootings for the most recent 250 business days as evidenced by the bank's back-testing, in accordance with the following table (Table 29):

Table 29

Zone	Number of overshootings	Plus-factor
Green	0	0.00
	1	0.00
	2	0.00
	3	0.00
	4	0.00
Yellow	5	0.40
	6	0.50
	7	0.65
	8	0.75
	9	0.85
Red	10 or more	1.00

For the purposes of calculating the number of overshootings, the bank may use back-testing based either on actual or on hypothetical changes in the portfolio.

Within the meaning of this point, 'overshooting' means a one-day change in the portfolio's value which exceeds the related one-day value-at-risk measure generated by the bank’s Internal Model.

For the purposes of determining the factor specified in paragraph 2 of this point, the number of overshootings shall be assessed at least quarterly.

402. Within five working days from the back-testing, the bank shall notify the National Bank of Serbia of the overshootings referred to in point 401 above, which lead to an increase of a plus-factor.

If the number of overshootings referred to in paragraph 1 above exceeds 10 (red zone), the National Bank of Serbia may, if it estimates that the Internal Model in no longer appropriate, revoke the model's approval or impose appropriate measures to insure that the irregularities are removed and the model is improved.

3. Approval of the National Bank of Serbia for the use of the Internal Models Approach

403. For the purposes of obtaining the approval for the use of the Internal Model Approach, the bank shall submit to the National Bank of Serbia the following documentation:

– general information regarding the use of this approach or combination of approaches from point 392, paragraph 1 of this Decision;

– documentation verifying compliance with qualitative standards specified in points 394 and 395 of the Decision;

– documentation verifying compliance with the quantitative standards referred to in point 397 of this Decision;

– documentation verifying compliance with additional requirements set out in point 398 of this Decision, if the bank intends to use the Internal Models Approach for specific position risk;

– documentation verifying compliance with the requirements for model validation and back-testing specified in points 399 and 400 of this Decision.

The National Bank of Serbia shall decide on the application for approval referred to in paragraph 1 above within six months from the day of receiving such application.

The bank that intends to use empirical correlations in accordance with point 396 of this Decision shall, in addition to the information and documentation set out in paragraph 1 of this point, provide documentation evidencing that its system for measuring correlations is reliable and comprehensive.

The bank that has been granted the approval specified in paragraph 1 above, shall ensure continuous compliance with the conditions set forth therein.

In the approval process for the use of the Internal Model Approach for the calculation of capital requirements for position risks, foreign exchange risk and commodities risk, the National bank of Serbia shall lay down whether the bank may use, in accordance with point 396 of this Decision, empirical correlations within one risk category and across risk categories, whether it is allowed to use a combination of internal model approaches specified in paragraph 1 of point 392 of the Decision, and which combination can be used.

If the bank which has been granted the approval referred to in paragraph 1 above ceases to comply with the conditions set out in that paragraph, it shall promptly notify the National Bank of Serbia and either submit a plan for a timely return to compliance or demonstrate that the effect of non-compliance is immaterial. If the bank has submitted the plan under this paragraph, it shall notify the National Bank of Serbia of its compliance with the conditions specified within the planned timeframe.

If the bank no longer intends to use empirical correlations, or when it intends to change the combination of approaches referred to in paragraph 4 above, it shall promptly notify the National Bank of Serbia thereof and submit a request to change the existing approval, or to grant a new one.

If the bank has been granted the approval of the National Bank of Serbia for the use of the Internal Model Approach or their combination referred to in point 392, paragraph 1 of this Decision, if duly justified, it may move to the application of approaches set out in Sections 2, 3, 4 or 5 of this Chapter only with the prior approval of the National Bank of Serbia. For the purposes of obtaining the approval, the bank shall provide the National Bank of Serbia with the documentation justifying the validity of the decision to stop using the Internal Models Approach for all or certain types of market risks.

4. Withdrawal of approval for the use of the Internal Models Approach

404. The National Bank of Serbia may withdraw the approval for the use of the Internal Model Approach or the combination of those approaches referred to in point 392, paragraph 1 of this Decision if it determines that the bank ceased to comply with the conditions set out in paragraph 403 thereof and the effects of non-compliance are material, if it failed to submit the plan specified in paragraph 5 of this point, if the submitted plan is inadequate or if its actions are not in compliance with the plan, and if the number of overshootings referred to in point 401 of the Decision makes the model inadequate.

