REGULATION ON MEASUREMENT AND ASSESSMENT OF CAPITAL ADEQUACY OF BANKS

SECTION ONE

Starting Provisions

PART ONE

Purpose and Scope, Grounds and Definitions

Purpose and Scope

ARTICLE 1 – (1) The purpose of this Regulation is to set down procedures and principles relating to ensuring that banks hold adequate capital on consolidated and non-consolidated basis against loses that may occur due to their exposures to risks.

Basis

ARTICLE 2 – (1) This Regulation is issued by virtue of and in reliance upon Articles 43, 45, 47 and 93 of the Banking Law no. 5411 dated 19/10/2005.

Definitions

ARTICLE 3 – (1) The terms used in this Regulation shall have the meanings designated to them below;

a) Trading Book: Including arising from client servicing and market making and including those being the subject matter of repurchase and securities lending transactions, the positions of banks in financial instruments and commodities held intentionally for short-term to do trade continuously in money and capital markets and/or with the intent of benefiting from actual or expected short-term price movements or to lock in arbitrage profits, and banks' on-balance sheet and off-balance sheet accounts and positions, where derivative financial instruments held in order to hedge or mitigate risks arising out of these trading book positions and where derivative financial instrument held for speculative

b) Parent undertaking: Parent undertaking defined in Article 3 of the Law,

c) Tier 1 Capital Adequacy Ratio: Non-consolidated basis Tier 1 capital/(risk weighted exposure amounts for credit risk + market risk + operational risk)

ç) Tier 1 capital: Tier 1 capital to be calculated according to the Regulation on Own funds of Banks published on Official Gazette dated 5/9/2013 and numbered 28756,

d) Investment firm: Investment firm defined in Article 3 of Regulation on Capital Markets dated as 6/12/2012 and numbered as 6362,

e) Minimum lease payments: Minimum lease payments defined on TMS 17 Lease Transactions Standards,

f) Bank: Banks defined in Article 3 of Law,

g) Banking book: On and off balance sheet items other than trading book,

ğ) Senior exposures: Exposures that give right on assets and revenues of obligor/issuer before any other exposure,

h) Common Equity Tier 1 capital adequacy ratio: Non-consolidated basis Common Equity Tier 1 capital/(risk weighted exposure amounts for credit risk + market risk + operational risk) ratio,

ı) Common Equity Tier 1: Common Equity Tier 1 calculated according to provisions of Regulation on Own funds of Banks,

i) Delta: The sensitivity of market value of the option to the changes in the value of the underlying asset of the option agreement,

j) Outsourcing institution: Outsourcing institution defined in Article 3 of Law,

k) Tranche: A contractually established segment of the credit risk linked to and associated with an exposure or a number of exposures, where a position in the segment, entails a risk of credit loss greater than or less than a position of the same amount in each other such segment, without taking account of credit protection provided by third parties directly to the holders of positions in the segment or in other segments

l) Convertible security: A security that can be converted to another financial instrument with the option and preference of the owner,

m) Commodity risk: The probability of loss to which the bank is exposed due to fluctuations in commodity prices, depending on its positions relating to commodities and commodity-based derivative financial instruments

n) Commodity: Precious metals and other commodities,

o) Interest rate risk: The probability of loss to which the bank is exposed due to general market risk and specific risk depending on the positions of financial instruments in trading book,

ö) Interest rate derivatives and off balance sheet instruments: Derivatives and off balance sheet instruments such as forward rate agreements, other forward contracts, bond futures, interest rate and cross currency swaps, forward foreign currency positions and options which react to changes in interest rate,

p) Financial instrument: A contract that gives rise to both a financial asset of one party and a financial liability or equity instrument of another party,

r) Financial holding company: Financial holding company defined in Article 3 of the Law,

s) Financial institution: Financial institution defined in Article 3 of the Law,

ş) Unfunded credit protection: Credit risk mitigation technique where the reduction of the credit risk on the exposure of a bank derives from the obligation of a third party to pay an amount in the event of the default of the borrower or the occurrence of other specified credit events;

t) Funded credit protection: A technique of credit risk mitigation where the reduction of the credit risk on the exposure of a bank derives from the right of that institution, in the event of the default of the counterparty or on the occurrence of other specified credit events relating to the counterparty, to liquidate, or to obtain transfer or appropriation of, or to retain certain assets or amounts, or to reduce the amount of the exposure to, or to replace it with, the amount of the difference between the amount of the exposure and the amount of a claim on the bank;

u) Advanced IRB Approach: Internal ratings based approach to calculate credit risk where probability of default, loss given default and credit conversion factors are estimated internally,

ü) General market risk: The probability of loss to which the bank is exposed due to the general market movements in interest rate and equity prices unrelated to specific risk.

v) Interest rate related instruments: Interest rate derivatives and off balance sheet items, debt instruments of which the yield is based on fixed or floating interest rate, and other instruments which can be purchased and sold like such debt instruments and/or other instruments of which price behavior is similar to such debt instruments,

y) Cash position: a position of an instrument that the bank possess or a position of an instrument that the bank takes under the scope of a commitment in a trading agreement except derivative instrument agreements,

z) Equity position risk: The probability of loss to which the bank is exposed arising from general market risk and specific risk, depending on its equity positions included in the trading book,

aa) Internal Ratings based (IRB) Approaches: Foundation and Advanced Internal Ratings based approaches,

bb) Liquid two-way market: A market where there are independent bona fide offers to buy and sell so that a price reasonably related to the last sales price or current bona fide competitive bid and offer quotations can be determined within one day and settled at such price within a relatively short time conforming to trade custom,

cc) Subordinated exposures: Exposures which are not senior,

çç) **(Repealed OG 8/6/2021-31505)**,

dd) Public Sector Entity: Institutions having a public legal personality separate from central government or local authorities, and their foreign equivalent entities, except for those operating in economic field according to commercial principles,

ee) Law: Banking Law no. 5411,

ff) Counterparty credit risk: The risk of default of a counterparty of a transaction that may cause a liability for both sides before the final settlement of the transaction's cash flows

gg) Precious metals: Precious metals identified by the Board within the frame of the limitations set forth in Article 57 of the Law,

ğğ) Collective investment undertakings (CIU): Investment partnerships and mutual funds as referred to in the regulations associated with the Capital Markets Law no. 6362 dated 6/12/2012,

as well as other undertakings accepted and termed as collective investment undertakings pursuant to the equivalent regulations of foreign countries,

hh) Consolidated Tier 1 capital adequacy ratio: Tier 1 Capital / (risk weighted exposure amounts for credit risk + market risk + operational risk) ratio calculated on consolidated basis,

ıı) Consolidated Common Equity Tier1 adequacy ratio: Common Equity Tier 1 Capital / risk weighted amounts subject to credit risk + market risk + operational risk) ratio calculated on consolidated basis,

ii) Consolidated own funds: Consolidated own funds to be calculated pursuant to procedures and principles set out in the Regulation on Own Funds of Banks,

jj) Consolidated capital adequacy standard ratio: Own funds/ (risk weighted exposure amount for credit risk + risk weighted exposure amount for market risk + risk weighted exposure amount for operational risk) standard ratio calculated on consolidated basis,

kk) Correlation trading: A strategy in which the investor takes position by taking into account the average correlation of an index,

ll) Protection buyer: A party which partially or fully transfers with a credit derivative its credit risk arising out of the reference entity,

mm) Protection seller: A party which partially or fully assumes with a credit derivative the credit risk arising out of a reference entity,

nn) Protection amount: An amount which is determined by credit derivative contract and which the protection seller will be obliged to pay to the protection buyer upon occurrence of the credit event,

oo) Credit Rating Agency (CRA): An agency authorized by the Board for the activities of rating of creditworthiness pursuant to and under the Regulation on Principles of Authorization and Activities of Rating Agencies published in the Official Gazette edition 28267 on 17/04/2012,

öö) Credit risk mitigation: A technique applied for mitigation of credit exposure value or amounts exposed to by the bank,

pp) Risk weighted exposure amount for credit risk: The amount to be taken into account in determination of the own funds required to be held against loss exposure rising from credit risk, in the calculation of capital adequacy standard ratio,

rr) Credit default swap: A contract whereby the protection seller partially or fully assumes the credit risk arising out of the reference entity against a certain amount of money to be paid by the protection buyer, and the protection seller agrees and undertakes to pay the protection amount to the protection buyer upon occurrence of the credit event,

ss) Credit derivative: Credit default swap, total return swap or credit-linked note,

şş) Credit linked note: A contract whereby the protection seller partially or fully undertakes the credit risk arising from a reference entity through buying the notes in cash which are issued by the protection buyer and repayments of which are linked to performance of the reference entity,

tt) Currency risk: The probability of loss to which the bank is exposed due to bank's all foreign exchange assets and liabilities, as a result of fluctuations in the foreign exchange rates,

uu) Board: Board of Banking Regulation and Supervision Agency,

üü) Agency: Banking Regulation and Supervision Agency,

vv) **(Amended OG 9/12/2016-29913)** Small and medium sized entity (SMEs): Entities that has revenue below the limit to be defined by the Board,

yy) Securities and commodities lending or borrowing transactions: A transaction whereby an institution or its counterparty transfers the securities or commodities against an appropriate collateral, subject to a commitment of the borrowing side to return equivalent securities at a certain future date or upon demand of the transferring side (As for the institution transferring securities or commodities, it is a securities or commodities lending transaction, and as for the transferee thereof, it is a securities or commodities borrowing transaction.),

zz) Originator bank: A bank which is directly or indirectly involved in a contract relating to securitization obligations or potential securitization obligations of a obligor or a potential obligor, or which purchases exposures of a third party onto its own balance sheet and then securitizes them or sponsor bank,

aaa) Securitization position: The amount of exposure in a securitization transaction,

bbb) Securitization: A transaction or scheme, whereby the credit risk linked to and associated with an exposure or a pool of exposures is used to service at least two different stratified risk positions or tranches, and the payments in the transaction or scheme are dependent upon the performance of the exposure or pool of exposures, and the subordination of tranches determines the distribution of losses during the ongoing life of the transaction or scheme,

ccc) Central counterparty: An institution which acts as an intermediary in transactions relating to contracts traded in one or more financial markets, and stands in the position of buyer against each seller and of seller against each buyer, and is legally authorized to intermediate,

ççç) Central government: Unincorporated public entities which are a part of public legal personality of the Government of the Republic of Turkey and do not have a separate legal personality, as well as the equivalent foreign entities and institutions,

ddd)Operational risk: The risk of loss resulting from inadequate or failed internal processes, people and systems or from external events, and includes legal risk as well,

eee) Risk weighted exposure amount for operational risk: The amount to be taken into account in determination of the amount of own funds required to be held against losses to be exposed to due to operational risk, in the calculation of capital adequacy standard ratio,

fff)Credit event: Refers to any event, such as default, insolvency and bankruptcy, restructuring and moratorium, which accelerates and makes the protection amount due and payable, as agreed upon in the contract,

ggg) Securitization Special purpose entity (SSPE): A fund institution or other entity, other than a bank, established to conduct securitization operations; the activities of which are limited solely to accomplish that objective; the structure of which is intended to isolate the obligations of the SSPE from those of the originator credit institution; and whose financial beneficiaries, holding claims against the SSPE are authorized to pledge or set-off their rights without any restrictions,

ğğğ)Master netting agreements: Framework of netting agreements covering repurchase transactions and/or securities or commodities lending transactions and/or other capital market based transactions,

hhh)Own funds: Own funds to be calculated pursuant to procedures and principles set forth in the Regulation on Own funds of the Banks,

ııı)Market risk: The risk of losses in on and off-balance-sheet positions of the banks arising from movements in market prices, within the scope of foreign exchange risk, commodity risk, interest rate risk and equity position risk,

iii)Reference obligation: Refers to the asset to be used to determine the amount of money payable in cash settlement, or the asset to be delivered in physical settlement, in credit derivatives,

jjj)Repo transaction: Any transaction governed by repo agreement or reverse repo agreement,

kkk)Repo agreement and reverse repo agreement: An agreement whereby a party or its counterparty transfers certain securities or commodities or certain rights associated with securities or commodities as granted by a recognized exchange, with a commitment to repurchase the guaranteed rights associated with such securities or commodities or the replacement securities or commodities of the same kind with the said securities or commodities over a predetermined price at a future date determined or to be determined by the transferring party, where the agreement does not permit a party to transfer or pledge certain securities or commodities to or in favor of more than one counterparty at one time and at the same time (this agreement stands as a repurchase agreement for the party selling the securities or commodities, and as a reverse repurchase agreement for the party buying the same)lll) Risk center: Risk Center established pursuant to Additional Article 1 of the Law,

mmm) Risk profile: The risk profile defined in Article 3 of the Regulation on Internal Systems of Banks,

nnn) Capital adequacy standard ratio: Own funds / (risk weighted exposure amounts for credit risk + market risk + operational risk) standard ratio calculated on non-consolidated basis,

ooo) Specific risk: The probability of loss in positions relating to financial instruments included in trading books of the Bank, other than ordinary market movements, due to problems that may arise out of management and financial standing of organizations which issue or guarantee the financial instruments of these positions and assume the payment obligations thereof,

ööö)Sponsor bank: A bank which establishes, manages the asset-backed commercial paper programme or other securitization programmes that purchase of risks from a third party company or provides credit enhancement or liquidity facility to these programmes.

ppp)Settlement risk: The probability of loss to which the bank is exposed due to fluctuations in prices of traded securities, foreign currencies or commodities due to non-realization of clearing transaction on due date thereof, in the case of transactions where particular securities, foreign currencies or commodities are required to be delivered over a price specified in the agreement at a certain due date and where both parties are required to perform their contractual obligations on that due date,

rrr)Foundation IRB Approach: Internal ratings based credit risk calculation approach where the probability of default is calculated internally while loss given default and credit conversion factors are determined by the Agency,

sss) Recognized exchanges: Exchanges which regularly operate and the procedures and principles of activities, membership and to-be-traded contracts of which are determined or approved by the concerned authorities of their home country and which are under daily margin depositing obligations as determined by the concerned authorities for the traded derivative financial instruments agreements as per the clearing mechanism,

şşş) Total return swap: A swap agreement whereby the protection seller agrees and undertakes to pay a certain amount of money to the protection buyer and to compensate the probable decreases in fair value of the reference entities throughout the validity term of the agreement, providing that the protection buyer transfers all cash flows to be created by the reference entities, as well as the increases in fair value of the reference entities,

ttt)Volatility: A measurement of magnitude and frequency of fluctuations in prices or rates of financial assets,

uuu)Re-securitization position: The amount of risk exposure of a re-securitization transaction;

üüü)Re-securitization: A type of securitization where the credit risk associated with and linked to the risk pool is divided into tranches, and at least one of the risks in the pool is composed of securitization position,

vvv) Replacement cost: The value equal to cost required to be incurred as of the date of balance sheet for replacement of the owned asset by another asset which has the same functions and same useful life, and is similar in terms of productivity and profitability,

yyy) (**Addition OG 8/6/2021-31505**) Covered bonds: Bonds defined as covered bonds by the relevant regulations of the Capital Markets Law or equivalent foreign regulations.

SECTION TWO

Risk Weighted Exposure Amount for Credit Risk

PART ONE

Calculation of Risk Weighted Exposure Amount for Credit Risk

Risk weighted exposure amount for credit risk

ARTICLE 4 – (1) Risk weighted exposure amount for credit risk is composed of total of risk weighted exposure amounts for on balance sheet assets and noncash loans, commitments and derivative financial instruments. Risk weighted exposure amount for credit risk is calculated with Standard Approach or Internal Ratings Based Approach. Where the risk weighted exposure amount for credit risk is calculated with Internal Ratings Based Approach a scaling factor of 1.06 is used. Use of Internal Ratings Based Approach is subject to the approval of the Agency. For the banks which use Advance IRB Approach to shift to Foundation IRB Approach or Standard Approach; for the banks which use Foundation IRB Approach to shift to Standard Approach is subject to the approval of the Agency. Shifting to Foundation IRB Approach or

Standard Approach is subject to the conditions of not aiming to calculate a lower capital requirement, being necessary for the aggregate risk structure and complexity of the bank in respect of relevant exposure type and not having negative effect on the payment capacity and sufficiency to manage its risks efficiently. Procedures and principles for the calculation of risk weighted exposure amount for credit risk with Internal Ratings Based Approach is determined by Board.

(2) In the calculation of risk weighted exposure amount, in order to determine the risk weights of on balance sheet assets and noncash loans, commitments and derivative financial instruments under Standard Approach CRA ratings, under Internal Rating Based Approach and internal model method in Annex II banks' internal models are used.

(3) The procedures and principles relating to mapping of the credit quality steps described in Annex-1 with the ratings of CRAs in accordance with neutrality, prudence and consistency principles are determined by the Board.

(4) In case that CRA ratings are used for risk weighting purposes, these ratings must be used consistently and in compliance with the provisions of Regulation on Principles of Authorization and Activities of Rating Agencies. Credit assessments cannot be used selectively in such manner to be interpreted only favorably. The most recent credit assessment scores accepted as valid by the relevant CRA are used in calculation of capital adequacy of banks.

(5) Credit assessments performed upon demand of credit customer are used by banks. Unsolicited credit assessment are used in accordance with the provisions of the Regulation on Principles of Authorization and Activities of Rating Agencies.

(6) The procedures and principles to be taken into account while using the credit risk mitigation techniques for the calculation of risk weighted exposures are determined by Board.

(7) For the assets, which are required to be included in the calculation of risk weighted exposures with their fair values, prudential procedures and principles on valuation set out in Part Two of Annex 3 are used.

(8) Banks are required to calculate counter party credit risk capital requirement for the following transactions in the trading book and the banking book. Value at risk calculation related to counterparty credit risk for the collateralized over the counter derivative financial instruments in trading book is conducted for the collateralized over the counter derivative financial instruments in banking book in the same way. Value at risk calculation related to counterparty credit risk for repo transactions in trading book is done in the same way for repo transactions in banking book in the framework of the principles and procedures described in Communiqué on Credit Risk Mitigation Techniques and Annex II of Regulation.

a) Derivative instruments

b) Repo transactions,

c) Securities or commodities lending and borrowing transactions,

d) Long settlement transactions.

The risk weights to be used in the calculation must be consistent with those used for calculating the capital requirements in the banking book.

(9) Where Standard Approach is used, the risk weighted exposure amounts for the transactions mentioned in paragraph 8 are calculated pursuant to ,depending on the relevance, Annex I or Communiqué on the Calculation of Risk-Weighted Exposure Amounts Related to Securitization; where IRB is used, it is calculated pursuant to ,depending on the relevance, Communiqué on Calculation of the Amount subject to Credit Risk by Internal-Rating based Approaches published in official gazette, dated 6/9/2014 and numbered 29111, or Communiqué on the Calculation of Risk-weighted Exposure Amounts Related to Securitization published in official gazette, dated 28/6/2012 and numbered 28337. While calculating the risk weighted exposure amounts for the transactions in paragraph 8 that are in trading book, the simple financial collateral approach prescribed in Communiqué on Credit Risk Mitigation Techniques cannot be used. Irrelevant of the use of Standard Approach or IRB Approach the calculation of risk weighted exposure amounts of transactions in paragraph 8 with central counterparties are conducted pursuant to Annex IV of the Regulation.

(10) All financial instruments and commodities which are includable in trading book can be taken into account as eligible collateral under the framework of Communiqué on Credit Risk Mitigation Techniques published in Official Gazette dated 6/9/2014 and numbered 2911 for repo transactions and securities or commodities lending and borrowing transactions. For risks stemming from derivative transactions, commodities that meet criteria to be included in the trading book can be taken into account as eligible collateral under the framework of Communiqué on Credit Risk Mitigation Techniques. For the collateral in the trading book which are eligible according to Communiqué on Credit Risk Mitigation Techniques the volatility adjustments defined in the mentioned Communique are applied. While determining the exposure values for repo transactions in case that the bank is approved to use the value at risk model validated by the Agency according to Article 4 of Communiqué on the Calculation of Market Risk by Risk Measurement Models and Assessment of Risk Measurement Models, bank can apply this model in the framework of principles and procedures defined in Communiqué on Credit Risk Mitigation Techniques and Annex II of Regulation for the collateral in trading book.

(11) In case the financial instruments and commodities which are not eligible collateral under the scope of Communiqué on Credit Risk Mitigation Techniques but eligible collateral according to paragraph 10 are lent, sold, or given as collateral or borrowed, purchased or taken as collateral, Banks which are using the standard volatility adjustment approach set out in Communiqué on Credit Risk Mitigation Techniques, takes into account the volatility adjustments of such instruments and commodities as if the equities that are not included in the main indexes listed in recognized exchanges.

(12) Volatility adjustments for the financial instruments and commodities which are not eligible collateral within the framework of Communiqué on Credit Risk Mitigation Techniques but eligible collateral according to paragraph 10 are calculated for each item separately by banks which are using Own Estimates Volatility Adjustments Approach under the scope of Article 36 of Communiqué on Credit Risk Mitigation Techniques.

(13) During the application of paragraph 9 netting can be undertaken under the framework of master netting agreements between repo transactions and/or securities or commodities borrowing or lending transactions and/or other transactions which give the bank to call for additional collateral daily which carry the following properties;

a) All positions are valued daily according to market price,

b) Borrowed, acquired or received items are carrying the eligibility criteria prescribed in Communiqué on Credit Risk Mitigation Techniques.

(14) Where the prices of undelivered securities, foreign exchange and commodities on the agreement are higher than market prices at the delivery date, irrelevant of whether the transaction is in trading book or banking book, banks are obliged to closely monitor undelivered transactions and calculate settlement risk capital requirement for such transactions. Systems for tracking and monitoring the credit risk exposure arising from unsettled transactions shall be developed by banks.

(15) Settlement risk capital requirement is calculated by multiplying the absolute value of the difference between the price on agreement and fair value with the relevant ratios in the following table.

Working Days after Delivery Date	Ratio(%)
Between 5 and 15 days	8
Between 16 and 30 days	50
Between 31 and 45 days	75
46 and more	100

(16) If a bank has paid for securities, foreign currencies or commodities before receiving them or it has delivered securities, foreign currencies or commodities before receiving payment for them and in the case of cross-border transactions, one day or more has elapsed since it made that payment or delivery, irrelevant of whether such transactions are in trading or banking book, it has to calculate capital requirement according to following table. Under Standard Approach, in calculation of capital charges, transfer value is accepted as the exposure value, and the risk weight applicable on the exposures is applied in accordance with Annex I hereof. If the current positive replacement cost arising out of free deliveries is not substantial, banks may apply one hundred percent risk weight on these risks.

Transaction Type	Up to first contractual payment or delivery leg	From first contractual payment or delivery leg up to four days after second contractual payment or delivery leg	From 5 business days post second contractual payment or delivery leg until extinction of the transaction
Free delivery	No capital charge	Treat as an exposure	Treat as an exposure risk weighted at 1250 %

(17) In applying a risk weight to free delivery exposures, banks using the Internal Ratings Based Approach may assign PDs to counterparties, for which it has no rated another banking book exposure, on the basis of the counterparty's external rating. Banks using Advanced IRB Approach may use 45% until LGD is calculated for all free delivery transactions. Alternatively Standard Approach risk weights or 100% can be used by IRB banks.

(18) In the case of a breakdown affecting the whole system in payment or clearing systems, the Agency is authorized to terminate the condition of calculation of capital charges until this problem is eliminated. Thereupon, failure of counterparty to realize its settlement obligations is not considered as a default within the framework of credit risk.

(19) Banks are required to create monitoring and follow-up policies and procedures related to settlement risk and establish a reporting system which ensures to take necessary actions on time.

(20) The risk weighted exposure amount for settlement risk is 12,5 times of the calculated capital requirement.

Determination of Exposure values Under the Scope of Standard Approach

ARTICLE 5 – (1) **(Amendment:OG-27/9/2016-29840)** As for the balance sheet items other than funds made available from participation accounts, exposure value refers to the balance sheet values that are calculated according to the Turkish Accounting Standards after the deduction of special provisions that are set aside in accordance with the Regulation on Procedures and Principles for Determination of Qualifications of Loans and Other Receivables by Banks and Provisions to be Set Aside published in the Official Gazette edition 26333 on 01/11/2006. As for the funds made available from participation accounts, exposure value refers to the values of them multiplied by alpha rate. Alpha rate is determined by the Board and publicly disclosed.

(2) Exposure value of non-cash credits and commitments is calculated by applying one hundred percent in the case of high risk, or fifty percent in the case of medium risk, or twenty percent in the case of medium/low risk, or zero percent in the case of low risk, to net amounts of these items remaining after deduction of special provisions, if any, that are set aside upon the provisions of the Regulation on Procedures and Principles of Determination of Qualifications of Credits and Other Receivables by Banks and of Provisions To Be Set Aside within the frame of the classification made in third paragraph hereof.

(3) Non-cash credits and commitments will be classified and converted into credit exposure equivalents through the use of principles and credit conversion factors (CCF) that are stated below. Where needed, BRSA Board is authorized to determine additional product and exposure types/classes and CCFs using the same principles/rationale that are mentioned hereof.

a) Commitments with an original maturity up to one year and commitments with an original maturity over one year will receive a CCF of 20% and 50%, respectively. However, any

commitments that are unconditionally cancellable at any time by the bank without prior notice, or that effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness, will receive a 0% CCF.

b) Direct credit substitutes, (general guarantees of indebtedness including standby letters of credit serving as financial guarantees for loans and securities) and acceptances (including endorsements with the character of acceptances) will receive a CCF of 100%.

c) Sale and repurchase agreements and asset sales with recourse, where the credit risk remains with the bank will receive a CCF of 100%.

ç) A CCF of 100% will be applied to the lending of banks' securities or the posting of securities as collateral by banks, including instances where these arise out of repo-style transactions (i.e. repurchase/reverse repurchase and securities lending/securities borrowing transactions).

d) Forward asset purchases, forward deposits and partly-paid shares and securities, which represent commitments with certain drawdown will receive a CCF of 100%.

e) Certain transaction-related contingent items (other than those granted for cash supply) will receive a CCF of 50%.

f) Note issuance facilities and revolving underwriting facilities will receive a CCF of 50%.

g) For short-term self-liquidating trade letters of credit arising from the movement of goods (e.g. documentary credits collateralized by the underlying shipment), a 20% CCF will be applied to both issuing and confirming banks.

(4) Where the risk exposure is related to securities or commodities sold, transferred or lent under a repurchase agreement or a securities or commodities lending or borrowing transaction or a margin trading, if and when it is contemplated that exposure value of these securities or commodities will be increased within the framework of Communique On Procedures And Principles Pertaining To Credit Risk Mitigation, this increased value is taken into consideration as the exposure value.

5) Exposure value of derivative financial instruments are determined in accordance with Annex-2 and Annex-4, and the effects of contracts for novation and other netting agreements for these methods are also taken into account in this determination.

(6) For the purposes of the fifth paragraph hereinabove, the agreements listed below are taken and regarded as derivative financial instruments:

b)   Interest rate-based agreements:

1)   Interest rate swap transactions based on a single currency;

2)   Basis swap transactions;

3)   Forward-rate agreements (FRA);

4)   Interest rate futures agreements;

5)   Purchased interest rate options; and

6)   other contracts of similar nature

c)   Foreign-exchange contracts and contracts concerning gold:

1)   cross-currency interest-rate swaps;

2)   Forward foreign exchange agreements;

3)   Currency futures agreements;

4)   Purchased currency options;

5)   other contracts of similar nature and

6)   Agreements concerning gold which are similar to those listed in subparagraphs (1) to (5) hereinabove.

d)   Agreements similar to those listed in subparagraphs (1) to (5) of paragraph (a) and in subparagraphs (1) to (4) of paragraph (b), based on other assets or indices. These agreements will include options, futures contracts, forward interest rate transactions and other securities-based derivative transactions and other currency, interest rate and return-based instruments, other agreements to be settled by cash payment or delivery of securities based on financial indices or financial indicators, commodity-based derivative transactions to be settled by cash payment or delivery of commodities providing that the relevant assets are traded in the organized markets, swaptions, second generation derivatives and exotic derivative transactions not included in the scope of paragraphs (a) and (b) hereinabove.

(7) Exposure values of repurchase transactions, securities or commodities lending or borrowing transactions, long settlement transactions, and margin trading transactions are determined in accordance with Annex-2 and Annex-4 or within the framework of Communiqué on Credit Risk Mitigation Techniques. Where a bank, acting as an agent, arranges such a transaction between a customer and a third party and provides a guarantee to the customer that the third party will perform on its obligations, then the risk to the bank is the same as if the bank had entered into the transaction as a principal. In such circumstances, a bank will be required to calculate capital requirements as if it were itself the principal.

(8) Where exposure is subject to a funded credit protection, the exposure value may be changed in accordance with Communique on Credit Risk Mitigation Techniques.

Classification of Exposures under Standard Approach:

ARTICLE 6 – (1) The risk exposures are classified as listed below:

(a) exposures to central governments or central banks;

(b) exposures to regional governments or local authorities;

(c) exposures to administrative bodies and non-commercial undertakings (public sector entities);

(ç) exposures to multilateral development banks;

(d) exposures to international organizations;

(e) exposures to banks and investment firms ;

(f) exposures to corporates;

(g) retail exposures;

(ğ) exposures secured by mortgages on real estate properties;

(h) Past due items;

(ı) exposures that are classified as higher risk by BRSA Board;

(i) **(Amended OG 8/6/2021-31505)** exposures to covered bonds;

(j) items representing securitization positions;

(k) Short-term receivables from banks and investment firms and short-term corporate receivables

(l) exposures in the form of units or shares in collective investment undertakings ('CIUs');

(m) equity exposures;

(n) other items.

(2) Risk exposure can be included in the retail exposures class referred to in point (g) of first paragraph only if and when the said risk is compliant with the following conditions:

a) The exposure is to an individual person or persons or to a SME;

b) Total sum of receivables from obligor customer or obligor risk group, without applying credit risk mitigation, should not exceed zero point two percent of all receivables included in the retail receivables class that is calculated by excluding the amounts calculated by taking into account Annex 1 paragraph 58; and

c) **(Amended OG 09/12/2016-29913)** Total consolidated amount of exposure to obligor customer or obligor risk group and undertaking, including gross past due receivables but excluding receivables that risk weight are applied to within the scope of Annex 1 paragraph 43, should not exceed 2the retail credit limit that is determined the Board for the implementation of this paragraph . In the calculation of this limit, credit exposure equivalents of non-cash loans and commitments within the scope of third paragraph of Article 5 through the use of credit conversion factors mentioned in the second paragraph of Article 5, positive replacement costs of derivatives and positive net exposure values of securities financing transactions are taken into account. Banks are required to take all actions and measures for acquisition of such information.

ç) The exposure takes the form of any of the following:

1) Revolving credits and lines of credit including credit cards and overdrafts

2) Personal term loans and leases e.g. installment loans, auto loans and leases, student and educational loans, personal finance and

3) SME business facilities and commitments.

(3) Exposure to foreign banks and investment firms can be included in the exposure classes referred to in point (e) and (k) of first paragraph only if and when the said exposures are to institutions subject to a capital adequacy practice equivalent to capital adequacy rules applied by the Agency or the Capital Markets Board.

(4) The following exposures are classified as equity exposures:

(a) Non-debt exposures conveying a subordinated claim on the assets;

(b) Debt exposures and other securities, partnerships, derivatives, the economic substance of which is similar to the exposures specified in point (a).

(5)   Securities cannot be included in retail exposure class.

(6)   Present value of retail minimum lease payments can be included in the retail exposure class.

(7)   Exposures not included in exposure classes mentioned in point (a) to (m) of first paragraph are classified under "Other Receivables" covered by point (n) of the said paragraph.

(8) An over installment of tax ,classified as current tax assets, would be assigned the relevant central government risk weighting in accordance with Annex-1.

(9) **(Addition: OG 8/6/2021-31505)** In order for the exposure to be classified as exposures to covered bonds referenced in paragraph (i) of the first subparagraph, the following conditions must be met:

a)The asset pool must consist of:

1)Receivables from or guaranteed by central governments, central banks, public institutions, or multilateral development banks; or

2)Receivables secured by residential real estate mortgages; or

3)Receivables secured by commercial real estate mortgages; or

4)Receivables from banks or brokerage firms with a risk weight of fifty percent or less, provided that such receivables do not exceed fifteen percent of the issuance of covered bonds, or guaranteed by such entities. The Board is authorized to add assets to the asset pool beyond those listed above.

b)The ratio between the nominal value of the asset pool and the nominal value of the covered bonds must meet the ratio specified in the regulations related to the Capital Markets Law or equivalent foreign regulations concerning secured securities.

c)In addition to the assets specified in subparagraph (a), the asset pool may include assets considered replacement assets for secured securities issuances according to the regulations related to the Capital Markets Law or equivalent foreign regulations, as well as derivative transactions undertaken to mitigate risks.

ç) The conditions stipulated in this paragraph must be met at the time of the initial issuance of the covered bonds and throughout the remaining maturity period.

d)The bank investing in the covered bonds must obtain, at least semi-annually from the issuer, information on the values of the asset pool and the covered bonds, the geographic distribution, types, balances, interest and currency risks of the underlying assets in the asset pool, the maturity structures of the underlying assets and the covered bonds, and the percentage of underlying assets in the asset pool that are overdue by more than ninety days from their maturity dates or payment dates.

Calculation of Risk-Weighted Amounts:

ARTICLE 7 – (1) Risk-weighted exposure amount is not calculated for the following items:

a) The counterparty should be a bank, investment firms or a financial institution that is subject to supervision of the Agency.

b) The counterparty is included in the same consolidation as the institution on a full basis;

c) The counterparty must have been founded and established in Turkey.

ç) There is no current or foreseen material practical or legal impediment to the prompt transfer of own funds or repayment of liabilities from the counterparty to the bank.

SECTION 3

Risk weighted exposure Amounts for Market Risk

Part 1

Trading Book and Calculation of Risk weighted exposure Amount for Market Risk

Trading Book

ARTICLE 8- (1) To be eligible for trading book capital treatment, financial instruments must either be free of any restrictive covenants on their tradability or able to be hedged completely even if the instruments compatible with definition of trading book.

(2) Banks should manage trading book positions according to Principles and Basis for Trading Book Management specified in the Annex-3 Part-1.

