

Credit Risk—The Standardized Approach

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Introduction

50. The Banking Supervision Department permits banking corporations a choice between two broad methodologies for calculating their capital requirements for credit risk. One alternative, the Standardized Approach, will be to measure credit risk in a standardized manner, supported by external credit assessments.¹⁴
51. The other alternative, the Internal Ratings-based Approach, which is subject to the explicit approval of the Supervisor, would allow banking corporations to use their internal rating systems for credit risk. This approach is set out in Proper Conduct of Banking Business Directive 204.
52. The Directive sets out revisions to the 1988 Basel Accord for risk weighting banking book exposures. Exposures that are not explicitly addressed in this directive will retain the current treatment; however, exposures related to securitization are dealt with in Proper Conduct of Banking Business Directive 205. Furthermore, the credit equivalent amount of Securities Financing Transactions (SFT)¹⁵ and OTC derivatives that expose a bank to counterparty credit risk¹⁶ is to be calculated under the rules set forth in Appendix C.¹⁷ In determining the risk weights in the standardized approach, banking corporations may use assessments by external credit assessment institutions recognized as eligible for capital purposes by the

¹⁴ The notations follow the methodology used by one institution, Standard & Poor's. The use of Standard & Poor's credit ratings is an example only; those of some other external credit assessment institutions could equally well be used.

¹⁵ Securities Financing Transactions (SFT) are transactions such as repurchase agreements, reverse repurchase agreements, security lending and borrowing, and margin lending transactions, where the value of the transactions depends on the market valuations and the transactions are often subject to margin agreements.

¹⁶ The counterparty credit risk is defined as the risk that the counterparty to a transaction could default before the final settlement of the transaction's cash flows. An economic loss would occur if the transactions or portfolio of transactions with the counterparty has a positive economic value at the time of default. Unlike a firm's exposure to credit risk through a loan, where the exposure to credit risk is unilateral and only the lending bank faces the risk of loss, the counterparty credit risk creates a bilateral risk of loss: the market value of the transaction can be positive or negative to either counterparty to the transaction. The market value is uncertain and can vary over time with the movement of underlying market factors.

¹⁷ Appendix C is based on the treatment of counterparty credit risk set out in Part 1 of the Basel Committee's paper *The Application of Basel II to Trading Activities and the Treatment of Double Default Effects* (July 2005).

Supervisor of Banks in accordance with the criteria defined in Paragraphs 90 and 91. Exposures should be risk-weighted net of specific provisions.¹⁸

A. Individual claims

1. Claims on sovereigns

53. Claims on sovereigns and their central banks and the national monetary authority will be risk-weighted as follows:

Credit Assessment	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Unrated
Risk Weight	0%	20%	50%	100%	150%	100%

54. A risk weight of 0% may be applied to banking corporations' exposures to the Government of Israel and to the Bank of Israel that are denominated in NIS and which were financed¹⁹ in NIS.²⁰ In this context, the following types of exposure will be considered to be exposure denominated in Israeli currency and can be designated a risk weight of 0%:

- Exposures indexed to foreign currency.
- Exposures denominated in foreign currency, which the State has the option of settling in NIS if it has difficulty obtaining foreign currency on the condition that the rate of conversion to NIS will be the current exchange rate (which allows the banking corporation to convert the shekel amount it has received into foreign currency in the amount that the State needed to redeem).

When a supervisory authority in another country has determined a lower risk weight than that appearing in the table above for the exposure of the sovereign in that country, that risk weight can be applied in the weighting of exposures in local currency, for this sovereign (or the central bank or the national monetary authority) which were financed in this currency, on the condition that the country is an OECD member and has a A- rating or better.

¹⁸ Deleted.

¹⁹ This is to say that the bank would also have corresponding liabilities denominated in the domestic currency.

²⁰ This lower risk weight may be extended to the risk weighting of collateral and guarantees. See Sections D.3 and D.5 below.

55. For the purpose of risk weighting claims on sovereigns that are not rated by a qualified external credit rating agency, use can be made of the country risk scores assigned by Export Credit Agencies (ECAs). To qualify, an ECA must publish its risk scores and subscribe to the OECD agreed methodology. In this case a bank will use the risk scores published by individual ECAs participating in the “Arrangement on Officially Supported Export Credits”.²¹ The OECD agreed methodology establishes eight risk score categories associated with minimum export insurance premiums. These ECA risk scores will correspond to risk weight categories as detailed below.

ECA risk scores	0-1	2	3	4-6	7
Risk weight	0%	20%	50%	100%	150%

56. Claims on the Bank for International Settlements, the International Monetary Fund, the European Central Bank, the European Stability Mechanism (ESM), the European Financial Stability Facility (EFSF), and the European Community may receive a 0% risk weight.

2. *Claims on non-central government public sector entities (PSEs)*

57. Public Sector Entities (PSE) will include the following entities:
- (a) Regional governments and local authorities;
 - (b) Entities under full government ownership which do not compete with the private sector;
 - (c) Public Sector Entities as determined by the local supervisory authority in OECD countries that are rated A- or higher;
 - (d) “Ashra”—the Israel Foreign Trade Risks Insurance Corporation, Ltd.
 - (e) Additional entities to be determined by the Supervisor of Banks

Claims on domestic PSEs will be risk-weighted according to the debts of the banks, as prescribed in Paragraphs 60 to 64²², without the use of preferential treatment for short-term claims. Nonetheless, if the debt of a local PSE includes any debt to a banking corporation that is classified by the banking corporation as a “problematic commercial credit risk” as defined in the Reporting to the Public Directive regarding the “Measurement and Disclosure

²¹ The consensus country risk classification is available on the OECD’s website (<http://www.oecd.org>)

²² Deleted.

of Impaired Debts, Credit Risk and Allowance for Credit Losses”, it will receive a risk weight according to claims on corporates as prescribed in Paragraphs 66 to 67, or past due loans as prescribed in Paragraph 75, as relevant.

The risk weight to be applied to exposures to “Ashra – the Israel Foreign Trade Risks Insurance Corporation, Ltd.” will be identical to that applied to exposure to the Government of Israel.

58. A risk weight can be attributed to the debts of PSEs in other countries in accordance with the directives of the supervisory authority in that country, on the condition that the country is a member of the OECD and has a rating of A- or better.²³ The risk weight to be applied to a PSE in a foreign country will not be lower than that derived from the external credit rating of that country.

3. *Claims on multilateral development banks (MDBs)*

59. The risk weights applied to claims on MDBs will generally be based on external credit assessments, in accordance with the following mapping:

Credit rating	AAA to AA-	A+ to BBB-	BB+ to B-	Less than B-	Unrated
Risk weight	20%	50%	100%	150%	50%

A 0% risk weight will be applied to claims on highly rated MDBs that fulfill the criteria provided below.²⁴ The eligibility criteria for MDBs risk weighted at 0% are as follows:

- Very high quality long-term issuer ratings, i.e. a majority of an MDB’s external assessments must be AAA;

²³ Deleted.