If the National Bank of Serbia withdraws the approval referred to in paragraph 1 above, the bank shall calculate capital requirements for position risks, foreign exchange risk and commodity risk in line with the approaches defined in Sections 2 to 5 of this Chapter.

C h a p t e r VI

CAPITAL REQUIREMENT FOR OPERATIONAL RISK

405. The bank shall calculate capital requirement for operational risk by using one of the following approaches:

1) Basic Indicator Approach,
2) Standardized Approach,
3) Advanced Approach, subject to the prior approval of the National Bank of Serbia.

By way of derogation from paragraph 1 above, subject to the prior approval of the National Bank of Serbia, the bank may calculate capital requirement for operational risk by using one of the following combination of approaches:

1) Advanced and Standardized Approach,
2) Advanced and Basic Indicator Approach,
3) Standardized and Basic Indicator Approach.

406. A bank using the Standardized or the Advanced Approach may move to another approach or a combination of approaches only if previously approved so by the National Bank of Serbia. The request for the change shall be accompanied by relevant documentation justifying its validity.

When the decision on approval referred to in paragraph 1 above has been submitted to the bank, the previously obtained approval for the use of an approach ceases to be valid.

In the decision under paragraph 2 of this point, the National Bank of Serbia shall specify the timeframe for transition to the newly approved approach.

If in the course of supervision of safety and soundness and legal compliance of activities of the bank the National Bank of Serbia establishes that the bank is no longer meeting the requirements for the use of the Standardized Approach, it may require the bank to start using the Basic Indicator Approach in all or in certain parts of its business operations.

If in the course of supervision of safety and soundness and legal compliance of activities of the bank the National Bank of Serbia establishes that the bank no longer meets the requirements for the use of the approved Advanced Approach, it may fully or partially withdraw the approval and require the bank to start using the Standardized Approach or the Basic Indicator Approach in all or in certain parts of its business operations.

Section 1

Basic Indicator Approach

407. Under the Basic Indicator Approach, the capital requirement for operational risk shall be equal to a three-year average exposure indicator multiplied by a 15% rate of capital requirement.

The average of the last three exposure indicators from paragraph 1 above shall be calculated as the arithmetic mean of the indicator values for

the previous three years. If any of the last three indicators was negative or equal to zero, it shall not be taken into account in the calculation of the three-year average. The three-year average shall be calculated as the ratio of the sum of positive indicator values and the number of years in which those values were realized.

The exposure indicator referred to in paragraph 1 above shall be calculated as the sum of net interest income and net non-interest income, based on the following items:

– interest income and expense,
– income from dividends and equity investments,
– income and expenses from fees and commissions,
– gains and losses from the sale of securities,
– income and expenses from revaluation of assets and liabilities,
– foreign exchange gains and losses,
– other operating income.

The bank shall not include the following elements in the calculation of the exposure indicator:

– expenditures from indirect write-off of placements,
– provision for off-balance sheet positions,
– other operating expenses,
– unrealized gains/losses on financial assets not held for trading,
– other income not arising from regular operations of the bank (e.g. income arising from insurance)

Costs arising from outsourcing operations to third parties that are not affiliated with the bank shall be regarded as other operating expenses. Banks are not required to include the costs arising from outsourcing operations to third parties in the calculation of the indicator of exposure, if the regulations governing the operation of such persons and the supervision of such operations are aligned with relevant regulations of the European Union.

The bank shall calculate the exposure indicator based on audited annual financial statements, and if such statements have not been audited, the bank may also use data from the unaudited financial statements for that year.

Section 2

Standardized Approach

408. A bank using the Standardized Approach for the calculation of capital requirement for operational risk shall meet the following criteria:

1) it shall have a well-documented operational risk management system within the risk management system, with clearly defined responsibilities;
2) it shall identify bank’s exposures to operational risk and collect relevant operational risk data, including material loss data;
3) it shall make sure that the operational risk management system is subject to regular internal or external audits;
4) the operational risk assessment process must be closely integrated into the risk management system and its output must be an integral part of the process of monitoring and controlling the bank's operational risk profile;
5) the bank has an established reporting system which supports the management and the employees involved in the risk management process in the decision making process, and it has adopted procedures for undertaking necessary actions on the basis of obtained information.