(3) When a bank hedges a banking book credit risk exposure using a credit derivative booked in its trading book (i.e. using an internal hedge), the banking book exposure is not deemed to be hedged for capital purposes unless the bank purchases from an eligible third party protection provider a credit derivative and this derivative meeting the requirements of eligibility for credit risk mitigation instrument. Where such third party protection is purchased and is recognized as a hedge of a banking book exposure for regulatory capital purposes, neither the internal nor external credit derivative hedge would be included in the trading book for regulatory capital purposes.

(4) Term trading-related repo-style transactions that a bank accounts for in its banking book may be included in the bank's trading book for regulatory capital purposes so long as all such repo-style transactions are included. For this purpose, trading-related repo-style transactions are defined as only those that meet the requirements of purpose of holding or taking trading book positions and stated in Annex-3 Part-1, and both legs are in the form of either cash or securities includable in the trading book.

(5) Following assets and positions do not meet the definition of the trading book, owing to significant constraints on the ability of banks to liquidate these positions and value them reliably on a daily basis:

a) Open equity stakes in hedge funds.

b) Private equity investments.

c) Positions in a securitization warehouse.

ç) Positions in a real estate holding.

d) Equity investments in a CIU where the bank cannot look through the fund daily or where the bank cannot obtain daily real prices for its equity investment in the CIU.

e) Derivative instrument with the above instrument types as underlying assets.

(6) Equity investment in a CIU which is eligible to be included in the trading book is subject to capital charge for market risk, via the positions in the investment and its related market risks.

Calculation of risk weighted exposures amount for market risk

ARTICLE 9- (1) Risk weighted exposures amount for market risk is calculated according to Standardized Measurement Method or Internal Models Approach.

(2) Banks which do not have an internal model permitted by the Agency, or the internal model of which is not found adequate by the Agency, or the adequacy and reliability of models of which are determined by the Agency to have been lost, calculate risk weighted exposures amount for market risk by multiplying the total sum of capital charges required for interest rate risk, equity positions risk, foreign exchange risk and commodity risk which are calculated according to standardized method in Part-1 and Part-2 by 12.5. Market risk capital requirement of options are included in relevant risk capital requirements according to the procedures and principles determined by the Board within the framework of fourth paragraph. Banks which take or hold material commodity positions have to calculate commodity risk capital requirement via the internal risk model. For a bank which does not have an internal model with regard to commodity risk, or the internal model of which is not found adequate by the Agency, or the adequacy and reliability of models of which are determined by the Agency have been lost, Board is entitled to impose reduction in their commodity position or holding additional capital.

(3) Banks which have an internal model permitted by the Agency calculate the risk weighted exposures amount for market risk by multiplying the capital charges calculated based on value at risk by 12.5.

(4) Where internal model approved by Agency does not cover all market risk categories, risk weighted exposure amount for market risk will be calculated by multiplying 12,5 with the sum of capital charges measured by the approved model and capital charges measured by the standardized method. Principles and procedures for using internal model in measuring risk weighted exposure amount for market risk and measuring capital charge with standardized method for market risk arising from options are determined by the Board.

(5) In calculation of capital charges for market risk arising from options, warrant is treated and regarded as an option transaction, and text of the issued warrant is accepted as an option contract.

(6) Positions of subsidiaries where there are obstacles to the quick repatriation of profits or where there are legal and procedural difficulties in carrying out the timely management of risks are treated as individual positions and not offset and netted against the positions of the

remainder of the group in the calculation of consolidated exposure amount of market risk. Netting and offsetting is implemented by entity base in calculating individual positions.

(7) Agency may demand from bank to report risk weighted exposures amount for market risk by each individual entities in a group to identify significant imbalances within a group and to take required measure promptly.

(8) Unless otherwise stated, the leg of a transaction related with the delivery of the asset or the payment of the corresponding value of the asset is regarded as short position of the relevant asset for the banks that will deliver the asset or make the payment, on the other hand, the leg related with the acceptance of the asset or collection of the value of the asset as long position of the relevant asset for the banks that will accept the asset or collect the value of the asset.

(9) Positions that are required to be included in calculation of risk weighted exposures amount for market risk at their fair value, whether they are in the trading book or in the banking book, are subject to provision of Procedures and Principles Prudent Valuation specified in Annex-3 Part-2.

PART TWO

Measuring of Capital Charge for Interest Rate Risk in Standardized Method

Scope and Coverage of the Capital Charge for Interest Rate Risk

ARTICLE 10-(1) Banks should calculate capital charge for interest rate risk arising from holding or taking positions in debt securities and other interest rate related instruments in the trading book. Interest rate risk capital requirement is the sum of specific risk capital charges and general market risk capital charges. Regarding implementation of capital requirement for interest rate risk and equity position risk;

a) Non-convertible preference shares are treated as interest rate related instruments.

b) Convertible bonds that behave and are traded like fixed-rate and floating-rate debt securities are treated as interest rate related instruments.

c) Convertible bonds that behave and are traded like equity are treated as equities.

A security which is the subject of a repurchase or securities lending agreement will be treated as if it were still owned by the lender of the security in measuring interest rate risk capital charge.

Specific Risk Capital Charge

ARTICLE 11-(1) Specific risk capital charge is composed of sum of following three separate specific capital charge:

a) Securities

b) Securitization Positions

c) Correlation Trading Portfolio.

(2) Interest rate and currency swaps, FRAs, forward foreign exchange contracts and positions arising from interest rate futures will not be subject to a specific risk capital charge only if their underlying is not a debt instrument or an index representing a basket of debt securities or an asset which has issuer/borrower.

Specific Risk Capital Charge for Securities

ARTICLE 12-(1) Specific risk capital charge for securities is calculated for each individual security whether it has a short or a long position. Instruments which are included in calculation of specific capital charges for securitization position or correlation trading portfolio are not subject to specific risk capital charge for securities. Within the context of this article, investment grade rate shall means a rate given by CRA and matched one of the first three credit quality steps.

(2) Individual security positions are determined by identical issue in measuring specific risk capital charge for securities. This identical issue based approach requires not only the same issuer but also the same coupon rates, liquidity, call features, etc. that may diverge price in the short run. Offsetting will be restricted to matched positions in the identical issue unless otherwise stated.

(3) Specific risk capital charge for securities will be calculated as sum of capital charges for each individual security position whether it is a short or long position. Capital charges for each individual security position will be determined by multiplying position amount by specific capital charge rate specified in the table below.

Categories	Credit Quality Step of Instrument	Specific Risk Capital Charge Rate
Government Debt İnstruments	1	0%
	2-3	0.25% (residual term to final maturity 6 months or less)
		1% (residual term to final maturity greater than 6 and up to and including 24 months)
		%1.60% (residual term to final maturity exceeding 24 months)
	4-5	%8
	6	%12
	unrated	%8
Qualified Debt İnstruments		0.25% (residual term to final maturity 6 months or less)
		1% (residual term to final maturity greater than 6 and up to and including 24 months)
		%1.60% (residual term to final maturity exceeding 24 months)
Others	Specific risk capital charge rate determined within the framework specified in paragraph ten.	

(4) The category "government debt instruments" will include all types of instruments including bonds, treasury bills and other short-term instruments issued by government or central bank, or by regional government or local authorities subject to a zero credit risk weight according to Annex-1.

(5) Board reserves the right to apply a specific risk capital charge rate different from the rates specified in the table above for securities issued by certain foreign governments, especially for securities denominated in a currency other than that of the issuing government.

(6) When government paper is denominated in domestic currency and funded in the same currency by the bank, "zero" specific risk capital charge is applied.

(7) The "qualifying debt instruments" category includes securities issued by public sector entities specified in Annex-1 within "Exposure to Administrative Bodies and Non-Commercial Undertakings" and multilateral development banks, plus other securities that are:

a) Rated investment-grade by at least two credit rating agencies specified.

b) Rated investment-grade by one rating agency and not less than investment-grade by any other

c) (**Amended OG 20/01/2016-29599**)[3] Subject to the approval of the Agency, unrated, but the issuer has securities listed on a recognized stock exchange and deemed to be of comparable investment quality by the reporting bank, and.

ç) For banks using the IRB Approach for a portfolio, unrated securities which are rated equivalent to investment grade under the reporting bank's internal rating system, which Agency has confirmed complies with the requirements for IRB approach and whose issuer has securities listed on a recognized stock exchange.

d) Debt securities issued by foreign banks or investment firms that are subject to similar regulations to those of domestic banks or investment firms regarding the calculation of capital adequacy ratio and prompt remedial actions when a bank or an investment firm fails to meet the capital ratio.

e) (**Amended OG 20/01/2016-29599**)[4] Securities issued by institutions that are deemed to be equivalent to investment grade quality and subject to supervisory and regulatory arrangements comparable to those under this Regulation.

(8) (**Amended OG 20/01/2016-29599**)[5] For the Agency approval specified in paragraph 7(c), the followings are required;

a) The assessments of the bank which explain the reasons why the securities are deemed to be of comparable investment quality,

b) Information by the bank on the security, which is listed on a recognized stock exchange, of the issuer of the debt instrument.

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[3] The Regulation amendment published in the Official Gazette dated 20/1/2016 and numbered 29599 enters into force on 31/3/2016.
[4] The Regulation amendment published in the Official Gazette dated 20/1/2016 and numbered 29599 enters into force on 31/3/2016.
[5] The Regulation amendment published in the Official Gazette dated 20/1/2016 and numbered 29599 enters into force on 31/3/2016.

(9) (Amended OG 20/01/2016-29599)[6] In order to benefit from provisions specified in paragraph 7(ç), banks should monitor whether there is a security, which is listed on a recognized stock exchange, of the issuer of the debt instrument, in every reporting period. Those banks that do not fulfill this requirement without prejudice to other legal proceedings, cannot benefit from paragraph 7(ç) for two years starting from the notification made by the Agency. Equivalent to investment grade means that the debt security has a one-year PD equal to or less than the one year PD implied by the long-run average one-year PD of a security rated investment grade or better by a qualifying rating agency in implementation of paragraph 7(ç).

(10) If a security is not categorized as government debt instrument and qualified debt instrument, it will be categorized as "the other debt instrument". Specific risk capital charge ratio for instruments in the other debt instrument category is equal to 8% of risk weights which will be determined in framework of credit risk under the Standardized Approach, as if it is a banking book instrument.

(11) If there is a case causing considerably underestimate the specific risk for debt instrument included in "the other debt instrument category" which has a high yield to redemption relative to government debt securities, Board will have the right to apply a higher specific risk charge to such instruments; and/or to disallow offsetting for the purposes of defining the extent of general market risk between such instruments and any other debt instruments.

Treatment for credit derivatives in specific risk capital charge framework

ARTICLE 13- (1) Positions of credit derivatives in the trading book are subject to specific risk capital charge unless they are included in the correlation trading portfolio. These positions are determined according to rights and obligations in the credit derivatives. In this context for total return swaps and credit linked notes; banks, protection seller in a credit derivative, have a long position in the underlying asset, and banks, protection buyer in a credit derivative, have a short position in the underlying asset. In addition, banks, protection seller, create a long position for the note itself.

(2) Unless otherwise stated, credit derivatives are subject to specific risk capital charge for security or securitization position via underlying instruments of credit derivatives by taking into account this article's provisions.

(3) Specific risk capital charge for banks, protection seller or buyer, in an n-th-to-default credit derivative transaction which has a basket of underlying reference instruments, and whose payoff is based on the n-th asset to default without regarding which asset defaults but regarding the rank of default such as first, second or third default, and once the n-th default occurs the transaction terminates and is settled, is the sum of the specific risk capital charges for each individual reference credit instrument in the basket but excluding the (n-1) obligations with the lowest specific risk capital charges. If the sum is higher than the maximum possible credit event payment, then the difference is exempted from the capital charge.

(4) Where a bank has a risk position in one of the reference credit instruments underlying a first-to-default credit derivative and this credit derivative hedges the bank's risk position, the bank is allowed to reduce with respect to the hedged amount both the capital charge for specific

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risk for the reference credit instrument and that part of the capital charge for specific risk for the credit derivative that relates to this particular reference credit instrument. Where a bank has multiple risk positions in reference credit instruments underlying a first-to-default credit derivative this offset is allowed only for that underlying reference credit instrument having the lowest specific risk capital charge.

(5) The reduction specified in paragraph 4 is not implemented for n-th-to-default credit derivative other than first to default credit derivatives.

(6) If a first or other n-th-to-default credit derivative is externally rated, the protection seller bank must calculate the specific risk capital charge using the rating of the credit derivative and apply the respective specific risk capital charge for securitization within the framework related to specific capital charge for securitization.

Specific Risk Capital Charge for Securitization Positions

ARTICLE 14-(1) Specific risk capital charge for securitization positions is calculated for securitization positions in the trading book by using the net positions of securitization instruments. The specific risk of securitisation positions held in the trading book is to be calculated according to the method used for such positions in the banking book unless otherwise specified in this article.

(2) Specific risk capital charge for securitization positions is equal to sum of capital charges calculated for each securitization position without considering whether it is long or short position by using issue based approach.

(3) In issue based approach, capital charges for each securitization position are calculated by multiplying absolute value of net position by specific risk capital charge rate. Specific risk capital charge rate is determined according to the table below by taking into account external credit rating and type of securitization positions:

Credit Quality Step (CQS)	CQS Based Long-term Ratings	1	2	3	4	Other CQS or unrated
	CQS Based Short-term Ratings	1	2	3		
Re-securitization Exposures		3.2 %	8%	18%	52%	100%
Securitization Exposures		1.6%	4%	8%	28%	100%

(4) The operational requirements for the recognition of external credit assessments for securitization positions in the banking book shall apply to securitization positions in the trading book in the calculation of specific risk capital charge.

(5) Exceptions of 1250 percent risk weights implementation for unrated positions in calculation of risk weighted exposures for credit risk arising from securitization positions in the banking book shall be applied within the same basis to securitization positions in the trading book which are subject to 100 percent risk weights according to the table above. Risk weights obtained by implementing the exceptions above are multiplied by 8% and results of these processes are considered specific risk capital charge ratio that will be applied to related securitization positions.

Specific risk capital charges for positions hedged by credit derivatives

ARTICLE 15- (1) Full allowance will be recognized when the values of reference asset and asset on which position is based always move in the opposite direction and broadly to the same extent. Full allowance would be the case generally in the following situations:

(a) Reference asset and asset on which position is based consist of completely identical instruments, or

(b) A long cash position is hedged by a total rate of return swap (or vice versa) and there is an exact match between the reference obligation and the underlying exposure.

In these cases, no specific risk capital requirement applies to positions rising from reference obligation and the underlying exposure.

(2) An eighty percent offset will be recognized when the values of reference asset and asset on which position is based always moves in the opposite direction but not broadly to the same extent. Eighty percent offset would be the case generally when a long cash position is hedged by a credit default swap or a credit linked note (or vice versa) and there is an exact match in terms of the reference obligation, the maturity of both the reference obligation and the credit derivative, and the currency of the underlying exposure. In addition, key features of the credit derivative contract such as credit event definitions, settlement mechanisms should not cause the price movement of the credit derivative to materially deviate from the price movements of the cash position. To the extent that the transaction transfers risk in the way of taking account of restrictive payout provisions such as fixed payouts and materiality thresholds, an eighty percent specific risk offset will be applied to the side of the transaction with the higher capital charge, while the specific risk requirement on the other side will be zero.

(3) Partial allowance will be recognized when values of reference asset and asset on which position is based usually moves in the opposite direction. Partial allowance would be the case generally in the following situations:

a) the position is captured in paragraph 1(b), but there is an asset mismatch between the reference obligation and the underlying exposure and the mismatch is not impede for the credit derivative to be eligible a credit risk mitigation instrument in calculation of risk weighted exposures for credit risk.

b) The position is captured in paragraph 1(a) or in paragraph 2 but there is a currency or maturity mismatch between the credit protection and the underlying asset.

c) The position is captured in paragraph 2 but there is an asset mismatch between the cash position and the credit derivative and the underlying asset is included in the (deliverable) obligations in the credit derivative documentation.

(4) In each of these cases in paragraphs 1 to 3, rather than adding the specific risk capital requirements for each side of the transaction (the credit protection and the underlying asset) only the higher of the two capital requirements will apply.

(5) If the protection is obtained by a credit derivative which is not captured in paragraphs 1 to 3, a specific risk capital charge will be calculated for both sides of the position.

Limit in the specific risk capital charge

ARTICLE 16- (1) Banks may limit the capital charge for an individual position in a credit derivative or securitization instrument to the maximum possible loss. For a short risk position of each individual position, this limit can be calculated as a change in value due to the underlying names immediately becoming default risk-free. For a long risk position of each individual position, the maximum possible loss can be calculated as the change in value in the event that all the underlying names were to default with zero recoveries. The maximum possible loss must be calculated for each individual position.

Specific risk capital charge for correlation trading portfolio

ARTICLE 17- (1) Correlation trading portfolio can be made up of securitization exposures and n-th-to-default credit derivatives that meet the following criteria:

a) The positions are neither re-securitization positions, nor derivatives of securitization exposures that do not provide a pro-rata share in the proceeds of a securitization tranche; and

b) All reference entities are single-name products, including single-name credit derivatives, for which a liquid two-way market exists. This will include commonly traded indices based on these reference entities.

(2) Positions based on exposures mentioned in Article 6, paragraph 1(g) and 1(ğ), and positions which reference a claim on a special purpose entity are not included in the correlation trading portfolio.

(3) Instrument or its underlying may also be included in the correlation trading portfolio positions that hedge the positions described in paragraph 1 and which are neither securitization exposures nor n-th-to-default credit derivatives and where a liquid two-way market as described above exists for the instrument or its underlyings.

(4) Specific risk capital charge for correlation trading portfolio will be equal to the larger of following total amounts:

a) the total specific risk capital charges that would apply just to the net long positions from the net long correlation trading exposures combined.

b) the total specific risk capital charges that would apply just to the net short positions from the net short correlation trading exposures combined.

(5) In implementation paragraph 4, the specific risk capital charge rates related to instruments which can be included in the portfolio will be used in calculation of total specific risk capital charges based on net short positions and net long positions.

General market risk capital charge

ARTICLE 18- (1) Banks have to calculate a capital charge for general market risk to capture the risk of loss arising from changes in market interest rates with respect to interest rate related instrument in the trading book.

(2) Positions subject to a hundred percent specific risk capital charge rate in calculation of specific risk capital charge for securitization may not be included in calculation of general market risk capital charge.

(3) General market risk capital charge in standardized method is measured by "maturity ladders method" or "duration method" and is equal to sum of following four sub-capital charge for both methods:

a) Net Position Charge

b) Vertical Disallowance (capital charge)

c) Horizontal Disallowance (capital charge)

ç) Only if it is not included to time-band as a position, "General market risk capital charge" for market risk arising from options by standardized method determined in framework of principles and procedures which are specified according to paragraph 4 of Article 9.

(4) In maturity ladders methods, sub-capital charges mentioned in paragraph 3(a)(b)(c) are calculated separately for each currency. The final amount of sub-capital charges of general market risk capital charge mentioned in paragraph 3(a)(b)(c) are obtained via aggregating amounts for each currency determined according to first sentence. There is no offsetting in aggregating process between capital charges calculated for each currency because all capital charges amounts are expressed in absolute values.

(5) In the maturity ladders method, general market risk capital charge for each currency is calculated by using the table in paragraph 7. The first step in the calculation is to slot both long and short positions into related time-bands of maturity ladders which will be specified according to currency of positions, by taking into account their residual term to maturity and by using their TL equivalence. Floating-rate instruments should be allocated according to the residual term to the next reprising date. For bonds with a coupon rate less than 3%, in the year calculation one year will be considered as 365 days.

(6) If an instrument's issuer and issues are identical, its long and short positions can be netted.

(7) The second step in the calculation is to weight the positions in each time-band by a factor designed to reflect the price sensitivity of those positions to assumed changes in interest rates. The weights for each time-band are set out in the table below.

Zones	Time-Bands			Risk Weights (%)	Assumed changes in yield (%)
	Number	Coupon 3% or more	Coupon less than 3%		
Zones I	1. Time Band	≤ 1 month	≤ 1 month	0,00	1,00
	2. Time Band	> 1 month ≤ 3 month	> 1 month ≤ 3 month	0,20	1,00

Zone	Time Band				
	3. Time Band	> 3 month ≤ 6 month	> 3 month ≤ 6 month	0,40	1,00
	4. Time Band	> 6 month ≤ 12 month	> 6 month ≤ 12 month	0,70	1,00
Zones II	5. Time Band	> 1 year ≤ 2 year	> 1,0 year ≤ 1,9 year	1,25	0,90
	6. Time Band	> 2 year ≤ 3 year	> 1,9 year ≤ 2,8 year	1,75	0,80
	7. Time Band	> 3 year ≤ 4 year	> 2,8 year ≤ 3,6 year	2,25	0,75
Zones III	8. Time Band	> 4 year ≤ 5 year	> 3,6 year ≤ 4,3 year	2,75	0,75
	9. Time Band	> 5 year ≤ 7 year	> 4,3 year ≤ 5,7 year	3,25	0,70
	10. Time Band	> 7 year ≤ 10 year	> 5,7 year ≤ 7,3 year	3,75	0,65
	11. Time Band	> 10 year ≤ 15 year	> 7,3 year ≤ 9,3 year	4,50	0,60
	12. Time Band	> 15 year ≤ 20 year	> 9,3 year ≤ 10,6 year	5,25	0,60
	13. Time Band	> 20 year	> 10,6 year ≤ 12,0 year	6,00	0,60
	14. Time Band		> 12,0 year ≤ 20,0 year	8,00	0,60
	15. Time Band		> 20 year	12,50	0,60

(8) After risk weighted positions are determined, Vertical and Horizontal Capital Charges are calculated. The first step in the calculation of vertical capital charge is to determine matching risk weighted positions between risk weighted long and short positions of each time band. Each matching risk weighted position is subject to 10% capital charge. Vertical capital charge is equal to sum of these capital charges. If a time-band consists of only one position such as long or short, there is no matching position and hence, risk weighted position of the time-band is not subject to 10% capital charge. Matching position occurs only between opposite positions and its value is equal to absolute value of smaller one or absolute value of any one of the positions if opposite positions are equal to each other.

(9) The next step is calculation of Hhorizontal Capital Charge. To calculate horizontal capital charge, first of all net risk weighted position is determined for each time-bands. Then risk weighted long and short positions of each zone is obtained by aggregating these positions in terms of long and short positions by taking into account their time-bands and zones of these time-bands.

(10) Horizontal Capital Charge is equal to sum of Horizontal Capital Charge-I and Horizontal Capital Charge-II.

(11) Horizontal Capital Charge-I is equal to sum of zones' capital charges that will be calculated by taking into account matching positions of each zone's long and short positions. If there is no

matching position in a zone, capital charge for the zone is not calculated. Capital charge rates are equal to 40% for zone-I matching position and to %30 for zone-II and zone-III of each one's matching positions.

(12) To calculate Horizontal Capital Charge-II, first of all, risk weighted net positions of each zone are determined. Then a three-step process is conducted. In the first step, matched risk weighted net position between zone-I and zone-II is determined, then matched position is multiplied by 40% capital charge rate. In second step, matched risk weighted net position between zone-II and zone-III is determined, then matched position is multiplied by 40% capital charge rate. Position that will be used for zone-II in second step is equal to residual position after that matched position in first step is offset from it. In the third step, matched positions between zone-I and zone-III is multiplied by 100% capital charge rate. But positions that will be used for zone-I and zone-III in third step are residual positions after that matched position in first step is offset from zone-I and matched position in second step is offset from zone-III. Horizontal Capital Charge-II is equal to sum of capital charges calculated in each of these steps.

(13) Net position charge is equal to 100% of maturity ladder net position that will be calculated by taken into account all of three zones. To calculate maturity ladder net position, firstly, netting position of zone-I, zone-II and zone-III are aggregated based on long or short position. Then the small one is subtracted from big one. The residual position of the subtraction operation is maturity ladder net position. If all netting positions of zones is a only long or short, maturity ladder net position will be equal to sum of the positions.

(14) Credit derivatives in trading book are subject to general market risk by taking into account positions in credit derivatives. The positions are determined within the framework of banks right and obligations and scope of general market risk coverage. In that scope:

a) General market risk capital charge is not calculated for both protection buyer and seller in the credit default swaps.

b) In total return swap, banks as a protection seller have a long position in the reference asset and a short position in the notional central government bond which is based on currency of payments and based on fixed or floating interest rate that depends on interest payments method, on the other hand banks as a protection buyer have an opposite position.

c) Credit linked note creates long position in the note itself for protection seller bank, while protection buyer bank does not calculate general market risk capital charge for credit linked notes.

(15) Banks with the necessary capability of calculating the price sensitivity of each position separately may use duration method for general market risk capital charge calculation with the Agency's consent. Banks must elect and use the method on a continuous basis unless a change in method is approved by Agency. The methodologies and systems used in the price sensitivity method will be ready for Agency supervision.

(16) In duration method; net position charge, vertical capital charge and horizontal capital charge are calculated as follows:

a) As a first step, the price sensitivity of each instrument in terms of a change in interest rates of amount specified table below for each related time-bands is calculate

b) As a second step, the resulting sensitivity measures are slotted into a related time-bands in the table below.

c) As a third step, long and short positions in each time-band are subjected to a 5% vertical capital charge.

ç) As a fourth step, the net positions in each time-band are subjected to horizontal capital charge with same methodology and rates in maturity ladder method.

d) As a fifth step, net position charge is calculated based on paragraph 13.

Zones	Time-Bands	Assumed changes in yield (%)
Zones I	≤ 1 month	1,00
	> 1 month ≤ 3 month	1,00
	> 3 month ≤ 6 month	1,00
	> 6 month ≤ 12 month	1,00
Zones II	> 1,0 year ≤ 1,9 year	0,90
	> 1,9 year ≤ 2,8 year	0,80
	> 2,8 year ≤ 3,6 year	0,75
Zones III	> 3,6 year ≤ 4,3 year	0,75
	> 4,3 year ≤ 5,7 year	0,70
	> 5,7 year ≤ 7,3 year	0,65
	> 7,3 year ≤ 9,3 year	0,60
	> 9,3 year ≤ 10,6 year	0,60
	> 10,6 year ≤ 12,0 year	0,60
	> 12,0 year ≤ 20,0 year	0,60
	> 20 year	0,60

Positions arising from interest rate derivatives and off-balance sheet instruments in calculation of interest rate risk capital charge

ARTICLE 19- (1) Measurement system of interest rate risk capital charge should include all interest rate derivatives and off-balance-sheet instruments in the trading book which react to changes in interest rates. If the derivative instrument is an option, it will be subject to interest rate risk capital charge according to "General market risk capital charge" for market risk arising from options by standardized method. Following derivatives instruments, but not limited to them, are treated interest rate derivatives within interest rate risk capital charge framework:

a) Exchange-traded futures on government debt securities, corporate debt securities or indices on interest rates.

b) OTC forwards on government debt securities, corporate debt securities, foreign exchange or indices on interest rates.

c) FRAs, swaps.

ç) Options on government debt securities, corporate debt securities, indices on interest rates, FRAs or swaps

(2) The derivatives are converted into positions in the relevant underlying assets or if the underlying asset of derivative has not an issuer such as index or reference value/price, they are converted into positions in notional asset, and become subjected to calculation of interest rate capital charge by way of this conversion. Unless otherwise state, government debt instruments are used as a notional asset in this implementation. The amounts of position reported should be the market value of the principal amount of the underlying or of the notional underlying resulting from the Principles and Procedures for Prudent Valuation specified in the Annex-3 Part-2. For instruments where the apparent notional amount differs from the effective notional amount, banks must use the effective notional amount.

(3) Futures and forward contracts, including forward rate agreements, are treated as a combination of a long and a short position in a notional government security. The period until delivery or exercise of the contract is accepted as the maturity of the positions. If underlying instrument of contract has an additional maturity, residual maturity after execution of contract will be added to related position maturity. For example, a long position in a June three month interest rate future (taken in April) is to be reported as a long position in a government security with a maturity of five months and a short position in a government security with a maturity of two months. Where a range of deliverable instruments may be delivered to fulfil the contract, the bank has flexibility to elect which deliverable security goes into the maturity ladder method but should take account of any conversion factor defined by the exchange. In the case of a future on a corporate bond index, positions will be included at the market value of the notional underlying portfolio of securities.

(4) Swaps in case of which both of their legs are affected from changing market interest rate will be treated as two notional positions in government securities with relevant maturities. For example, an interest rate swap under which a bank is receiving floating rate interest and paying fixed will be treated as a long position in a floating rate instrument of maturity equivalent to the period until the next interest fixing and a short position in a fixed-rate instrument of maturity equivalent to the residual life of the swap. For swaps that pay or receive a fixed or floating interest rate against some other reference price, e.g. a stock index, the interest rate component should be slotted into the appropriate repricing maturity category, with the reference price component being included in the related risk category framework (e.g equity position risk for the example of stock index) . The separate legs of cross-currency swaps are to be reported in the relevant maturity ladders for the currencies concerned.

Allowable offsetting of matched positions

ARTICLE 20- (1) Banks may include in the interest rate maturity framework altogether (for both specific and general market risk) long and short positions (both actual and notional) in identical instruments with exactly the same issuer, coupon, currency and maturity in a netting manner. A matched position in a future or forward and its corresponding underlying may also be fully offset. When the future or the forward comprises a range of deliverable instruments offsetting of positions in the future or forward contract and its underlying is only appropriate in cases where there is a readily identifiable underlying security which is most profitable for the trader with a short position to deliver. No offsetting will be allowed between positions in different currencies.

(2) In addition, opposite positions in the same category of instruments are to be allowed to offset fully on conditions that the positions must relate to the same underlying instruments, be

of the same nominal value and be denominated in the same currency. In addition, to qualify for this treatment following requirements should be meet:

a) for futures: offsetting positions in the notional or underlying instruments to which the futures contract relates must be for identical products and mature within seven days of each other;

b) for swaps and FRAs: the reference rate (for floating rate positions) must be identical and the coupon closely matched; and

c) for swaps, FRAs and forwards: the residual maturity must correspond within the following limits:

1) less than one month hence: same day;

2) between one month and one year hence: within seven days;

3) over one year hence: within thirty days.

(3) For implementation of paragraph 2, followings are accepted as the derivatives categories;

a) Exchange-traded future

b) OTC forward (except forward foreign exchange)

c) FRAs, Swaps

ç) Forward foreign exchange

d) Options

PART 3

Calculation of Capital Charge in Standardized Method for Equity Position Risk, Foreign Exchange Risk and Commodity Risk

Calculation of Equity Position Risk Capital Charge

ARTICLE 21- (1) Equity position risk capital charge is equal to sum of general market risk capital charge and specific risk capital charge. General market risk capital charge and specific risk capital charge cover the risk of holding or taking positions in equities in the trading book. Equity positions consist of instruments that exhibit market behavior similar to that of equities and are affected by equity price changes such as convertible bonds, commitments to buy or sell equity securities, derivative products, stock indices or other instruments.

(2) Specific risk capital charge is calculated by taking into account net positions in an individual equity and general market risk capital charge is calculated by taking into account net position in each national market. Net positions in individual equity is equal to net short or net long positions retained from offsetting of long and short position in related individual equity. Each equity index in each national market is treated as an individual equity.

(3) Specific risk capital charge for equity positions is equal to 8% of sum of absolute value of net individual equity positions.

(4) General market risk capital charge for equity positions is equal to 8% of sum of absolute value of net position in each national market. Net equity position in a national market shall mean net short or net long position retained from netting of total equity short positions and total equity long positions in the national market by taking into account individual net equity position in determining of the total positions.

(5) The derivatives are to be converted into positions in the relevant underlying. In this conversion:

a) Futures and forward contracts relating to individual equities should in principle be reported at current market prices.

b) Futures relating to stock indices should be reported as the marked-to-market value of the notional underlying equity portfolio.

6) Each stock index is treated as an equity position in futures transactions relating to stock indices. In a swap transaction, the assets to be received according to the contract are treated as the long position in the assets and the assets to be delivered are treated as the short position in the assets. Equity positions are included into measurement system at market price of related equity. If a leg of contract is related to fixed or floating interest rate, the position will be included into calculation of interest rate risk capital charge.

(7) Equity options and stock index options will be included into market risk framework according to principles regarding the calculation of risk weighted exposures for market risk arising from options.

(8) The net long or short position in a contract on well-diversified indices is subject to 2% specific risk capital charge. Indices listed in the table below are treated as well-diversified indices.

Nation	İndices
Australia	S&P/ASX 200
Austria	ATX
Belgium	BEL 20
Canada	S&P/TSX 60
France	CAC 40
Germany	DAX
Japan	Nikkei 225
Netherlands	AEX
Spain	IBEX 35
Sweden	OMX
Switzerland	SMI
United Kingdom	FTSE 100
United States	S&P 500
Turkey	BIST 100

(9) In the case of the futures-related arbitrage strategy that the bank takes an opposite position in exactly the same index at different dates or in different market centers, 2% specific risk capital charge is applied to only one index with the opposite position. This position is not subject to general market risk capital charge.

(10) Where a bank engages in a deliberate arbitrage strategy, in which a futures contract on a broadly-based index matches a basket of stocks, matching positions are subjected to %4 specific risk capital charge by depending on condition that:

a) The trade has been deliberately entered into and separately controlled;

b) The composition of the basket of stocks represents at least 90% of the index when broken down into its notional components.

(11) Implementation of paragraph 10 applies even if all of the stocks comprising the index are held in identical proportions. Any excess value of the stocks comprising the basket over the value of the futures contract or excess value of the futures contract over the value of the basket is to be treated as an open long or short position.

Calculation of Capital Charge for Foreign Exchange Risk

ARTICLE 22-(1) Except cases in paragraphs 2 and 3, banks have to calculate foreign exchange risk capital charge for the risk of holding or taking positions in foreign currencies and gold disregarding of whether the position is a trading book item or not.

(2) No capital charge is needed to apply to positions related to items that are deducted from a bank's capital when calculating its capital base

(3) A bank is not required to calculate capital charge for related reporting period on provided that:

a) Its overall net open position does not exceed 2% of its own fund.

b) The greater of the sum of its gross long positions and the sum of its gross short positions, which included in calculation of overall net open position, does not exceed 100% of own fund.