²⁴ MDBs currently eligible for a 0% risk weight are: the World Bank Group comprised of the International Bank for Reconstruction and Development (IBRD) and the International Finance Corporation (IFC), the Asian Development Bank (ADB), the African Development Bank (AfDB), the European Bank for Reconstruction and Development (EBRD), the Inter-American Development Bank (IADB), the European Investment Bank (EIB), the European Investment Fund (EIF), the Nordic Investment Bank (NIB), the Caribbean Development Bank (CDB), the Council of Europe Development Bank (CEDB) and the Multilateral Investment Guarantee Agency (MIGA).

- Shareholder structure is comprised of a significant proportion of sovereigns with long-term issuer credit assessments of AA- or better, or the majority of the MDB's fund-raising sources are in the form of paid-in equity/capital and there is little or no leverage;
- Strong shareholder support demonstrated by the amount of paid-in capital contributed by the shareholders; the amount of further capital the MDBs have the right to call, if required, to repay their liabilities; and continued capital contributions and new pledges from sovereign shareholders;
- Adequate level of capital and liquidity (a case-by-case approach is necessary in order to assess whether each MDB's capital and liquidity are adequate); and,
- Strict statutory lending requirements and conservative financial policies, which would include among other conditions a structured approval process, internal creditworthiness and risk concentration limits (per country, sector, and individual exposure and credit category), large exposures approval by the board or a committee of the board, fixed repayment schedules, effective monitoring of use of proceeds, status review process, and rigorous assessment of risk and provisioning to loan loss reserve.

4. *Claims on banks*

60. "Bank"—a banking corporation as defined in the Banking (Licensing) Law, 5741-1981, and a banking institution that is incorporated abroad and defined as a bank by the supervisory authority in the country in which it is incorporated.

The risk weight of exposure due to a bond issued by an auxiliary corporation (an "issuing company") will be detailed in Paragraph 99 below.

"Credit card company"—a company that is an acquirer as defined in Section 36i of the Banking (Licensing) Law, 5741-1981, which issues payment cards, as these terms are understood in the Debit Cards Law, 5746-1986.

61. All banks and credit card companies incorporated in a given country will be assigned a risk weight one category less favorable than that assigned to claims on the sovereign of that country. However, for claims on banks in countries with sovereigns rated BB+ to B- and on banks in unrated countries the risk weight will be capped at 100%.

62. Deleted.²⁵

63. The aforementioned is summarized in the following table:²⁶

Credit Assessment of Sovereign	AAA to AA-	A+ to A-	BBB+ to B-	Below B-	Unrated
Risk weight	20%	50%	100%	150%	50%

64. A risk weight of 20% can be applied to the debts of Israeli banks and credit card companies whose original term to maturity is three months or less and which are denominated and funded in NIS.

5. *Claims on securities firms*

65. Claims on securities firms may be treated as claims on banks provided these firms are subject to supervisory and regulatory arrangements comparable to those in the Proper Conduct of Banking Business Directives regarding Capital Measurement and Adequacy (including, in particular, risk-based capital requirements).²⁷ Otherwise such claims will follow the rules for claims on corporates, as described in Paragraphs 66 to 68.

Securities companies that have incorporated abroad can be dealt with in accordance with the directives of the supervisory authority in that country, on condition that the country is an OECD member and has a rating of A- or higher.

6. *Claims on corporates*

66. The table provided below illustrates the risk weighting of rated corporate claims, including claims on insurance companies. The standard risk weight for unrated claims on corporates will be 100%. No claim on an unrated corporate may be given a risk weight preferential to that assigned to its sovereign of incorporation.

²⁵ Deleted.

²⁶ Deleted.

²⁷ That is, capital requirements that are comparable to those applied to banking corporations in this directive. Implicit in the meaning of the word “comparable”, is that the securities firm (but not necessarily its parent company) is subject to consolidated regulation and supervision with respect to any downstream affiliates.

Credit assessment	AAA to AA-	A+ to A-	BBB+ to BB-	Below BB-	Unrated
Risk weight	20%	50%	100%	150%	100%

67. As part of the assessment of capital adequacy (Proper Conduct of Banking Business Directive 211), the Supervisor will consider whether the credit quality of corporate claims held by individual banking corporations should warrant a standard risk weight higher than 100%.

68. Deleted.

7. *Claims included in the regulatory retail portfolios*

69. Claims that qualify under the criteria listed in Paragraph 70 may be considered as retail claims for regulatory capital purposes and included in a regulatory retail portfolio. Exposures included in such a portfolio may be risk-weighted at 75%, except as provided in Paragraph 75 for past due loans.

70. To be included in the regulatory retail portfolio, claims must meet the definition of retail exposure according to Paragraphs 231 and 232 of Proper Conduct of Banking Business Directive 204 as well as the following four criteria:

- Orientation criterion - The exposure is to an individual person or persons or to a small business;
- Product criterion - The exposure takes the form of any of the following: revolving credits and lines of credit (including credit cards and overdrafts), personal term loans and leases (e.g. installment loans, auto loans and leases, student and educational loans, personal finance), and small business facilities and commitments. Securities (such as bonds or shares), whether listed or not, and activity of customers in derivative financial instruments (apart from embedded derivatives which, according to generally accepted accounting principles, were separated from the host contract) are specifically excluded from this category. Mortgage loans are excluded to the extent that they qualify for treatment as claims secured by residential property (see Paragraph 72).

- Granularity criterion - The aggregate exposure to one counterpart²⁸ will not exceed 0.2% of the overall regulatory retail portfolio.
- Low value of individual exposures - The maximum aggregated retail exposure to one counterpart cannot exceed an absolute threshold of NIS 5 million.

A retail exposures that does not meet the above conditions, will be treated for the purposes of capital allocation as a corporate exposure. Retail exposure that has been included in the regulatory retail portfolio and no longer fulfils the above conditions cannot return to being included in the regulatory retail portfolio unless there have been material changes that justify this.

71. Deleted.

8. *Claims secured by residential property*

72. Lending fully secured by mortgages on residential property (as defined in Paragraph 231 of Proper Conduct of Banking Business Directive 204), that is or will be occupied by the borrower, or that is rented, will be risk weighted as follows:

<u>LTV ratio</u>	<u>Risk weight</u>
Up to 45 percent	35 percent
Over 45 percent to 60 percent	50 percent
Over 60 percent	60 percent*

*Loans secured by residential property extended from March 15, 2018.