A bank which intends to use the Standardized Approach for calculating capital requirements for operational risk shall notify the National Bank of Serbia accordingly and not later than 15 days prior to the application of this approach. The following documentation shall be supplied:

– the overview of the organizational structure of the bank with a clearly defined scope of activities of the organizational unit which is managing this risk and defined responsibilities within the organizational unit;
– the documentation evidencing compliance with the criteria set out in paragraph 1 of this point;
– the description of own operational risk assessment process;
– the external or internal audit report on the adequacy of the process for managing this risk.

The bank shall submit to the National Bank of Serbia the documentation listed in paragraph 2 above at least annually.

409. For the purposes of calculating capital requirement under the Standardized Approach, the bank shall divide its activities into a number of business lines as set out in Table 30 and calculate the exposure indicator for each business line in the manner set out in point 407, paragraphs 3 to 6 of this Decision:

Table 30

Business line mapping

Business line	Business activities	Capital requirement rate
Corporate financing	Underwriting of financial instruments	18%
	Services related to underwriting	
	Investment advice	
	Consulting on capital structure, industrial strategy and related matters and advice relating to acquisition of shares and holdings in other undertakings and other significant investments	
	Investment research and financial analysis and other forms of consulting services relating to transactions in financial instruments	
Trading and sales	Dealing on own account	18%
	Brokerage	
	Reception and transmission of orders in relation to one or more financial instruments	
	Execution of orders on behalf of clients	
	Placing of financial instruments without firm commitment basis	
	Multilateral trading facility management	
Retail brokerage (including entrepreneurs, agricultural producers, small and medium-sized enterprises which meet the conditions set out in point 49 hereof)	Reception and transmission of orders in relation to one or more financial instruments	12%
	Execution of orders on behalf of clients	
	Placing of financial instruments without firm commitment basis	
Corporate banking	Acceptance of deposits and other repayable funds	15%
	Lending	
	Financial leasing in accordance with provisions of a separate law	
	Issuing of guarantees and other commitments	
Retail banking (including entrepreneurs, agricultural producers, small and medium-sized enterprises which meet the conditions set out in point 49 hereof)	Acceptance of deposits and other repayable funds	12%
	Lending	
	Financial leasing in accordance with provisions of a separate law	
	Issuing of guarantees and other commitments	
Payment transactions	Money transfer services	18%
	Issuing and administering payment instruments	
Agency services	Safekeeping financial instruments for the account of clients and related services, such as custodianship and cash/collateral management	15%
Asset management	Portfolio management	12%
	Management of investment funds	
	Other forms of asset management	

Under the Standardized Approach, the capital requirement for operational risk shall be equal to a three-year average of annual capital requirements for all business lines.

Annual capital requirement under paragraph 2 of this point is equal to the sum of the capital requirements for individual lines of business from that point for a given year.

The capital requirement for individual business lines from paragraph 3 of this point shall be calculated by multiplying the exposure indicator calculated for that business line by the corresponding capital requirement rate specified in Table 30.

Where the capital requirement for any individual business line is negative, these requirements (with a negative sign) shall be included in the calculation of annual capital requirement referred to in paragraph 2 above.

The three-year average of annual capital requirements from paragraph 2 is the arithmetic mean of those requirements. Where the annual capital requirement for a given year is negative, the input to the calculation of the three-year average for that year shall include a zero instead of a negative figure and a three-year average divided by three.

410. The bank shall establish policies, procedures and criteria for calculating the exposure indicator in its internal acts, as well as for mapping individual business activities into business lines. It shall also adjust these criteria to new or changed business conditions.