(4) The foreign exchange risk capital charge is equal to 8% of the overall net open position. Net gold position and net open position of each currency are used in calculation of overall net open position. In calculating foreign exchange risk capital charge, FX index positions are treated as denominated related currency and gold index positions are treated as denominated gold positions. Net open position in each currency should be calculated by summing following items:

a) The net spot position: This position is equal to all asset items less all liability items, including accrued interest, denominated in the currency in question.

b) The net forward position: It is a position arising from transactions of which either receivable leg or obligation leg or both legs is related to foreign currency or FX index and will occur at a specified future time. The principal on currency swaps not included in the spot position is included in the net forward position. This position covers all off balance sheet transactions that will be held at a specified future time, regardless of whether the transactions is entered in organized markets or in OTC markets.

c) Non-Cash Loan Positions: It is a position arising from guarantees and similar instruments that are certain to be called and are likely to be irrecoverable. It covers non-cash FX loans that are certain to be called and which are classified as a non-performing loan. These positions are composed on the basis of value of the loan before conversion factor are applied.

ç) Net position based on future income/expenses not yet accrued: It is a position calculated as deducting the future expenses from future incomes not yet accrued but already fully hedged and certain to be realized;

d) The net delta-based equivalent position: Only where delta-plus method is used for market risk capital charge arising from options, it is a net position retained from offsetting positions in the short and long positions of options in terms of the foreign currency equivalent of the delta.

(5) Banks have a discretion on "net position based on future income/expenses not yet accrued" specified in paragraph 4(ç) to include in calculation of net open position or not. But, banks cannot change their choice in later periods.

(6) Forward currency positions which are measured in banks' management accounting on net present values, are discounted using current interest rates and valued at current spot rates, in calculating net forward currency position.

(7) Net gold position is treated as if a foreign currency and calculated in accordance with paragraphs 4, 5 and 6.

(8) If the position based on composition of two or more foreign currencies, like CIUs, can be split into their component parts, each of parts will be included in the calculation of net open position for related currency; if it cannot be split into their component parts, it will be treated as a separate currency, after then, its net open position under the name of net composite position is included in overall net open position like net gold position.

(9) Even there is no loss possibility of a bank arising from foreign exchange risk because there is no net open position due to the matched positions in the bank; if the bank has its capital denominated in TL, its capital/asset ratio will fall if the TL depreciates, and also capital adequacy ratio. By running a short position in the TL the bank can protect its capital adequacy ratio, although the position would lead to a loss if the TL were to appreciate. Any positions which a bank has deliberately taken in order to hedge partially or totally against the adverse effect of the exchange rate on its capital ratio are treated as a structural position and may be excluded from the calculation of net open currency positions if the positions are met the qualifications and comply with principles and process specified by Board. Structural position kept in excess of amount to protect the bank's capital adequacy ratio is included to calculation of net open position. Items that are deducted from a bank's own funds may also be treated as structural positions if they meet the qualifications and comply with the principles and process specified by Board.

(10) Each foreign currency open positions, each net composite positions and net gold position is converted at spot rates/price into TL for measuring overall net open position. Then, net open positions in each currency are aggregated separately based on short or long position. Net overall open position is equal to sum of the aggregated position with the bigger absolute value and absolute value of net gold position and absolute value of each composite positions.

Calculation of capital charge for commodity risk

ARTICLE 23- (1) Banks have to measure capital charge with simplified approach specified in paragraph 9 or maturity ladder approach specified in paragraphs 10 to 14 for commodity risk arising from commodity and derivative financial instruments on commodity whether they are

in banking book or trading book. Commodity risk is not calculated for gold and derivative financial instruments on gold.

(2) Each position related to commodity and derivative financial instruments on commodity is expressed in terms of the standard unit of measurement.

(3) Where a commodity or a derivative financial instruments on commodity contains foreign exchange risk or interest rate risk, capital charges are calculated not only for commodity risk but also for other risks.

(4) Commodity risk is calculated for each commodity type. In calculation of position related to commodity following principles are applied:

a) Position related sub-categories of the same commodity in cases where the subcategories are deliverable against each other are treated as a position in the same commodity.

b) Positions in a commodity or derivative financial instruments on commodity can also be considered as positions in the same commodities if they are close substitutes against each other and a minimum correlation of 0.9 between the price movements can be clearly established over a minimum period of one year.

(5) In implementation of paragraph 9, amount of long (short) positions in excess of short (long) positions in the same commodity, derivative financial instruments on commodity and delta-based equivalent of options where the "delta plus" method is used corresponds to net position in the same commodity. Positions in derivative financial instruments on commodity are treated as positions in underlying commodity.

(6) Futures and forward contracts relating to individual commodity should be incorporated in the measurement system as notional amounts of measurement units (barrels, kilos etc.) and should be assigned a maturity with reference to expiry date.

(7) Commodity swaps where one leg is a fixed price and the other is current market price should be incorporated as a series of positions equal to the notional amount of the contract, with one position corresponding with each payment on the swap and slotted into the maturity ladder specified in paragraphs 10 to 14 accordingly. The positions would be long positions if the bank is paying fixed and receiving floating, and short positions if the bank is receiving fixed and paying floating. Commodity swaps where the legs are in different commodities are to be incorporated in the relevant maturity ladder.

(8) Positions resulting from delta-based equivalent of options on commodity or commodity derivative may be offset with positions in commodities or instruments which are same with underlying of the options.

(9) In simplified approach, commodity risk capital charge is equal to sum of two separate charges that the one is equal to 15% of the amount obtained from multiplying absolute value of net position of related commodity by fair value of commodity and the other one is equal to 3% of the amount obtained from multiplying the sum of absolute value of long and short position in commodity by fair value of commodity.

(10) In maturity ladder approach, separate maturity ladders in accordance with the following table are used for each commodity. All commodity related positions and all positions that are

treated as positions in same commodity in accordance with paragraph 4 are slotted into relevant time-bands. Physical stocks should be allocated to the first time-band.

Time-Bands	Spread Rates (%)
≤ 1 month	1,50
> 1 month to ≤ 3 months	1,50
> 3 months to ≤ 6 ay months	1,50
> 6 months to ≤ 12 months	1,50
> 1 year to ≤ 2 years	1,50
> 2 years to ≤ 3 years	1,50
> 3 years	1,50

(11) For each time-band, short positions and long positions are aggregated separately. Amount of that short positions matched with long positions or long positions matched with short positions in a time-band is "matched position" for relevant time-band. The residual long or short position is "unmatched position" for the same time-band.

(12) Matching position in between unmatched long (short) position for a time-band with unmatched short (long) position for a nearer time-bands is "matched position" in between these two time-bands. Part of unmatched long or short position which is not matching in process creates unmatched position.

(13) Bank's capital charge for each commodity is equal to sum of following amounts by using relevant maturity ladder:

a) For each time-band or in between two time-bands, the sum of matched long and short positions will be multiplied first by the appropriate spread rate for that band as set out in the table specified in paragraph 10, and then by TL equivalent of the commodity's spot price.

b) Where there is matched position in between unmatched position in one time-band with unmatched position in another time-bands, the amount obtained by multiplying the matched positions first by 0,6%, and then by TL equivalent of the commodity's spot price.

c) The amount obtained by multiplying unmatched positions remained at the end of processes in points (a) and (b) first by 15%, and then by TL equivalent of the commodity's spot price.

(14) Overall capital charge for commodity risk of a bank is equal to sum of capital charges calculated for each commodity.

SECTION FOUR

Risk Weighted Exposure Amount for Operational Risk

PART ONE

Calculation of Risk Weighted Exposure Amount for Operational Risk

Risk Weighted Exposure Amount for Operational Risk

ARTICLE 24 – (1) Risk weighted exposure amount for operational risk is calculated by three methods in a continuum of increasing sophistication and risk sensitivity: (i) the Basic Indicator

Approach; (ii) the Standardized Approach; and (iii) Advanced Measurement Approaches (AMA). A prior consent of the Agency is required for use of Standardized Approach and AMA. Principles and procedures for using AMA is determined by the Board.

(2) Banks with significant operational risk exposures which have more complex activities are expected to use an approach that is more sophisticated than the Basic Indicator Approach and that is appropriate for the risk profile of the bank.

Basic Indicator Approach

ARTICLE 25 – (1) The amount to be found by the multiplication of fifteen percent of the average over the previous three years of positive annual gross income of the bank by twelve point five is the amount that should be held for operational risk.

(2)   Gross income is defined as net interest income plus net non-interest income. This measure should: (i) be gross of any provisions (e.g. for unpaid interest); (ii) be gross of operating expenses, including fees paid to outsourcing institutions ; (iii) exclude realized profits/losses from the sale of securities in the banking book; and (iv) exclude extraordinary or irregular items as well as income derived from insurance.

(3)   The average is calculated by excluding the gross income of the year when the annual gross income to be calculated within the frame of second paragraph is negative or zero. Figures for any year in which annual gross income is negative or zero should be excluded from both the numerator and denominator when calculating the average. If the annual gross income is negative or zero for the last three years, the risk weighted exposure amount for operational risk is not calculated.

Standardized Approach and Application Criteria

ARTICLE 26 – (1) Banks shall calculate the risk weighted exposure amount for operational risk as the multiplication of the average over three years of the sum of the annual capital requirements across all business lines referred to in Table below by twelve point five. The annual capital requirement of each business line is equal to the product of the corresponding beta factor referred to in that Table and the part of the relevant annual gross income mapped to the respective business line for each year.

	Activities	Rate (%)
Corporate finance	Underwriting of financial instruments or placing of financial instruments on a firm commitment basis. Services related to underwriting investment advice. Advice to undertakings on capital structure, industrial strategy and related matters and advice and services relating to the mergers and the purchase of undertakings. Investment research and financial analysis and other forms of general recommendation relating to transactions in financial instruments	18
Trading and sales	Dealing on own account Money broking 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 a firm commitment basis Operation of Multilateral Trading Facilities	18

Retail banking (activities with natural persons and SMEs meeting the conditions of eligibility for inclusion in the retail receivables class mentioned in article 6)	- Acceptance of deposits and participation funds - Lending - Card services - Leasing - Guarantees and commitments - Investment counseling services	12
Retail intermediation/brokerage (activities with natural persons and SMEs meeting the conditions of eligibility for inclusion in the retail receivables class mentioned in Article 6)	- Receipt and transmission of trading orders for one or more financial instruments - Execution of orders in the name of customers - Placing of financial instruments without a firm commitment basis	12
Commercial banking	- Acceptance of deposits and participation funds - Lending - Leasing - Guarantees and commitments	15
Payment and settlement	- Fund transfer services - Issue and management of means of payment	18
Agency services	- Services of custody and management of financial instruments in the name of customers, also including services such as custody services and cash / collateral management	15
Asset management	- Portfolio management - CIU management - Other asset management services	12

(2) Where the aggregate capital requirement across all business lines within a given year is negative, banks shall use the value zero as the input to the numerator for that year.

(3) The Agency may permit the use of this method only if and to the extent the following conditions are satisfied:

a) A bank must develop specific policies and have documented criteria for mapping gross income for current business lines and activities into the standardized framework. These criteria should be continuously reviewed, and the required revisions should be made for new or changing lines of business, activities and risks.

b) In addition to Guideline on Operational Risk Management, banks should also comply with the following qualifying criteria:

1)   Banks should have a well-documented operational risk management and assessment system with clear responsibilities assigned to an operational risk management function. Banks should codify policies and procedures for identification, assessment, monitoring, controlling and risk-reporting of the operational risk. Bank must systematically track relevant operational risk data including material losses by business line. This operational risk management processes and assessment system should be subject to regular internal and external independent review and validation. These reviews must include both the activities of the business units and of the operational risk management function.

2)   The operational risk assessment system must be closely integrated into the risk management processes of the bank. Its output must be an integral part of the process of monitoring and controlling the banks operational risk profile. The bank must have techniques for creating incentives to improve the management of operational risk throughout the firm.

3)   Banks should establish a management reporting system for regular reporting of operational risk exposures, including material operational losses, to business unit management, senior management, and to the board of directors. Banks must have procedures for taking appropriate action according to the information within the management reports.

(4) Principles as to mapping of lines of business as mentioned in point (a) of paragraph 3 hereinabove are as follows:

a) All activities must be mapped into the eight business lines in a mutually exclusive and jointly exhaustive manner.

b) Any banking or non-banking activity which cannot be readily mapped into the business line framework, but which represents an ancillary function to an activity included in the framework, must be allocated to the business line it supports. If more than one business line is supported through the ancillary activity, an objective mapping criteria must be used.

c) If an activity cannot be mapped into a particular business line then the business line yielding the highest charge must be used. The same business line equally applies to any associated ancillary activity.

ç) Banks may use internal pricing methods to allocate gross income ,which is calculated according to Article 25, between business lines provided that total gross income for the bank still equals the sum of gross income for the eight business lines.

d) The mapping of activities into business lines for operational risk capital purposes must be consistent with the definitions of business lines used for regulatory capital calculations for credit and market risk. Any deviations from this principle must be clearly motivated and documented.

e) Senior management is responsible for the mapping policy which is subject to the approval by the board of directors.

f) The process of mapping to lines of business should be subject to an independent review.

(5) Agency can impose a period of initial monitoring of a bank's Standardized Approach before it is used for regulatory capital purposes.

Alternative Standardized Approach

ARTICLE 27- (1) Under the Alternative Standardized Approach, the risk weighted exposure amount for operational risk is calculated within the framework of procedures and principles described in paragraphs 1 and 2 of Article 26 hereinabove except for the business lines of 'retail banking' and 'commercial banking'. For these, rather than the annual gross income amounts of retail and commercial banking lines of business for each year as mentioned in paragraph 1 of Article 26, the relevant indicator is a normalized income indicator equal to the nominal amount of loans and advances (non-risk weighted and gross of provisions) multiplied by 3.5%. The loans and advances consist of the total drawn amounts in the corresponding credit portfolios. For the 'commercial banking' business line, banks shall also include securities held in the non-trading book in the nominal amount of loans and advances.

(2) In assessment of applications filed for a license of use of this application, the criteria set forth in paragraph 3 of Article 26 hereof are taken into consideration. In order to be eligible to file an application for a license of use, at least ninety percent of annual gross income amounts of the bank for the last three years as will be calculated pursuant to the procedures and principles set down in paragraph 2 of Article 25 hereinabove should have been obtained from retail and commercial banking lines of business, and a substantial portion of retail and/or commercial banking activities should be composed of credit facilities at a high default probability level, and the Alternative Standardized Approach should provide an appropriate basis for calculating its capital requirement for operational risk and this should be documented by an independent audit report.

Combined use of different approaches and transition

ARTICLE 28- (1) Banks may request permission to use a combination of the Basic Indicator Approach and the Standardized Approach only in exceptional circumstances such as the recent acquisition of new business which may require a transition period for the application of the Standardized Approach.

(2) Combined use of Basic Indicator Approach and Standardized Approach is subject to the commitment of the bank to entirely shift to Standardized Approach within a period of time to be deemed appropriate by the Agency.

(3) Banks may use AMA in combination with either the Basic Indicator Approach or the Standardized Approach, where the following conditions are met. Subject to the approval of Agency, a bank opting for partial use may determine which parts of its operations will use an AMA on the basis of business line, legal structure, geography, or other internally determined basis.

(a) the combination of approaches used by the bank captures all its operational risks and Agency is satisfied with the methodology used by the bank to cover different activities, geographical locations, legal structures or other relevant divisions determined on an internal basis;

(b) the criteria set out in paragraph 3 of the Article 26 for the Standardized Approach and the standards set out for AMA by the Board are covered;

(c) on the date of implementation of AMA, a significant part of the institution's operational risks are captured by that approach;

(ç) the bank takes a commitment to apply the AMA across a material part of its operations within a time schedule and plan that was submitted to and approved by the Agency. The plan should be driven by the practicality and feasibility of moving to the AMA over time, and not for other reasons.

(4) Transition from the Standardized Approach to Basic Indicator Approach; and from AMA to Standardized Approach or Basic Indicator Approach is subject to permission of the Agency. If Agency determines that a bank using a more advanced approach no longer meets the qualifying criteria for this approach, it may require the bank to revert to a simpler approach for some or all of its operations, until it meets the conditions specified by the Agency for returning to a more advanced approach. Banks may only revert to the use of a less sophisticated approach for operational risk; provided that the bank has demonstrated to the satisfaction of the Agency that the use of a less sophisticated approach is not proposed in order to reduce the operational risk related capital requirements of the bank, is necessary on the basis of nature and complexity of the bank and would not have a material adverse impact on the solvency of the bank or its ability to manage operational risk effectively.

SECTION FIVE

Capital Adequacy Ratios and Final Provisions

PART ONE

Capital Adequacy Ratios and Consolidated Capital Adequacy Ratios

Capital Adequacy Ratios

ARTICLE 29 – (1) It is required that the capital adequacy standard ratio is hold and maintained at 8% minimum.

(2) It is required that the tier 1 capital adequacy ratio is hold and maintained at 6% minimum.

(3) It is required that the common equity tier 1 capital adequacy ratio is hold and maintained at 4.5% minimum.

Consolidated capital adequacy ratios

ARTICLE 30 – (1) It is required that the consolidated capital adequacy standard ratio is hold and maintained at 8% minimum.

(2) It is required that the consolidated tier 1 capital adequacy ratio is hold and maintained at 6% minimum.

(3) It is required that the consolidated common equity tier 1 capital adequacy ratio is hold and maintained at 4.5% minimum.

Reporting period and differentiation

ARTICLE 31 – (1) **(Amended OG 27/9/2016-29840)** The ratios mentioned in Articles 29 and 30 are calculated at the periods of own funds and consolidated own funds calculation periods stated in the regulation on own funds of banks and reported to the Agency within the periods to be determined by the Board.

(2) Considering banks' internal systems, assets and financial structure, Board can decide to increase the minimum capital adequacy ratios and consolidated minimum capital adequacy ratios, to apply different ratios for each bank, and to differentiate calculation and the reporting periods.

PART TWO

Other and Final Provisions

Incompliance to ratios

ARTICLE 32 – (1) In case that any of the capital adequacy ratios and consolidated capital adequacy ratios fall below the minimum level, the compliance to the minimum level have to be satisfied in a period defined by the Board limited to six months at most.

(2) In case it is found that fictive transactions have been done in order to satisfy the minimum ratios and consolidated minimum ratios, the amounts corresponding to such transactions are deducted from assets and liabilities backwards and the ratios subject to related periods are recalculated.

Cancellation of approvals

ARTICLE 33 – (1) In case it is found that the conformity to the minimum requirements in order to be approved to use the approaches and methods within the framework of this regulation and other regulations based on this regulation, it is required to prove that the nonconformity is not material or the re-conformity will be satisfied in an period and according to a plan approved by the Agency. Otherwise the approvals are cancelled.

Capital Floor Application for Internal Ratings-Based Approaches

ARTICLE 34 – (Amended OG 14/3/2018-30360)[7] Banks that are permitted to use the IRB approach will use the risk weighted exposure amount as;

Where:

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[7] This amendment takes effect on the date of publication, effective from 1/1/2018.

A:For exposures for which permission to use the IRB approach has been granted, the risk weighted exposure amount for credit risk calculated using the IRB approach; for other exposures, the risk weighted exposure amount for credit risk calculated using the standard approach,

B:Risk weighted exposure amount calculated with Standard Approach for all exposures,

C1: Amounts deducted from the common equity Tier 1 and Tier 2 capital in accordance with Article 9 of the Regulation on Own Funds of Banks,

C2: The sum of general provisions added to the Tier 2 capital and positive amounts in accordance with Article 8, paragraph 1 of the Regulation on Own Funds of Banks

C3: The amount of general provisions to be added to the Tier 2 capital in accordance with the Regulation on Own Funds of Banks, in the case of applying the Standard Approach to all exposures.

Adjustment amount $= [(a\times(B\times0.08+C1-C3))-(A\times0.08+C1-C2)]\times12.5$

If the adjustment amount calculated with the formula is positive, the amount found by adding it to A is used. The "a" value is applied as eighty percent. The Agency may determine a different "a" value if deemed necessary.

Transition process for Advanced Measurement Approaches

ARTICLE 35 – (1) The risk weighted exposure amount for operational risk calculated by the banks which are approved to use AMA cannot be less than 100% for the first year, 90% for the second year and 80% for the third year following the date of approval.

Disclosure and market discipline

ARTICLE 36 – (1) Disclosures of banks under the scope of this regulation are determined by the Board.

Repealed regulation

ARTICLE 37 – (1) Regulation on Measurement and Assessment of Capital Adequacy of Banks published on Official Gazette dated 28/06/2012 and numbered 28337 is repealed.

(2) References to the mentioned regulation is accepted as done to this Regulation.

The treatment regarding the banks which started to apply TFRS 9

PROVISIONAL ARTICLE 1 – (OG-14/3/2018-30360)[8]

(1) Amounts included in the Common Equity Tier 1 Capital in accordance with the Provisional Article 5 of the Regulation on Own Funds of Banks shall not be deducted from the exposure value calculated in accordance with the Standard Approach or IRB Approach.

(2) Risk weighted exposure amounts for credit risk is not calculated for deferred tax assets arising from the amounts included in the Common Equity Tier 1 Capital in accordance with the Provisional Article 5 of the Regulation on Own Funds of Banks

[8] This amendment takes effect on the date of publication, effective from 1/1/2018.

Enforcement

ARTICLE 38 – (1) This regulation is enforceable after 31/03/2016.

Execution

ARTICLE 39 – (1) This regulation is executed by the Head of Banking Regulation and Supervision Agency.

ANNEX I

RISK WEIGHTS FOR THE DETERMINATION OF RISK WEIGHTED ASSET EXPOSURE AMOUNTS

PART I

Risk Weights

1. EXPOSURES TO CENTRAL GOVERNMENTS OR CENTRAL BANKS
1.1 Application
1. Without prejudice to provisions of paragraphs 2 to 7, %100 risk weight is applied for exposures to central governments and central banks.
2. Exposures to central governments and central banks which are rated by a CRA are risk weighted according to following table:

Credit Quality Step	1	2	3	4	5	6
Risk Weight (%)	0	20	50	100	100	150

3. Exposures to European Central Bank are subject to %0 risk weight.
4. Exposures to Central Government or Central Bank of Republic of Turkey denominated in TL are subject to 0% risk weight. In order to be eligible for the mentioned application there must be funding at the same currency corresponding to exposure.
5. The same lower risk weight can be assigned where foreign jurisdictions' authorities apply a lower risk weight than the risk weights defined in paragraphs 1 and 2 for their central governments and central banks denominated in their domestic currency. In case it is seen necessary, Board can limit the application of this provision by country. While applying the mentioned treatment there must be corresponding funding to the exposures with the same currency.

1.2 Use of export credit agency ratings

6. Export credit agency's (ECA) credit assessments can be accepted by the Board if either of the following conditions is met:

   a) Risk scores are based on the consensus of ECAs participating in the "Arrangement on Officially Supported Export Credits" of OECD
   b) ECA publishes its ratings, subscribe to the methodology agreed by OECD and the rating is associated with one of eight "minimum export insurance premiums" that the OECD agreed methodology establishes.

7. Exposures for which a credit assessment by an ECA is recognized for risk weighting purposes by Board shall be assigned a risk weight according to table below.

ECA Score	0	1	2	3	4	5	6	7
Risk weight(%)	0	0	20	50	100	100	100	150

2. EXPOSURES TO REGIONAL GOVERNMENTS OR LOCAL AUTHORITIES

8. Without prejudice to paragraphs 9 and 10, exposures to regional governments or local authorities are subject to same requirements as exposures to banks and investment firms. While determining the risk weights, the method set out in paragraphs 27 to 30 must be used. Preferential treatment for short term exposures set out in paragraphs 29, 30 and 35 cannot be applied to exposures to regional governments or local authorities.

9. Exposures to local authorities must be treated as exposures to the central government of Republic of Turkey where there is no difference in risk between such exposures because of the specific revenue-raising powers of the former, and the existence of specific institutional

Credit Quality Step of the Central Government	1	2	3	4	5	6
Risk weight applied to exposure (%)	20	50	100	100	100	150

arrangements the effect of which is to reduce their risk of default. Agency determines the local authorities which will be subject to the same risk weight with the central governments.

10. Where a foreign jurisdiction's authority applies the same treatment for a regional government or local authority with its central government, the same treatment to that regional government or local authority is applied. In case it is seen necessary, Board can limit the application of this provision by country.

3. EXPOSURES TO ADMINISTRATIVE BODIES AND NON-COMMERCIAL UNDERTAKINGS

3.1. Application

11. Without prejudice to the provisions of paragraphs 12 to 17, 100% risk weight is applied to exposures to administrative bodies and non-commercial undertakings.

3.2. Exposures to public sector entities

12. Without prejudice to the provisions of paragraphs 13 to 17, 100% risk weight is applied to exposures to public sector entities.

13. Banks determine the risk weight for these exposures by considering the provisions of paragraphs 16 and 17. Where the Board decides that they do not have any difference in terms of riskiness due to existence of a guarantee by the Central Government of Republic of Turkey, exposures to public sector entities are subject to the same treatment with exposures to central government.

14. Where the foreign jurisdictions' authorities apply a treatment for public sector entities same as central governments, exposures to these public sector entities are subject to the same treatment. In case it is seen necessary, Board can limit the application of this provision by country.

15. Where the foreign jurisdictions' authorities risk weight exposures to public sector entities as exposures to banks and investment firms, exposures to these entities are subject to same treatment. In case it is seen necessary, Board can limit the application of this provision by country.

3.3. Method Based on Risk Weight Applied to Central Government

16. Exposures to public sector entities are subject to the risk weights defined in the following table based on the credit quality step of the central government of the jurisdiction they are located.

17. Without prejudice to paragraphs 13 to 15, exposures to public sector entities incorporated in countries where the central government is unrated, are subject to 100% risk weight.

4. EXPOSURES TO MULTILATERAL DEVELOPMENT BANKS
4.1. Scope
18. Under the scope of this Annex, Inter-American Investment Corporation, Black Sea Trade and Development Bank and Central American Bank for Economic Integration shall be considered as multilateral development bank (MDB).
4.2. Application
19. Without prejudice to paragraphs 20 to 22, exposures to MDBs are subject to same treatment used for banks and investment firms in accordance with paragraphs 27 to 30.
20. The preferential treatment for short term exposures set out in paragraphs 29, 30 and 35 cannot be applied to these exposures.
21. Exposures to the following MDBs are subject to 0% risk weight;

a) International Bank for Reconstruction and Development,

b) International Finance Corporation,

c) Inter-American Development Bank,

ç) Asian Development Bank,

d) African Development Bank,

e) Council of Europe Development Bank,

f) Nordic Investment Bank,

g) Caribbean Development Bank,

ğ) European Bank for Reconstruction nd Development,

h) European Investment Bank,

ı) European Investment Fund,

i) Multilateral Investment Guarantee Agency,

j) Islamic Development Bank,

k) International Finance Facility for Immunization.

22. Board can update the list in paragraph 21 under the scope of international standards compliance to which Agency has a commitment.
5. EXPOSURES TO INTERNATIONAL ORGANIZATIONS
23. The following international organizations are subject to 0% risk weight;

a) European Union

b) International Monetary Fund,

c) Bank for International Settlements.

6. EXPOSURES TO BANKS AND INVESTMENT FIRMS
6.1. Application
24. For the determination of risk weights applied to the exposures to banks and investment firms, the method set out in paragraphs 27 to 30 must be used.
25. Without prejudice to paragraphs 24 to 37, other financial institutions which are subject to the authorization and supervision of the Agency are subject to the same risk weights applied to banks.
6.2. Risk weight floor applied to unrated banks and investment firms
26. Without prejudice to paragraphs 14 and 15 of Part II, the risk weight applied to unrated banks and investment firms cannot be lower than the risk weight applied to exposures to the

central government of the jurisdiction in which the bank or the investment firm is incorporated. This limitation is not applied for the short term letter of credits used for trade finance purposes.

6.3. Method based on credit ratings

27. Exposures to banks and investment firms with an original maturity of more than three months for which a rating by a CRA is available, shall be assigned a risk weight according to table below by considering the long term ratings.

Credit Quality Step	1	2	3	4	5	6
Risk weight (%)	20	50	50	100	100	150

28. Without prejudice to provision of paragraph 26, unrated banks and investment firms are subject to 50% risk weight.

29. For exposures to banks and investment firms rated by a CRA, which have original maturity of three months or less, the risk weighs in the table below is used by considering the long term ratings. The exposures which have original maturity of three months or less but expected to renew at the end of maturity or has already renewed are subject to the provisions applicable to long term exposures.

Credit Quality Step	1	2	3	4	5	6
Risk weight (%)	20	20	20	50	50	150

30. Without prejudice to provisions of paragraph 26, exposures to unrated banks and investment firms which have original maturity of three months or less are subject to 20% risk weight. The exposures which have original maturity of three months or less but expected to renew at the end of maturity or already renewed are subject to the provisions applicable to long term exposures.

6.4 Issues related to short term credit ratings

31. Eligibility of the short term ratings under the scope of paragraphs 27 to 30 is subject to the following conditions.

32. If there is no short-term issue specific rating for the short term exposure, the general preferential treatment for short-term exposures as specified in paragraph 29 shall apply to all exposures to banks and investment firms with original maturity of three months or less.

33. Where there is short-term issue specific rating for a short term exposure and if that rating requires a risk weight equal or lower than the requirement according to paragraph 29 then the exposure is subject to the risk weight which is mapping to this rating by taking into consideration the table in paragraph 64 and these exposures are categorized according to the risk classification related to paragraph 64. All other exposures which have original maturity less than or equal to three months are subject to treatment according to paragraph 29.

34. Where there is short-term issue specific rating for a short term exposure and if that rating requires a risk weight higher than the requirement according to paragraph 29 then including this exposure all exposures which have original maturity less than or equal to three months is subject to the risk weight which is mapping to this rating by taking into consideration the table in paragraph 64 and these exposures are categorized according to the risk classification related to paragraph 64.

6.5. Short term exposures in local currency of the obligor

35. Under the framework set out in paragraphs 27 to 30, exposures to banks and investment firms with original maturity of three months or less, which are denominated in local currency and funded in that currency; are subject to risk weights one category higher than the

preferential risk weight applied to exposures to central governments as defined in paragraphs 4 and 5.

36. The minimum risk weight applicable to exposures with original maturity of three months or less, are denominated in local currency and funded in that currency, is 20%.

6.5. Exposures to banks and investment firms which is taken as own fund item by obligor

37. Where the counterparties are banks and investment firms, debt instruments and loans including securities, which are taken into account as own fund item by the obligors, cannot be considered as they are in exposures to banks investment firms classification.

7. EXPOSURES TO CORPORATES

38. For exposures to corporates the risk weights at the following table are used.

Credit Quality Step	1	2	3	4	5	6
Risk weight (%)	20	50	100	100	150	150

39. Without prejudice to provisions of paragraphs 14 and 15 of Part II, exposures to unrated corporates are assigned a 100 % risk weight or the risk weight of exposures to the central government of the jurisdiction in which the corporate is incorporated, whichever is the higher. When the default statistics leads a judgment that exposures to unrated corporates require a higher risk weight than 100% Board can increase this risk weight.

8. RETAIL EXPOSURES

40. (Amended OG 20/1/2016-29599) Except the past due exposures, exposures classified in accordance with the criteria set out in paragraph 2 of Article 6 of the Regulation are subject to 75% risk weight.. In case it is believed that the default statistics show that a higher risk weight is required for retail exposures the mentioned risk weight can be increased by credit type the Board.

9. EXPOSURES SECURED BY MORTGAGES ON REAL ESTATE PROPERTIES

41. Without prejudice to provisions of 43 to 54, secured portion of exposures which are fully or partially secured by mortgages on a real estate properties are subject to 100% risk weight. In case that there is a mortgage on a real estate subsequently where all degrees and orders are mortgaged without sharing with any others by a single party, all mortgages on the sequence is accepted to be on the best degree.

42. The amount defined as the secured portion of the exposure secured by mortgages on real estate cannot be larger than minimum of the reserved mortgage amount and the value of the real estate. Where more than one party has reserved the first degree mortgage amount on a real estate, the amount defined as the secured portion cannot be larger than the amount which is the share of bank on mortgage degree multiplied with minimum of reserved mortgage amount and value of real estate. Where the mortgage amount is defined in foreign currency, reserved mortgage amount is calculated according to buying rate declared by Central Bank of Republic of Turkey at the last day of the capital requirement calculation period and for the calculation of secured and unsecured portion, the same principle is employed also for amounts of mortgages in foreign currency established in the name of other persons.

9.1. Exposures Secured by Residential Real Estate Mortgages

43. (Amended 20/1/2016-29599) Exposures, which are fully secured according to definition in point (c) of paragraph 45 by mortgages on residential real estates that are owned by the obligor and that will be occupied or is being occupied or that is rented or will be rented, are subject to 35% risk weight. Where default statistics require a different risk weight, Board may change this risk weight on the condition that %35 is the lowest possible weight. For the application of this paragraph Board may determine additional requirements.

44. Lease exposures, which are fully secured according to definition in point (c) of paragraph 45 by mortgages on residential real estates of which the bank is lessor and the lessee has the option to buy the real estate, are subject to 50% risk weight.

45. For the treatment set out in paragraphs 43 and 44 the following requirements and the requirements set out in Article 21 of the Communiqué on Credit Risk Mitigation Techniques must be satisfied.

a) Except the macroeconomic conditions affecting the performance of the real estate and the obligor together, there must not be any significant dependency of the value of the real estate on the credibility of the obligor.

b) Payments of the relevant exposure must not essentially depend on the performance of the real estate or project, but depend on the capacity of payment by other sources of the obligor.

c) (Amended OG 20/1/2016-29599) For the application of this paragraph the Acceptable Collateralized Amount of Real Estate (ACARE) is the amount calculated with the following formula, if ACARE is larger than or equal to the exposure amount, the exposure is accepted to be fully secured.