These reduced risk weights are limited to residential loans that fulfill the following:

- The loan is intended for the purchase or leasing of an apartment that is not for business purposes (including its construction, extension or renovation, or the financing of early repayment of such a loan in full or in part, on condition that not more than 30 days

²⁸ Aggregated exposure means gross amount (i.e. not taking any credit risk mitigation into account) of all forms of debt exposures (balance sheet and non-balance sheet after conversion to credit-value equivalent) that individually satisfy the three other criteria. In addition, “one counterpart” is a “borrower” as defined in Proper Conduct of Banking Business Directive 313: Limitations on the Indebtedness of a Borrower and a Group of Borrowers” and someone who controls said borrower and someone who is controlled by them (for example, in the case of a small business that is affiliated to another small business, the limit would apply to the banking corporation’s aggregate exposure on both businesses).

have passed since the date of early repayment and the amount of the loan does not exceed the amount of the loan that was repaid including expenses; for this purpose, “expenses” are defined as any charge related directly to the loan, such as early fees, stamps, fee for opening a file, etc.).

- (b) The ratio of the amount of the loan (for which the banking corporation is responsible) and the value of the encumbered asset (as per the banking corporation’s share of the lien) (LTV) is as noted above on the day the loan was extended. The ratio will not be affected by the existence of mortgage insurance.

If the asset is not purchased from a construction company, its value will be determined by an appraiser, as prescribed in Proper Conduct of Banking Business Directive no. 451 “Procedures for Extending Housing Loans”.

- (c) The amount of the loan does not exceed NIS 5 million.

Mortgage loans that are not eligible for a weight of 35%, 50%, or 60% will be weighted according to the risk weight that applies to a regulatory retail portfolio, subject to the fulfillment of that portfolio’s eligibility conditions.

- 72a. For the purposes of Paragraph 72, the LTV of a loan guaranteed by a residential property that was provided prior to January 1, 2003 will be calculated at less than 75 percent. The LTV of a loan guaranteed by a residential property that was provided from January 1, 2003 until the date on which these directives go into effect, will be calculated according to the value of the loan and the value of the property on the day the loan was extended, even if the property was not valued by an appraiser.

73. Deleted.

9. *Claims secured by commercial real estate*

74. In view of the experience in numerous countries that commercial property lending has been a recurring cause of troubled assets in the banking industry over the past few decades, the risk weighting of mortgages on commercial real estate will be 100%.²⁹

For this purpose: “Claims guaranteed by commercial real estate” are loans for transactions involving “revenue-producing real estate” as described in Paragraph 226 of Proper Conduct

²⁹ Deleted.

of Banking Business Directive 204, and as long as the claim is guaranteed by commercial real estate.

10. Past due loans

75. The unsecured portion of any loan (other than a qualifying residential mortgage loan which is eligible for a weighting of 35% or 50%) that is past due for more than 90 days, net of specific provisions (including partial write-offs), will be risk-weighted as follows.³⁰ For this purpose, “past due” is according to its definition in the Public Reporting Directives.

- 150% risk weight when specific provisions (including “accounting write-offs”) are less than 20% of the outstanding amount of the loan (before the aforementioned specific provisions);
- 100% risk weight when specific provisions (including “accounting write-offs”) are no less than 20% of the outstanding amount of the loan (before the aforementioned specific provisions);

76. For the purpose of defining the secured portion of the past due loan, eligible collateral and guarantees will be the same as for credit risk mitigation purposes (see Section D below).³¹

77. Deleted.

78. In the case of qualifying residential mortgage loans, weighted 35% or 50%, when such loans are past due for more than 90 days, they will be risk weighted at 100% net of specific provisions.

11. Higher-risk categories

79. The following claims will be risk weighted at 150% or higher:

- Claims on sovereigns, PSEs, banks, credit card companies, and securities firms rated below B-.
- Claims on corporates rated below BB-.

³⁰ Deleted.

³¹ Deleted.

- Past due loans as set out in Paragraph 75.
- Securitization tranches that are rated between BB+ and BB- will be risk weighted at 350% as set out in Paragraph 567 of Proper Conduct of Banking Business Directive 205.

80. A risk weight of 150% will be applied to assets such as venture capital and private equity investments.

For this purpose:

“Venture capital investment”- an investment in a designated corporation that fulfilled one (or more) of the following conditions:

- a. Investments in companies or ventures that are in the development stage;
- b. The investment is through a buyout or a buy-in;
- c. The investment was made as a way of financing the company or the venture and is accompanied by the right to information or management or representation on the Board of Directors;
- d. The investment was made in order to conduct or facilitate a transaction included in sub-Paragraphs a to c.

“Private equity investment”- Investment in companies whose maximum life is 15 years and whose shares are not traded on a recognized stock exchange and which were created to be active in investment in shares, assets and ownership rights in financial and non-financial companies with the goal of selling them in the future.

The investment can include, among other things, investments in venture capital, investments in established companies and leveraged buyouts.

12. Other assets

81. The treatment of securitization exposures is presented separately in Proper Conduct of Banking Business Directive 205. The standard risk weight for all other assets will be 100%.³² Investments in equity or regulatory capital instruments issued by financial corporations and not deducted from capital, where the banking corporation’s holdings do not exceed 10% of the issued common share capital of the financial corporation, will be risk-weighted at 100%.

³² Deleted.

81a. A risk weight of 0% will be applied to cash in hand, gold ingots stored in a safe and surplus advances paid to the Income Tax Authority. A risk weight of 20% will be applied to cash items in the process of collection.

81b. A risk weight of 250% will apply to items as stated in Paragraph 13 “Threshold deductions” of Proper Conduct of Banking Business Directive 202 (Measurement and Capital Adequacy – Regulatory Capital) that were not deducted from capital.

81c. A risk weight of 1250% will be applied to items as stated in Paragraph 14 of Proper Conduct of Banking Business Directive 202 (Measurement and Capital Adequacy – Regulatory Capital).

13. Off-balance sheet items

82. Off-balance-sheet items under the standardized approach will be converted into credit exposure equivalents through the use of credit conversion factors (CCF). The conversion to credit of off-balance-sheet items will be carried out after Credit Risk Mitigation (CRM; according to Chapter D). Counterparty risk weightings for OTC derivative transactions will not be subject to any specific ceiling.

83. 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 cancelable at any time by the banking corporation without prior notice, or that effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness, will receive a 0% CCF.³³

At this stage, the legal and business conditions in Israel do not justify the application of a CCF of 0%. Nonetheless,

- (a) Since there is a different legal framework that characterizes credit card activity, a CCF of 10% can be applied to unused credit lines on the credit cards of retail borrowers, as long as there is effective monitoring of the repayment ability of the card holder and adjustments are made to the size of the credit line when called for.
- (b) A commitment to provide credit that was given to a customer as part of "approval in principal and maintaining the interest rate" of Proper Conduct of Banking Business Directive 451 "Procedures for Extending Housing Loans", will receive a CCF of 0%.

83(i). Direct credit substitutes, e.g. 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%.

83(ii). Sale and repurchase agreements and asset sales with recourse,³⁴ where the credit risk remains with the banking corporation will receive a CCF of 100%.