Basic principles of the mapping referred to in paragraph 1 above shall include the following:

1) all activities must be mapped into business lines in a mutually exclusive and comprehensive manner;

2) any activity which cannot be readily mapped into a business line and is an ancillary business activity to the core business under some of the specified business lines, shall be allocated to the business line it supports. If activities in more than one business line are supported through the ancillary activity, objective mapping criteria shall be used in accordance with the bank’s internal acts;

3) if an activity cannot be mapped into any particular business line, this and all its ancillary activities shall be mapped into the business line with the highest capital requirement;

4) bank may use internal pricing methods to allocate the exposure indicator between business lines. Costs generated in one business line which

refer to another business line shall be attributed to that second line (for instance, based on internal transfer costs between the two business lines);

5) the mapping of business activities into relevant business lines shall in form and in essence be consistent with relevant provisions of this Decision relating to credit and market risks.

The bank's board of directors is responsible for adopting and supervising the implementation of the policy related to the mapping of business activities into business lines, and the executive board is responsible for policy implementation.

The bank shall ensure that the process of mapping business activites into business lines is subject to internal or external audits.

Section 3

Advanced Measurement Approach

1. Requirements for the use of the Advanced Measurement Approach

411. The bank shall calculate capital requirement for operational risk using the Advanced Measurement Approach based on the internal model for measuring this risk.

Qualitative standards for the use of the Advanced Measurement Approach include following:

– bank shall set up a well-documented operational risk management system;

– bank shall ensure its operational risk measurements to be fully integrated into day-to-day risk management processes;

– the bank shall establish an independent risk management function for operational risk, that is a separate organizational unit responsible for managing this risk;

– there shall be regular reporting of operational risk exposures and losses. The bank shall also have procedures for taking appropriate corrective actions on the basis of information received;

– external or internal audit notification with regard to the adequacy of the proposed operational risk management.

Quantitative standards for the use of the Advanced Measurement Approach refer to:

1) operational risk measurement and model for the calculation of capital requirement,

2) internal data,
3) external data,
4) scenario analysis,
5) factors reflecting the business environment and the internal control system**.**

412. The bank shall ensure that the measurement of operational risk is adequate, especially taking into account the verification and validation of the reliability of this measurement, as well as transparency and accessibility of data related to the measurement.

Bank shall calculate its capital requirement for operational risk as comprising both expected loss and unexpected loss. If this expected loss has already been adequately captured in its internal business practices, the bank may exclude it from the calculation. The operational risk measurement shall also include events that are unlikely to occur but could cause great material losses, with a 99,9 % confidence interval over a one year period.

The bank shall ensure that the operational risk measurement system contains key elements to meet the adequacy criterion set out in paragraph 1 above. Key elements of operational risk measurement are internal data, external data, scenario analysis, factors reflecting the business environment, internal controls system. The bank shall have a well-documented approach for assigning weights for the use of these elements in the measurement.

The bank shall ensure that the risk measurement system captures the major drivers of risk affecting the relationship between frequency of the event and the value of exposure arising from these events which are unlikely to occur but could cause great material losses (i.e. the shape of the tail of the loss estimates).

413. The bank’s operational risk measurement system shall take into account correlations in operational risk loss across individual operational risk estimates only if the measuring of correlations is sound and implemented with integrity, and if it takes into account the uncertainty surrounding any such correlation estimates, particularly in periods of stress. The bank shall validate its correlation assumptions using appropriate qualitative and quantitative techniques.

A bank shall include operational risk measurement, as an integral part of a unique system managing that risk, in the risk management system, and shall avoid the multiple uses of qualitative assessments or risk mitigation techniques recognised for the calculation of capital adequacy.

414. A bank shall measure its operational risk based on a minimum historical observation period of five years. When a bank first moves to an Advanced Measurement Approach, at least a three-year historical observation period is acceptable.