Amended Sentence :OG-20/1/2016-29599)

$$ACARE = \sum_{1}^{n} \min\{\mathrm{Re}\,servedMortgageAmount_i ; LTVi \times UsableValueof\,\mathrm{Re}\,alEstatei_i\}$$ In the formula;

n: The lowest degree of reserved mortgage belonging to bank,

i: The reserved mortgage degree of the bank,

LTV_i : The loan to value which is for i=1 (1st degree mortgage reserve) 80%; for i>1 (2nd and the later degrees) 50%

Reserved Mortgage Amount$_i$: The mortgage reservation amount on right of the bank in degree i

Usable Value of Real Estate$_i$: Regarding the mortgage reservation related to degree i, the amount calculated by subtracting the reserved mortgage amounts including the empty ones before degree i from the value of real estate; if the bank's reserved mortgage amount is for a sub-degree of i which has no defined priority the amount calculated by subtracting all reserved amounts before degree i and all sub-degree amounts before the bank's sub-degree including the empty reservations from the value of real estate; multiplied by the share of bank in the degree or sub-degree,

Share of bank in degree i: The ratio of reserved mortgage amount for the name of bank in a degree or sub-degree to the total mortgage reservation amount in that degree or sub-degree

9.2. Exposures Secured by commercial real estate

46. (Amended OG 20/1/2016-29599) For markets assessed by BRSA as well-developed and long-established fully secured tranches of exposures secured partially or fully by mortgages on offices, multi-purpose commercial premises and multi-tenanted commercial premises like commercial real estates are subject to risk weight of 50% if the following conditions are met and Agency declares it to public.

   a) Losses stemming from commercial real estate lending up to the lower of 50% of the market value or 60% of mortgage lending value must not exceed 0.3% of the outstanding loans in any given year.
   b) Overall losses stemming from commercial real estate lending must not exceed 0.5% of the outstanding loans in any given year.

47. Fully secured tranche of the lease exposures, which are secured by mortgages on commercial real estates of which the bank is lessor and the lessee has the option to buy the real estate, are subject to the provisions of paragraph.

48. For the treatment set out in paragraphs 46 and 47, the following requirements and the conditions in Article 21 of the Communiqué on Credit Risk Mitigation Techniques must be satisfied.

a) Except the macroeconomic conditions affecting the performance of the real estate and the obligor together, there must not be any significant dependency of the value of the real estate on the credibility of the obligor.

b) Payments of the relevant exposure must not essentially depend on the performance of the real estate or project, but depend on the capacity of payment by other sources of the obligor. Board may decide to remove this requirement for exposures secured by commercial real estate.

49. **(Amended OG 20/1/2016-29599)** Mortgage lending value (MLV) is the multiplication of the value of real estate by a ratio of collateralization limit defined by the Board. Unless another value is stated by the Board this ratio of collateralization limit is 85%. For the application of this paragraph Acceptable Collateralized Amount of Real Estate (ACERE) is calculated according to following formula. The amount of exposure up to the value of ACERE is accepted as fully secured tranche.

$$\min\{\%50 \times UVRE_1; \%60 \times MLV_1; \text{Re}\,servedMortgageAmount_1\} +$$

$$\sum_2^n \min\{\%34 \times UVRE_i; \%40 \times MLV_i; \text{Re}\,servedMortgageAmount_i\}$$

In the Formula,

$UVRE_i$: (Usable Value of Real Estate$_i$) Regarding the mortgage reservation related to degree i, the amount calculated by subtracting the reserved mortgage amounts including the empty ones before degree i from the value of real estate; if the bank's reserved mortgage amount is for a sub-degree of i which has no defined priority the amount calculated by subtracting all reserved amounts before degree i and all sub-degree amounts before the bank's sub-degree including the empty reservations from the value of real estate; multiplied by the share of bank in the degree or sub-degree,

MLV_i = $UVRE_i$ x Ratio of Collateralization Limit Defined by Board

Reserved Mortgage Amount$_1$: The mortgage reservation amount right of bank in degree 1

n: The lowest degree of reserved mortgage belonging to bank,

i: The reserved mortgage degree of the bank,

Reserved Mortgage Amount $_i$: The mortgage reservation amount right of bank in degree i

Share of bank in degree i: The ratio of reserved mortgage amount for the name of bank in a degree or sub-degree to the total mortgage reservation amount in that degree or sub-degree

50. The exposure amount exceeding fully secured portion in paragraph 49 is subject to 100%.

51. Board may accept to use 50% risk weight for the exposures in jurisdictions where their authorities declare to the public that they satisfy the requirements set out in paragraph 46.

52. Among the exposures subject to 50% risk weight according to paragraphs 46 and 51, the ones whose principal amounts or the interests are delinquent for more than 90 days are subject to 100% risk weight after specific provisions are deducted.

53. If in any given year one of the limits mentioned in paragraph 46 is breached, the eligibility of the treatment in paragraph 46 is lost and until the conditions are met 100% risk weight is applied.

54. The provision of paragraph 53 is applied comparably for the exposures subject to provision of paragraph 51.

10. PAST DUE EXPOSURES

55. Without prejudice to the provisions of paragraphs 56 to 58, except the exposures subject to provisions of paragraph 43 and exposures in provision of paragraph 52, exposures of which

principal or interest or both are overdue for more than ninety days following the end of maturity or the due payment date will be subject to a risk weight of:

a) Where the ratio of specific provision for the exposure to the exposure amount before specific provision is less than 20%, unsecured part of net amount of the exposure is subject to 150%

b) Where the ratio of specific provision for the exposure to the exposure amount before specific provision is equal to more than 20%, unsecured part of net amount of the exposure is subject to 100%

c) Where the ratio of specific provision for the exposure to the exposure amount before specific provision is equal to more than 50%, unsecured part of net amount of the exposure is subject to 50%

56. For the purpose of defining the secured portion of the past due loan, collaterals and guarantees eligible under Communiqué on Credit Risk Mitigation Techniques are taken into account.

57. The risk weight applicable to the net of provisions amount of exposures risk weighted subject to the provision of paragraph 43, of which principal or interest or both are overdue for more than ninety days following the end of maturity or the due payment date, is 100%. 50% risk weight is applied to the rest of the exposure after specific provision is set aside where the ratio of the specific provisions set aside to the exposure amount before specific provision is set aside is greater than or equal to 20%.

58. Retail exposures of which the principal or interest or both are overdue for more than ninety days following the end of maturity or the due payment date, are not included the sum of all exposures in the retail exposure classification while calculating the 0.2% limit set out in point (b) of Article 6 of the Regulation.

11. HIGH RISK EXPOSURES DEFINED BY BOARD

59. **(Amended OG 20/1/2016-29599)** The exposures which are defined to be 150% or more by the Board and the exposures which are subject to 150% or more according to this Regulation are accepted as high risk exposures and categorized under this class.

Within this context although they are not past due, exposures which are categorized as nonperforming are risk weighted with 150% BRSA Board can define additional high risk weighted items.

60. In case that specific provisions are allocated for non-past due high risk exposures, risk weights are applied according to the method set out in paragraphs 55 to 58.

12. COVERED BONDS

61. Covered bonds are subject to risk weights according to their ratings by CRA.

62. In case that there is no rating available for a covered bond, risk weight is determined according to provisions in paragraph 9 of Part II.

13. SECURITIZATION POSITIONS

63. For the determination of risk weights of securitization positions the procedures and principles stated in paragraph 5 of Article 7 of the Regulation are taken into account.

14. BANKS AND INVESTMENT FIRMS AND CORPORATES WITH SHORT TERM RATINGS

64. Where there are short term ratings for exposures to banks and investment firms that are subject to paragraphs 27 to 30 and to corporates, risk weights in the following table are used by taking into account these ratings.

Credit Quality Step	1	2	3	4	5	6
Risk weight (%)	20	50	100	150	150	150

15. COLLECTIVE INVESTMENT UNDERTAKINGS

65. Investments in CIUs held in banking book is subject to risk weights according to Look Through Approach or Mandate Based Approach.

66. In case where it is not possible to apply the look through or mandate based approaches 1250% risk weight is applied to investments in CIUs.

67. The risk weighted exposure amount for investment in CIUs can be calculated by Look-Through Approach provided that there is sufficient and frequent information provided to the bank regarding the underlying exposures of the CIUs and such information is verified by an independent third party. Independent third parties are limited to the depository or the custodian bank or the management company. In calculation of CIU's risk weighted exposure amounts, CIU's derivative investments shall be taken into account in which the underlying receives a risk weighting treatment under Annex-1 of the Regulation, and the associated counterparty credit risk exposure in accordance with Annex-2 and Annex-4 of the Regulation. Instead of determining a CVA charge associated with the fund's derivatives exposures in accordance with the Regulation, banks must multiply the counterparty credit risk exposure calculated according to Annex-2 and annex-4 of the Regulation by a factor of 1,5 before applying the risk weight associated with the counterparty.

68. If there is no sufficient information about underlying exposures of the CIUs, the risk weighted exposure amount can be calculated by Mandate-Based Approach using the information contained in a CIU's mandate or in the national regulations governing CIU or disclosures of the CIU.

In this calculation, underlying exposures of the CIUs are risk weighted assuming the underlying portfolios are invested to the maximum extent allowed under the CIU's mandate in those assets attracting the highest capital requirements. Whenever the underlying risk of a derivative exposure or an off-balance-sheet item receives a risk weighting treatment under the Regulation, the notional amount of the derivative position or of the off-balance sheet exposure is risk weighted accordingly. If the underlying is unknown, the full notional amount of derivative positions must be used for the calculation. If the notional amount of derivatives is unknown, it will be estimated conservatively using the maximum notional amount of derivatives allowed under the mandate. Exposure value of derivatives may be determined in accordance with Part I of Section II of Annex 2 of the Regulation. Whenever the replacement cost is unknown, the exposure measure for counterparty credit risk will be calculated in a conservative manner by using the notional amount as a proxy for the replacement cost; whenever the add-on factor is unknown, the maximum add-on factor of 15% applies. For the derivative instruments for which calculation of capital requirement is required to calculate for CVA risk under the scope of Regulation, CVA risk is not calculated under the scope of this paragraph. The exposure amounts of such derivatives are 1.5 times the exposure amount calculated according to Part I of Section II of Annex 2 of the Regulation.

69. While using Look-Through Approach, if banks do not have adequate data or information to perform the calculations themselves, they may rely on third-party calculations defined in paragraph 67 for determining the risk weights associated with their investments in CIUs.

However, in this case, the risk weighted exposure amount for CIU's underlying exposures is the amount calculated as if the bank is holding these positions directly multiplied by 1.2.

70. When a bank has an investment in CIU that itself has an investment in another CIU, risk weight applied to the investment of the first CIU can be determined by using Look-Through Approach or the Mandate-Based Approach, or 1250% risk weight can be used. For all subsequent layers, the risk weights applied to an investment in another CIU can be determined by using the Look-Through Approach under the condition that the Look-Through Approach was also used for determining the risk weight for the investment in the CIU at the previous layer. Otherwise, the risk weight set out in paragraph 66 must be applied.

71. The risk weighted exposure amount for investment in CIUs is calculated with the following formula in the context of Look-Through Approach or the Mandate-Based Approach.

Risk Weighted Exposure Amount = Average Risk Weight × Leverage × Exposure Value

In the formula, the average risk weight of CIU is the ratio of the total risk weighted exposure amount to the total assets of the CIU and the leverage is the ratio of total assets to total equity of CIU, exposure value is the bank's investment in a CIU. In Mandate-Based Approach leverage is taken into account by using the maximum financial leverage permitted in the CIU's mandate or in the national regulation governing the CIU or disclosures of the CIU. When determining the risk weighted exposure amount related to bank's investment in a CIU, the multiplication of average risk weight and leverage is subjected to a cap of 1250%.

16. EQUITY INVESTMENTS

72. Participation shares exceeding the limit set out in Article 56 of the Law are subject 1250% risk weight.

73. The part of items, defined in point (ç) of paragraph 4 of Article 9 of the Regulation on Own Funds of Banks, that are not subtracted from core capital are subject to 250% risk weight.

74. The part of investments, defined in point (b) of paragraph 4 of Article 9 of the Regulation on Own Funds of Banks that are not subtracted from own funds and equity investments which are bot in the scope pf paragraphs 72 and 73 are subject to 100% risk weight.

17. OTHER EXPOSURES
75. 100% risk weight is applied to tangible assets.
76. Banks apply a risk weight of 100% to prepaid expenses and accrued income the counterparty of which cannot be identified.
77. Purchased checks, moneys in transit, and matured securities (those subject to a risk weight of higher than 20%) are subject to 20% risk weight, while cash and cash equivalent items are subject to 0% risk weight.
78. Gold bullions held in own vaults or gold depot accounts are subject to 0% risk weight.
79. In the case of sale and repurchase agreements and asset sales with recourse forward asset purchases, forward forward deposits, partly-paid shares and securities, the risk weight shall be that assigned to the assets in question and not to the counterparties to the transactions.
80. Exposures of loans sourced with funds where the bank is only an intermediary and the risk of which are not belong to bank, are subject to 0% risk weight.
81. Where a bank provides credit protection for a number of exposures under terms that the nth default among the exposures shall trigger payment and that this credit event shall

terminate the contract, and where the product has an external credit assessment from a CRA, the risk weights provided according to the rules prescribed in paragraph 5 of Article 7 of the Regulation are applied. If the product is not rated by a CRA, the risk weights of the exposures included in the basket will be aggregated, excluding n-1 exposures, up to a maximum of 1250 %. Whether the transaction is rated by a CRA or not, the risk weight calculated by application of the appropriate one of the methods described hereinabove is multiplied by nominal amount of protection provided by the agreement, to find the risk-weighted amount. The n-1 exposures to be excluded from the aggregation shall be determined on the basis that they shall include those exposures each of which produces a lower risk-weighted exposure amount than the risk-weighted exposure amount of any of the exposures included in the aggregation.

82. The exposure value for leases must be the discounted minimum lease payments. Where the payment of leased property's residual value is guaranteed by a third party other than the lessee and guarantee and guarantor satisfies the conditions in Articles 13, 26, 27 and 29 of Communiqué on Credit Risk Mitigation Techniques, the guarantee can be taken into account as unfunded credit protection. These exposures are assigned to the relevant exposure class prescribed in Article 6 of the Regulation. Where there is an option to purchase the leased property at the end of lease period by lessee or a third party 100% risk weight is applied to the residual value of the leased property until the exercise of the option. In case of the option is exercised, the amount of claim related to purchasing transaction is subject to the risk weight of the exposure class where the exposure is classified until the collection.

PART II

Use of CRAs' Credit Ratings for Determination of Risk Weights

1. APPLICATION

1. **(Amended OG 9/12/2016-29913)** For the determination of risk weights, banks may assign one or more CRA and they notifies the names of assigned CRAs to the Agency . Banks must use the credit ratings of CRAs as an input in their internal risk management.

2. **(Amended OG 9/12/2016-29913)** If a bank decides to use ratings of a CRA for items in a particular exposure class, then that bank must use such ratings acquired from Risk Center for all exposures belonging to this exposure class consistently and steadily.

3. A bank which decides to use the ratings of a CRA, must use those ratings consistently and continuously.

4. A bank can use a credit rating only if that rating represents the payment capacity of all principal and interest amount of the obligor.

5. In case that there is only one rating of CRAs assigned for rating of an item, that rating is used for the determination of risk weight.

6. In case that the ratings of a rated item by two CRAs maps to different risk weights, the higher risk weight must be used.

7. In case that the ratings of more than two assigned CRAs maps to different risk weights for a rated item, the higher of the lowest two risk weights is used. In case that both risk weights are equal this risk weight is used.

2. RATING OF ISSUER AND ISSUE

8. Where a credit rating exists for a specific issuing programme or facility to which the item constituting the exposure belongs, this credit rating shall be used to determine the risk weight to be assigned to that item.

9. Where there is no issue specific rating of exposure, the following general principals are applied;

a) For such an exposure; if a rating is done for another exposure of the obligor, but the bank's exposure is not an investment made in the relevant rated exposure, then the high quality credit assessment of the rated exposure (a credit assessment matched to a risk weight lower than the risk weight applied on an unrated receivable) may be applied to this unrated exposure of

the bank only if this exposure is in all aspects equal to or superior than the other rated exposure of the obligor. If it is not equal or superior, the relevant rating cannot be used, and this exposure is subject to the risk weight of other unrated receivables.

b) In case there is a rating of the issuer, this rating is applied to all unsecured senior issues of the issuer. As a result, only senior issues of that issuer can benefit from senior issues of the issuer rating. Other unrated issues of that issuer with high quality rating are taken into account as unrated exposures.

c) Where the issuer and/or a single issue has a low quality rating (ratings mapping to a risk weight equal to or higher than the risk weight applied to unrated exposures), an unrated issue from the same issuer will be subject to the same risk weight with that applied to the mentioned low quality credit rating.

10. The provisions of paragraphs 8 and 9 hereinabove do not prevent the application of provisions of paragraphs 59 and 60 of the First Part hereof.

11. An independent credit rating made for a company cannot be used in determination of risk weight to be applied to another company, regardless of whatever the relation between them.

3. SHORT TERM CREDIT RATINGS

12. Ratings of short term exposures are used only for loans and off-balance sheet items to banks and investment firms and corporates.

13. Short term ratings of exposures is used only for related item.

14. As an exception to paragraph 13, in case that 150% is applied to a short term exposure, regardless of being short term or long term all other unrated unsecured exposures of the same obligor is subject to 150% risk weight.

15. As an exception to paragraph 13, in case that 50% risk weight is applied to a short term exposure, none of the short term unrated exposures is subject to a risk weight below 100%.

4. LOCAL AND FOREIGN CURRENCY EXPOSURES

16. A credit assessment of an asset of the obligor in domestic currency cannot be used for the purpose of determination of risk weight applicable on another asset of the same obligor in a foreign currency.

COUNTERPARTY CREDIT RISK

SECTION ONE
Definitions, Selection of the Method to be Used and Scope

PART ONE
Definitions

Transaction types

1. Transactions with a long swap period refer to transactions in which the delivery of securities, commodities or foreign currency in exchange for cash, commodities or other financial instruments is committed and the contractually specified settlement or delivery date is a date that is more than five business days after the trade date or, if market standards provide for a shorter swap period, a date later than that market standard.

2. Trading on margin refers to the purchase, sale, holding of securities as a position or the extension of credit for the purchase, sale or trading of securities. Trading on margin do not include other loans extended by using securities as collateral.

3. Derivative transactions include the instruments specified in the sixth paragraph of Article 5 of this Regulation that are not executed with any central counterparty within the scope of Annex-4 to this Regulation and derivative instruments that provide for the transfer of credit risk that are not executed with any central counterparty within the scope of Annex-4 to this Regulation.

Netting group and hedging group and related definitions

4. Netting group refers to a group of transactions with a single counterparty, which are subject to a legally binding bilateral netting agreement as specified in paragraph seven of Part One of Section Two, or to which netting can be applied within the scope of the procedures and principles specified in Section Two and the Communiqué on Credit Risk Mitigation Techniques, or which are subject to cross-product netting with the qualifications specified in Section Three. Transactions that are not subject to a legally enforceable bilateral netting agreement referred to in paragraph seven of Part One of Section Two shall be considered as a separate netting group on a transaction-by-transaction basis. Within the framework of the method described in Section Two of Part Two, if the simulated negative fair value of each netting group is determined to be zero in the calculation of the expected risk amount, all netting groups with the same counterparty are treated as a single netting group.

5. Risk position refers to the amount of risk used for a transaction in the standardized approach to counterparty credit risk measurement (SY-KTKR) and determined according to a pre-selected/agreed method.

6. Hedging group refers to the group of transactions within the same netting group in which full or partial offsetting is made when calculating the potential credit risk amount add-on amount in the SY-KTKR.

7. A margin contract refers to a legally valid contract that gives one party to a transaction the right to require collateral from the other party to the transaction if the risk assumed by that party exceeds a predetermined level.

8. The margin threshold refers to the maximum exposure amount that entitles a party to request collateral when the threshold is exceeded.

9. The margin period of the risk refers to the period between the last exchange of collateral, including the netting group, in the event of default and the date on which the position of the defaulting counterparty is closed and the resulting market risk is re-hedged.

10. In the internal model method, for a netting group with a maturity of more than one-year, effective maturity refers to the risk-free interest rate discounted amount of cash flows expected to arise in the netting group until maturity divided by the risk-free interest rate discounted amount of cash flows expected to arise in a netting group over a one-year period. For transactions with maturities of less than one year, the effective maturity can be calculated to reflect the roll-over risk by using effective expected cash flows instead of expected cash flows.

11. Cross-product netting refers to the inclusion of different types of transactions in the same netting group according to the cross-product netting rules described in Section 3.

12. Current market value refers to the net fair value of transactions with the counterparty within the netting group in accordance with Section 2. Both positive and negative fair values are used in the calculation of current market value.

Distributions

13. A fair value distribution is a probability distribution estimate, by transaction type, of the values that the net fair values of such transactions within a netting group might assume at a future date (after the forecast period), taking into account the market values realized up to the date of the calculation.

14. The risk amount distribution is an estimate of the probability distribution of fair values obtained by setting negative fair value estimates equaling zero.

15. A risk-free distribution is the distribution that fair values or risk exposures would have at some future point in time, calculated using values that are implicit in the market, such as implied volatilities.

16. The actual distribution is the distribution of fair values or risk exposures at a point in time in the future, calculated using historical and realized values, such as volatilities calculated over past price and interest rate changes.

Risk measurements and adjustments

17. The current exposure amount refers to the fair value of the transaction or transactions included in a netting group that would be lost in the event of default of the counterparty, assuming that no collection would be made in the event of the counterparty's bankruptcy. If the fair value is negative, the current exposure amount is considered to be zero.

18. The maximum exposure amount refers to the amount that corresponds to a high percentile, such as ninety-five percent or ninety-nine percent, in the distribution of exposure amounts at a given date before the maturity of the longest-dated transaction in the netting group. The maximum exposure amount is usually generated for many dates until the maturity of the longest maturity of the transactions in the netting group.

19. The expected risk amount (ERA) refers to the average of the distribution of risk amounts at a given date before the maturity of the longest-dated transaction in the netting group. The expected risk amount is usually generated for a number of dates until the maturity of the longest maturity of the transactions in the netting group.

20. The effective expected risk amount (EBRT) is the greater of the expected risk amount at that date or the effective expected risk amount at the previous date.

21. The expected positive risk amount (BPRT) refers to the weighted average over time of the expected risk amounts, where the weights are determined according to the proportion that the individual expected risk amount represents over a given time period. When calculating the minimum capital requirement, this average is taken for the first year or, if the maturity of all contracts in the netting group is less than one year, over the maturity period of the longest-term contract in the netting group.

22. The effective expected positive risk amount (EBPRT) refers to the weighted average over time of the effective expected risk amounts for the first year or, if the maturity of all contracts in the netting group is less than one year, over the maturity period of the contract with the longest maturity in the netting group, where the weights are determined by the proportion that the individual expected risk amount represents over a given time period.

23. Credit valuation adjustment (KDA) and one-sided KDA reflects the current market value of the credit risk arising from the failure to fulfil any of the obligations specified in the contract with the counterparty. This adjustment may reflect the current market value of the counterparty's credit exposure or the current market value of the credit exposure of both the bank and the counterparty. One-sided KDA reflects the current market value of the bank's credit risk exposure to the counterparty but not the current market value of the counterparty's credit risk exposure to the bank.

Risks associated with counterparty credit risk

24. Rollover risk refers to the underestimation of the actual value of the expected positive risk amount of transactions that are expected to be continuously renewed. The amount of additional risk created by future transactions is not included in the BPRT calculation.

25. General adverse trend risk is the risk that arises when there is a positive correlation between the default probabilities of counterparties and general market risk factors.

26. Specific adverse trend risk refers to the risk that arises when there is a positive correlation between the exposure amount and the counterparty's PD due to the nature of the transaction. A bank is considered to be exposed to specific adverse trend risk if it is expected that the future risk amount will also increase when the counterparty's PD is high.

SECTION TWO
Selection of the Method to be used and Scope

(1) Banks determine the risk amounts for derivative transactions by using one of the methods specified in Section 2. When calculating the risk amount arising from counterparty credit risk for derivative transactions within the scope of this Annex, if the bank does not prefer to use the internal model method defined in Section Two of Part Two or fails to obtain the necessary permission from the Agency for the use of the internal model method, the bank shall use the SY-KTKR defined in Part One of Section Two.

(2) The Bank, parent company, and any of the subsidiaries within the scope of consolidation may use one of the methods specified in Section 2 on a permanent basis, independently from the method used by the other subsidiaries. However, any of the subsidiaries may not use both of the methods at the same time. Banks that carry out progressive implementation as specified in the second paragraph of the Section Two of the Part Two may use these methods together within the framework of the said exception, provided that they obtain permission from the Agency.

(3) The general characteristics of transactions that create counterparty credit risk are as follows:

a) Transactions have current market values or current risks.
b) Transactions have a random future value depending on market variables.
c) Transactions require mutual payment or exchange of financial instruments (including commodities) for payment.
d) The counterparty of the transactions and the probability of default for this counterparty can be clearly identified. Transactions where the probability of default is determined on a pool basis do not constitute counterparty credit risk under this Annex.
d) Collateral may be used for risk mitigation or collateral is inherent in the nature of the transaction.
e) Short-term funding is the main purpose of these transactions. Mutual swap (cash or securities swap) takes place in the short term.
f) Netting can be used for risk mitigation purposes.
g) Positions are frequently valued taking into account market data.
h) Re-margining can be used.

2. On condition that permission is obtained from the Agency, banks may use the internal model method defined in the Section Two of the Part Two in determining the risk amount for the following transactions and contracts that are not made with any central counterparty within the scope of Annex-4 attached to this Regulation.

a) Derivative transactions,
b) Repo transactions,
c) Securities or commodity lending transactions,
d) Trading on Margin,
d) Transactions with a long swap period.

3. If hedging is provided with credit derivatives for an item outside trading accounts or an amount exposed to counterparty credit risk, the capital requirement for the hedged asset is calculated based on the risk-weighted amount calculation for unfunded credit hedges in the Communiqué on Credit Risk Mitigation Techniques and the provisions on maturity inconsistency to be used in this calculation. For the related credit derivatives and credit derivatives that can be taken into account within the scope of internal hedging in trading accounts, the risk amount related to counterparty credit risk is taken into account as zero.

4. When credit default swaps for which the Bank is a hedging seller and which are not monitored in trading accounts are considered as loan hedging provided by the Bank and subject to credit risk capital requirement over the hedged amount, the risk amount related to counterparty credit risk to be calculated for the said swaps is taken into account as zero.

5. In the methods set out in Section 2, the risk amount for a particular counterparty is equal to the sum of the risk amounts calculated for each netting group with that counterparty. In calculating the risk weighted amount for derivative transactions for a counterparty in accordance with Articles 4 to 7 of the Regulation, the total risk amount for netting groups consisting of derivative transactions listed in the sixth paragraph of Article 5 of the Regulation is the greater of zero and the difference between the total risk amount arising from all netting groups with the relevant counterparty and the sum of the KDAs related to the counterparty deemed by the bank to have incurred a loss in value. Such KDA is calculated without netting off the liability adjustments that are taken into account as a deduction item from Common Equity Tier 1 capital in accordance with subparagraph (h) of the first paragraph of Article 9 of the Regulation on Equity of Banks. The risk-weighted asset amount for a derivative transaction is calculated by multiplying the risk amount by the risk weight calculated using the Standard or Internal Ratings Based Approaches. Mitigation of the risk amount due to KDA does not affect the capital requirement calculated due to KDA.

6. In determining the risks arising from transactions with a long swap period; regardless of the methods selected for derivative transactions, repo transactions, securities or commodity lending transactions and trading on margin, any of the internal model method can be used, provided that the bank obtains permission from the Agency through the SY-KTKR specified in the Section Two. In determining the risks arising from repo transactions, securities or commodity lending transactions and trading on margin, the bank may use the internal model method defined in the Section Two of the Part Two, provided that the bank obtains permission from the Agency; If the permission of the Agency is not obtained, the Communiqué on Credit Risk Mitigation Techniques shall be used.

7. In order to use the SY-KTKR referred to in Part One Section Two, it is ensured that the amount written in the contract sufficiently reflects the risk exposure due to the contract. For this purpose, for example, where an increase in cash flows is foreseen in the contract, the impact of this increase on the risk structure of that contract is taken into account in determining the amount written in the contract.

8. The risk amount for derivative transactions with central counterparties, repo and reverse repo transactions, securities or commodity lending transactions and trading on margin shall be calculated within the scope of Annex-4 attached to this Regulation. The risk amount for the transactions subject to cash swap will be calculated in accordance with the rules on swap risk and delivery without payment within the scope of the Regulation.

9. If the tranche of a derivative transaction traded in organized markets from the member organization to the client is arranged as a bilateral agreement, both the client and the member organization will consider the transaction as an OTC derivative in the capital requirement calculation.

SECTION TWO
Methods

PART ONE
Standard Approach Method for Counterparty Credit Risk Measurement

1. The risk amount is calculated for each netting group according to the formula below.

Risk Amount = α * (YM + PKT)

In this formula, the following terms have the following meanings;

α = Alpha = 1.4 ,
YM = Renewal cost,
PKT = Potential credit risk amount

2. Renewal cost and potential credit risk amount are calculated separately for netting groups with and without margin. The risk amount calculated for the netting group with margin cannot be more than the risk amount calculated under the assumption that the same netting group is without margin.

3. For the transactions without margin, renewal cost is defined as the amount of loss incurred if a counterparty defaults and the transactions of that counterparty are terminated immediately. For the transactions without margin, the potential credit risk amount is defined as the increase in the amount of risk that may occur within 1 year from the calculation date.

4. For the transactions with margin, renewal cost is defined as the amount of loss incurred if a counterparty defaults now or at a future date and that counterparty's transactions are immediately terminated and replaced by other transactions. For the transactions with margin, the amount of potential credit risk is defined as the increase in the amount of risk over the margin period.

5. The application of a discount rate for non-cash collateral in the calculation of replacement cost is stemming from the risk that the value of the collateral may decrease within 1 year for the transactions without margin and within the margin period of the risk for the transactions with margin.

6. The replacement cost is calculated at the netting group level. The potential credit risk amount is calculated for each asset category within the netting group and then aggregated.

7. (1) In the calculation of the capital amount related to counterparty credit risk, the transactions made within the scope of the contracts specified below in the second paragraph of Part Two of Section One are evaluated within the same netting group.

Of the following contracts;

a) Bilateral renewal agreements between a bank and its counterparty that create a single net amount by offsetting mutual receivables and payables between the parties denominated in the same currency and valued at the same date, thereby terminating the old agreements and creating a single legally binding agreement,

b) Other netting agreements, including legally binding renewal agreements, which do not meet the qualifications specified in subparagraph (a)

those meet the following conditions

i) In the event of default, bankruptcy, insolvency, liquidation or similar circumstances of the counterparty, allows the net sum of the positive and negative amounts of all transactions under the contract, valued at fair value, to be converted into a single right or obligation, such as collection or payment.

ii) In the event of default of one party, the contract does not contain provisions for partial payment or no payment at all, even if the defaulting party is a net creditor,

iii) In case of a legal dispute or disagreement regarding the netting agreement, a written and justified legal opinion stating that the bank's receivables and payables will be limited to the net total in terms of the following legal sources.

1) The laws and other legal regulations of the country in which the counterparty is located or, if a branch of the counterparty located in a country other than the country in which the counterparty is established is involved, the laws and other legal regulations of the country in which the relevant foreign branch is located,

2) Legal regulations governing individual transactions under the contract,

3) The legal arrangements governing each contract or agreement affecting netting.

iv) The existence of procedures to ensure that the netting agreement remains legally valid as a result of possible amendments to the legislation.

(2) The Agency also confirms whether the netting agreements are legally binding by cooperating with the competent authorities of the relevant countries, if necessary. If any of the two country supervision authorities give a negative opinion, the risk mitigation effect of the netting agreement is not taken into account. Netting agreements containing provisions that the bank will not be paid or will be paid less than the amount due in case of default of the counterparty are not taken into account in risk mitigation. Documents relating to the netting agreement shall be kept in accordance with Article 42 of the Law on retention of documents.

8. The replacement cost is calculated in two different ways depending on whether a margin agreement is signed with the counterparty. For transactions with margin, the formula for calculating the replacement cost applies both to bilateral transactions and to transactions conducted in the form of central clearing. The collaterals that the Bank is required to receive and/or send depending on various contracts, including the initial margin, are also taken into account in the calculation of the replacement cost.

9. For transactions without margin, replacement cost is the greater of the following amounts:

For transactions without margin, replacement cost is the greater of the following amounts:

i) The current market value of the contract less the value of the collateral after volatility adjustment,

ii) Zero.

The mathematical formula for the replacement cost is as follows:

$$YM = \max(CPD - CTD, 0)$$

In this formula, the following terms have the following meanings;

CPD = Current market value of transactions with a counterparty that fall within the scope of a netting group, before taking collateral into account,

CTD = Current market value of all collateral received after volatility adjustment less current market value of all collateral given after volatility adjustment

When applying the volatility adjustment rate to collaterals, non-cash collateral that the bank sends to the counterparty is increased by the applied volatility adjustment rate, while non-cash collateral that the bank receives from the counterparty is decreased by the applied volatility adjustment rate. In the application of the SY-KTKR, overcollateralization or negative current market value has no mitigating effect on the replacement cost, but has a mitigating effect on the amount of potential credit risk.

10. Bilateral transactions where only the bank has an obligation to post collateral but the counterparty does not have an obligation to post collateral to the bank, which can only be considered margined for the counterparty, are considered as transactions without margin for the bank when calculating the renewal cost.

11. The replacement cost for the transactions with margin is the greater of the following amounts:

i)   The amount determined by deducting the value of the collateral after applying the volatility adjustment from the current market value of the contract,

ii)   The amount determined by deducting the net independent collateral amount from the sum of the bank's threshold risk amount that must be exceeded in order to obtain collateral from the counterparty and the minimum transfer collateral amount sent by the bank to the counterparty account,

iii)   Zero.

The mathematical formula for the replacement cost is as follows.

$$YM = \max(CPD - CTD, ET + ATT - NBTT, 0)$$

In this formula, the following terms have the following meanings;

CPD = Current market value of transactions with a counterparty that fall within the scope of the netting group, before taking collateral into account,

CTD = Current market value of all collateral received after volatility adjustment less the current market value of all collateral given after volatility adjustment,

ET = Bank's threshold risk amount to be exceeded in order to obtain collateral from the counterparty,

ATT = The minimum transfer collateral amount sent by the bank to the counterparty account,

NBTT = Net amount of collateral sent by the counterparty to the bank as initial margin less the amount of collateral sent by the bank to the counterparty as initial margin (variation margin is not taken into account in this calculation)

A volatility adjustment is applied when determining margin amounts, whereby non-cash collateral sent by the bank to the counterparty is increased by the volatility adjustment applied, while non-cash collateral received by the bank from the counterparty is decreased by the volatility adjustment applied. The amount denoted as (ET + ATT - NBTT) in the above formula refers to the highest risk amount that does not cause a call for variation margin for the bank. While calculating the NBTT in the above formula, the initial margin sent by the bank to the counterparty but segregated from the counterparty's own accounts and in bankruptcy discharge status (not freely usable by the counterparty) specified in Annex-4 attached to this Regulation is not included in the calculation since it will be returned to the bank when the counterparty defaults. Likewise, when calculating the CTD, the collateral in bankruptcy (which cannot be freely used by the counterparty) specified in Annex-4 to this Regulation is not included in the calculation as it will be returned to the bank when the counterparty defaults.