³³ Deleted.

³⁴ These items are to be weighted according to the type of asset and not according to the type of counterparty with whom the transaction has been entered into.

- 83(iii). Liabilities for which a demand for payment has been received (i.e. liabilities at the expense of the customers according to which the banking corporation commits to payment, within a certain period after receiving a demand for payment from the beneficiary, starting from the day on which the demand for payment was received) will receive a CCF of 100%.
84. 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). See Section D.3 for the calculation of risk-weighted assets where the credit converted exposure is secured by eligible collateral.
- 84(i). Forward asset purchases, forward deposits and partly-paid shares and securities³⁵, which represent commitments with certain drawdown, will receive a CCF of 100%.
- 84(ii). Certain transactions related to contingent items (e.g. performance bonds, bid bonds, warranties and standby letters of credit related to particular transactions) will receive a CCF of 50%.
- 84(iii). Note issuance facilities (NIFs) and revolving underwriting facilities (RUFs) will receive a CCF of 50%.
- 84(iv). A liability to a central counterparty (as defined in Appendix C) will receive a CCF of 100%.
- 84(v). Guarantees to ensure the investments of home buyers of the following types will receive a CCF of 10% if the home has been handed over to the mortgagor and 30% if this has not yet been done:
- (a) The guarantee is provided to a home buyer under the Sale (Homes) (Guaranteeing the Investment of Home Buyers) Law, 5735–1974.
 - (b) The guarantee is provided to a property rights holder in a vacate-and-build project, “Tama 38” project (type 2), or a combination transaction, under the following conditions:

³⁵ These items are to be weighted according to the type of asset and not according to the type of counterparty with whom the transaction has been entered into.

- (1) The basis for realizing the guarantee is identical to the basis for the forfeiture of the guarantee to the home buyer of the type noted in Subsection (a).
 - (2) The guarantee formula is identical to the formula of the guarantee to a home buyer of the type noted in Subsection (a), except with regard to remuneration that is not financial remuneration but the transfer of the property rights, in whole or in part, by the homeowner to the entrepreneur.
 - (3) The guarantee ensures the construction of a home and its transfer to the property owner, free and clear of any lien, foreclosure, or third-party right, except if these rights were registered for the benefit of a third party at the request of the property owner or due to a debt of the property owner to a third party.
85. 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.
86. Where there is an undertaking to provide a commitment on an off-balance sheet item, banking corporations are to apply the lower of the two applicable CCFs.
- 86a. An off-balance-sheet item that is not included in Paragraphs 82 to 85 above will receive a CCF of 100%.
87. The credit equivalent amount of OTC derivatives and SFTs that expose a banking corporation to counterparty credit risk is to be calculated under the rules set forth in Appendix C.
88. Banking corporations must closely monitor securities, commodities, and foreign exchange transactions that have failed, starting the first day they fail. A capital charge must be applied to failed transactions and must be calculated in accordance with Appendix B.
89. With regard to unsettled securities, commodities, and foreign exchange transactions, banking corporations are exposed to counterparty credit risk from trade date, irrespective of the booking or the accounting of the transaction. Therefore, banking corporations are encouraged to develop, implement and improve systems for tracking and monitoring the credit risk exposure arising from unsettled transactions as appropriate for producing management information that facilitates action on a timely basis. Furthermore, when such transactions are

not processed through a delivery-versus-payment (DvP) or payment-versus-payment (PvP) mechanism, banking corporations must calculate a capital charge as set forth in Appendix B.

B. External credit assessment

1. The recognition process

90. The Supervisor is responsible for determining on a continuing basis whether an external credit assessment institution (ECAI) meets the criteria listed in the paragraph below. The Supervisor should refer to the IOSCO Code of Conduct Fundamentals for Credit Rating Agencies when determining ECAI eligibility. The assessments of ECAs may be recognized on a limited basis, e.g. by type of claims or by jurisdiction. The supervisory process for recognizing ECAs should be made public to avoid unnecessary barriers to entry.

The following ratings agencies are recognized as eligible ECAs:

- Standard & Poor's Ratings Services (hereinafter: S&P)
- Moody's Investors Service (hereinafter: Moody's)
- Fitch Ratings (hereinafter: Fitch)
- AM Best Europe-Rating Services (hereinafter: AM Best)

2. Eligibility criteria

91. An ECAI must satisfy each of the following six criteria.
- **Objectivity:** The methodology for assigning credit assessments must be rigorous, systematic, and subject to some form of validation based on historical experience. Moreover, assessments must be subject to ongoing review and responsive to changes in financial condition. Before being recognized by the Supervisor, an assessment methodology for each market segment, including rigorous backtesting, must have been established for at least one year and preferably three years.
 - **Independence:** An ECAI should be independent and should not be subject to political or economic pressures that may influence the rating. The assessment process should be as free as possible from any constraints that could arise in situations where the composition of the board of directors or the shareholder structure of the assessment institution may be seen as creating a conflict of interest.
 - **International access/Transparency:** The individual assessments, the key elements underlining the assessments and whether the issuer participated in the assessment process, should be publicly available on a non-selective basis, unless they are private

assessments. In addition, the general procedures, methodologies, and assumptions for arriving at assessments used by the ECAI should be publicly available.

- **Disclosure:** An ECAI should disclose the following information: its code of conduct; the general nature of its compensation arrangements with assessed entities; its assessment methodologies, including the definition of default, the time horizon, and the meaning of each rating; the actual default rates experienced in each assessment category; and the transitions of the assessments, e.g. the likelihood of AA ratings becoming A over time.
- **Resources:** An ECAI should have sufficient resources to carry out high quality credit assessments. These resources should allow for substantial ongoing contact with senior and operational levels within the entities assessed in order to add value to the credit assessments. Such assessments should be based on methodologies combining qualitative and quantitative approaches.
- **Credibility:** To some extent, credibility is derived from the criteria above. In addition, the reliance on an ECAI's external credit assessments by independent parties (investors, insurers, trading partners) is evidence of the credibility of the assessments of an ECAI. The credibility of an ECAI is also underpinned by the existence of internal procedures to prevent the misuse of confidential information. In order to be eligible for recognition, an ECAI does not have to assess firms in more than one country.

C. Implementation considerations

1. The mapping process

92. The Supervisor will be responsible for assigning eligible ECAIs' assessments to the risk weights available under the standardized risk weighting framework, i.e. deciding which assessment categories correspond to which risk weights. The mapping process should be objective and should result in a risk weight assignment consistent with that of the level of credit risk reflected in the tables above. It should cover the full spectrum of risk weights.