The bank shall be able to map its historical internal loss data into business lines defined in points 409 and 410 of the Decision and into the event types defined in the following table (Table 31):

Table 31

Event type classification

Event-type category	Definition
Internal frauds	Losses arising from activities of bank employees with the intent of fraud, embezzlement, misappropriation of bank property and other illicit property gain due to violation of regulations or internal acts of the bank
External frauds	Losses arising from activities conducted with the intent of fraud, misappropriation of property, violation of regulations by a third party outside the bank
Employment practices and work-place safety	Losses arising from violation of law or contracts regulating labour relations, employment, health and social care or safety at work; losses arising from payment of personal injury claims or from discrimination events
Clients, products and business practices	Losses arising from unintentional or negligent failure to meet professional obligations towards clients, or from the nature or design of a product
Damage to physical assets	Losses arising from damaged physical assets due to force majeure (e.g. natural disaster) or other events
Business disruption and system failures	Losses arising from business disruptions or system errors
Transaction execution, delivery and process management	Losses arising from failed transactions or unsound process management, from relations with business partners and service providers

The National Bank of Serbia may require the bank to supply data mapped as specified in paragraph 2 above.

The bank may map events causing losses arising from operational risks at the bank level into the additional business line named “corporate items” and establish procedures for objective mapping of losses by event types.

415. Internal data on the operational risk losses that are related to credit risk and have historically been included in the internal credit risk databases shall be recorded in the operational risk databases and be separately identified. If these losses have been captured in the calculation of credit risk

capital requirement, the bank shall not use them for the purposes of calculating the capital requirement for operational risk.

A bank shall include operational risk losses that are related to market risk in the scope of the capital requirement for operational risk, and not in the scope of the capital requirement for market risks.

A bank shall make sure that its internal loss data capture all materially significant activities and exposures, though some activities and/or exposures may be excluded if the bank is able to document that the excluded activities or exposures, both individually and in combination, would not have a significant impact on the overall risk estimates. The bank shall also make sure that appropriate minimum significance threshold (amount of money) for the collection of those data is defined.

Aside from information on gross loss amounts (without fees from insurance and other risk transfer mechanisms), within the process of collecting internal data the bank shall collect the following:

– the date of the event (where it cannot be determined, the date when the event was established or the loss was recorded in the business books); – any recoveries of gross loss amount;
– the descriptive information about the causes of the loss event.

The bank shall specify the criteria for allocating data regarding losses arising from activities that span over more than one business line or events in centralised functions, as well as from related events over time.

The bank shall establish and implement procedures for assessing the relevance of historical loss data which should include any changes, adjustments and exceptions in the process of internal data collection, as well as the responsibility for implementing these procedures.

416. Bank’s operational risk measurement system shall make use of relevant external operational risk loss data, especially when there is a reason to believe that the bank is exposed to events that are unlikely to occur, but could cause severe material losses.

The bank shall have procedures for determining the conditions for the use of external data, which includes designing the methodology for their incorporation in the operational risk measurement system. The use of external data shall be properly documented and regularly reviewed, and it shall be subject to annual internal or external audits.

417. When measuring operational risk, the bank shall also use scenario analysis which is based on the opinions of bank employees who have appropriate professional knowledge and experience, in order to assess its exposure to risk events that are unlikely to occur, but could cause severe material losses. Over time, such assessments need to be reassessed and validated through comparison to actual loss experience to ensure their reliability.

418. The bank shall ensure that its operational risk measurement system captures key business environment and internal control factors that influence the bank's operational risk profile, and the choice of each factor needs to be based on experience and expert judgement of employees in the affected business areas. The choice of factors shall be properly documented and subject to internal or external audits. Bank shall regularly reassess and validate the process of capturing relevant factors and the outcomes through comparison to internal loss data and relevant external data.

The sensitivity of risk estimates to changes in the factors specified in paragraph 1 above, and the method of assigning weights to those (various) factors need to be well reasoned and documented. Operational risk measurement shall also capture potential increases in risk due to greater complexity of activities and increased business volume.

2. The impact of insurance and other risk transfer mechanisms

419. For the purposes of calculating capital requirement for operational risk, the bank may take into account the impact of insurance if the following conditions are met:

1) the insurance provider shall be duly authorized by the relevant regulatory body to provide insurance and shall have a credit assessment by a nominated credit assessment institution associated with credit quality step 3 or above belonging to the exposure to banks class, in line with the provisions of Section 1 of Chapter IV of this Decision. The provider shall not be affiliated to the bank, unless when exposure to operational risk is transferred to an independent third party (for example, the reinsurer) who meets the conditions prescribed for the insurance provider;

2) the initial term of the insurance policy shall be no less than one year;