12. Potential credit risk amount is calculated with the following formula.

$$PKT = \text{multiplier} * \text{Add-on}^{\text{total}}$$

Since overcollateralization reduces the potential credit risk amount together with the renewal cost, it has a reducing effect on the amount of capital required to be held by the bank for counterparty credit risk and this reducing effect is included in the calculation through the multiplier. The multiplier is calculated by the following formula.

$$\text{Multiplier} = \min(1; \text{Base} + (1 - \text{Base}) * e^{((\text{CPD-CTD}) / (2 * (1 - \text{Base}) * \text{Add-on total})))})$$

In this formula:

The base is 0.05.

In the case of overcollateralization where the CTD is higher than the CPD, the above formula results in a multiplier value less than 1. Similarly, if the CPD is less than zero, the multiplier value is less than 1. This stems from the fact that derivatives that are in loss are not considered a risk for the bank and are not expected to be in profit in the future.

13. When calculating the Add-on$^{\text{total}}$ in the above formula, add-on amounts (Add-on$^{(a)}$) are first calculated separately for each asset category and then the add-on amounts calculated for each asset category are summed up without taking into account the diversification benefit that may occur between different asset categories and the Add-on$^{\text{total}}$ is calculated by the following formula.

$$\text{Add-on}^{\text{total}} = \sum_{a} \text{Add-on}^{(a)}$$

14. For derivative transactions where there is only one main risk factor, the derivative is mapped to an asset category based on this main risk factor. The main risk factor is the interest rate yield curve for interest rate swaps, the reference asset for credit default swaps and the exchange rate for currency call options. There may be more than one risk factor for more complex transactions, such as transactions based on multiple assets or hybrid derivatives. In this case, the main risk factor is determined by taking into account the volatility of the risk factors and the sensitivity of the bank. The Agency may require some complex derivative

transactions to be mapped to more than one asset category. In this case, the same position is included in more than one asset category. Where a derivative transaction is mapped to more than one asset category, the bank appropriately determines the sign of the risk factors and delta adjustments.

15. The main risk factor or factors for each transaction are categorized into one or more of the following five asset categories

 i)   Interest rate,
 ii)   Exchange rate,
 iii) Credit,
 iv) Share certificates,
 v)   Commodities.

The add-on amount for each asset category is formulated according to the EBPRT used in accordance with the assumption that the current market value of all transactions in the asset category is "0".

16. Although the calculation of the add-on amount is different for each asset category, there are common calculation steps below for different asset categories.

 i)   Calculation of the adjusted nominal amount (di) on a trade-by-trade basis: For interest rate derivatives and credit derivatives, the calculation of di also takes into account the supervisory agency duration (DOD).
 ii)   Applying the maturity factor (VFi) to d_i on a trade-by-trade basis: VFi is calculated differently for transactions with and without margin.
 iii) Calculation of the effective nominal amount by applying supervisory delta adjustment (δ) to d_i on a transaction-by-transaction basis: This is based on the direction of the position (long or short) and whether the transaction is linear.
 iv) Reflecting the volatility of the risk factor by applying the supervisory agency volatility factor (DOVF) to the effective nominal amount on a trade-by-trade basis.
 v)   Segregation of transactions related to each asset category into hedging groups and aggregation first on a hedging group basis and then on an asset category basis: Supervisory correlation factors are applied to credit, equity and commodity derivatives to reflect the impact of significant basis risk and diversification.

17. (1) For all asset categories, contract maturity (Vi) is the last date on which the contract has not yet been terminated and is still in force. If the underlying asset of a derivative contract is another derivative contract and the underlying derivative contract is to be physically cleared, as in the case of swaptions, the contract maturity is the date of the last scheduled payment on the underlying derivative contract.

 (2) For interest rate and credit derivative contracts, the contract inception date (BAi) is the date on which the interest rate treatment or credit contract commences. If a derivative contract is based on the value of another interest rate or derivative transaction, such as a swaption or bond option derivative, the inception date is determined by the underlying asset.

 (3) The contract expiry date (BIi) for interest rate and credit derivative contracts is the date on which the interest rate application or credit contract ends. If a derivative contract is based on the value of another interest rate or derivative transaction, such as a swaption or bond option derivative, the end date is determined according to the underlying asset.

(4) The maturity of the option contract (VOi) for all asset categories in option derivative contracts is determined by the last date on which the option will be exercised. The VOi shall be used in the calculation of the supervision agency delta adjustment referred to in paragraph 20 for options.

The following example table shows the V_i, BA_i and BI_i calculations for derivative transactions.

Derivative Transaction	V_i	BA_i	BI_i
10-year interest rate or credit default swap	10 years	0	10 years
10-year interest rate swap starting in 5 years	15 years	5 years	15 years
Forward exchange rate contract starting in 6 months and ending in 12 months	1 year	6 months	1 year
European type swaption based on a 5-year interest rate swap with a cash payment option exercisable within 6 months	6 months	6 months	5.5 years
European type swaption based on a 5-year interest rate swap with an option to be exercisable within 6 months, payable on delivery	5.5 years	6 months	5.5 years
10-year Bermuda type swaption with options exercisable for each year	10 years	1 year	10 years
Interest rate basis or cap for a 5-year term with 6 monthly payments	5 years	0	5 years
Bond option with a 5-year maturity, exercisable after 1 year at the latest	1 year	1 year	5 years
3-month Eurodollar future with 1 year maturity	1 year	1 year	1.25 years
2-year future based on 20-year treasury bond	2 years	2 years	22 years
6-month option forward on a 2-year future based on a 20-year treasury bond	2 years	2 years	22 years

18. The nominal amount (d_i) adjusted for interest rate and credit derivatives is calculated as the multiplication of the nominal amount in TL by the supervisory agency duration (DOD). In this calculation, DOD is calculated by the following formula.

$$DOD_i = (e^{-0.05 * BA_i} - e^{-0.05 * BI_i}) / 0.05$$

If the derivative transaction has already started on the DOD_i calculation date, BA_i becomes 0. If the derivative transaction has not started yet, BA_i and BI_i are considered as minimum 10 days in the DOD_i calculation.

D_i for exchange rate derivatives is the value in TL of the foreign currency portion of the contract. If both parts of the contract are denominated in foreign currencies, the larger amount in TL denotes d_i.

For equity and commodity derivatives, d_i is the product of the quantity of the equity or commodity and the market price of each equity or commodity.

19. In contracts, the nominal amount is generally fixed and does not change until maturity. However, in contracts where this is not applicable, the following practices are applied.

i)   For derivative transactions with multiple payments (digital options, target redemption forwards, etc.), the notional amount is calculated for each case and the largest amount is taken as basis.

ii)   Where the nominal amount is determined based on market value, current market variables are used to calculate the nominal amount.

iii) If the notional amount is a floating value (as in the case of amortizing swaps and accreting swaps), the average nominal amount for the remaining term of the derivative is the nominal amount of the contract.

iv) For leveraged swaps, the nominal amount of the equivalent unleveraged swap is used. In this case, the nominal amount is multiplied by the factor determined within the scope of the leveraged transaction.

v) In derivative contracts with multiple principal changes, the nominal amount is calculated by multiplying the nominal amount by the number of principal changes.

vi) In derivative contracts where the contract is restructured on certain dates and the value of the contract is set to zero on the restructuring dates, the remaining maturity is the time remaining until the restructuring date.

20. The supervision agency delta adjustment (δ_i) for different derivatives transactions is summarized in the following table.

Derivative Transaction	Long position in the main risk factor	Short position in the main risk factor
No tranche of options or secured debt obligations	+1	-1
	Purchased	Sold
Call option	$+\phi \left[((\ln (PF_i/UF_i) + 0.5 * \sigma^2 * VO_i) / \sigma_i * VO_i^{1/2} \right]$	$-\phi \left[((\ln (PF_i/UF_i) + 0.5 * \sigma^2 * VO_i) / \sigma_i * VO_i^{1/2} \right]$
Put option	$-\phi \left[- ((\ln (PF_i/UF_i) + 0.5 * \sigma^2 * VO_i) / \sigma_i * VO_i^{1/2} \right]$	$+\phi \left[- ((\ln (PF_i/UF_i) + 0.5 * \sigma^2 * VO_i) / \sigma_i * VO_i^{1/2} \right]$
	Purchased/long in hedging	Sold / short in hedging
Secured debt obligation tranche	$+ \left[15 / ((1 + 14 * BN_i) * (1+ 14 * AN_i)) \right]$	$- \left[15 / ((1 + 14 * BN_i) * (1+ 14 * AN_i)) \right]$

A long position in the main risk factor means that the market value of the trade increases while the value of the main risk factor increases. A short position in the main risk factor means that the market value of the trade decreases while the value of the main risk factor increases.

In these formulas, the following terms have the following meanings.

PF_i = Market price of the underlying asset subject to the option transaction,

UF_i = Exercise price of the underlying asset subject to the option transaction,

VO_i = The maturity of the option contract,

σ_i = Supervision agency option volatility,

ϕ = Standard normal cumulative distribution function,

BN_i = Secured debt obligation tranche attachment point,

AN_i = Secured debt obligation tranche separation point

21. The effective nominal amount is converted into EBPRT by applying supervision agency factors according to the volatility of each asset category. The factors used in this context are adjusted to reflect the EBPRT of a linear transaction with a market value of zero and a maturity of 1 year.

22. (1) A hedging group is created for each currency for interest rate derivatives. A hedging group is created for each currency pair in exchange rate derivatives. A hedging group is created for credit derivatives. A hedging group is created for equity derivatives. For commodity derivatives, four hedging groups are created: "energy", "mining", "agriculture" and "other commodities".

(2) Derivative transactions denominated in a currency the value of which depends on two risk factors are referred to as base transactions and the risk amount to be calculated under this Annex for these base transactions is calculated separately for each hedging group within the same asset category. In these transactions, each pair of risk factors is a base and there is a separate hedging group for each pair of risk factors. 3-month LIBOR-6-month LIBOR, 3-month LIBOR-3-month treasury bill are examples of such bases. When calculating the risk amount under this Annex for hedging groups consisting of basis transactions for an asset category, the supervision agency volatility factor is multiplied by the factor of 0.5.

(3) Derivative transactions the value of which depends on the volatility of a risk factor shall be considered as volatility transactions and the risk amount to be calculated for these volatility transactions under this Annex shall be calculated separately for each hedging group within the same asset category. The first subparagraph of this paragraph shall be taken into account when forming volatility hedging groups. Variance swaps, volatility swaps, options on volatility are examples of volatility transactions. When calculating the risk amount under this Annex for hedging groups consisting of volatility transactions for an asset category, the supervision agency shall multiply the volatility factor by the factor of 5.

23. (1) The maturity factor (VFi) for transactions without margin is calculated according to the following formula.

$$VF_i^{\text{without margin}} = [\min (V_i; 1 \text{ year}) / (1 \text{ year})]^{0.5}$$

In this formula:

Vi refer to the remaining maturity of the contract and is considered as a minimum of 10 working days.

(2) The maturity factor (VF_i) for transactions with margin is calculated according to the following formula

$$VF_i^{\text{with margin}} = 1.5 * (RMS/1 \text{ year})^{0.5}$$

In this formula:

RMS = refers to the margin period of the risk and is found as follows.

RMS = F + N – 1

In this formula:

N = Re-margining period in working days,

F refers to the margin period of the minimum risk and F is found as follows.

    i)   10 business days for transactions with daily margining and not executed with a central counterparty,

    ii)   5 business days for transactions where there is daily margining and member institution banks conduct transactions with central counterparties for their clients,

    iii)   20 business days for netting groups that have not been executed with a central counterparty but include more than 5,000 transactions,

    iv)   If the Bank has more than two collateral completion disputes for a netting group or a counterparty in two consecutive quarterly periods that last longer than the margin period for the risk referred to in points (i), (ii) or (iii), the Bank shall use a period of at least twice the margin period for the risk referred to in points (i), (ii) or (iii) as the minimum margin period for the following two quarterly periods.

24. The supervision agency correlation factor (ρ_i) is only taken into account in the calculation of the add-on amount for the potential credit risk amount for credit, equity and commodity derivatives. ρ_i is derived using a single-factor model and represents the weighting to be assigned systematically or product- or entity-specific.

25. The following table sets out the supervision agency parameters to be used in the risk calculation under this Annex.

Asset Category	Sub-category	Supervision Agency Volatility Factor ($DOVF_i$)	Supervision Agency Correlation Factor (ρ_i)	Supervision Agency Option Volatility (σ_i)
Interest rate		% 0.5		% 50
Exchange rate		% 4		% 15
Credit, Single asset	AAA	% 0.38	% 50	% 100
	AA	% 0.38	% 50	% 100
	A	% 0.42	% 50	% 100
	BBB	% 0.54	% 50	% 100
	BB	% 1.06	% 50	% 100
	B	% 1.6	% 50	% 100
	CCC	% 6	% 50	% 100
Credit, Index	Investable	% 0.38	% 80	% 80
	Speculative	% 1.06	% 80	% 80
Stock, Single asset		% 32	%50	% 120
Stocks, Index		% 20	%80	% 75
Commodity	Electricity	% 40	% 40	% 150
	Oil/Gas	% 18	% 40	% 70
	Mine	% 18	% 40	% 70
	Agriculture	% 18	% 40	% 70
	Other	% 18	% 40	% 70

26. (1) Interest rate derivatives are categorized into maturity segments based on their maturity dates. There are three maturity tranches: less than 1 year, 1-5 years and more than 5 years. While full settlement can be made for transactions in the same maturity tranche, partial settlement can be made for transactions in different maturity tranches.

(2) Firstly, the effective nominal amount (D_{jk}) is calculated for each pair of "currency (j), maturity tranche (k)" according to the following formula.

$$D_{jk}^{(FO)} = \sum_{i \in (j,k)} \delta_i * d_i^{(FO)} * VF_i$$

Then for each currency (j, hedging group)

(i) in case of partial offsetting between maturity tranches, according to the following formula

$$D_j = [\, (D_{j1})^2 + (D_{j2})^2 + (D_{j3})^2 + 1.4 * D_{j1} * D_{j2} + 1.4 * D_{j2} * D_{j3} + 0.6 * D_{j1} * D_{j3}\,]^{0.5}$$

(ii) if there is no settlement between maturity tranches, according to the following formula

$$D_j = |\,D_{j1}\,| + |\,D_{j2}\,| + |\,D_{j3}\,|$$

The effective nominal amount is calculated. The formula to be used in this calculation is at the discretion of the bank.

(3) Using the effective nominal amount calculated in this paragraph and the supervision agency volatility factor, the add-on amount is calculated for each currency (j, hedging group) according to the following formula.

$$\text{Add-on}_j^{(FO)} = Dj^{(FO)} * DOVF_j^{(FO)}$$

(4) Finally, the add-on amounts calculated for each currency are summed according to the following formula to calculate the total add-on amount for interest rate derivatives.

$$\text{Add-on}_j^{(FO)} = \sum_j \text{Add-on}_{j\,j}^{(FO)}$$

27. (1) When calculating the add-on amount for foreign currency derivatives, the effective nominal amount for the currency pair (j, hedging group) is first calculated according to the following formula. In this calculation, full settlement is made within the same hedging group (for the same currency pair).

$$D_j^{(DK)} = \sum \delta_i * d_i^{(DK)} * VF_i$$

(2) The add-on amount is then calculated for each currency pair (j, hedging group) according to the following formula, using the absolute value of the effective nominal amount calculated in this paragraph and the supervision agency volatility factor.

$$\text{Add-on}_j^{(DK)} = |\,Dj^{(DK)}\,| * DOVF_j^{(DK)}$$

(3) Finally, the add-on amounts calculated for each currency pair are obtained by taking the nominal amounts of the foreign currency part of the contract in TL and summed according to the following formula to calculate the total add-on amount for FX derivatives.

$$\text{Add-on}^{(DK)} = \sum_j \text{Add-on}_j^{(DK)}$$

28. (1) When there is no distinction between basis transactions and volatility transactions as specified in paragraph 22, there is a hedging group for the credit derivative in the same netting group and all reference assets related to this credit derivative are considered within the same hedging group. When calculating the add-on amount for credit derivatives, the effective nominal amount is first calculated according to the following formula. When calculating the effective nominal amount on a per reference asset basis, full settlement of all credit derivatives based on the same reference asset (single asset or index) is permitted.

$$D_{RV}^{(K)} = \sum_{i \in RV} \delta_i * d_i^{(K)} * VF_i$$

(2) Then, using the effective nominal amount calculated in this paragraph and the supervision agency volatility factor, the add-on amount is calculated for each reference asset according to the following formula.

$$\text{Add-on}_V^{(K)} = D_{RV}^{(K)} * DOVF_{RV}^{(K)}$$

(3) Finally, the total add-on amount for the credit asset category is calculated by partial offsetting the add-on amounts calculated for each reference asset using the single factor model according to the following formula.

$$\text{Add-on}^{(K)} = [(\sum_{RV}\rho_{RV}^{(K)} \text{Add-on}_{RV}^{(K)})^2 + \sum_{RV} (1-(\rho_{RV}^{(K)})^2) * \text{Add-on}_{RV}^{(K)})^2]^{0.5}$$

This formulation is based on separating the risk of the credit derivative asset category into systematic and reference asset-specific risk components and allowing full settlement of the systematic component but not the reference asset-specific component. The larger the supervision agency correlation factor, the greater the importance of the systematic component and the greater the risk mitigating effect from settlement.

(4) For the portfolios in which long and short positions are relatively close to each other, a high correlation factor implies a lower capital requirement calculation. For the portfolios where the long position is relatively very high relative to the short position or the short position is relatively very high relative to the long position, a higher correlation factor implies a higher capital requirement calculation. Where most of the risk is related to the systematic component, different reference assets are highly correlated with each other, resulting in lower capital requirements because the settlement of long and short positions is more effective Where most of the risk is related to the reference asset-specific component, the settlement of long and short positions is less effective, resulting in a higher capital requirement. The use of a single hedging group for credit derivatives means that the systematic portion of credit derivatives relating to different industries and regions is offset equally, which makes it difficult to analyze how the risks arising from credit derivatives of entities operating in different regions and industries differ from each other.

29. (1) When there is no distinction between basis transactions and volatility transactions as specified in paragraph 22, there is a hedging group for the equity derivative in the same netting group and all reference assets related to this equity derivative are considered within the same hedging group. When calculating the add-on amount for equity derivatives, the effective nominal amount is first calculated according to the following formula. When calculating the effective nominal amount on a per reference asset basis, full settlement of all equity derivatives based on the same reference asset (single asset or index) is permitted.

$$D_{RV}{}^{(HS)} = \sum_{i \in RV} \delta_i * d_i{}^{(HS)} * VF_i$$

(2) Then, using the effective nominal amount calculated in this paragraph and the supervision agency volatility factor, the add-on amount is calculated for each reference asset according to the following formula.

$$\text{Add-on}_{RV}{}^{(HS)} = D_{RV}{}^{(HS)} * DOVF_{RV}{}^{(HS)}$$

(3) Finally, the total add-on amount for the equity asset category is calculated by partial settlement the add-on amounts calculated for each reference asset using the single factor model according to the following formula.

$$\text{Add-on}^{(HS)} = [(\sum_{RV} \rho_{RV}{}^{(HS)} * \text{Add-on}_{RV}{}^{(HS)})^2 + \sum_{RV} (1 - (\rho_{RV}{}^{(HS)})^2) * (\text{Add-on}_{RV}{}^{(HS)})^2]^{0.5}$$

This formulation is based on the separation of the risk associated with the equity asset category into systematic and reference asset-specific risk components, with full settlement of the systematic component but no settlement of the reference asset-specific component.

(4) The supervision agency volatility factor for equity derivatives is based on a conservative beta factor. The beta of a stock is the ratio of the volatility of that stock to the volatility of the market index. (A beta greater than 1 means that the volatility of a stock is greater than the volatility of the market index. The beta of a stock is calculated by linear regression based on the market index of that stock). When calculating the Add-on amount under this paragraph, the bank is not permitted to make modeling assumptions and therefore only two supervision agency volatility factors are used, one for a single asset and one for an index, as specified in the table in paragraph twenty-five of this Part.

30. (1) When calculating the Add-on amount for commodity derivatives, the effective nominal amount is first calculated according to the following formula. When calculating the effective nominal amount on the basis of each reference asset commodity type, full settlement of all commodity derivatives based on the same reference asset commodity type (k) within a hedging group (j) is permitted.

$$D_k{}^{(E)} = \sum_{i \in T_K{}^J} \delta_i * d_i{}^{(E)} * VF_i$$

In this formulation, Tkj stands for "reference asset commodity type k" in "hedging group j".

(2) Then, using the effective nominal amount calculated in this paragraph and the supervision agency volatility factor, the Add-on amount is calculated for the "same reference asset commodity type k" in the "same hedging group j" according to the following formula.

$$\text{Add-on } T_K{}^{J\,(E)} = D_k{}^{(E)} * DOVF\ T_K{}^{J\,(E)}$$

(3) Then, the total Add-on amount is calculated for the commodity asset categories within the same hedging group by partial settlement using the single factor model according to the formula below for "different reference asset commodity types k" within the "same hedging group j".

$$\text{Add-on }_{RKGj}{}^{(E)} = [(\rho_j{}^{(E)} * \sum_k \text{Add-on } T_K{}^{J\,(E)})^2 + (1 - (\rho_j{}^{(E)})^2) * \sum_k (\text{Add-on } T_K{}^{J\,(E)})^2]^{0.5}$$

This formulation is based on the separation of the risk of the commodity derivative into systematic and reference asset commodity-specific risk components, with full settlement of the systematic component but no offsetting of the reference asset commodity-specific component.

(4) Finally, the total Add-on amount for the commodity asset category is calculated according to the following formula. When calculating the total Add-on amount, it is not allowed to net Add-on amounts of 4 different hedging groups.

$$\text{Add-on}^{(E)} = \sum_{j} \text{Add-on}_{RKGj}{}^{(E)}$$

(5) The fact that there are many different types of a commodity in a hedging group may cause the basis risk between these different types to be ignored. In order not to ignore the basis risk between different types of the same commodity within a protection group, the Agency may request the bank to calculate the Add-on amount for different types of this commodity as if they were different commodities. The geographical location or quality of the commodity are not the criteria taken into account when forming protection groups. For example, the energy protection group includes oil, natural gas, coal and electricity, which have very different characteristics.

31. (1) If there is more than one margin contract related to the same netting group, this netting group is divided into sub-netting groups according to the number of margin contracts. This separation is made separately for the renewal cost and potential credit risk amount.

(2) If the same margin contract is related to more than one netting group, the renewal cost of the margin contract is calculated according to the following formula by deducting the total collateral amount from the sum of all risks without margin of the netting groups subject to the margin contract.

$$YM_{MS} = \max \left\{ \sum_{NG \in MS} \max (CPD_{NG}; 0) - CTD_{MS}; 0 \right\}$$

In this formula, the following terms have the following meanings

CPDNG = Current market value of transactions within the same netting group related to the same margin contract before taking collateral into account,

CTDMS = Net current market value of collateral received for the sum of all netting groups associated with the same margin contract after applying the discount rate

(3) If the same margin contract is related to more than one netting group, the potential credit risk amount related to the margin contract is calculated by summing the potential credit risk amounts calculated assuming that each netting group is without margin according to the following formula.

$$PKT_{MS} = \sum_{NG \in MS} PKT^{\text{without margin}}{}_{NG}$$

PART TWO

Internal Model Method

1. (1) Banks using both the Standard Approach and Internal Ratings Based (IRB) Approach to calculate the amount subject to credit risk may apply to the Agency for permission to use the internal model method (IMM). Banks that apply for permission and meet the conditions specified in this part shall use the IMM for all positions exposed to the KKR, except for the transactions specified in paragraph (d) of the second subparagraph of the of Part Two of Section One. Nevertheless, banks may use the internal model method only for the transactions specified in subparagraph (a) of paragraph two of Part Two of Section One, or only for the transactions specified in subparagraphs (b), (c) and (ç) of paragraph two of Part Two of Section One, or only for the transactions specified in subparagraphs (a) to (ç) of paragraph two of Part Two of Section One, provided that the procedures and principles regarding netting specified in paragraph seven of Part One of Section Two are met. The Bank shall apply the IMM for all of its positions, except for risks that are not significant in terms of size and riskiness in relation to these transactions.

(2) Banks may use either of the two methods set out in this Annex to calculate the risk amount for the transactions referred to paragraph (d) of the second paragraph of the Part Two of the Section One, regardless of the method used for the transactions referred to in subparagraphs (a) to (d) of the second paragraph of the Part Two of the Section One. Banks that have obtained permission to use IMM approaches may choose to permanently use the risk weights in the Standard Approach specified in Articles 4 to 7 of the Regulation for these transactions, regardless of the significance level of the transactions specified in subparagraph (d) of the second paragraph of the Part Two of Section One.

(3) Banks need to comply with the conditions described in this part to implement IMM.

2. During the transition to the IMM, the Bank may implement a progressive implementation for the different types of transactions specified in subparagraphs (a) to (d) of the second paragraph of Part Two of Section One, and may use the SY-KTKR defined in Part One of Section Two for these types of transactions. The Bank is obliged to submit to the Agency a plan for the transition to IMM.

3. For the types of transactions specified in subparagraphs (a) and (d) of the second paragraph of Part Two of Section One, the SY-KTKR may be used for partnerships under the same group.

4. A bank that is authorized to use the IMM may not use again the SY-KTKR specified in Part Two, Section One for risks that are deemed significant in terms of size and riskiness, except for the exceptions specified in paragraphs two and three, with the approval of the Agency and in cases where it provides a justifiable reason. The bank shall demonstrate to the Agency that the transition to a less sophisticated method does not create a capital arbitrage. In case of non-compliance with the conditions set out in this Part, the bank shall submit a report within a plan to be approved by the Agency with the aim of restoring compliance or prove that the effects of non-compliance are insignificant.

Risk amount

5. The amount of risk is measured at the netting group level. The model determines the estimated distribution of changes in the fair value of the netting group attributable to changes in market variables such as interest rates and foreign exchange rates. The model then calculates

the amount of risk for each netting group for future periods, taking into account changes in the market. For secured assets, the model may also include future movements in the value of collateral.

6. Banks may include collateral acceptable under Articles 9 and 10 of the Communiqué on Credit Risk Mitigation Techniques and collaterals acceptable under paragraph ten of Article 4 of this Regulation in the estimated distributions of changes in the fair value of the netting group, if the quantitative, qualitative and data conditions for the collateral are met for the IMM.

7. In cases where the bank takes collateral into account in the calculation of the risk amount, this collateral is not taken into account in determining the value of the THK , i.e. in these cases the bank will use unsecured THK .

8. For the banks using IMM for counterparty credit risk exposures, the counterparty credit risk capital requirement is the higher one of the following amounts:

a) Capital requirement based on the EBPRT calculated using current market data for these risk amounts (excluding the KDA capital requirement calculated in accordance with Section 4)

b) Capital requirement based on the EBPRT calculated using a single consistent stress calibration for all counterparty credit exposures for which the IMM is used for these exposure amounts.

When determining the greater of (a) and (b), this comparison is made on a total portfolio basis, not on a counterparty basis. Such stress calibration should be a consistent stress calibration applied on the portfolio including all counterparties.

9. The Bank does not have to use only one type of model when using the IMM. The relevant paragraphs describe the internal model as a simulation model. However, analytical models may also be used, provided that they are approved by the Agency, applied to all significant risks and meet other operational requirements.

10. Except for counterparties that are clearly identified as being exposed to specific adverse trend risk under paragraphs 507 and 508, the exposure amount is calculated by multiplying the Alpha (α) value by the EBPRT:

Risk amount = α x EBPRT

In this equation:

Alpha (α) value is taken as 1.4. EBPRT is calculated by estimating the average BRT at a time t in the future based on possible future values of market risk factors such as interest rates, exchange rates, etc. The model estimates the BRT value for future time series such as t1, t2, t3.

11. EBRT is calculated by repeating the following equation.

$$EBRT_{t_k} = \text{maximum}\,(\,EBRT_{t_{k-1}}\,;\,BRT_{t_k}\,)$$

In this equation:

The current date is denoted as t0 and is equal to the current risk amount.

12. In this calculation, the EBPRT is the average EBRT value throughout the first year of future risk. If the maturity of all contracts in the netting group is less than one year, the BPRT is the average value of the BRTs until the maturity of all contracts in the netting group. EBPRT is calculated as the weighted average of EBRT by the following equation.

$$\text{EBPRT} = \sum_{k=1}^{\min(1\text{ year; maturity})} EBRT_{t_k} * \Delta t_k$$

In this equation:

$\Delta t_k = t_k - t_{k-1}$ weights allow future risk to be calculated at dates that are non-uniformly spaced in time.

13. The BRT or maximum risk amount is calculated in such a way as to take into account the non-normality of the risk amount distribution, where the distribution takes the form of leptokurtosis.

14. The Agency may set a higher alpha coefficient for the bank's counterparty credit risk exposures. Circumstances requiring a higher alpha coefficient may include concentration on certain counterparties, high exposure to general adverse trend risk, high correlation between the market values of counterparties, and other bank-specific characteristics of the KKR. Banks may also calculate a more conservative risk amount for all counterparties than the risk amount calculated according to the above equation. If the Agency considers that the alpha value or the risk amount calculated according to the IMM does not reasonably represent the risk amount for counterparty credit risk, it shall take the necessary measures. These measures may include requesting the bank to revise its estimates, asking the bank to apply a higher alpha and risk amount, or not allowing the bank to use the IMM.

Internal estimation of the coefficient α

15. Notwithstanding the provisions of paragraph 10, banks may use their own estimate of α of not less than 1.2, where "α" equals the ratio of the economic capital requirement (denominator) derived from a full simulation of counterparty credit risk to the economic capital requirement (denominator) calculated using the BPRT. In this calculation, the BPRT is considered as a fixed amount of used credit. The Bank demonstrates that it meets all the requirements for the internal estimate of BPRT and that, in the numerator of this ratio, the internal estimates of α include significant sources of dependence of the fair value allocation of transactions or portfolios between counterparties, such as the correlation of defaults of counterparties with each other or the correlation of these defaults with market risk. The diversity of portfolios is also taken into account in the internal estimates for α.

16. The Bank calculates the numerator and denominator of α in a consistent manner according to the modeling methodology used, parameter characteristics and portfolio composition. The approach used is determined as a result of the internal capital adequacy assessment process (ISEDES) specified in the Regulation on Internal Systems of Banks published in the Official Gazette dated 28.06.2012 and numbered 28337. There must be written implementation procedures and principles for the approach used and the approach must be subject to independent validation. The Bank evaluates its estimates at least quarterly, or more frequently if the portfolio composition changes over time. Model risk is also taken into account by banks. The Agency takes into account the differences that may occur in the alpha estimate due to errors in the model setup.

17. When estimating α, where appropriate, the volatilities and correlations of the market risk factors used in the joint simulation of market and credit risks are adjusted to the credit risk factor to reflect potential increases in those volatilities and correlations during economic downturns. Internal alpha estimates also take into account the concentration to counterparties.

18. If the initial maturity of the longest-term contract included in the netting group is more than one year, the formula in the seventeenth paragraph of the second part of Annex-1 to the Communiqué on Calculation of the Amount Subject to Credit Risk with Internal Ratings Based Approaches is used in the calculation of the effective maturity.

19. If the initial maturity of all contracts included in the netting group is less than one year, the effective maturity is calculated in accordance with the eighteenth paragraph of the second part of the Annex-1 of the Communiqué on Calculation of the Amount Subject to Credit Risk with Internal Ratings Based Approaches.

Risk amount for netting groups subject to margin contract

20. When modeling the risk amounts subject to a margin contract, the margin period of the risk for transactions subject to daily valuation or daily re-margining cannot be less than the periods specified below.

a) 5 business days for netting groups that include only repo transactions, securities or commodity lending transactions and trading on margin,

b) 10 working days for all other netting groups.

21. In the following cases, the minimum periods specified in this paragraph shall apply instead of the periods specified in subparagraphs (a) and (b) of paragraph 20.

a) For netting groups where the total number of transactions is above 5,000 at any time during any quarter, the margin period of the risk cannot be less than 20 business days for the next quarter.

b) For netting groups with one or more transactions involving either illiquid collateral or a derivative that is not easy to renew, the margin period of the risk cannot be less than 20 business days.

22. In applying subparagraph (b) of paragraph 21, in determining whether collateral is illiquid collateral or a derivative transaction is a derivative transaction that is not readily renewable, it is considered whether there is a continuously active market in which a counterparty can obtain multiple price quotations over two or fewer days without affecting the market or charging a discount for margin or a premium for a derivative transaction under stress market conditions. In determining the real value of transactions that are not subject to daily valuation as an example of illiquid transactions, the transactions using models with inputs that are not specified in the market can be given.

23. Banks take into account the concentration of transactions or securities held as collateral with a particular counterparty and whether they would be able to replace such transactions or securities if that counterparty were to suddenly pull out of the market.

24. If the bank has more than two margin call disputes for a netting group or a counterparty in two consecutive quarters that last longer than the margin period for the risk referred to in paragraphs twenty and twenty-one, the bank shall use a period of at least twice the margin period for the risk referred to in paragraphs twenty and twenty-one as the margin period for the two consecutive quarters.

25. If the re-margining period is N days, the margin period of the risk, being the margin period F of the risk referred to in paragraphs 20 and 21, is calculated by the following formula:

Margin period of risk $=F+N-1$

26. If the internal model includes the effect of margining on changes in the market value of the netting group, risk amount calculations for other collateral, repurchase agreements, securities and commodity lending or borrowing transactions and trading on margin, excluding cash collateral denominated in the same currency as the currency of the risk, are modeled together with the risk.