The mappings of the recognized ECAI ratings are below:

Long-term ratings:

	The rating company's rating				Risk weighting		
	Fitch	Moody's*	S&P	AM Best	Corporates	Banks**	Sovereigns
1	AAA to AA-	Aaa to Aa3	AAA to AA-	AAA to AA-	20%	20%	0%
2	A+ to A-	A1 to A3	A+ to A-	A+ to A-	50%	50%	20%
3	BBB+ to BBB-	Baa1 to Baa3	BBB+ to BBB-	BBB+ to BBB-	100%	100%	50%
4	BB+ to BB-	Ba1 to Ba3	BB+ to BB-	BB+ to BB-	100%	100%	100%
5	B+ to B-	B1 to B3	B+ to B-	B+ to B-	150%	100%	100%
6	CCC+ or lower	Caa1 or lower	CCC+ or lower	CCC+ or lower	150%	150%	150%

* Includes its IFS long-term ratings.

** The risk weighting of banks is determined according to the approach based on the country's rating (see Paragraph 61).

Short-term ratings:

	Fitch's rating	Moody's rating	S&P's rating	AM Best	Risk weight
1	F1+, F1	P-1	A-1+	AMB-1+	20%
2	F2	P-2	A-1	AMB-1-	50%
3	F3	P-3	A-2, A-3	AMB-2, AMB-3	100%
4	Lower than F3	NP	The lowest of all the short-term ratings	AMB-4	150%

Long-term IFS/Financial strength ratings:

	The rating company's rating			Risk weight
	Fitch's rating	S&P's rating	AM Best's rating	
1	AAA to AA-	AAA to AA-	A++ to A+	20%
2	A+ To A-	A+ To A-	A to A-	50%
3	BBB+ to BBB-	BBB+ to BBB-	B++ to B+	100%
4	BB+ to BB-	BB+ to BB-	B to B-	100%
5	B+ to B-	B+ to BB-	C++ to C+	150%
6	CCC+ or lower	CCC+ or lower	C or lower	150%

93. When conducting such a mapping process, factors that the Supervisor will assess include, among others, the size and scope of the pool of issuers that each ECAI covers, the range and meaning of the assessments that it assigns, and the definition of default used by the ECAI. In order to promote a more consistent mapping of assessments into the available risk weights, an ECAI must fulfill the requirements of Appendix A, which provides guidance as to how such a mapping process may be conducted.
94. Banking corporations must use the chosen ECAIs and their ratings consistently for each type of claim, for both risk weighting and risk management purposes. Banking corporations will not be allowed to “cherry-pick” the assessments provided by different ECAIs, and to arbitrarily change the use of ECAIs.
95. Banking corporations must disclose ECAIs that they use for the risk weighting of their assets by type of claims, the risk weights associated with the particular rating grades as determined by the Supervisor through the mapping process as well as the aggregated risk-weighted assets for each risk weight based on the assessments of each eligible ECAI.

2. *Multiple assessments*

96. If there is only one assessment by an ECAI chosen by a banking corporation for a particular claim, that assessment should be used to determine the risk weight of the claim.
97. If there are two assessments by ECAIs chosen by a banking corporation which map into different risk weights, the higher risk weight will be applied.
98. If there are three or more assessments with different risk weights, the assessments corresponding to the two lowest risk weights should be referred to and the higher of those two risk weights will be applied.

3. *Issuer versus issues assessment*

99. Where a banking corporation invests in a particular issue that has an issue-specific assessment, the risk weight of the claim will be based on this assessment. Notwithstanding the aforementioned, when a banking corporation invests in a debt security issued by a banking corporation (including a subsidiary that is an auxiliary corporation, whose only activity is issuing securities), local PSE whose risk weight is derived from the country's rating, or securities firm that meets the conditions that allow bank's treatment (see Paragraph 65), the debt's risk weight will be determined in accordance with the issuer's risk weight, and will not be based on a specific issue rating, if such exists. Where the banking corporation's claim is not an investment in a specific assessed issue, the following general principles apply.
- In circumstances where the borrower has a specific assessment for an issued debt but the banking corporation's claim is not an investment in this particular debt — a high quality credit assessment (one which maps into a risk weight lower than that which applies to an unrated claim) on that specific debt may only be applied to the banking corporation's unassessed claim if this claim ranks *pari passu* or senior to the claim with an assessment in all respects. If not, the credit assessment cannot be used and the unassessed claim will receive the risk weight for unrated claims.
 - In circumstances where the borrower has an issuer assessment, this assessment typically applies to senior unsecured claims on that issuer. Consequently, only senior claims on that issuer will benefit from a high quality issuer assessment. Other unassessed claims of a highly assessed issuer will be treated as unrated. If either the issuer or a single issue has a low quality assessment (mapping into a risk weight equal to or higher than that which applies to unrated claims), an unassessed claim on the same counterparty that

ranks pari passu or is subordinated to either the senior unsecured issuer assessment or the exposure assessment will be assigned the same risk weight as is applicable to the low quality assessment.

100. Whether the banking corporation intends to rely on an issuer assessment or an issue-specific assessment, the assessment must take into account and reflect the entire amount of credit risk exposure the banking corporation has with regard to all payments owed to it.³⁶
101. In order to avoid any double counting of credit enhancement factors, no supervisory recognition of credit risk mitigation techniques will be taken into account if the credit enhancement is already reflected in the issue specific rating (see Paragraph 114).

4. *Domestic currency and foreign currency assessments*

102. Where unrated exposures are risk weighted based on the rating of an equivalent exposure to that borrower, the general rule is that foreign currency ratings would be used for exposures in foreign currency. Domestic currency ratings, if separate, would only be used to risk weight claims denominated in the domestic currency.³⁷

5. *Short-term/long-term assessments*

103. For risk-weighting purposes, short-term assessments are deemed to be issue specific. They can only be used to derive risk weights for claims arising from the rated facility. They cannot be generalized to other short-term claims. In no event can a short-term rating be used to support a risk weight for an unrated long-term claim. Short-term assessments may only be used for short-term claims against banks and corporates. The table below provides a

³⁶ For example, if a banking corporation is owed both principal and interest, the assessment must fully take into account and reflect the credit risk associated with repayment of both principal and interest.

³⁷ However, when an exposure arises through a banking corporation's participation in a loan that has been extended, or has been guaranteed against convertibility and transfer risk, by certain MDBs, its convertibility and transfer risk can be considered to be effectively mitigated. To qualify, MDBs must have preferred creditor status recognized in the market and be included in footnote 24. In such cases, for risk weighting purposes, the borrower's domestic currency rating may be used instead of its foreign currency rating. In the case of a guarantee against convertibility and transfer risk, the local currency rating can be used only for the portion that has been guaranteed. The portion of the loan not benefiting from such a guarantee will be risk-weighted based on the foreign currency rating.

framework for banking corporations' exposures to specific short-term facilities, such as a particular issuance of commercial paper:

Credit Assessment	A-1/P-1 ³⁸	A-2/P-2	A-3/P-3	Others ³⁹
Risk weight	20%	50%	100%	150%

104. If a short-term rated facility attracts a 50% risk-weight, unrated short-term claims cannot attract a risk weight lower than 100%. If an issuer has a short-term facility with an assessment that warrants a risk weight of 150%, all unrated claims, whether long-term or short-term, should also receive a 150% risk weight, unless the banking corporation uses recognized credit risk mitigation techniques for such claims.