3) for insurance policies with a residual term of less than one year, appropriate haircuts must be made reflecting the declining residual term of the policy. Insurance policies with a residual term of 90 days or less shall not be taken into account for the purposes of calculating capital requirement for operational risk;

4) the minimum notice period for cancellation of the insurance policy shall be 90 days;

5) the insurance policy shall have no exclusions or limitations related to damages, triggered by supervisory actions and measures imposed by competent or supervisory authorities. The policy shall have no provisions excluding or limiting damages in cases of bankruptcy or winding up of the bank (except in respect of events occurring after the initiation of bankruptcy or winding up proceedings), unless these limitations and exclusions are the result of fines imposed by these authorities;

6) the calculation of effects of risk mitigation must reflect the insurance coverage in a manner that is transparent in its relationship to, and consistent with the actual likelihood and impact of loss used in the determination of operational risk capital requirement.

The bank shall have in place a methodology for recognizing impacts of insurance on the calculation of capital requirements, which shall regulate the method for determining discounts and value reductions in relation to insurance impacts – in the following cases:

– the residual term of an insurance policy is less than one year;
– interest policy's cancellation terms is less than one year;
– payment is uncertain and there are mismatches in coverage of insurance policies.

When calculating the capital requirement for operational risk, the bank shall provide appropriate reasoning and shall document the impact of insurance and other transfer mechanisms.

420. The capital requirement reduction arising from the recognition of impacts of insurance and other transfer mechanisms shall not exceed 20 % of the capital requirement for operational risk calculated without taking into account those impacts.

3. Granting and withdrawing approval of the National Bank of Serbia for the use of the Advanced Measurement Approach

421. The National Bank of Serbia shall grant approval for the use of the Advanced Measurement Approach for the calculation of capital requirement for operational risk if the bank complies with the requirements specified in points 411 to 418 hereof.

For the purposes of obtaining approval referred to in paragraph 1 of this point, the bank shall submit to the National Bank of Serbia the following documentation:

– general information regarding the use of this approach and its implementation plan;

– documentation verifying compliance with the requirements specified in that paragraph;

– overview of the use of insurance and other risk transfer mechanisms to reduce the bank's exposure to operational risk;

– own assessment of readiness to implement the Advanced Measurement Approach.

Where the National Bank of Serbia grants approval for the use of the Advanced Measurement Approach for calculating capital requirements for operational risk on a consolidated basis to a bank and its subsidiary which belong to a banking group that is supervised on the consolidated basis by the National Bank of Serbia, or to a bank that is a member of a banking group over which it does exercise supervision (sub-consolidation) - in addition to the documentation specified in paragraph 2 of this point, the bank shall also submit the following:

– a description and explanation of methodology for allocating the capital requirement for operational risk among different entities of the group;

– an explanation of whether and how diversification effects of the use of the Advanced Measurement Approach on a group-wide basis will be factored in the operational risk measurement system.

The National Bank of Serbia shall decide on the application for approval referred to in paragraph 1 above within six months from the day of receiving such application.

The bank shall submit to the National Bank of Serbia the internal or external audit report on the adequacy of the Advanced Measurement Approach at least annually.

422. If the bank which has been granted the approval for the use of the Advanced Measurement Approach for calculating capital requirements for operational risk ceases to comply with the conditions set out in paragraphs 411 to 418 hereof, it shall either promptly present to the National Bank of Serbia a plan for a timely return to compliance or demonstrate that the effect of non-compliance is immaterial. If the bank has submitted the plan under this paragraph, it shall promptly notify the National Bank of Serbia of its compliance with the specified conditions within the planned timeframe.

The National Bank of Serbia may withdraw the approval specified in paragraph 1 of this point if it establishes that the bank ceased to comply with the conditions set out therein and the effects of non-compliance are material, if it failed to submit the plan specified in paragraph 1 of this point, if the

submitted plan is inadequate or if its actions are not in compliance with the plan.

For the purposes of calculating the capital requirement for operational risk, the bank whose approval specified in paragraph 1 above has been withdrawn by the National Bank of Serbia, shall use the Basic Indicator Approach or the Standardized Approach.