27. If the bank is unable to model collateral together with the risk amount, the bank may not consider collateral other than cash collateral denominated in the same currency as the currency in the calculation of the risk amount for derivative transactions, unless the bank uses an internal estimates-based volatility adjustment approach or a standard volatility adjustment approach that meets the standards specified in the comprehensive financial collateral method in accordance with the Communiqué on Credit Risk Mitigation Techniques.

28. The banks using the internal model approach cannot take into account the effect of reducing the exposure amount in their models if the collateral agreement includes a provision requiring collateral to be taken in the event of a downgrade in the creditworthiness of the counterparty.

Counterparty credit risk management - policies, processes and systems

29. (1) As it is a type of credit risk, it acts in accordance with the regulations on stress testing, residual risk associated with credit risk mitigation techniques and credit concentration in the process of assessing counterparty credit risk.

(2) The Bank establishes and maintains a counterparty credit risk management infrastructure that includes the following elements:

a) Policies, processes and systems that will ensure that counterparty credit risk is identified, measured, managed, approved and reported internally.

b) Implementation procedures and principles to ensure compliance with policies, processes and systems.

(3) These policies, processes and systems should be conceptually sound, implemented with integrity and in writing. The related documentation should include explanations of the empirical techniques used in counterparty credit risk calculations.

30. The counterparty credit risk management infrastructure required pursuant to paragraph 19 shall take into account the market and liquidity risks associated with counterparty credit risk, as well as legal and operational risks. In particular, such infrastructure shall ensure the bank's compliance with the following principles.

a) The Bank shall not engage in any transaction with a counterparty without examining the creditworthiness of the counterparty.

b) The Bank takes into account the credit risks at swap and before swap.

c) These risks are managed as comprehensively and broadly as possible at counterparty level (by assessing counterparty credit risks together with other credit risks) and at bank level.

31. A bank using IMM ensures that its counterparty credit risk management infrastructure takes into account the liquidity risk related to the following issues at a level that is satisfactory to the Agency:

a) Potential margin calls under variation margin or other types of margins (such as initial margin and standalone margins) in the event of adverse market shocks.

b) Potential margin calls for the refund of excess collateral posted by the counterparty.

c) Margin calls arising from a possible downgrade of the bank's own external credit rating.

The Bank shall ensure that the nature and period of collateral reuse is compatible with its liquidity needs. The Bank shall not jeopardize its ability to timely post or receive the collateral.

32. The Bank's senior management should actively participate in counterparty credit risk management and allocate adequate resources for this purpose. Senior management should be informed, through a formal process, of the constraints and assumptions of the model used and their potential impact on the reliability of the output. Senior management should be informed about uncertainties relating to market conditions and operational risks and how these are reflected in the model.

33. The daily reports on counterparty credit risk prepared pursuant to subparagraph (b) of paragraph thirty-eight should be reviewed by managers with sufficient seniority and authority to ensure that necessary reductions are made in the positions taken by the credit allocation and treasury units on the basis of authorized personnel and in the total counterparty credit risk of the bank.

34. The counterparty credit risk management infrastructure established pursuant to paragraph 19 shall be used in conjunction with internal credit and trading limits. The limits should be consistently linked to the risk measurement model in time and should be well understood by the managers of the credit allocation and treasury departments and senior management. In the event that risk limits are exceeded, the bank should have a formal process to ensure that the exceedance is reported to the required level of management.

35. Counterparty credit risk measurement also includes the measurement of daily and intra-day utilization of credit limits. Banks calculate the current risk amount on a separate basis, with and without taking into account the effect of collateral. Banks calculate the highest risk amount or potential risk amount within the confidence interval they determine on the basis of portfolio and counterparties. Banks shall take into account risk concentrations related to categories such as risk groups, sectors and markets.

36. Banks should establish and maintain a regular and strictly enforced stress testing program. Stress test results should be reviewed periodically, at least quarterly, by senior management and used by the board of directors or senior management in determining counterparty credit risk policies and limits. Where the stress test indicates a particular risk sensitivity to specific facts and circumstances, the necessary measures are taken immediately to manage these risks prudently.

Organizational structure for counterparty credit risk

37. A bank using IMM shall establish and maintain the following units:

a) A counterparty credit risk control unit in accordance with paragraph thirty-eight.
b) A collateral management unit in accordance with paragraph 39.

38. The counterparty credit risk control unit shall carry out the following functions and meet the following requirements:

a) The unit shall be responsible for establishing and implementing the bank's counterparty credit risk management system, including initial and periodic validation of the model.

b) The unit shall produce daily reports and perform analyses based on the outputs of the bank's risk measurement model. These analyses include the assessment of the relationship between the counterparty credit risk amount and trading limits.

c) The unit checks the integrity of the data entered and generates reports and performs analysis based on the outputs of the risk measurement model, including the evaluation of the relationship between the risk amount and credit limits and trading limits.

ç) The unit should be independent from the units that create, renew or trade the risk and should not abuse its authority.

d) The unit must have sufficient staff.

e) The Unit reports directly to the senior management of the Bank.

f) The operations of the unit should be an integral part of the bank's day-to-day credit risk management process.

g) The operations of the unit should be an integral part of the process of planning, monitoring and controlling the bank's credit and overall risk profile.

39. The collateral department carries out the following roles and functions:

a) Calculating the amount of collateral that will be required and managing potential disputes related to the collateral replenishment transaction, and accurately reporting the independent amount, initial margins and variation margin levels on a daily basis, in the event that margin call is required,

b) Checking the integrity of the data for the execution of the margin call and ensuring that it is consistent and reconciled with all other relevant data sources in the bank,

c) Monitoring the magnitude of collateral reuse and changes in the rights of the bank or the related counterparty to which collateral has been posted,

d) In the event that collateral is reused, information such as the type, credit quality and maturity of such collateral is reported to the appropriate relevant department,

e) Monitoring the concentration by type of the collaterals accepted by the Bank,

f) Periodic reporting of collateral management information, including information on the types of collateral received or posted, disputes related to margin calls, to senior management, at least on a quarterly basis, in a manner that reflects possible trends.

f) The unit must have sufficient staff.

40. Senior management shall allocate sufficient resources to the collateral department required under subparagraph (b) of paragraph thirty-seven to ensure an adequate level of operational performance in connection with timely and accurate margin call processing by the bank and timely response to counterparty margin calls. Senior management shall ensure that this unit has sufficient staff to process margin calls and related disputes in a timely manner, even during severe market crises, and to limit the number of high-volume disputes arising from the volume of trading.

Review of counterparty credit risk management system

41. The Bank regularly subjects its counterparty credit risk management systems to independent review through internal audit processes. Such audit, which must be conducted at least once a year, covers the activities of the counterparty credit risk control and collateral management units required pursuant to paragraphs thirty-eight and thirty-nine and at least the following matters.

a) The adequacy of the documentation and processes related to the counterparty credit risk management system required pursuant to paragraphs twenty-nine to fortieth,
b) The organizational structure of the counterparty credit risk control unit required to be established pursuant to subparagraph (a) of paragraph thirty-seven,
c) The organizational structure of the collateral management unit required to be established pursuant to subparagraph (b) of paragraph thirty-seven,
d) Linking counterparty credit risk measurements with daily risk management,
e) Approval process for risk pricing models and valuation systems used by front and back office staff,
f) Validation of significant changes to the counterparty credit risk measurement process,
g) The extent to which counterparty credit risk is taken into account in the risk measurement model,
h) Integrity of management information systems,
i) Reliability and completeness of counterparty credit risk data,
j) Whether the provisions of collateral and netting agreements are correctly reflected in the risk amount measurements,
k) Confirm the consistency, reliability and timeliness of the data sources used in the models, including the independence of the data sources involved,
l) Accuracy and appropriateness of volatility and correlation assumptions,
m) Accuracy of valuation and risk amount calculations,
k) Confirmation of the accuracy of the model at frequent intervals using back-testing as set out in paragraph 75,
l) Compliance of counterparty credit risk control unit and collateral management unit with legal requirements.

Operational Requirements for BPRT Models

42. In order to calculate the BPRT for the purposes of calculating the regulatory capital requirement, banks meet the following operational requirements. Such requirements are qualitative standards for the management of ERRs, utilization testing, stress testing, identification of adverse trend risk and internal controls. The bank shall demonstrate to the Agency that it complies with the Guidelines for the Management of Counterparty Credit Risk, including the requirements set out in paragraphs thirteen, twenty-nine, thirty, thirty-two, thirty-four, thirty-five, thirty-six, forty-one, sixty-six and sixty-nine of this Part.

Utilization Test

43. The risk amount distribution produced by the model used in EBPRT calculations is included in the bank's daily counterparty credit risk management process. The outputs of the model are determinative in the bank's credit approval, counterparty credit risk management, allocation of capital on unit and activity basis and corporate governance processes. Models and forecasts created and applied solely to qualify internal model methods cannot be used. In order to grant approval for the use of internal models, the applications to be made to the Agency must require proof that the model used to calculate the risk amount distribution based on BPRT

measurements complies with the minimum criteria specified in this part, and that the said model has been in use for at least one year.

44. The model used to determine the allocation of counterparty credit risk amounts is part of the counterparty credit risk management framework, which covers the identification, measurement, management, approval and internal reporting of counterparty credit risk. The counterparty credit risk management framework also includes the measurement of credit limit utilization, the treatment of counterparty credit risk together with other credit risks, and the allocation of capital on a unit and activity basis. In addition to BPRT, banks also measure and manage current risk amounts. Where appropriate, current risk amounts are calculated separately with and without the effect of collateral. If counterparty credit risk measures, such as the maximum exposure amount based on the risk amount distribution generated by the model used, are also used in the calculation of the BPRT, the usage test is considered to be duly performed.

45. Banks shall establish the necessary systems to calculate the BRT on a daily basis, except where it is demonstrated that it is appropriate to calculate counterparty credit risk on a less frequent basis. Banks shall calculate the BRT for a time period that accurately reflects the maturity of contracts and the timing of future cash flows, and in accordance with the composition and magnitude of exposures.

46. The risk amount is calculated, monitored and controlled for a time period that covers the maturity of all contracts within the netting group, not just for a one-year period. Banks shall have appropriate methods for identifying and controlling counterparty risk for periods longer than one year. Incremental estimates of risk amounts are considered as inputs to the internal capital requirement assessment process.

Stress Test

47. Banks regularly conduct a detailed stress test process to be used in capital adequacy assessments for counterparty credit risk. Stress test results are compared with the BPRT measurement and taken into account within the framework of the Internal Capital Adequacy Assessment Process (ICAAP).

48. Stress test involves assessing possible events or changes in economic conditions that could adversely affect the bank's credit risk exposures and the bank's resistance to such changes. Examples include economic and industrial contraction, market movements and reduced liquidity. The bank should have a comprehensive stress testing program for counterparty credit risk. The stress testing program covers all transaction and aggregate exposures that create counterparty risk at each counterparty level over a sufficient time scale to allow for regular stress testing.

49. Banks conduct stress tests for all counterparties at least monthly to identify concentrations in the sensitivity of key market risk factors such as interest rates, foreign exchange rates, equity, credit spreads and commodity prices to a particular direction and, where necessary, to reduce these concentrations. Risk stress tests, including single-factor, multi-factor and significant non-directional risks, as well as stressing the risk amount and creditworthiness together, are conducted at the level of the counterparty, the counterparty's risk group and the bank's total risk.

50. (1) Banks should conduct multi-factor stress test scenarios at least quarterly and assess significant non-directional risks, including yield curve risk and basis risk. As a

minimum, multi-factor stress tests include scenarios for the following situations: As a minimum, multi-factor stress tests include scenarios for the following situations:

a) Serious economic or market developments,
b) Significant decrease in market liquidity,
c) Liquidation of positions of a large financial intermediary institution.

(2) Stressed market movements also have an impact on counterparty creditworthiness. Banks stress test the movement of the risk amount and counterparty creditworthiness together at least quarterly.

51. The severity of shocks applied to risk factors is consistent with the objective of the stress test. When testing solvency under stress, the shocks applied to the factors are of a severity that adequately covers past unusual market conditions and reflects extreme but potentially stressful market conditions. Under stress testing, the impact of these shocks on capital, capital requirements and earnings are evaluated. The stress testing program also evaluates less severe but more likely scenarios on a daily basis for the purposes of portfolio monitoring, hedging and managing concentrations.

52. The stress testing program, to the extent appropriate, considers inverse stress tests to identify extreme but possible scenarios that could lead to a material adverse impact, discloses the results of non-linear movements of the portfolio against risk factors.

53. According to the program, the results of stress tests are regularly reported to senior management on at least a quarterly basis. The reports and analyses of the results cover the impact at the highest counterparty level across the portfolio, significant concentrations within the portfolio by sector or region, and specific trends of the relevant portfolio and counterparties.

54. Senior management takes a leading role in integrating stress testing into the bank's risk management structure and risk culture, ensuring that the results are meaningful and used in the management of counterparty credit risk. Stress test results for significant risks are compared with the guidelines that determine the bank's risk appetite, and if excessive or concentrated risks are identified, necessary measures are taken by senior management.

Adverse Trend Risk

55. Banks give necessary and sufficient attention to risks that may significantly increase the risk of general and specific adverse trends.

56. In order to identify general adverse trend risk, banks design stress tests and scenario analyses to identify risk factors that are positively correlated with counterparty creditworthiness. Such tests and analyses include the possibility of severe shocks due to changes in the relationships between risk factors. Banks monitor general adverse trend risk by product, region, sector or other categories related to their activities. Reverse trend risk and the steps taken to manage this risk are regularly reported to senior management and the relevant committee.

57. Banks shall establish procedures and principles for the identification, monitoring and control of specific adverse trend risk for each natural or legal person who is a party to a contract at the conclusion of the contract and during the term of the contract. Contracts to which counterparties to which specific adverse trend risk has been identified shall be taken into account in accordance with paragraph fifty-eight.

58. Banks calculate capital requirements for counterparty credit risk in accordance with the following principles for counterparties for which specific adverse trend risk is identified.

a) Financial instruments where there is a legal link between the issuer and the counterparty and specific adverse trend risk exists are not included in the same netting group as other transactions with the counterparty.

b) The risk amount for credit default swaps on a single reference borrower, where there is a legal link between the issuer and the counterparty and specific adverse trend risk exists, is equal to the total expected loss in the residual fair value of the underlying asset, assuming the issuer is liquidated. For these swaps, for banks using the IRB approach, in case of default, the loss is taken into account as one hundred percent.

c) For the swap transactions mentioned in subparagraph (b), the risk weight to be used in the risk weighted amount calculation in accordance with Articles 4 to 7 of the Regulation is the risk weight applied to the unhedged section of the relevant contract/transaction.

d) The risk amount is equal to the value of the transaction under the assumption of default of the underlying asset for equity derivatives, bond options, etc. where there is a legal link between the issuer and the counterparty and there is a specific adverse trend risk for a single reference borrower. Since the capital requirement calculation for additional risk (additional default and creditworthiness change risk) in the market risk calculation already includes a loss given default (LGD) estimate, the LGD value is taken as 100 percent in the calculations.

59. Banks prepare periodic reports on the general and specific adverse trend risks they are exposed to and the measures taken to manage these risks and submit these reports to senior management and relevant committees.

Consistency of the Modeling Process

60. Other operational requirements that banks should ensure are internal controls to ensure the consistency of model inputs (transaction data, historical market data, calculation frequency and pricing models used in the BPRT measurement). The model used takes into account the terms and characteristics of the relevant transaction in a timely, complete and prudent manner. Transaction terms include, at a minimum, the amounts specified in the contract, maturity, reference assets, and margin and netting provisions. The terms and characteristics of such transactions are kept in a database that is subject to periodic audit. In order for netting arrangements to be recognized, the legally binding nature of the netting must be confirmed and assured by the legal department and the relevant data must be entered into the database by an independent entity. The terms and characteristics of transactions and the inclusion of their data in the model are subject to internal audit. It is continuously checked that these terms and characteristics are accurately or prudently reflected in the BPRT, and processes are established to validate the model and source data systems for verification.

61. Current market data are used to calculate current risk amounts. Banks can calibrate their BPRT models using historical market data or implied market data to create the parameters (trend, volatility and correlation) to be used in the stochastic processes they take as basis. The Bank using historical market data uses at least 3 years of historical data. This data is updated at least quarterly or more frequently as needed to reflect market conditions. The Bank calibrates the EBPRT model using three years of data that includes a stress period on the credit default rate spreads of the Bank's counterparties, or implied market data that includes such a stress

period. Banks, for this purpose, shall meet the conditions set out in paragraphs sixty-two, sixty-three and sixty-four.

62. Banks shall submit to the Agency, at least quarterly, that the stress period used for the calculations in this paragraph is consistent with the period for interest rate spreads on other receivables such as incremental credit default swaps or loans or corporate bonds for a representative sample of counterparties to which the bank is exposed for traded loan interest rate spreads. Where there is insufficient credit interest rate spread data for a counterparty, that counterparty is associated with specific credit interest rate spread data based on its region, internal rating and line of business.

63. The EBPRT model for all counterparties uses either historical or implied data, including data over the stressed credit period, and considers this data in a manner consistent with the method used to calibrate the EBPRT model to available data.

64. The bank establishes a sufficient number of reference portfolios that are sensitive to the same underlying risk factors to which the bank is exposed in order to assess the effectiveness of the stress calibration of the EBPRT. The risk amount of these reference portfolios;

a) Current values of current market prices, current stressed volatilities, current stressed correlations or other relevant factors derived from a three-year stress period,

b) Market prices at the end of the stress period derived from the three-year stress period are calculated using the stressed volatilities at the end of the stress period, stressed correlations at the end of the stress period or the values of other relevant factors at the end of the stress period.

The Agency may ask the bank to correct the stress calibration if the risk amounts of these reference portfolios deviate significantly from the amounts obtained from the stress calibration of the EBPRT.

65. The model is subject to a validation process. This process is explicitly included in the bank's policies and procedures. The validation process includes the tests needed to ensure the integrity of the model and describes situations where assumptions are violated and may lead to an understatement of the BPRT. The validation process also includes a review of the comprehensiveness of the model.

66. (1) Banks monitor relevant risks and should have processes in place to adjust the internal BPRT estimate when such risks reach a critical level. In this framework, the bank shall:

a) Recognize and manage its risks within the scope of specific adverse trend risk,

b) Compare the one-year BPRT estimate periodically with the BPRT realized during the maturity period for risks with an increasing risk profile after one year,

c) Regularly compares the calculated renewal cost (current risk amount) and realized risk amounts for risks with a remaining maturity of less than one year, and retains the data that enables this comparison.

(2) When evaluating the internal model that estimates the expected positive exposure, in particular for banks that are allowed to estimate the alpha, the Agency assesses the following attributes of the portfolio that give rise to the KKR:

a) Diversification of the portfolio (the number of risk factors to which the portfolio is exposed),

b) Correlation between the bankruptcy probabilities of counterparties,

c) Number and concentration of counterparty transactions.

67. Before including a transaction in a netting group, the bank shall have systems in place to verify that the transaction is covered by a legally binding netting agreement that complies with the conditions set out in paragraph seven of Part One, Section Two.

68. A bank that uses collateral for counterparty credit risk mitigation shall have systems in place to verify that this collateral complies with the legal validity standards in accordance with the procedures and principles set out in the Communiqué on Credit Risk Mitigation Techniques before taking into account the effect of collateral in its calculations.

Requirements for the risk management system

69. The Bank shall comply with the following conditions:

a) The Bank meets the qualitative requirements specified in the Communiqué on Calculation of Market Risk with Risk Measurement Models and Evaluation of Risk Measurement Models.

b) The Bank regularly conducts a back testing program in which model-generated risk metrics are compared with actual risk metrics and hypothetical changes in static positions are compared with actual values.

c) The Bank conducts an initial validation and regularly reviews the counterparty credit risk model and its results. Validation and review are independent of the development of the model.

d) The board of directors and senior management of the bank actively participate in the risk control process and ensure that sufficient resources are allocated for credit risk and counterparty credit risk control. In this respect, the daily reports prepared by the independent counterparty credit risk control unit established pursuant to subparagraph (a) of paragraph thirty-seven are reviewed by managers having sufficient seniority and authority to ensure that the positions taken by the authorized personnel of the treasury units and the necessary reductions in the total risk of the bank are made.

e) The bank's internal risk measurement model is an integral part of the bank's daily risk management process. The outputs of this model are also an integral part of the control, monitoring and planning process of the counterparty credit risk profile.

f) The risk measurement system is used in conjunction with internal credit and trading limits. In this respect, the limits are consistently linked to the risk measurement model over time and are understandable by the managers of the credit allocation and treasury departments and senior management.

g) The Bank ensures that the risk management system is well documented through a risk management guide that includes the basic principles and empirical methods to be used, maintains a written set of internal policies, controls and procedures, particularly with respect to the activities of the risk measurement system, and establishes a system to ensure compliance with the policies.

h) The Bank's risk measurement system is subject to regular independent review through internal audit processes. This review shall include both the activities of the trading units and the activities of the independent counterparty credit risk control unit. A review of the entire risk management process shall be conducted at regular intervals, at least annually, and shall include at least the matters set out in paragraph forty-one.

i) Periodic validation of counterparty credit risk models, including back-testing, is periodically reviewed by managers having sufficient authority to take steps to eliminate weaknesses in the model.

70. The Agency shall use the value of α referred to in paragraph 10, taking into account the extent to which the conditions set out in paragraph 69 are met. Only banks that fully meet these criteria will be able to use the minimum multiplication factor specified in paragraph fifteen.

71. Banks document the initial and periodic validation processes of counterparty credit risk models and the risk metric calculations produced by the model in sufficient detail to allow a third party to repeat the same analysis or risk metric calculations. This documentation explains which back-testing and periodic validation will be performed and how often, how the validation is performed with data flow and portfolios, and the analyses used.

72. Banks shall define criteria for evaluating counterparty credit risk models and models included in the risk calculation and have a written policy to describe the process for identifying and resolving unacceptable performance.

73. Banks describe how representative counterparty portfolios are constructed for the purposes of validating the counterparty credit risk model and its risk metrics.

74. In the validation of the counterparty credit risk model and the risk metrics that generate its estimate distributions, more than a single statistic of the estimate distribution is considered.

Validation conditions for BPRT Models

75. (1) As part of the initial and periodic validation of counterparty credit risk models and model-generated risk metrics, banks meet the following requirements:

a) Banks perform back-testing using historical data on the movements of market risk factors before obtaining permission for the use of the model from the Agency. Back-testing takes into account multiple estimation time periods of at least 1 year, including different starting dates and different market conditions.

b) Banks apply counterparty credit risk models to back-test the performance of the model's risk metrics together with the performance of the market risk factor estimates. The estimated time periods used for secured trades reflect the margin period of the risk applied to secured or margined trades. Such estimation time horizons cover a minimum time period of one year.

c) Large differences between the resulting risk amounts and the forecast distribution indicate that there is a problem with the model and the data used that needs to be corrected. In such cases, the Agency may require appropriate measures to be taken to resolve the problem and additional capital to be held during this improvement process.

d) Pricing models used to calculate counterparty credit risk based on future shocks to market risk factors under a specific scenario are tested as part of the initial and periodic model validation process. Such pricing models may differ from models used to calculate market risk over a short time horizon. Pricing models used for options take into account the non-linear nature of the option value with market risk factors.

d) The counterparty credit risk model takes into account transaction-specific information to aggregate risk amounts on a netting group basis. Banks are responsible for ensuring that these transactions are matched to the appropriate netting groups within the model.

e) Static and historical back-testing against a representative counterparty is part of the validation process. The Bank periodically applies such back-testing to multiple representative counterparties, real or hypothetical. Such representative portfolios are selected on the basis of

the risk factors to which the bank is exposed and the sensitivity of the selected portfolios to significant risk factors.

f) The Bank applies back-testing to test the assumptions of counterparty credit risk models and the model's risk metrics, including modeling the relationship between maturities of the same risk factor and modeling the relationship between risk factors.

g) Counterparty credit risk models and the performance of the model's risk metrics are subject to appropriate back-testing. The back-testing program shall be at a level that can identify poor performance of the risk metrics of the BPRT model.

h) Banks validate the counterparty credit risk models and the risk metrics of the model for time intervals consistent with the maturity of the trades subject to the internal model.

h) As part of the periodic validation process, the pricing models used in the calculation of counterparty risk are tested against appropriate independent models.

i) Periodic validation includes an assessment of the near-term performance of counterparty credit risk models and the model's risk metrics.

j) As part of the validation process, it is assessed which parameters of the counterparty credit risk model should be updated and how often.

k) The initial and periodic validation of the counterparty credit risk model assesses the appropriateness of the calculations at counterparty and netting group level.

l) Periodic assessment of model performance covers all counterparties using the model.

(2) A more conservative measure may be used instead of α multiplied by the BPRT in the calculation of each counterparty's exposure amount, subject to prior authorization from the Agency. The level of relative conservatism will be assessed by the Agency during the initial authorization and regular reviews of the BPRT models. The Bank regularly validates its conservatism.

(3) If the back-testing indicates that the validity of the model is not adequate, the Agency may revoke the authorization granted for the model or may require appropriate measures to be taken to ensure that the model is improved immediately and that additional capital is held during this improvement process.

SECTION THREE
Cross-Product Netting

Types of cross product netting that may be approved by the Agency

1. If the bank has a netting agreement with the same counterparty that meets the qualifications specified in paragraph seven of Part One of Section Two, only the bank that is permitted by the Agency to use the IMY defined in Part Two of Section Two, provided that it is in the same netting group when calculating the exposure amount under this Annex, repo transactions, securities or commodity lending and borrowing transactions and trading margin can cross product netting with each other, and repo transactions, securities or commodity lending and borrowing transactions and securities lending and borrowing transactions, and trading margin can perform cross-product netting of trading margin with over-the-counter derivative transactions.

2. Contractual cross product netting means the calculation of a netted risk amount by offsetting the negative and positive values based on a bilateral netting agreement between the bank and the counterparty in accordance with the procedures and principles set out in the first paragraph.

3. In the framework of cross product netting, the following are considered to be different product categories and banks may cross product net between these different product categories only if the procedures and principles set out in this section are met.

a) Repo transactions, securities or commodity lending and borrowing transactions;
b) Trading on Margin,
c) Derivative transactions.

4. Netting between transactions with different legal entities in the same risk group is not taken into account in the calculation of the capital requirement.

5. Contractual cross-product netting transactions have the following additional qualifications:

a) The net sum referred to in paragraph 2 is the net sum of the positive and negative closing values of the bilateral netting agreement and the positive and negative market values of the individual transactions within the scope of the netting transaction.

b) The written and justified legal opinions referred to in paragraph seven of Part One of Section Two shall also address the validity and enforceability of the netting agreements as a whole and their effect on the material provisions of the netting agreement. These opinions shall be deemed to be legal opinions within the scope of the legal regulations of the country in which the bank operates, or legal memoranda that include all matters related to the contract together with their justifications.

c) Pursuant to paragraph seven of Part One of Section Two, banks shall have systems in place to confirm that any transaction to be included in the netting group is covered by the legal opinion. Banks shall update legal opinions in order to ensure the legal validity of cross product netting as a result of possible changes in the relevant legislation.

d) Banks shall ensure continuous compliance with the criteria for the recognition of bilateral netting under the bilateral netting agreement and the procedures and principles set out in the Communiqué on Credit Risk Mitigation Techniques in order for cross-product netting to be taken into account.

d) The application of cross-product netting becomes part of the bank's total counterparty credit risk measurement and the bank manages counterparty credit risk in this context.

e) Risks using cross product netting on a counterparty basis are aggregated and this amount is taken into account as part of the credit limits and economic capital processes.

f) In the event of default of a party, netting agreements that contain provisions that the non-defaulting party will not pay the defaulting party or will pay less than the amount due cannot be subject to cross-product netting under any circumstances, even if the defaulting party is a creditor.

SECTION FOUR
Capital Requirement Calculation for KDA Risk

PART ONE
Scope

1. Banks shall calculate capital requirements for KDA risk in accordance with this Section for derivatives to which they are a party for all other activities, except for credit derivatives that are acceptable for the purpose of reducing risk-weighted loan amounts for credit risk.

2. Unless it is stated to the bank by the Agency that the amount of KDA risk is not material, it is assumed that the amount of KDA risk related to repo transactions, securities or commodity lending transactions, trading margin valued at fair value for accounting purposes is material and each amount of KDA risk related to such transactions is included in counterparty credit risk calculations.

3. Transactions conducted with a central counterparty are not included in the calculation of capital requirements for KDA risk.

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PART TWO
Advanced Method

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1. The bank that is permitted by the Agency to use internal models in the calculation of the specific risk capital requirement for the interest rate risk of debt instruments in accordance with Article 4 of the Communiqué on Calculation of Market Risk with Risk Measurement Models and Evaluation of Risk Measurement Models, calculate capital requirements for CVA risk by modeling the impact of changes in counterparty credit spreads on the CVAs of all counterparties to those transactions, taking into account acceptable CVA risk hedges in accordance with paragraphs one to three of Part Four for all transactions for which the use of the IMM is permitted in determining the amount of exposure to be taken into account in the calculation of counterparty credit risk in accordance with paragraph one of Part Two of Section Two. If the internal model permitted by the Agency to be used in the calculation of the specific risk capital requirement for the interest rate risk of debt instruments in accordance with Article 4 of the Communiqué on Calculation of Market Risk with Risk Measurement Models and Evaluation of Risk Measurement Models is insufficient to accurately measure the risk of changes in credit interest rate spreads, the bank calculates the capital requirement arising from KDA risk according to the Standard Method specified in Part 3 instead of the advanced method specified in this Part. The internal model is limited to changes in counterparties' credit interest rate spreads and does not model the sensitivity of KDA to changes in other market factors, including changes in the value of the reference asset, commodity, exchange rate or interest rate of the derivative.

2. The capital requirement for KDA risk for each counterparty is calculated according to the formula below, regardless of the accounting valuation method used by the bank to determine KDA:

$$KDA = THK_{piyasa} \cdot \sum_{i=1}^{T} max \left\{ 0; e^{-(\frac{s_{i-1} \cdot t_{i-1}}{THK_{piyasa}})} - e^{-(\frac{s_i \cdot t_i}{THK_{piyasa}})} \right\} \cdot \left(\frac{BRT_{i-1} \cdot D_{i-1} + BRT_i \cdot D_i}{2} \right)$$

The equivalents of the terms in the above formula are as follows:

t_i: t_0 = Time remaining to the i-th time period, provided that $t0 = 0$.

t_T: The longest contractual maturity within the netting groups with the counterparty.

s_i: The interest rate spread on the counterparty's loan at time t_i to be used in the calculation of the counterparty's KDA. If credit default swap interest rate spread information is available for a counterparty, the bank uses that interest rate spread. If such interest rate spread information is not available, the bank uses an equivalent interest rate spread based on the counterparty's rating, sector and region.

THK_{market}: It is the percentage of loss in the event of default of the counterparty and is based on the interest rate spread of the counterparty if the counterparty has an instrument traded in the market, or if such an instrument is not available, an equivalent interest rate spread determined by taking into account the counterparty's rating, sector and region. THK_{market} refers to a rate based on a market assessment that is not based on the bank's internal estimation, unlike the THK specified in the Communiqué on Internal Ratings-Based Approaches and Calculation of the Amount Subject to Credit Risk or paragraph fifty-eight of the Part Two of Section Two.

BRT_i: It is the amount of expected exposure to the counterparty at the time of the revaluation, as defined in paragraph nineteen of Part One of Section One. This calculation includes the amount of exposure arising from all different netting groups for the relevant counterparty, and the longest maturity of each netting group is the maturity of the longest-term contract within that netting group.

D_i: It is the discount rate adjusted for default risk at time t_i, provided that $D_0=1$.

The part expressed by the function "max" in the above formula refers to the marginal default probability implied in the market for a possible default between t_{i-1} and t_i. The implied marginal default probability in the market refers to the theoretically determined risk-neutral default probability, not the real-life default probability. In other words, the marginal default probability implied in the market is the market-determined price of the hedge purchased against default.

3. When calculating the capital requirement for KDA with respect to a counterparty, banks using the model approved by the Agency in accordance with Article 4 of the Communiqué on Calculation of Market Risk with Risk Measurement Models and Evaluation of Risk Measurement Models in the calculation of the specific risk of debt instruments shall base all inputs of this model on the appropriate one of the following formulas.

a) If such model is based on loan interest rate spread sensitivities for specific times, the bank bases each loan interest rate spread sensitivity (Legal KS01) on the following formula.

$$Yasal\ KS01_i = 0{,}0001.\, t_i.\, e^{-\left(\frac{s_i.t_i}{THK_{piyasa}}\right)}.\frac{BRT_{i-1}.D_{i-1} - BRT_{i+1}.D_{i+1}}{2}$$

b) If the model uses the sensitivity of the loan rate spread to parallel shifts in loan rate spreads, the bank uses the following formula.

$$Yasal\ KS01_i = 0{,}0001.\sum_{i=1}^{T}\left(t_i.\, e^{-\left(\frac{s_i.t_i}{THK_{piyasa}}\right)} - t_{i-1}.\, e^{-\left(\frac{s_{i-1}.t_{i-1}}{THK_{piyasa}}\right)}\right).\frac{BRT_{i-1}.D_{i-1} - BRT_i.D_i}{2}$$

d) If the model uses second-order sensitivities for shifts in loan interest rate spreads (interest rate spread gamma), the gamma is calculated based on the formula in paragraph 2.

4. A bank that is authorized by the Agency to use IMM in accordance with the first paragraph of the Second Part of the Second Section in order to calculate the risk amount for a significant portion of its activities, but uses the SY-KTKR in the First Part of the Second Section for small portfolios, but is authorized by the Agency to use the market risk RMD model for the specific risk of debt instruments traded in accordance with Article 4 of the Communiqué on Risk Measurement Models and Calculation of Market Risk and Evaluation of Risk Measurement Models, may calculate the capital requirement for KDA risk arising from netting groups for which it does not use the IMM in accordance with paragraphs 2 and 3, subject to Agency's permission. This permission shall only be granted for a limited number of small portfolios to banks using the SY-KTKR in Part One of Section Two.

5. For the calculation in paragraph 4 and in the case where the IMM does not generate a BRT profile, the bank shall take into account the following two factors:

a) Accepts that a fixed BRT profile is generated.
b) Equalizes the BRT to the risk amount calculated in accordance with the SY-KTKR in Part One of Section Two for a maturity equal to the greater of the following.
1) Half of the longest maturity in the netting group,
2) Weighted average maturity calculated using the nominal values of all transactions in the netting group.