105. Deleted.

106. When a short-term assessment is to be used, the institution making the assessment needs to meet all of the eligibility criteria for recognizing ECAIs as presented in Paragraph 91 in terms of its short-term assessment.

6. *Level of application of the assessment*

107. External assessments for one entity within a corporate group cannot be used to risk weight other entities within the same group.

7. *Unsolicited ratings*

108. As a general rule, banking corporations should use *solicited* ratings from eligible ECAIs. The Supervisor of Banks recognizes unsolicited rating for countries, PSEs, banks and public companies only. When using these ratings, the rating company must fulfill the following two conditions:

³⁸ The notations follow the methodology used by Standard & Poor's and by Moody's Investors Service. Standard and Poor's A-1 rating includes both A-1+ and A-1-.

³⁹ This category includes all non-prime and ratings B or C ratings.

- (a) The rating company will have normalized policies and procedures which ensure that unsolicited ratings will not be less reliable than solicited ones and that there is no difference in judgment between solicited and unsolicited ratings.
- (b) The unsolicited rating will be clearly identified as such.

When a public company has both an unsolicited rating and a solicited one, the banking corporation must make use of the solicited rating only. However, there may be the potential for ECAs to use unsolicited ratings to put pressure on entities to obtain solicited ratings. Such behavior, when observed, will cause the Banking Supervision Department to consider whether to continue recognizing that ECAI as eligible for purposes of capital adequacy.

D. The standardized approach – credit risk mitigation (CRM)

1. Overarching issues

(i) Introduction

109. Banking corporations use a number of techniques to mitigate the credit risks to which they are exposed. For example, exposures may be collateralized by first priority claims, in whole or in part with cash or securities, a loan exposure may be guaranteed by a third party, or a banking corporation may buy a credit derivative to offset various forms of credit risk. Additionally banking corporations may agree to net loans owed to them against deposits from the same counterparty.

110. Where these techniques meet the requirements for legal certainty as described in Paragraphs 117 and 118 below, the revised approach to CRM allows a wider range of credit risk mitigants to be recognized for regulatory capital purposes than is permitted under to the capital adequacy directives that were in place prior to this directive.

(ii) General remarks

111. The framework set out in this directive is applicable to the banking book exposures in the standardized approach. For the treatment of CRM in the IRB approach, see Proper Conduct of Banking Business Directive 204.

112. The comprehensive approach for the treatment of collateral (see Paragraphs 130 to 138 and 145 to 181) will also be applied to calculate the counterparty risk charges for OTC derivatives and repo-style transactions booked in the trading book.

113. No transaction in which CRM techniques are used should receive a higher capital requirement than an otherwise identical transaction where such techniques are not used.

114. The effects of CRM will not be double counted. Therefore, no additional supervisory recognition of CRM for regulatory capital purposes will be granted on claims for which an issue-specific rating is used that already reflects that CRM. As stated in Paragraph 100, principal-only ratings will also not be allowed within the framework of CRM.

115. While the use of CRM techniques reduces or transfers credit risk, it simultaneously may increase other risks (residual risks). Residual risks include legal, operational, liquidity and market risks. Therefore, it is imperative that banking corporations employ robust procedures and processes to control these risks. Where these risks are not adequately controlled, the Supervisor may impose additional capital charges or take other supervisory actions as outlined in Proper Conduct of Banking Business Directive 211 (Capital Adequacy Assessment).

115(i). The banking corporations must devote sufficient resources for the orderly operation of margin agreements concerning OTC derivatives and securities financing transactions (SFTs) with counterparties as measured by the timeliness and accuracy of its outgoing calls and response time to incoming calls. Banking corporations must have collateral management policies in place to control, monitor and report:

- The risk to which margin agreements exposes them (such as the volatility and liquidity of the securities exchanged as collateral);
- The concentration risk to certain types of collateral;
- The reuse of collateral (both cash and non-cash) including the potential liquidity shortfalls resulting from the reuse of collateral received from counterparties; and
- The surrender of collateral posted to counterparties.

116. The disclosure requirements prescribed in the Reporting to the Public Directives must also be observed for banking corporations to obtain capital relief in respect of any CRM techniques.

(iii) Legal certainty

117. In order for banking corporations to obtain capital relief for any use of CRM techniques, the following minimum standards for legal documentation must be met.

118. All documentation used in collateralized transactions and for documenting on-balance sheet netting, guarantees and credit derivatives must be binding on all parties and legally enforceable in all relevant jurisdictions. Banking corporations must have conducted sufficient legal review to verify this and have a well founded legal basis to reach this

conclusion, and undertake such further review as necessary to ensure continuing enforceability.

118a. In order to ensure the adequacy of the legal review, a banking corporation must fulfill the following requirements:

- A banking corporation must adopt a policy, procedures and processes that will ensure the adequacy of the review. These will ensure, among other things, the implementation of repeat reviews as needed.
- The reviewer must possess legal expertise and professional experience in the particular area in which he is providing an opinion, and must not be dependent on the unit that carried out the transaction.
- The banking corporation will save all the required documents in its records.

2. Overview of Credit Risk Mitigation Techniques⁴⁰

(i) Collateralized transactions

119. A collateralized transaction is one in which:

- banking corporations have a credit exposure or potential credit exposure; and
- that credit exposure or potential credit exposure is hedged in whole or in part by collateral posted by a counterparty⁴¹ or by a third party on behalf of the counterparty.

120. Where banking corporations take eligible financial collateral (e.g. cash or securities, more specifically defined in Paragraphs 145 and 146 below), they are allowed to reduce their credit exposure to a counterparty when calculating their capital requirements to take account of the risk mitigating effect of the collateral.

Overall framework and minimum conditions

⁴⁰ See Appendix E for an overview of methodologies for the capital treatment of transactions secured by financial collateral under the standardized approach.

⁴¹ In this section “counterparty” is used to denote a party to whom a banking corporation has an on- or off-balance sheet credit exposure or a potential credit exposure. That exposure may, for example, take the form of a loan of cash or securities (where the counterparty would traditionally be called the borrower), of securities posted as collateral, of a commitment or of exposure under an OTC derivatives contract.