Section 4

Combination of approaches

423. For the purposes of calculating the capital requirement for operational risk, the bank which was approved by the National Bank of Serbia for the combined use of approaches shall calculate the capital requirement as the sum of individual capital requirements for operational risk calculated by using individual approaches.

424. The National Bank of Serbia may approve a bank to use the Advanced Measurement Approach in combination with the Basic Indicator Approach or the Standardized Approach, subject to the following conditions:

– all operational risks of the bank are captured by the combination;

– the operational risk management methodology appropriately covers different activities, geographical locations, organizational units or other relevant factors;

– if the criteria defined in point 408 of the Decision for activities for which the Standardized Approach is used are met, or the criteria referred to in points 411 to 418 of this Decision, for activities for which bank uses the Advanced Measurement Approach.

When granting approval referred to in paragraph 1 of this point, the National Bank of Serbia may require that, on the first day of application for the Advanced Measurement Approach, a substantial part of the bank's operational risk is to be covered by this approach, and that the Bank shall undertake obligation to transfer a material part of its business to this approach within the time schedule defined in that approval.

For the purposes of obtaining approval referred to in paragraph 1 of this point, the bank shall submit to the National Bank of Serbia the documentation evidencing the bank’s compliance with the conditions set out therein, as well as an overview of activities broken down by individual approaches.

The National Bank of Serbia shall decide on the application for approval referred to in paragraph 1 above within six months from the day of receiving such application.

The National Bank of Serbia may withdraw approval referred to in paragraph 1 above it the bank ceases to comply with the specified conditions.

425. A bank may use a combination of the Basic Indicator Approach and the Standardized Approach, subject to the prior approval of the National Bank of Serbia, only in exceptional circumstances when certain time is needed to move to the Standardized Approach (e.g. introduction of a new business activity).

When applying for the approval referred to in paragraph 1 of this point, the bank shall submit to the National Bank of Serbia the documentation evidencing the existence of exceptional circumstances and their description, as well as a plan for moving to the Standardized Approach for all business lines and organizational units.

In the Decision granting approval under paragraph 1 of this point, the National Bank of Serbia shall also specify the timeframe for transition from the combined approach to the Standardized Approach.

The National Bank of Serbia may withdraw the approval referred to in paragraph 1 above, it the bank fails to move to the Standardized Approach within the timeframe specified in paragraph 3 of that point.

C h a p t e r VII

TRANSITIONAL AND FINAL PROVISIONS

426. A bank may, up to 1 January 2018, assign a risk weight of 0% - except exposures specified in paragraph 1 of point 36 of the Decision - to all exposures to the Republic of Serbia and the National Bank of Serbia, as well as to exposures to central governments of Member States and central banks of Member States whose credit assessment is associated with credit quality step 3 or above (investment grade) and which are denominated and funded in the domestic currency of any Member State.

427. Part of the amount of required reserves for estimated losses on on-balance sheet assets and off-balance sheet items may be treated as a deduction from capital, rather than as a deduction from core capital as prescribed in point 12 of the Decision, as follows:

1) up to 31 December 2011 – 100% of the amount;
2) up to 31 December 2012 – 75% of the amount;
3) up to 31 December 2013 – 50% of the amount.

From the date of entry into force of this Decision, the bank shall test the implementation of provisions of this Decision to ensure that its business operations are fully aligned with those provisions no later than by 31 December 2011.

In accordance with the Decision on capital adequacy reporting, no later than by 20 October 2011 the bank shall submit a report to the National Bank of Serbia on the results of the test as at 30 September 2011, performed in accordance with paragraph 2 of this point.

428. The Decision on Capital Adequacy (RS Official Gazette, Nos. 129/2007 and 63/2008) shall cease to have effect on the date of the entry into force of this Decision.

429. This Decision shall enter into force on the eighth day of its publication in the “RS Official Gazette” and shall be applied as from 31 December 2011, except the provisions of points 125 to 139 of the Decision, which shall be applied as from 1 September 2011.

EB NBS no. 40
16 June 2011

Belgrade

Chairman
of the Executive Board of the National Bank of Serbia
Governor
of the National Bank of Serbia

Dejan Soskic, PhD (sgd.)