6. The capital requirement for KDA risk consists of the capital requirements for both general and specific credit interest rate spread exposures, including the stressed RMD but excluding the additional risk capital requirement. Banks determine the capital requirement for KDA as the sum of the stressed and unstressed RMD. This requirement is calculated as follows:
a) When calculating non-stressed RMD, current parameter calibrations for BRT are used.
b) When calculating stressed RMD, the future BRT profiles of the counterparty determined using the stress calibration in paragraph sixty-first of Part Two of Section Two are used. The most severe one-year stress period within the three-year stress period for the parameters used in the determination of the risk amount is taken into account as the stress period for the credit interest rate spread parameters.
7. In relation to the matters set out in this part, the Agency may determine additional procedures and principles on the following matters:

a) How to determine the equivalent interest rate differential for the purpose of determining the THK_{market} used in the calculation in the second paragraph,
b) Information on the required portfolio size and number of portfolios to be held in relation to the limited number of small portfolios referred to in the fourth paragraph,
c) Additional issues to be determined by the Board.

8. Additional KDA risk capital requirement is calculated for secured and unsecured KDA groups over the counterparties of all derivative transactions, including hedging instruments that meet the required criteria for KDA. In terms of such requirement, the instruments subject to this requirement cannot be netted off against other instruments on the bank's balance sheet, unless otherwise specified.

PART THREE
Standard Method

1. The banks that do not calculate the capital requirement for KDA risk arising from transactions with counterparties using the Advanced Method described in Part Two shall calculate the capital requirement for KDA risk arising from each counterparty according to the following formula, taking into account the acceptable KDA risk hedges in accordance with Part Four.

$$K = 2,33. \sqrt{h}. \sqrt{\left(\sum_i 0,5.w_i. \left(M_i.TT_i^{toplam} - M_i^{koruma}.B_i \right) - \sum_{ind} w_{ind}.M_{ind}.B_{ind} \right)^2 + \sum_i 0,75.w_i^2. \left(M_i.TT_i^{toplam} - M_i^{koruma}.B_i \right)^2}$$

2. The expressions in the above formula are as follows.

a) h: One-year risk calculation period h=1.

b) w_i: Weight to be applied to counterparty "i".

Each counterparty is matched with one of the six weights (w_i) in the following table, based on the ratings assigned by authorized KDKs. If the counterparty does not have a rating issued by an authorized KDK, the counterparty will be assessed in the third credit quality tier.

Credit quality tier	Weight (%)
1	0,7
2	0,8
3	1,0
4	2,0
5	3,0
6	10,0

c) TT_i^{total}: "i" the amount of counterparty credit risk (aggregated by netting groups) arising from the counterparty and calculated in accordance with the methods in Section 2 used in the calculation of the capital requirement for counterparty credit risk, taking into account the effect of collateral.

For a bank that does not use the IMM in Part Two of Section Two, the total counterparty credit risk arising from a counterparty would be discounted using the following factor.

$$\frac{1 - e^{-0,05.M_i}}{0,05.M_i}$$

d) B_i: Nominal size of credit default swaps on a single reference borrower purchased with respect to counterparty "i" only and used to hedge KDA risk.

This nominal amount will be discounted using the following factor.

$$\frac{1 - e^{-0,05.M_i^{koruma}}}{0,05.M_i^{koruma}}$$

e) B_{ind}: The entire nominal size of one or more index credit default swaps purchased for the purpose of hedging KDA risk.

This nominal amount will be discounted using the following factor.

$$\frac{1 - e^{-0,05.M_{ind}}}{0,05.M_{ind}}$$

f) w_{ind}: Weight to be applied to index risk hedges.

Banks will match the indices to one of six weights (w_i)) based on the average interest rate spread of the index.

g) M_i: Effective maturity of transactions with "i" counterparty.

For the bank using the IMM in Part Two of Section Two, M_i is calculated in accordance with paragraph eighteen of Part Two of Section Two according to the type of transaction. However, if the longest remaining maturity for the netting group is longer than 5 years, the upper limit is determined as the longest remaining maturity for the netting group instead of 5 years in the formula specified in the seventeenth paragraph of the Part two of Annex-1 attached to the Communiqué on Calculation of the Amount Subject to Credit Risk with Internal Ratings Based Approaches.

For the bank that does not use the IMM included in Part Two of Section Two, M_i is the weighted average remaining maturity based on the nominal amount specified in the contract for each transaction. The upper limit of 5 years is not applied for this calculated M_i.

h) M_i^{hedge}: The maturity of the hedging instrument with a nominal size of "B_i" (If these are multiple positions, the amounts $M_i^{hedge}.B_i$_i will be added together and used in the formula).

i) M_{ind}: The term of the index risk hedge.

If there is more than one index risk hedge position, M_{ind} is calculated by weighting the maturity of the risk hedge for each index by their nominal amounts.

3. In the case of a credit default swap that is used to hedge counterparty credit risk and is based on an index in which a counterparty is included, the bank may deduct the nominal amount attributable to the counterparty from the nominal amount of the index credit default swap, taking into account the appropriate weight to be applied to that counterparty, and treat the hedge of that counterparty as a hedge of a single reference borrower (B_i) with the same maturity as the maturity of the index.

PART FOUR
Acceptable Hedges

1. (1) In order for risk hedges to be taken into account in the calculation of the capital requirement for KDA risk in accordance with Parts Two and Three of this Section, these risk hedges must be used for the purpose of mitigating and managing KDA risk and must be among the risk hedges listed below.

a) Credit default swaps on a single reference borrower or other equivalent hedging instruments that directly reference the counterparty,

b) Index credit default swaps where the basis between the interest rate spread on any counterparty and the interest rate spread of the index credit default swap risk hedge is reflected in RMD models.

(2) The requirement in paragraph (b) to reflect in RMD models the basis between the interest rate spread on any counterparty and the interest rate spread on the index credit default swap hedge also applies where an indicator for that counterparty's interest rate spread is used.

(3) For all counterparties for which an indicator is used, banks should use an acceptable time series derived from a representative sample of similar counterparties for which interest rate spread information is available.

(4) If the Agency does not find it sufficient to reflect the basis between the interest rate spread of any counterparty and the interest rate spread of the index credit default swap risk hedge in the RMD models, the bank may use only fifty percent of the nominal amount of the index risk hedges in the RMD model.

(5) The risk hedges available under subparagraph (b) will only be available to banks that calculate capital requirements for KDA risk under Part Two of Section Three.

2. Banks will not be able to use other counterparty credit risk hedges when calculating the capital requirement for KDA risk. In particular, credit derivatives and credit-linked bonds linked to a tranche or "n"th event of default will not be taken into account when calculating the capital requirement for KDA risk.

3. Risk hedges taken into account when calculating the capital requirement for KDA risk will not be used to mitigate other risks.

SECTION FIVE
Calculation of total capital for KKR and KDA

1. In this Section, the capital requirement for the IMM is defined as the capital requirement for KKR based on risk-weighted assets, which is calculated by multiplying the risk amount calculated for each counterparty by the relevant credit risk weights and summing them across all counterparties.

a) For banks that are authorized to use IMM and use an internal model for market risk for the calculation of interest rate specific risk capital requirement for bonds, the total capital requirement for KKR is the sum of the following amounts (i+ii):

i) The greater of the following;

1) Capital requirement based on the default amount calculated using current market data for these risk amounts,

2) The capital amount related to the IMM based on the default amount calculated using the stress calibration. For banks using the Internal Ratings Based approach, the risk weights to be used for derivative transactions are calculated by making a full maturity adjustment as a function of the probability of default as specified in Annex 1 of the Communiqué on Calculation of the Amount Subject to Credit Risk with Internal Ratings Based Approaches and assuming the effective maturity (V) as 1. For this purpose, the bank proves to the Agency that the specific

RMD model used by the bank has the capacity to cover the effects of the change in ratings. Otherwise, the maturity adjustment formula $(1 - 1.5 \times b)^{-1} \times (1 + (V - 2.5) \times b)$ should be used.

ii) Capital requirement for KDA calculated using the advanced method.

b) For banks that are authorized to use IMM and are not authorized to calculate specific risk RMD for bonds, the total capital requirement for KKR is the sum of the following amounts (i+ii):

i) The greater of the default amount calculated using the current parameter calibration and the capital requirement calculated based on the default amount calculated using the stressed parameters.

ii) Capital requirement calculated for KDA according to the standard method.

c) For other banks, the total capital requirement for KKR is the sum of the following amounts (i+ii):

i) Capital amount calculated according to the SY-KTKR,

ii) Capital requirement for the calculation of KDA according to the standard method.

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ANNEX-3
PRINCIPLES AND BASIS FOR PRUDENT VALUATION AND TRADING BOOK MANAGEMENT
PART-1   **Principles and Basis for Trading Book Management**

1. A trading book consists of positions in financial instruments and commodities held either with trading intent. A position in financial instruments or commodites in order to hedge other elements of the trading book is included trading book. To be eligible for trading book capital treatment, financial instruments must either be free of any restrictive covenants on their tradability or able to be hedged completely. In addition, positions should be frequently and accurately valued, and the portfolio should be actively managed.

2. Positions held with trading intent are those held intentionally for short-term resale and/or with the intent of benefiting from actual or expected short-term price movements or to lock in arbitrage profits, and may include for example proprietary positions, positions arising from client servicing and market making.

3. Banks must have clearly defined policies and procedures for determining which exposures to include in, and to exclude from, the trading book for purposes of calculating their regulatory capital, to ensure compliance with the criteria for trading book set forth in this Part and taking into account the bank's risk management capabilities and practices. Compliance with these policies and procedures must be fully documented and subject to periodic internal audit.

4. These policies and procedures should, at a minimum, address the general considerations listed below. The list below provides a minimum set of key points that must be addressed by the policies and procedures for overall management of a firm's trading book rather than intended to provide a series of tests that a product or group of related products must pass to be eligible for inclusion in the trading book:

a) The activities the bank considers to be trading and as constituting part of the trading book for regulatory capital purposes;

b) The extent to which an exposure can be marked-to-market daily by reference to an active, liquid two-way market;

c)For exposures that are marked-to-model, the extent to which the bank can:

(i) Identify the material risks of the exposure;

(ii) Hedge the material risks of the exposure and the extent to which hedging instruments would have an active, liquid two-way market;

(iii) Derive reliable estimates for the key assumptions and parameters used in the model.

ç) The extent to which the bank can and is required to generate valuations for the exposure that can be validated externally in a consistent manner;

d) The extent to which legal restrictions or other operational requirements would impede the bank's ability to effect an immediate liquidation of the exposure;

e) The extent to which the bank is required to, and can, actively risk manage the exposure within its trading operations; and

f) The extent to which the bank may transfer risk or exposures between the banking and the trading books and criteria for such transfers.

5. The following will be the basic requirements for positions eligible to receive trading book capital treatment:

a) Clearly documented trading strategy for the position/instrument or portfolios which it would include expected holding horizon at the same time, approved by senior management.

b) Clearly defined policies and procedures for the active management of the position, which must include:

i) positions are managed on a trading desk;

ii) position limits are set and monitored for appropriateness;

iii) dealers have the autonomy to enter into/manage the position within agreed limits and according to the agreed strategy;

iv) positions are marked to market at least daily and when marking to model the parameters must be assessed on a daily basis;

v) positions are reported to senior management as an integral part of the institution's risk management process; and

vi) positions are actively monitored with reference to market information sources (assessment should be made of the market liquidity or the ability to hedge positions or the portfolio risk profiles). This would include assessing the quality and availability of market inputs to the valuation process, level of market turnover, sizes of positions traded in the market, etc.

c) Clearly defined policy and procedures to monitor the positions against the bank's trading strategy including the monitoring of turnover and stale positions in the bank's trading book.

PART-2
Principles and Basis for Prudent Valuation

1 Banks have to consider the guidance on prudent valuation that is stated in this part for all of their positions that are accounted at fair value, whether they are in the trading book or in the banking book.

1.1. This guidance will be implemented for but only in calculation of capital requirement not also practices related to financial reporting in framework of Banking Act, provision 37 and 38.

1.2. A framework for prudent valuation practices consist of the following three items:

a) Established and maintained adequate systems and controls to ensure that the valuation estimates are prudent and reliable.

b) Principles and Basis on Valuation Methodologies

c) Valuation Adjustments

A. Systems and Controls

2. Banks are obliged to establish and maintain adequate systems and controls to ensure that their valuation estimates are prudent and reliable. These systems must be integrated with other risk management systems within the organisation.

3. This systems must cover documented policies and procedures for the process of valuation and independent reporting lines for the department accountable for the valuation process.

3.1. Documented policies and procedures for the process of valuation; includes clearly defined responsibilities of the various areas involved in the determination of the valuation, sources of market information and review of their appropriateness, guidelines for the use of unobservable inputs reflecting the bank's assumptions of what market participants would use in pricing the position, frequency of independent valuation, timing of closing prices, procedures for adjusting valuations, end of the month and ad-hoc verification procedures

3.2. Clear and independent (ie independent of front office) reporting lines for the department accountable for the valuation process. The reporting line should ultimately be to a main board executive director.

B. Principles and Basis on Valuation methodologies
B.1 Marking to market

4. Banks must mark-to-market as much as possible. Marking-to-market is at least the daily valuation of positions at readily available close out prices in orderly transactions that are sourced independently such as readily available close out prices include exchange prices, screen prices, or quotes from several independent reputable brokers.

5. The more prudent side of bid/offer should be used unless the banks is a significant market maker in a particular position type and it can close out at mid-market.

6. Banks should maximise the use of relevant observable inputs and minimise the use of unobservable inputs when estimating fair value using a valuation technique. However, observable inputs or transactions may not be relevant, such as in a forced liquidation or distressed sale, or transactions may not be observable, such as when markets are inactive. In such cases, the observable data should be considered, but may not be determinative.

B.2 Marking to model

7. Only where marking-to-market is not possible for fair value, measured value by mark-to-model is treated as fair value. It is a basis to being prudential in using mark-to-model. Marking-to-model is defined as any valuation which has to be benchmarked, extrapolated or otherwise calculated from a market input. When marking to model, an extra degree of conservatism is appropriate.

8. The following criterias are used in assessing whether a mark-to-model valuation is prudent:

a) Senior management should be aware of the elements of the trading book or of other fair-valued positions which are subject to mark to model and should understand the materiality of the uncertainty this creates in the reporting of the risk/performance of the business.

b) Market inputs should be sourced, to the extent possible, in line with market prices and the appropriateness of the market inputs for the particular position being valued should be reviewed regularly.

c) Where available, generally accepted valuation methodologies for particular products should be used as far as possible.

ç) Where the model is developed by the institution itself, it should be based on appropriate assumptions, which have been assessed and challenged by suitably qualified parties independent of the development process, and the model should be developed or approved independently of the front office and independently tested including that validating the mathematics, the assumptions and the software implementation.

d) There should be formal change control procedures in place and a secure copy of the model should be held and periodically used to check valuations.

e) Risk management should be aware of the weaknesses of the models used and how best to reflect those in the valuation output.

f) The model should be subject to periodic review to determine the accuracy of its performance by using methods suc as assessing continued appropriateness of the assumptions, analysis of P&L versus risk factors, comparison of actual close out values to model outputs. Appropriate valuation adjustments should be made for the uncertainties of the model valuation.

B.3 Independent price verification

9. "Mark to market" and "mark to model" are subjectes to an independent price verification process. The process is cover the regularly verification and accuracy of market prices or model inputs. While daily marking-to-market may be performed by dealers, verification of market prices or model inputs should be performed by a unit independent of the dealing room, at least monthly (or, depending on the nature of the market/trading activity, more frequently). It need not be performed as frequently as daily mark-to-market, since the objective, ie independent, marking of positions should reveal any error or bias in pricing, which should result in the elimination of inaccurate daily marks.

10. Independent price verification entails a higher standard of accuracy in that the market prices or model inputs are used to determine profit and loss figures. whereas daily marks are used for management reporting in between reporting dates. For independent price verification, where pricing sources are more subjective, eg only one available broker quote, prudent measures such as valuation adjustments may be appropriate.

C. Valuation Adjustments
11. As part of their procedures for marking to market, banks must establish and maintain procedures for considering valuation adjustments. Banks must use third-party valuations to consider whether valuation adjustments are necessary for not only mark to market but also mark to model.

12. Banks should use the followings in their valuation adjustments to be formally considered at a minimum: unearned credit spreads, close-out costs, operational risks, early termination, investing and funding costs, and future administrative costs and, where appropriate, model risk.

13. In addition to paragraph 11 and 12, provisions of paragraphs 14 to 16 are also considered in valuatin adjustments for less liquid positions.

14. Banks must establish and maintain procedures related to less liquid positions for for regulatory capital purposes. These procedures should include judging the necessity of and calculating methods for an adjustment to the current valuation of less liquid positions. Valuation adjustment soul be made to consider the need for an adjustment to a position's valuation to reflect current

illiquidity whether the position is marked to market using market prices or observable inputs, third-party valuations or marked to model.

15. Assumptions made about liquidity in the market risk capital charge may not be consistent with the bank's ability to sell or hedge out less liquid positions. In that case, where appropriate, an adjustment must taken to the current valuation of these positions, and review it continued appropriateness on an on-going basis. Reduced liquidity may have arisen from market events. Additionally, close-out prices for concentrated positions and/or stale positions should be considered in establishing the adjustment. Banks must consider all relevant factors when determining the appropriateness of the adjustment for less liquid positions. These factors may include, but are not limited to, the amount of time it would take to hedge out the position/risks within the position, the average volatility of bid/offer spreads, the availability of independent market quotes (number and identity of market makers), the average and volatility of trading volumes (including trading volumes during periods of market stress), market concentrations, the aging of positions, the extent to which valuation relies on marking-to-model, and the impact of other model risks.

16. For complex products including, but not limited to, securitisation exposures and n-th-to-default credit derivatives, banks must explicitly assess the need for valuation adjustments to reflect two forms of model risk: the model risk associated with using a possibly incorrect valuation methodology; and the risk associated with using unobservable and possibly incorrect calibration parameters in the valuation model.

CALCULATION of CAPITAL REQUIREMENT for RISKS TO CENTRAL COUNTERPARTIES

SECTION ONE
Definitions and Scope
PART ONE
Definitions

1. Bankruptcy remote, in relation to client assets, means that effective arrangements exist which ensure that those assets will not be available to the creditors of a CCP or of a clearing member in the event of the insolvency of that CCP or clearing member respectively, or that the assets will not be available to the clearing member to cover losses it incurred following the default of a client or clients other than those that provided those assets,

2. CCP-related transaction means a contract or a transaction listed in paragraph 7 of Section 1 between a client and a clearing member that is directly related to a contract or a transaction listed in that paragraph between that clearing member and a CCP,

3. Clearing member is a member of, or a direct participant in, a CCP that is entitled to enter into a transaction with the CCP,

4. Client is a party to a transaction with a CCP through either a clearing member acting as a financial intermediary, or a clearing member guaranteeing the performance of the client to the CCP,

5. Default funds are clearing members' funded or unfunded contributions towards, or underwriting of, a CCP's mutualised loss sharing arrangements (The description given by a CCP to its mutualised loss sharing arrangements is not determinative of their status as a default fund; rather, the substance of such arrangements will govern their status),

6. Trade exposures include the current and potential future exposure of a clearing member or a client to a CCP arising from transactions listed in paragraph 7 of Section 1, as well as initial margin.

Scope

7.This Annex shall be applied for the following transactions with CCP.

(a) transactions enumerated in the 6th Paragraph of the 5th Article of Regulation on Measurement and Evaluation of Capital Adequacy of Banks (Regulation) and credit derivatives,
(b) repurchase transactions,
(c) securities or commodities lending or borrowing transactions,
(d) margin lending transactions,
(e) long settlement transactions.

8. As long as all the following conditions are met for one of the tranactions, which is listed in Paragraph 7 of Section 1, with CCP this transaction shall be defined as qualifying. In the calculation of capital requirements, one of the methods, which is established in Parapraph 1-17 of Part 1 of Section 2 or in Paragraph 1 of Part 3 of Section 2, shall be applied for qualifying trade esposure. In the calculation of capital requirements, one of the methods, which is established in Parapraph 1-2 of Part 2 of Section 2 or Paragraph 1 of Part 3 of Section 2, shall be applied for qualifying default funds.

a) CCP shall be licensed by the Capital Market Board (CMB) or by an authority abroad equivalent to CMB for clearing services,

b) CCP shall be regarded as completely consistent with CPMI-IOSCO Principles for Financial Market Infrastructures (PFMI) by CMB or an authority abroad equivalent to CMB,

c) The transaction shall not be rejected by a CCP meeting the qualifications listed in subparagraph (a) and (b).

9. In case at least one of the conditions listed in Paragraph 8 of Section 1 is not met for one of the tranactions, which is listed in Paragraph 7 of Section 1, with CCP this transaction shall be defined as nonqualifying. In the calculation of capital requirements, the provisions established in Parapraph 1 of Section 3 shall be applied for nonqualifying trade esposures. In the calculation of capital requirements, the provisions established in Parapraph 2 of Section 3 shall be applied for nonqualifying default funds.

SECTION TWO
Capital Requirements for Qualifying Transactions

PART ONE
Calculation of Capital Requirements for Trade Exposures

A. Clearing Member Exposures to CCPs

1. Where a bank acts as a clearing member of a CCP for its own purposes and where the clearing member offers clearing services to clients, these trade exposures are regarded as clearing member exposures to CCPs.

2. The exposure amount for trade exposures under Paragraph 1 is to be calculated in accordance with Annex 2 of the Regulation (excluding potential CVA risk exposure).

3. A risk weight of 2% shall be applied to the exposure amount calculated in accordance with Paragraph 2.

4. In the case of IMM banks set out in Annex 2 of the Regulation, the 20-day floor for the margin period of risk (MPOR) will not apply, provided that the netting set does not contain illiquid collateral or exotic trades and provided there are no disputed trades.

5. Where settlement is legally enforceable on a net basis in an event of default and regardless of whether the counterparty is insolvent or bankrupt, the total replacement cost of all contracts relevant to the trade exposure determination can be calculated as a net replacement cost if the applicable close-out netting sets meet the requirements set out in Annex 2 of the Regulation and/or Communique on Credit Risk Mitigation Techniques.

B. Clearing Member Exposures to Clients

6. The clearing member will always capitalise its exposure (including potential CVA risk exposure) to clients as bilateral trades, irrespective of whether the clearing member guarantees the trade or acts as

an intermediary between the client and the CCP in accordance with Annex 2 of the Regulation and Parapgraph 7 and 8.

7. To recognise the shorter close-out period for cleared transactions, clearing members can capitalise the exposure to their clients applying a margin period of risk of at least 5 days, if they adopt the IMM.

8. Clearing member bank that use current exposure method or standardised method in accordance with Annex 2 of the Regulation shall multiply its EAD, which is calculated in accordance with Paragraph 6 by the following scalar;

(a) 0,71 for a margin period of risk of five days;
(b) 0,77 for a margin period of risk of six days;
(c) 0,84 for a margin period of risk of seven days;
(d) 0,89 for a margin period of risk of eight days;
(e) 0,95 for a margin period of risk of nine days;
(f) 1 for a margin period of risk of ten days or more.

C. Client Exposures to Clearing Member

9. Where a bank is a client of a clearing member, and enters into a transaction with the clearing member acting as a financial intermediary the client's exposures to the clearing member may receive the treatment in Annex 2 and Communique on Credit Risk Mitigation Techniques if all the conditions in Paragraph 12 are met. A risk weight of 2% shall be applied to this client's exposure amount.The bank shall not calculate any capital requirement for CVA exposures set out in Section 4 of Annex 2 of the Regulation. In the case of IMM banks set out in Annex 2 of the Regulation, the 20-day floor for the margin period of risk (MPOR) will not apply, provided that the netting set does not contain illiquid collateral or exotic trades and provided there are no disputed trades. Where settlement is legally enforceable on a net basis in an event of default and regardless of whether the counterparty is insolvent or bankrupt, the total replacement cost of all contracts relevant to the trade exposure determination can be calculated as a net replacement cost if the applicable close-out netting sets meet the requirements set out in Annex 2 of the Regulation and/or Communique on Credit Risk Mitigation Techniques.

10. Where a client is not protected from losses in the case that the clearing member and another client of the clearing member jointly default or become jointly insolvent, but the condition set out in subparagraph (b) of Paragraph 12 is met, the client's exposures to the clearing member may receive the treatment in Annex 2 and Communique on Credit Risk Mitigation Techniques. A risk weight of 4% shall be applied to this client's exposure amount.The bank shall not calculate any capital requirement for CVA exposures set out in Section 4 of Annex 2 of the Regulation. In the case of IMM banks set out in Annex 2 of the Regulation, the 20-day floor for the margin period of risk (MPOR) will not apply, provided that the netting set does not contain illiquid collateral or exotic trades and provided there are no disputed trades. Where settlement is legally enforceable on a net basis in an event of default and regardless of whether the counterparty is insolvent or bankrupt, the total replacement cost of all contracts relevant to the trade exposure determination can be calculated as a net replacement cost if the applicable close-out netting sets meet the requirements set out in Annex 2 of the Regulation and/or Communique on Credit Risk Mitigation Techniques.

11. Where a client is not protected from losses in the case that the clearing member and another client of the clearing member jointly default or become jointly insolvent and the condition set out in subparagraph (b) of Paragraph 12 isnot met, the client's exposures to the clearing member may receive the treatment in Annex 2 and Communique on Credit Risk Mitigation Techniques (including potential CVA risk exposure).

12. (a) The offsetting transactions are identified by the CCP as client transactions and collateral to support them is held by the CCP and/or the clearing member, as applicable, under arrangements that prevent any losses to the client due to the default or insolvency of the clearing member, the default or insolvency of the clearing member's other clients, and the joint default or insolvency of the clearing member and any of its other clients.The client must be in a position to provide to the Agency, if requested, an independent, written and reasoned legal opinion that concludes that, in the event of legal challenge, the relevant courts and administrative authorities would find that the client would bear no losses on account of the insolvency of an intermediary clearing member or of any other clients of such intermediary under relevant law.

(b) Relevant laws, regulation, rules, contractual, or administrative arrangements provide that the offsetting transactions with the defaulted or insolvent clearing member are highly likely to continue to be indirectly transacted through the CCP, or by the CCP, should the clearing member default or become insolvent. In such circumstances, the client positions and collateral with the CCP will be transferred at market value unless the client requests to close out the position at market value.

D. Client Exposures to CCP

13. Where a client enters into a transaction with the CCP, with a clearing member guaranteeing its performance, the client's exposures to the CCPmay receive the treatment in Annex 2 and Communique on Credit Risk Mitigation Techniques if all the conditions in Paragraph 12 are met. A risk weight of 2% shall be applied to this client's exposure amount.The bank shall not calculate any capital requirement for CVA exposures set out in Section 4 of Annex 2 of the Regulation. In the case of IMM banks set out in Annex 2 of the Regulation, the 20-day floor for the margin period of risk (MPOR) will not apply, provided that the netting set does not contain illiquid collateral or exotic trades and provided there are no disputed trades. Where settlement is legally enforceable on a net basis in an event of default and regardless of whether the counterparty is insolvent or bankrupt, the total replacement cost of all contracts relevant to the trade exposure determination can be calculated as a net replacement cost if the applicable close-out netting sets meet the requirements set out in Annex 2 of the Regulation and/or Communique on Credit Risk Mitigation Techniques.

E. Treatment of Posted Collateral

14. If the collateral is held at the CCP on a client's behalf and is not held on a bankruptcy remote basis, a 2% risk-weight must be applied to the collateral if the conditions established in paragrapgh 12 of this regulation are met;

15. Where a client is not protected from losses in the case that the clearing member and another client of the clearing member jointly default or become jointly insolvent, but all other conditions in the paragraph 12(b) are met a risk weight of 4% will apply to the client's exposure to the clearing member.

16. If conditions of paragraph 12 (a) and (b) are not met and transactions are not considered as trade exposures , any assets or collateral posted must, from the perspective of the bank posting such collateral, receive the risk weights that otherwise applies to such assets or collateral under the capital adequacy framework and annex 1, regardless of the fact that such assets have been posted as collateral. Where assets or collateral of a clearing member or client are posted with a CCP or a clearing member and are not held in a bankruptcy remote manner, the bank posting such assets or collateral must also recognise credit risk based upon the assets or collateral being exposed to risk of loss based on the creditworthiness of the entity holding such assets or collateral.

17. Without considering paragraphs 14 to 16, collateral posted by the clearing member, that is held by a custodian, and is bankruptcy remote from the CCP, is not subject to a capital requirement for counterparty credit risk exposure to such bankruptcy remote custodian.

PART TWO
Default Fund Exposures

1. Clearing member with the CCP must allocate capital for exposures due to default fund contributions. Where a default fund is shared between products or types of business with settlement risk only (which is regulated in Article 20 of Regulation on Measurement and Evaluation of Capital Adequacy of Banks) and products or types of business which give rise to counterparty credit risk which is regulated in 1st section paragraph 7 of this regulation, all of the default fund contributions will receive the risk weight determined according to the formulae and methodology set forth in paragraph 2 of this section, without apportioning to different classes or types of business or products.

However, where the default fund contributions from clearing members are segregated by product types and only accessible for specific product types, the capital requirements for those default fund exposures determined according to the formulae and methodology set forth in paragraph 2 of this section must be calculated for each specific product giving rise to counterparty credit risk. In case the CCP's prefunded own resources are shared among product types, the CCP will have to allocate those funds to each of the calculations, in proportion to the respective product specific EAD.

2. a) CCP's hypothetical capital requirement (KCCP) due to its counterparty credit risk exposures, outlined in paragraph 7 of section 1, to all of its clearing members is calculated with the below formula. KCCP is a hypothetical capital requirement for a CCP, calculated on a consistent basis for the sole purpose of determining the capitalisation of clearing member default fund contributions; it does not represent the actual capital requirements for a CCP which may be determined by a CCP and its supervisor.

$$K_{CCP} = \sum_{\substack{clearing \\ members:i}} max\left(EBRM_i - IM_i - DF_i;0\right) \cdot RW \cdot Capital\ ratio$$

Where
RW is a risk weight of 20%.
Capital ratio means 8%.
$max(EBRM_i - IM_i - DF_i;0)$ is the exposure amount of the CCP to CM 'i', with all values relating to the valuation at the end of the day before the margin called on the final margin call of that day is exchanged, and,

− EBRMi : the exposure value to clearing member 'i' before risk mitigation for transactions mentioned in Section 1 paragraph 7 ; where, for the purposes of this calculation, variation margin that has been exchanged enters into the mark-to-market value of the transactions;

-Imi: being the initial margin collateral posted by the clearing member with the CCP;
- Dfi: The prefunded default fund contribution by the clearing member that will be applied upon such clearing member's default, either along with or immediately following such member's initial margin, to reduce the CCP loss.

Each exposure amount is the counterparty credit risk exposure amount a CCP has to a clearing member, calculated as a bilateral trade exposure for OTC derivatives and exchange traded derivatives either under Current Exposure Method (CEM), or for SFTs, under Communique on Credit Risk Mitigation regulation. Even if more than 5000 trades are within one netting set, the holding periods for transactions in section 1 paragraph 7-b and 7-c will be mimimum 5 days, for transactions in paragraph 7-ç will be minimum 10 days.

For the purposes of calculating KCCP via CEM, *ANet = 0.15*AGross + 0.85*NGR*Agross will be used.*For the purposes of this calculation, the numerator of the NGR is EBRMi without the CEM add-on in case of OTC derivatives, and the denominator is the gross replacement cost. Moreover, for the purposes of this calculation, the NGR must be calculated on a counterparty by counterparty basis. Further, if NGR cannot be calculated;

i) Section 3 sub paragraph 2 of this annex will be applied for calculating capital requirement.
ii) CCP discloses to those clearing members whose NGR couldn't be calculated.
iii) CCP discloses to BRSA, names of clearing member banks whose NGR couldn't be calculated.

The PFE calculation under the CEM for options and swaptions that are transacted through a CCP is adjusted by multiplying the notional amount of the contract by the absolute value of the option's delta, which is calculated according to sub paragraph 11 of Second section of Annex 2 of Regulation on Measurement and Evaluation of Capital Adequacy of Banks.

The netting sets that are applicable to transactions with same clearing members are applied according to Annex 2 of Regulation on Measurement and Evaluation of Capital Adequacy of Banks and Communiqué on Credit Risk Mitigation Techniques (CCRM)

b) Aggregate capital requirement for all clearing members (prior to the concentration and granularity adjustment) should be calculated, assuming a scenario where two average clearing members default and, therefore, their default fund contributions are not available to mutualise losses. This scenario is incorporated in the following risk-sensitive formula:

$$K_{CM}^{*} = \begin{cases} c_2 \cdot \mu \cdot (K_{CCP} - DF^{'}) + c_2 \cdot DF_{CM}^{'} & if & DF^{'} < K_{CCP} & (i) \\ c_2 \cdot (K_{CCP} - DF_{CCP}) + c_1 \cdot (DF^{'} - K_{CCP}) & if & DF_{CCP} < K_{CCP} \leq DF^{'} & (ii) \\ c_1 \cdot DF_{CM}^{'} & if & K_{CCP} \leq DF_{CCP} & (iii) \end{cases}$$

Where

Kcm :   Aggregate capital requirement on default fund contributions from all clearing members prior to the application of the granularity and concentration adjustment.

DFCCP : CCP's prefunded own resources (eg contributed capital, retained earnings, etc), which are required to be used by CCP to cover its losses before clearing members' default fund contributions are used to cover losses

DFCM :   Prefunded default fund contributions from surviving clearing members available to mutualise losses under the assumed scenario. Specifically: '

$$DF'_{CM} = DF_{CM} - 2 \cdot \overline{DF_i} ,$$

where $\overline{DF_i}$ is the average default fund contribution.

DF' = Total prefunded default fund contributions available to mutualise losses under the assumed scenario. Specifically:

$$DF' = DF_{CCP} + DF'_{CM}$$

C_1 : A decreasing capital factor, between 0.16% and 1.6%, applied to the excess prefunded default funds provided by clearing members (DFCM):

$$c_1 = Max\left\{ \frac{1.6\%}{(DF'/K_{CCP})^{0.3}} ; 0.16\% \right\}$$

C_2: 100%; a capital factor applied when a CCP's own resources (DFCCP) are less than such CCP's hypothetical capital requirements (KCCP), and, as a result, the clearing member default funds are expected to assist in the coverage of the CCP's hypothetical capital requirements (KCCP).