121. Banking corporations may opt for either the simple approach, which, similar to the capital adequacy Directives that were in effect prior to this Directive, substitutes the risk weighting of the collateral for the risk weighting of the counterparty for the collateralized portion of the exposure (generally subject to a 20% floor), or for the comprehensive approach, which allows fuller offset of collateral against exposures, by effectively reducing the exposure amount by the value ascribed to the collateral. Banking corporations may operate under either, but not both, approaches in the banking book, but only under the comprehensive approach in the trading book. Partial collateralization is recognized in both approaches. Mismatches in the maturity of the underlying exposure and the collateral will only be allowed under the comprehensive approach.
122. However, before capital relief will be granted in respect of any form of collateral, the standards set out below in Paragraphs 123 to 126 must be met under either approach.
123. In addition to the general requirements for legal certainty set out in Paragraphs 117 and 118, the legal mechanism by which collateral is pledged or transferred must ensure that the banking corporation has the right to liquidate or take legal possession of it, in a timely manner, in the event of the default, insolvency or bankruptcy (or one or more otherwise-defined credit events set out in the transaction documentation) of the counterparty (and, where applicable, of the custodian holding the collateral). Furthermore banking corporations must take all steps necessary to fulfill those requirements under the law applicable to the bank's interest in the collateral for obtaining and maintaining an enforceable security interest, e.g. by registering it with a registrar, or for exercising a right to net or set off in relation to title transfer collateral.
- 123a. Collateral will be recognized as eligible only if the legal right of the banking corporations to the collateral (for instance, a lien) is valid for any third party.
124. (a) In order for collateral to provide protection, the credit quality of the counterparty and the value of the collateral must not have a material positive correlation; and
(b) securities issued by the counterparty — or by any related group entity — are ineligible.
In this Paragraph, “group” is defined according to the definition of “group of borrowers” in Proper Conduct of Banking Business Directive 313.

125. Banking corporations must have clear and robust procedures for the timely liquidation of collateral to ensure that any legal conditions required for declaring the default of the counterparty and liquidating the collateral are observed, and that collateral can be liquidated promptly.
126. Where the collateral is held by a custodian, banking corporations must take reasonable steps to ensure that the custodian segregates the collateral from its own assets. A banking corporation will be considered to have taken reasonable steps if the following requirements are fulfilled:
- (b) The condition appears in the contract; and
 - (c) The banking corporation receives a report from the custodian on a periodic basis.
127. A capital requirement will be applied to a banking corporation on either side of the collateralized transaction: for example, both repos and reverse repos will be subject to capital requirements. Likewise, both sides of a securities lending and borrowing transaction will be subject to explicit capital charges, as will the posting of securities in connection with a derivative exposure or other borrowing.
128. Where a banking corporation, acting as an agent, arranges a repo-style transaction (i.e. repurchase/reverse repurchase and securities lending/borrowing transactions) 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 banking corporation is the same as if the banking corporation had entered into the transaction as a principal. In such circumstances, a banking corporation will be required to calculate capital requirements as if it were itself the principal.

The simple approach

129. In the simple approach the risk weighting of the collateral instrument collateralizing or partially collateralizing the exposure is substituted for the risk weighting of the counterparty. Details of this framework are provided in Paragraphs 182 to 185.

The comprehensive approach

130. In the comprehensive approach, when taking collateral, banking corporations will need to calculate their adjusted exposure to a counterparty for capital adequacy purposes in order to take account of the effects of that collateral. Using haircuts, banking corporations are required to adjust both the amount of the exposure to the counterparty and the value of any collateral received in support of that counterparty to take account of possible future fluctuations in the value of either⁴², occasioned by market movements. This will produce volatility adjusted amounts for both exposure and collateral. Unless either side of the transaction is cash, the volatility adjusted amount for the exposure will be higher than the exposure and for the collateral it will be lower.
131. Additionally, where the exposure and collateral are held in different currencies, an additional downwards adjustment must be made to the volatility adjusted collateral amount to take account of possible future fluctuations in exchange rates.
132. Where the volatility-adjusted exposure amount is greater than the volatility-adjusted collateral amount (including any further adjustment for foreign exchange risk), banking corporations shall calculate their risk-weighted assets as the difference between the two multiplied by the risk weight of the counterparty. The framework for performing these calculations is set out in Paragraphs 147 to 150.
133. The adjustment of the amount of the exposure and the amount of the collateral to possible fluctuations in their value, will be carried out using standard regulatory haircuts as described in Paragraph 151 below.
134. Deleted.
135. The size of the individual haircuts will depend on the type of instrument, type of transaction and the frequency of marking-to-market and remargining. For example, repo-style transactions subject to daily marking-to-market and to daily remargining will receive a haircut based on a 5-business day holding period and secured lending transactions with daily mark-to-market and no remargining clauses will receive a haircut based on a 20-business day

⁴² Exposure amounts may vary where, for example, securities are being lent.

holding period. These haircut numbers will be scaled up using the square root of time formula depending on the frequency of remargining or marking-to-market.

In this section, “holding period” is the average period of time required, according to the Basel Committee, in order to close a position / liquidate collateral.

136. For certain types of repo-style transactions (broadly speaking government bond repos as defined in Paragraphs 170 and 171) banking corporations are permitted not to apply standard supervisory haircuts or own-estimate haircuts in calculating the exposure amount after risk mitigation.

137. The effect of master netting agreements covering repo-style transactions can be recognized for the calculation of capital requirements subject to the conditions in Paragraph 173.

138. Deleted.

(ii) On-balance sheet netting

139. Where banking corporations have legally enforceable netting arrangements for loans and deposits they may calculate capital requirements on the basis of net credit exposures subject to the conditions in Paragraph 188.

(iii) Guarantees and credit derivatives

140. Where guarantees or credit derivatives are direct, explicit, irrevocable and unconditional, account can be taken of such credit protection in calculating capital requirements.

141. A range of guarantors and protection providers are recognized. As under the capital adequacy directives that were in place until this directive, a substitution approach will be applied. Thus, only guarantees issued by or protection provided by entities with a lower risk weight than the counterparty will lead to reduced capital charges since the protected portion of the counterparty exposure is assigned the risk weight of the guarantor or protection provider, whereas the uncovered portion retains the risk weight of the underlying counterparty.

142. Detailed operational requirements are given below in Paragraphs 189 to 193.

(iv) *Maturity mismatch*

143. Where the residual maturity of the CRM is less than that of the underlying credit exposure a maturity mismatch occurs. Where there is a maturity mismatch and the CRM has an original maturity of less than one year, the CRM is not recognized for capital purposes. In other cases where there is a maturity mismatch, partial recognition is given to the CRM for regulatory capital purposes as detailed below in Paragraphs 202 to 205. Under the simple approach for collateral, maturity mismatches will not be allowed.

(v) *Miscellaneous*

144. Treatments for pools of credit risk mitigants due to a single exposure and first- and Nth-to-default credit derivatives are given in Paragraphs 206 to 210 below.