μ :   1.2; an exposure scalar of 1.2 is applied in respect of the unfunded part of a CCP's hypothetical capital requirements (KCCP).

Equation (i) applies when a CCP's total prefunded default fund contributions (DF) are less than the CCP's hypothetical capital requirements (KCCP). In such case, the clearing members unfunded default fund commitments are expected to bear such loss and the exposure for a clearing member bank is, due to the potential failure of other members to make additional default fund contributions when called, expected to be greater than the exposure if all default funds had been prefunded. Therefore, an exposure scalar (μ) of 1.2 is applied in respect of the unfunded part of KCCP, to reflect the bank's greater exposure arising from reliance on unfunded default fund contributions. If a part of the CCP's own financial resources available to cover losses is used after all clearing members' default fund contributions (DFCM) are used to cover losses, then this part of the CCP's contribution to losses should be included as part of the total default fund (DF).

Equation (ii) applies when a CCP's own resource contributions to losses (DFCCP) and the clearing members' default contributions (DFCM), are both required to cover the CCP's hypothetical

capital (KCCP), but are, in the aggregate, greater than the CCP's hypothetical capital requirements KCCP. As noted in the above definition, for DFCCP to be included in the total default fund available to mutualise losses (DF'), the CCP's own resources must be used before DFCM. If that is not the case and a part of CCP's own financial resources is used in combination, on a pro rata or formulaic basis, with the clearing members' default fund contributions (DFCM) to cover CCP losses, then this equation needs to be adapted, in consultation with BRSA, such that this part of CCP contribution is treated just like a clearing member's default fund contribution.

Equation (iii) applies when a qualifying CCP's own financial resource contribution to loss (DFCCP) is used first in the waterfall, and is greater than the CCP's hypothetical capital (KCCP), so that the CCP's own financial resources are expected to bear all of the CCP's losses before the clearing members' default fund contributions (DFCM) are called upon to bear losses.

c) Capital requirement for an individual clearing member 'i' (K*CMi*) is calculated by distributing (*K CM**) to individual clearing members in proportion to the individual clearing member's share of the total prefunded default fund contributions and taking into account the CCP granularity (through the factor that accounts for the number of members 'N') and the CCP concentration (through the factor 'β').

$$K_{CM_i} = \left(1 + \beta \cdot \frac{N}{N-2}\right) \cdot \frac{DF_i}{DF_{CM}} \cdot K_{CM}^*,$$

$$\beta = \frac{A_{Net,1} + A_{Net,2}}{\sum_i A_{Net,i}}$$

N = Number of clearing members
DF_i = Prefunded default fund contribution from an individual clearing member 'i'
DF_{CM} = Prefunded default fund contributions from all clearing members (or any other member contributed financial resources that are available to bear mutualised CCP losses).

Alternatively, where the above allocation method fails because of the fact that the CCP does not have prefunded default fund contributions, the following hierarchy of conservative allocation method applies:
1. Allocate K^*_{Cm} based upon each CM's proportionate liability for default fund calls (ie unfunded DF commitment);
2. In the case such an allocation is not determinable; allocate K^*_{Cm} based upon the size of each CM's posted IM.

These allocation approaches would replace (DF_i / DF_{CM}) in the calculation of K_{CMi}.

A_{net1} and A_{net2} above the formulae denote the clearing members with the two largest A_{Net} values .For transactions and contracts set out in point (a) of paragraph 7 of section 1, the A_{Net} is calculated in accordance with the formulae and elements set out in paragraph 2(a) of part 2 of section 2. For transactions and contracts set out in point (b) and (ç) of paragraph 7 of section 1, the A_{Net} is calculated in accordance with principles and proceduresset out in Communiqué on Credit Risk Mitigation Techniques.

$$A_{net} = E * H_e + C * (H_c + H_{fx})$$

where;

E : the current value of the exposure

H_e: haircut appropriate to the exposure

C: the current value of the collateral received

H_c : haircut appropriate to the collateral

H_{fx}: haircut appropriate for currency mismatch between the collateral and exposure

ç) If CCP does not have prefunded default fund contributions, the following hierarchy of conservative allocation method applies for each members:

i) The $\frac{DF_i}{DF_{cm}}$ that stands in formulea set out   in paragraph 2(c) of part 2 of section 2 should be replaced by the "Unfunded default fund contribution from individual clearing member 'i'/ Aggregate unfunded default fund contribution"

ii) If it is not calculated the ratio of "Unfunded default fund contribution from individual clearing member 'i'/ Aggregate unfunded default fund contribution" as indicated in (i), The $\frac{DF_i}{DF_{cm}}$ that stands in formulea set out   in paragraph 2(c) of part 2 of section 2 should be replaced by the "initial margins posted by individual clearing member 'i' / Aggregate of initial margins"

PART THREE
The Alternative Method Of Own Fund Requirement For Trade Risks and Default Fund Contribution

1 Own Fund Requirement for trade risks and default fund contribution arise from contracts and transactions made with CCP indicated in paragraph 7 of section 1 can be calculated the following formulae

[Min{(%2*TEi+%1.250*DFi));(%20*TEi)}]*% 8

Where;

TEi: It is bank i's trade exposure to the CCP, as measured by the bank according to paragraphs 2 to 5 of part 1 of section 2

DFi: It is bank ı's pre-funded contribution to the CCP's default fund.

SECTION THREE
Exposures to Non-qualifying CCPs
The Own Fund Requirements for Exposures to Non-qualifying CCPs

1. Banks must apply the Standardised Approach for credit risk in the main framework, according to the category of the counterparty, to their trade exposure to a non-qualifying CCP which is set out paragraph 7 of section 1.

2. The own fund requirements for **t**he default fund contribution that is either pre- funded or unfunded with the amounts of outstanding that is committed by the contracts to put the default fund contribution is calculated as fallows.

$$S_i = (DF_i + \mu \cdot DF_i^t) \cdot \%1250 \cdot \%8$$

Where,

μ: 1,2

DF_i: It is bank ı's pre-funded contribution to the CCP's default fund.

DF_i^t: It is bank ı's unfunded contribution to the CCP's default fund

DF_i and DF_i^t are calculated in accordance with the principles and procedures stated in paragraphs 1 and 2 of part 2 of section 2.

(Amended OG 6/6/2017-30088)
SECTION FOUR
Notification and Recalculation

1. The CCP should submit the following information to the clearing members and the Agency

a) hypothetical capital requirement (K_{ccp}) that is calculated in accordance with paragraph 2(a) of part 2 of section 2

b)All pre-funded contributions DFcm of all clearing members set out in paragraph 2 (b) of part 2 of section 2 and aggregate capital requirement on default fund contributions from all clearing members prior to the application of the granularity and concentration adjustment or in case that there is not pre-funded contribution to the CCP's default fund, aggregate unfunded default fund contribution set out in paragraph 2(~~d~~ç) of part 2 of section 2, or in case that there is not aggregate unfunded default fund contribution, all aggregate initial margins that is received from all clearing members which is set out in paragraph 2(~~d~~ç) of part 2 of section 2

c) the amount of its pre-funded financial resources that it is required to use to cover its losses before using the default fund contributions of the remaining clearing members (DF $_{CCP}$)which is set out in paragraph 2(b) of part 2 of section 2, used by CCP to cover losses

ç) Average of prefunded default fund contribution by the clearing member (DF$_i$) set out in paragraph 2(b) of part 2 of section 2.

d) The number of clearing members (N) set out in paragraph 2 (b) of part 2 of section 2

e) the CCP concentration (β) set out in paragraph 2 (c) of part 2 of section 2

f) Factor c1 set out in paragraph 2 (b) of part 2 of section 2

2. Information specified in paragraph 1 of this section is recalculated by the CCP at least in every quarter. In case that risks indicated in this annex of "Regulation on Measurement and Assessment of Capital Adequacy of Banks" and the number of transactions arisen from risk or own funds of CCP have significant changes, information specified in paragraph 1 of this section shall be recalculated when these significant changes accur without considering that minimum quarter time.

3. Agency has authority to determine which format of information specified in paragraph 1 of this section would be

4. Agency has authority to increase the frequency of recalculation in accordance with paragraph 2 of this section and of the notification made in accordance with paragraph 1 of this section.

SECTION FIVE
Monitoring Risks

1. A bank which is member of clearing shall assess, through appropriate scenario analysis and stress testing, whether the level of own funds held against exposures to a CCP, including potential future credit exposures, exposures from default fund contributions and, where the banking is acting as a clearing member, exposures resulting from contractual arrangements, adequately relates to the inherent risks of those exposures.

2. Banks shall monitor all their exposures to CCPs and shall lay down procedures for the regular reporting of information on those exposures to board, senior management and appropriate committee.

CALCULATION OF CAPITAL REQUIREMENT FOR RISKS ARISING FROM CENTRAL COUNTERPARTIES

SECTION ONE
Definitions and Scope

Definitions

1. Discharge of the collaterals of the customer or member organization from bankruptcy; It means that, in the event of an insolvency of a CCP or a member organization, effective arrangements are in place to ensure that the assets of the members or their customers held by the CCP are not open to the follow-up or use of the CCP's creditors and the collaterals of the members' customers held by the CCP are not open to the follow-up or use of the member organization's creditors, or that the collaterals of a customer of the members are used only for the risks and losses arising from the transactions in paragraph eight of the Section One in connection with this customer and cannot be used for the losses and risks of other defaulting customers.

2. CCP-related transaction means the contract or transaction referred to in the same paragraph that is directly related to the contract or transaction referred to in the eighth paragraph of the Section One between a customer and a member organization and that is also directly related to the contract or transaction referred to in the eighth paragraph of the Section One entered into by the same member organization with a CCP.

3. Member organization means the organization that participates in the CCP and is responsible for fulfilling its financial obligations arising from this participation.

4. Customer means the organization that has entered into a contract with a member organization that provides for the clearing of its transactions with a CCP.

5. Guarantee fund means the funded or unfunded contributions of member organizations to the CCP's common loss-sharing pool (the effectiveness of common loss-sharing pools, rather than their definition by CCPs, is important in the assessment of common loss-sharing pools as guarantee funds),

6. Business risk means the current and potential risk amount of the member organization's or customer's receivables from the CCP, including the initial margin, with respect to the transactions listed in paragraph eight of the Section One.

7. Multi-level customer structure means a structure in which the bank receives clearing and settlement services from the customer of a member organization or from the customer of another customer (when calculating the risk amount between the customer and the customer's

customer, the customer providing clearing and settlement services is defined as a "high-level customer" and the customer to whom clearing and settlement services are provided is defined as a "low-level customer").

Scope

8. This Annex applies to the following transactions and contracts concluded with the CCP.

a) Contracts and credit derivatives listed in the sixth paragraph of Article 5 of the Regulation,

b) Repo transactions,

c) Securities or commodity lending transactions,

d) Securities transactions on credit,

e) Transactions with a long swap period.

9. If all the following conditions are met for the transactions or contracts concluded with the CCP as listed in the eighth paragraph of the Section One, the transaction or contract shall be referred to as a qualified transaction, and for capital requirement calculations, the procedures and principles set out in Part One of Section Two for business risks and the procedures and principles set out in Part Two of Section Two for guarantee fund amounts shall apply.

a) The CCP is authorized to provide clearing and settlement services by the Capital Markets Board (CMB) or a foreign authority equivalent to the CMB,
 b) The CCP is declared to be fully compliant with the CPMI and IOSCO's "Principles for Financial Market Infrastructures" (PFMI) as a central counterparty by the CMB or a CMB equivalent authority established abroad,
c) The contract or transaction has not been rejected by a CCP having the qualifications in subparagraphs (a) and (b).

10. If at least one of the conditions specified in the ninth paragraph of the Section One is not met for the transactions or contracts concluded with the CCP listed in the eighth paragraph of the Section One , the transaction or contract shall be referred to as a non-qualified transaction and the procedures and principles specified in the first paragraph of the Third Section shall be applied in the calculation of the capital requirement for business risks; and the procedures and principles specified in the second paragraph of the Third Section shall be applied in the calculation of the capital requirement for the guarantee fund amount.

SECTION TWO
Capital Requirement for Qualified Transactions

PART ONE
Calculation of Capital Requirement for Business Risks

A. Member Organization's Risk from the CCP

1. The direct risk of the member organization bank from the CCP and the business risks of the member organization bank from the CCP where the member organization bank acts as

an intermediary between the customer and the CCP and is obliged to cover the customer's losses in case of default and/or insolvency of the CCP are considered within this scope.

2. The risk amount for the business risks within the scope of the first paragraph is calculated in accordance with the procedures and principles set out in Annex-2 of this Regulation and/or the Communiqué on Credit Risk Mitigation Techniques. However, no additional risk amount is calculated for the credit valuation adjustment risk specified in Section Four of the same annex.

3. Two percent risk weight is applied to the risk amount calculated according to the second paragraph.

4. Provided that the netting group for the risk amount calculated in accordance with paragraph 2 does not include illiquid collateral or exotic transactions and the transactions in this netting group are not in dispute and daily re-margining is applied, the minimum holding period for transactions in paragraph eight of Part One may be set at less than 20 business days even if the netting group includes more than 5,000 trades at any time during any quarter. However, the margin period of the risk for the transactions under subparagraph (a) of paragraph eight of the Section One may not be less than 10 business days. In cases where the CCP holds variation margin for the transactions under subparagraph (a) of paragraph eight of Section One and the member organization's margin is not protected against the risk of the CCP's failure to fulfil its obligations, the margin period of the risk is one of the lesser of
 i) 1 year or
 ii) the remaining maturity of the transaction,
but not less than 10 business days.

5. Provided that netting is permitted in accordance with the procedures and principles set out in Annex-2 attached to this Regulation and/or the Communiqué on Credit Risk Mitigation Techniques, the total renewal cost is calculated over the net amount. The risk weight to be applied to the collateral sent by the member organization bank to the CCP shall be determined in accordance with paragraphs 14 to 18 of this Part and not in accordance with paragraph 3 of this Part.

B.   Member Organization's Risk from the Customer

6. If the member organization bank is only an intermediary between the customer and the CCP or if it is not only an intermediary but also guarantees the losses that may arise from this business transaction, the risk weighted amount to be calculated for the business risks of the member organization bank from the customer, including the credit valuation adjustment risk, shall be calculated in accordance with the procedures and principles specified in Annex-2 attached to this Regulation and/or the Communiqué on Credit Risk Mitigation Techniques and paragraphs 4 and 7 of this Regulation.

7. The member organization bank using the internal model method specified in Annex-2 of this Regulation or the standard approach for counterparty credit risk measurement may determine a shorter margin period than the margin period of the risk specified in the same annex. However, the margin period of this risk cannot be less than 5 business days.

8. In the event that the member organization bank receives collateral from the customer for the clearing and settlement transaction and this collateral is transferred to the CCP, the member organization may consider this collateral for the "CCP-member organization part" or

for the "member organization-customer part". Therefore, the initial margin sent by the customer to the member organization bank has the nature of reducing the member organization's risk from the customer. This practice also occurs between "high level customer" and "low level customer" in multi-level customer structures.

In the event that the member organization bank receives collateral from the customer for the clearing and settlement transaction and this collateral is transferred to the CCP, the member organization may consider this collateral for the "CCP-member organization part" or for the "member organization-customer part".

C.   Customer's Risk from the Member Organization

9. In the event that the bank performs transactions with the CCP as a customer of another member organization and all of the conditions specified in paragraph twelve are met, the risk amount for the business risks of the customer bank from the member organization is calculated in accordance with the procedures and principles specified in Annex-2 attached to this Regulation and/or the Communiqué on Credit Risk Mitigation Techniques. Two percent risk weight is applied to the risk amount calculated within this scope. However, capital requirement is not calculated for the credit valuation adjustment risk specified in Section Four of the same annex. Provided that the netting group for the risk amount calculated in accordance with this paragraph does not include illiquid collateral or exotic transactions and the transactions in this netting group are not in dispute and daily re-margining is applied, the minimum holding period for transactions in paragraph eight of Part One may be set at less than 20 business days even if the netting group includes more than 5,000 trades at any time during any quarter. However, the margin period of the risk for the transactions in subparagraph (a) of paragraph eight of Section One may not be set at less than 10 business days. In cases where the CCP holds variation margin for the transactions under subparagraph (a) of paragraph eight of Section One and the member organization's margin is not protected against the risk of the CCP's failure to fulfil its obligations, the margin period of the risk is one of the lesser of
i) 1 year or
ii) the remaining maturity of the transaction,
but not less than 10 business days.

Provided that netting is allowed within the framework of the procedures and principles specified in Annex-2 attached to this Regulation and/or the Communiqué on Credit Risk Mitigation Techniques, the total renewal cost is calculated over the net amount. In multi-level customer structures, if all of the conditions specified in paragraph twelve are met, the risk weighted amount for the business risks of the "low level customer" bank from the "high level customer" is also calculated within the scope of this paragraph.

10. If the customer bank cannot be protected from the losses that may arise in case of default and/or insolvency of the member organization itself and other customers of the member organization, but the condition specified in subparagraph (b) of paragraph twelve is met, the risk amount for the business risks of the customer bank from the member organization is calculated in accordance with the procedures and principles specified in Annex-2 attached to this Regulation and/or the Communiqué on Credit Risk Mitigation Techniques. Four percent risk weight is applied to the risk amount calculated within this scope. However, no additional risk amount is calculated for the credit valuation adjustment risk specified in Section Four of the same annex. Provided that netting is permitted in accordance with the procedures and principles set out in Annex-2 attached to this Regulation and/or the Communiqué on Credit

Risk Mitigation Techniques, the total renewal cost is calculated over the net amount. Provided that the netting group for the risk amount calculated in accordance with this paragraph does not include illiquid collateral or exotic transactions and the transactions in this netting group are not disputed and there is daily re-margining, for transactions under paragraph eight of Part One, the minimum holding period may be set at less than 20 business days even if the netting group contains more than 5,000 trades at any time during any quarter. However, the margin period of the risk for the transactions in subparagraph (a) of paragraph eight of Section One may not be set at less than 10 business days. In cases where the CCP holds variation margin for the transactions under subparagraph (a) of paragraph eight of Section One and the member organization's margin is not protected against the risk of the CCP's failure to fulfil its obligations, the margin period of the risk is one of the lesser of

i) 1 year or
ii) the remaining maturity of the transaction,

but not less than 10 business days.

In multi-level customer structures, if the condition specified in subparagraph (b) of paragraph 12 is met but the condition specified in subparagraph (a) of paragraph 12 is not met, the risk weighted amount for the business risks of the "low level customer" bank from the "high level customer" is also calculated within the scope of this paragraph.

11. In the event that the customer bank cannot be protected from the losses that may arise in case of default and/or insolvency of the member organization itself and other customers of the member organization and the condition specified in subparagraph (b) of paragraph twelve is not met, the risk weighted amount to be calculated by the customer bank for its business risks from the member organization, including the credit valuation adjustment risk, shall be calculated in accordance with the procedures and principles specified in Annex-2 attached to this Regulation and/or the Communiqué on Credit Risk Mitigation Techniques and paragraphs 4 and 7 of this Regulation. In multi-level customer structures, if the condition specified in subparagraphs (a) and (b) of paragraph twelve is not met, the capital amount to be calculated for the business risks of the "low level customer" bank from the "high level customer" shall also be calculated within the scope of this paragraph.

12. a) In the event of default and/or insolvency of its customers, the member organization or other customers of the member organization together or separately ,the arrangements regarding the ability of the CCP to separate and identify the transactions of the member's customers and the collateral related to these transactions as customer transactions and collateral, and the arrangements regarding the collateral of the customers held by the member organization and/or the CCP, shall protect against losses that may arise. In order to determine that such collaterals are protected against losses arising from the default of the member or other customers, the customer bank must demonstrate to the Agency that there are legal, binding and enforceable arrangements in place to ensure that it will not incur losses as a result of these transactions.

b) In the event of default or insolvency of the member organization, there should be legal regulations stipulating that the transaction with the customer bank may be executed indirectly through the CCP or directly by the CCP. In such cases, customer positions and collateral held at the CCP are transferred at market value unless the customer requests to close its position at market value.

D. Customer's Risk from the CCP

13. In the event that the member organization guarantees the customer bank's risk from the CCP and all of the conditions specified in paragraph twelve are met, the risk amount for the customer bank's business risks from the CCP is calculated in accordance with the procedures and principles specified in Annex-2 attached to this Regulation and/or the Communiqué on Credit Risk Mitigation Techniques. Two percent risk weight is applied to the risk amount calculated within this scope. In case the member organization guarantees the customer bank's risk from the CCP, if the condition specified in subparagraph (b) of paragraph twelve is met but the condition specified in subparagraph (a) of paragraph twelve is not met, the risk amount for the customer bank's business risks from the CCP is calculated in accordance with the procedures and principles specified in Annex-2 attached to this Regulation and/or the Communiqué on Credit Risk Mitigation Techniques and then a four percent risk weight is applied to this risk amount. However, in these calculations, no additional risk amount is calculated for the credit valuation adjustment risk specified in Section Four of the same annex. For the risk amount calculated in accordance with this paragraph, the minimum holding period may be set at less than 20 business days even if the netting group contains more than 5,000 trades at any time in any quarter, provided that the netting group does not contain illiquid collateral or exotic transactions and that the transactions in this netting group are not in dispute and the daily re-margining is applied, in relation to the transactions in paragraph eight of Part One. However, the margin period of the risk for the transactions in subparagraph (a) of paragraph eight of Section One may not be set at less than 10 business days. In cases where the CCP holds variation margin for the transactions under subparagraph (a) of paragraph eight of Section One and the member organization's margin is not protected against the risk of the CCP's failure to fulfil its obligations, the margin period of the risk is one of the lesser of
   i) 1 year or
   ii) the remaining maturity of the transaction,
but not less than 10 business days.

Provided that netting is permitted in accordance with the procedures and principles set out in Annex-2 attached to this Regulation and/or the Communiqué on Credit Risk Mitigation Techniques, the total renewal cost is calculated over the net amount. If the conditions specified in subparagraphs (a) and (b) of paragraph 12 are not met, the risk weighted amount to be calculated by the client bank for its business risks from the CCP, including the credit valuation adjustment risk, shall be calculated in accordance with the procedures and principles specified in Annex-2 attached to this Regulation and/or the Communiqué on Credit Risk Mitigation Techniques and paragraphs 4 and 7 of this Regulation.

D. Risk Related to Collaterals Given

14. If all of the conditions specified in paragraph twelve are met and these transactions are deemed to be within the scope of business risk, the risk weighted asset amount for the collaterals given by the member organization bank or the customer bank is two percent of the value of the collateral.

15. In the event that the customer bank cannot be protected against the losses that may arise in the event of default and/or insolvency of the member organization itself and other customers of the member organization, but the condition specified in subparagraph (b) of paragraph twelve is met and these transactions are deemed to be within the scope of business risk, the risk weighted amount for the collaterals given by the member organization bank or the customer bank is four percent of the collateral amount.

16. In cases where the conditions specified in subparagraphs (a) and (b) of paragraph 12 are not met and/or these transactions are not considered as business risks, the risk weighted amount is calculated by multiplying the collateral amount by the risk weight to be determined in accordance with the procedures and principles set forth in paragraphs 4 to 7 of this Regulation.

17. Notwithstanding the provisions of paragraphs fourteen to sixteen and paragraph eighteen, if the assets pledged or deposited as collateral with a CCP or a member organization have been discharged from bankruptcy in the event of insolvency of one or more customers of the CCP and/or the member organization and/or the member organization, the customer or the member organization bank may consider the risk amount for counterparty credit risk arising from these assets as zero or apply the relevant risk weight as zero percent.

18. If the collateral having the characteristics of business risk is held by the CCP, a risk weight of two percent is applied to this collateral. The risk weight to be determined for the CCP according to the procedures and principles set forth in paragraphs 4 and 7 of this Regulation shall be applied to the collateral given for other purposes. Banks using the standardized approach for measuring counterparty credit risk specified in Annex-2 to this Regulation shall include the collateral given that is not discharged from bankruptcy in the "net amount found by subtracting the amount of collateral sent by the counterparty to the bank as initial margin from the amount of collateral sent by the bank to the counterparty as initial margin" (NBTT). Banks using the internal model method specified in Annex-2 to this Regulation shall take the "alpha" multiplier into account when calculating the risk amount of the collaterals given.

PART TWO
Calculation of Capital Requirement for Guarantee Fund Amounts

1. The member organization bank shall calculate the capital requirement for the risks covered by the amount placed in the guarantee fund. If the CCP does not have an individual guarantee fund for the transactions in the products containing only clearing and settlement risk as specified in Article 4 of this Regulation and for the transactions and contracts in paragraph eight of the Section One, the capital requirement shall be calculated collectively as specified in the second paragraph of this Part, not for each product or product group. If there is an individual guarantee fund for the transactions and contracts in the eighth paragraph of the Section One, the capital requirement for each transaction shall be calculated as specified in the second paragraph of this Part. If the capital allocated by the CCP is divided among product groups, the CCP shall take these funds into account in the calculations within the framework of the risk amount associated with each product.

2. a) The hypothetical capital requirement for the CCP's risks from all member institutions and their customers for the contracts and transactions specified in the eighth paragraph of the Section One shall be calculated according to the formula below. In this formula, the hypothetical capital requirement is calculated for the purpose of determining the amount of each member organization's guarantee fund contributions to be capitalized on the CCP's balance sheet. Such value does not represent the actual capital requirement that a CCP is required to set aside.

$$KCCP = \sum RTi * RA * \%8$$

In the above formula, the following terms have the following meanings;

KCCP : The hypothetical capital requirement arising from the CCP's exposure to all member institutions and their clients,

RT_i : The CCP's exposure to member organization i and its customers,

RA : Twenty percent risk weighting (as a minimum)

While calculating RT_i, all collateral held by the CCP, including the funded guarantee fund deposited by member organizations to the CCP, is taken into account. RT_i is calculated according to the amounts at the end of the day before the last margin call date.

The Board may increase the minimum twenty percent risk weight according to the ratings of the member organizations.

In cases where the member organization provides clearing and settlement services and customer transactions and collateral are monitored in separate member organization accounts, the sum of the risk amounts for all customers of this member organization is taken into account when calculating RTi for each member organization. Customer collateral cannot be used to reduce the CCP's risk from the member organization in the calculation of the KCCP. If these separate sub-accounts simultaneously include the transactions referred to in subparagraph (a) of paragraph eight of Section One and the transactions referred to in subparagraphs (b) to (d) of paragraph eight of Section One, when calculating RTi for each member organization, the sum of the risk amounts for all customers of this organization is calculated by adding the risk amount arising from the transactions referred to in subparagraph (a) of paragraph eight of Section One and the risk amount arising from the transactions referred to in subparagraphs (b) to (d) of paragraph eight of Section One.

In case the collateral received is held for the transactions specified in subparagraph (a) of paragraph eight of the Section One and for the transactions specified in subparagraphs (b) to (d) of paragraph eight of the Section One in the member organization account, the funded initial margin provided by the member organization or the customer shall be allocated to the risk amount arising from the transactions specified in subparagraph (a) of paragraph eight of the Section One and the risk amount arising from the transactions specified in subparagraphs (b) to (d) of paragraph eight of the Section One in proportion to a ratio to be determined according to the product-specific risk amount. While determining the product-specific risk amount, the procedures and principles set out in the Communiqué on Credit Risk Mitigation Techniques for the transactions specified in subparagraphs (b) to (d) of paragraph eight of the Section One , and the procedures and principles set out in the Part One of the Section Two titled "Standard Approach for Counterparty Credit Risk Measurement" of Annex-2 attached to this Regulation for the transactions specified in subparagraph (a) of paragraph eight of the Section One are applied (without taking into account the effect of collaterals).

If the funded guarantee fund amount (TFi) of member organization i cannot be disaggregated according to its sub-accounts and customers, the funded guarantee fund amount is allocated according to the ratio of the initial margin sent by member organization i for its sub-account to the total initial margin sent by member organization i.

For the transactions specified in subparagraph (a) of paragraph eight of Section One, RTi is calculated in the same way as the calculation of the CCP's commercial risk from the member organization, within the scope of the procedures and principles set out in Part One of Section Two titled "Standard Approach for Counterparty Credit Risk Measurement" of Annex-2 attached to this Regulation and 10 business days are taken into account as the margin period of the risk. In the event of default of the member organization or the customer, all collateral (including TFi) held by the CCP in the event that the CCP can make a claim, reduces the CCP's risk from the member organization or the customer with the multiplier effect specified in the twelfth paragraph of the Part One of Section Two titled "Standard Approach for Counterparty Credit Risk Measurement" of Annex-2 attached to this Regulation.

RTi for the transactions specified in subparagraphs (b) to (d) of paragraph eight of the Section One is calculated by the following formula. The volatility adjustments to be applied for the transactions specified in subparagraphs (b) to (d) of paragraph eight of the Section One are made by taking into account the rates specified in Table-1 in Annex-1 to the Communiqué on Credit Risk Mitigation Techniques.

$$RT_i = Max\ (RAÖRT_i - BT_i - TF_i\ ; 0)$$

In the above formula, the following terms have the following meanings;

$RAÖRT_i$: The CCP's risk from the member organization calculated without taking into account the risk mitigating effect of the collaterals sent by member organization i to the CCP within the framework of the procedures and principles set out in the Communiqué on Credit Risk Mitigation Techniques,

BT_i : Initial margin given by member organization i to the CCP,

TF_i : The amount of the funded guarantee fund given to the CCP by member organization i, which will be used together with or immediately after the initial margin of the member organization in order to cover the possible losses of the CCP in case of default of the member organizations

In the calculations to be made under this subparagraph, even if there are more than 5,000 trades within a netting group, provided that daily re-margining is applied, the minimum holding period shall be applied as 5 business days instead of 20 business days for the transactions referred to in subparagraphs (b) and (c) of paragraph eight of Section One, and as 10 business days instead of 20 business days for the transactions referred to in subparagraphs (a) and (d) of paragraph eight.

Netting for transactions with the same counterparty member organization is made in accordance with Annex-2 attached to this Regulation and/or the Communiqué on Credit Risk Mitigation Techniques.

b) The capital requirement of each member organization bank is calculated according to the following formula.

$$S_i = max\ \{KCCP * (TF_i\ /\ (TF_{MKT} + TF_{ÜK}))\ ;\ TF_i * \%8 * \%2\}$$

In the above formula, the following terms have the following meanings:

S_i: The capital requirement of member organization i for the guarantee fund,

$TF_{ÜK}$: The total funded amount put into the guarantee fund by all member organizations,

TF_{MKT}: The capital allocated by the CCP (Tier 1 capital, retained earnings, etc.) to be used together with or after the use of the resources placed in the guarantee fund by member institutions to cover possible losses,

TF_i: Amount of funded guarantee fund given by member organization i to the CCP

SECTION THREE
Non-Qualified Transactions

Calculation of capital requirement for non-qualifying transactions

1. The capital requirement arising from trade risks from the CCP for transactions within the scope of the eighth paragraph of the First Section that are not qualified is calculated in accordance with the provisions of the Regulation on the Standard Approach to credit risk.

2. The capital requirement for funded and unfunded guarantee fund amounts related to non-qualified transactions within the scope of paragraph eight of Section One is calculated according to the following formula:

$$S_i = (TF_i + \mu \cdot TF_i^t) \cdot \%1250 \cdot \%8$$

In the above formula, the following terms have the following meanings

μ: risk multiplier with a value of 1.2,

TF_i: Amount of funded guarantee fund given by member organization i to the CCP,

TF_i^t: The unfunded amount committed to be put into the guarantee fund by the member organization

SECTION FOUR
Notification and Recalculation

1. The CCP reports the following information quarterly to the member organization banks and the Agency.

a) Hypothetical capital requirement (KCCP) calculated in accordance with subparagraph (a) of the second paragraph of the Part Two of Section Two,

b) Total funded guarantee fund amount ($TF_{ÜK}$) of all member organizations referred to in subparagraph (b) of paragraph two of Part Two of Section Two,

c) The capital allocated by the CCP to be used after or together with the use of the resources placed in the guarantee fund by the member institutions to cover possible losses as

referred to in subparagraph (b) of the second paragraph of the second paragraph of Part Two of Section Two (TF$_{MKT}$).

2. The information referred to in the first paragraph of this Section shall be recalculated by the CCP at least every three months. If there is a significant change in the risks within the scope of this Annex of the Regulation and in the number of transactions that give rise to these risks and/or in the amount of capital allocated by the CCP, the information in the first paragraph of this Section shall be recalculated immediately as soon as these changes take place, without taking into account the minimum period of three months, and shall be notified to the Agency and the member organization banks.

3. The Agency is authorized to determine the format of the information specified in the first paragraph of this Section.

4. The Agency is authorized to increase the frequency of the notifications to be made under the first paragraph of this Section and the recalculation to be made under the second paragraph of this Section.

SECTION FIVE
Monitoring of Risks

1. As a member organization, the bank assesses whether the capital requirement for transactions with the CCP reflects the risks arising from those transactions by applying appropriate scenario analyses and stress tests. This assessment includes potential and contingent risks arising from future withdrawals from the guarantee fund and/or secondary commitments to underwrite or modify the clearing transactions of the bank's customer in the event of the insolvency of another member organization.

2. The Bank monitors all risks associated with the CCP, including the risks arising from the transactions made through the CCP and the obligations assumed due to being a member of the CCP, and regularly submits them to senior management and the relevant committee of the board of directors.

SECTION SIX
Cap on Capital Requirement for Qualified Transactions

1. The sum of the capital requirement for business risks for qualified transactions calculated in accordance with the principles and procedures set out in Part One of Section Two and the capital requirement for guarantee fund amounts for qualified transactions calculated in accordance with the principles and procedures set out in Part Two of Section Two, assuming that the same transactions are non-qualified transactions, if it is more than the total capital requirement for non-qualified transactions calculated in accordance with the procedures and principles set out in Section 3, the total capital requirement to be calculated by the bank for qualified transactions shall be at least as much as the capital requirement for non-qualified transactions calculated in accordance with the aforementioned assumption and the procedures and principles set out in Section 3.

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(1) This amendment enters into force on 1/7/2022.