3. Collateral

(i) *Eligible financial collateral*

145. The following collateral instruments are eligible for recognition in the simple approach:

- (a) Cash (as well as certificates of deposit or comparable instruments issued by the lending bank) on deposit with the bank which is incurring the counterparty exposure.^{43,44}
- (b) Gold.
- (c) Debt securities rated by a recognized external credit assessment institution where these are either:
 - at least BB- when issued by sovereigns or PSEs that are treated as sovereigns by the Supervisor of Banks; or
 - at least BBB- when issued by other entities (including banks and securities firms); or
 - at least A-3/P-3 for short-term debt instruments.

⁴³ Cash funded credit linked notes issued by the banking corporations against exposures in the banking book which fulfill the criteria for credit derivatives will be treated as cash collateralized transactions.

⁴⁴ When cash on deposit, certificates of deposit or comparable instruments issued by the lending banking corporation are held as collateral at a third-party banking corporation in a non-custodial arrangement, if they are openly pledged/assigned to the lending banking corporation and if the pledge/assignment is unconditional and irrevocable, the exposure amount covered by the collateral (after any necessary haircuts for currency risk) will receive the risk weight of the third-party banking corporation.

- (d) Debt securities not rated by a recognized external credit assessment institution where these are:
- issued by a bank whose shares are traded as part of a major index; and
 - listed on a recognized exchange; and
 - classified as senior debt; and
 - all rated issues of the same seniority by the issuing bank must be rated at least BBB- or A-3/P-3 by a recognized external credit assessment institution; and
 - the banking corporation holding the securities as collateral has no information to suggest that the issue justifies a rating below BBB- or A-3/P-3 (as applicable).
- (e) Equities (including convertible bonds) that are included in a main index.
- (f) Undertakings for Collective Investments in Transferable Securities (UCITS) and mutual funds where:
- a price for the units is publicly quoted daily; and
 - the UCITS/mutual fund is limited to investing in the instruments listed in this Paragraph.⁴⁵

145(i). Re-securitizations (as defined in Proper Conduct of Banking Business Directive number 205), irrespective of any credit ratings, are not an eligible financial collateral.

146. The following collateral instruments are eligible for recognition in the comprehensive approach:

- (a) All of the instruments in Paragraph 145;
- (b) Equities (including convertible bonds) which are not included in a main index but which are listed on a recognized exchange;
- (c) UCITS/mutual funds which include such equities and meet the criteria in Paragraph 145(f) above.

146a. For the purpose of determining whether collateral is eligible as mentioned in Paragraphs 145 and 146 above:

“Recognized stock exchange” – a stock exchange in which a major index is traded.

⁴⁵ However, the use or potential use by a UCITS/mutual fund of derivative instruments solely to hedge investments listed in this paragraph and paragraph 146 shall not prevent units in that UCITS/mutual fund from being eligible financial collateral.

“Major index” – any one of the following:

Country	Name of the index
Australia	All Ordinaries
Austria	Austrian Traded Index
Belgium	BEL 20
Britain	FTSE 100, FTSE Mid 250
Canada	S&P/TSX Composite
Europe	Dow Jones Stoxx 50 Index, FTSE Eurofirst 300, MSCI Euro Index, Euro Stoxx 50
France	CAC 40, SBF 250
Germany	DAX
Holland	AEX
Hong Kong	Hang Seng
Israel	Tel Aviv 125
Italy	MIB 30
Japan	Nikkei 225, Nikkei 300, Topix
South Korea	Kospi
Singapore	Straits Times Index
Spain	IBEX 35
Sweden	OMX
Switzerland	SMI
US	S&P 500, Dow Jones Industrial Average, NASDAQ Composite, Russell 2000

(ii) *The comprehensive approach*

Calculation of capital requirement

147. For a collateralized transaction, the exposure amount after risk mitigation is calculated as follows:

$$E^* = \max \{0, [E \times (1 + H_e) - C \times (1 - H_c - H_{fx})]\}$$

where:

E^* = the exposure value after risk mitigation

E = 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

148. The exposure amount after risk mitigation will be multiplied by the risk weight of the counterparty to obtain the risk-weighted asset amount for the collateralized transaction.

149. The treatment for transactions where there is a mismatch between the maturity of the counterparty exposure and the collateral is given in Paragraphs 202 to 205.

150. Where the collateral is a basket of assets, the haircut on the basket will be $H = \sum a_i H_i$ where a_i is the weight of the asset (as measured by units of currency) in the basket and H_i the haircut applicable to that asset.

Standard supervisory haircuts

151. These are the standard supervisory haircuts (assuming daily mark-to-market, daily remargining and a 10-business day holding period), expressed as percentages:

Table 1

Issue rating for debt securities	Residual maturities	Sovereigns ^{46,47}			Other issuers ⁴⁸			Securitization exposures		
		Holding period of 20 days	Holding period of 10 days	Holding period of 5 days	Holding period of 20 days	Holding period of 10 days	Holding period of 5 days	Holding period of 20 days	Holding period of 10 days	Holding period of 5 days
AAA to A-1/AA-	≤ One year	0.707	0.5	0.354	1.414	1	0.707	2.828	2	1.414
	> 1 year, ≤ 5 years	2.828	2	1.414	5.657	4	2.828	11.314	8	5.657
	> 5 years	5.657	4	2.828	11.314	8	5.657	22.628	16	11.314
A+ to BBB-/A-2 to A-3/unrated bank debt securities per Paragraph 145(d)	≤ One year	1.414	1	0.707	2.828	2	1.414	5.657	4	2.828
	> 1 year, ≤ 5 years	4.243	3	2.121	8.485	6	4.243	16.971	12	8.485
	> 5 years	8.485	6	4.243	16.971	12	8.485	33.942	24	16.971
BB+ to BB-	All periods	21.213	15	10.607	Ineligible			Ineligible		

Table 2

⁴⁶ Including PSEs that are treated as sovereigns by the Supervisor of Banks.

⁴⁷ Multilateral Development Banks (MDBs) that have received a risk weight of 0% will be treated as sovereigns.

⁴⁸ Including PSEs that are not treated as sovereigns by the Supervisor of Banks.

	Holding period of 20 days	Holding period of 10 days	Holding period of 5 days
The main index shares (including convertible bonds) and gold	21.213	15	10.607
Other shares (including convertible bonds) listed on a recognized stock exchange	35.355	25	17.678
UCITS / mutual funds	The highest haircut that can be applied to a security in which the fund is permitted to invest.		
Cash ⁴⁹	0	0	0

Table 3

	Holding period of 20 days	Holding period of 10 days	Holding period of 5 days
Haircuts due to currency mismatch	11.314	8	5.657

151a. Notwithstanding the aforementioned, the allocation of haircuts to eligible securities, that are held in an account for securities mortgaged to the banking corporation, will be carried out according to the following alternatives:

- (a) If it is not possible for the customer to replace the securities, each of the eligible securities will be allocated the relevant haircut, as prescribed in Paragraph 151 above.
- (b) If it is possible for the customer to replace the securities, but the customer is restricted to investing in eligible securities only, all of the securities will be allocated the highest uniform haircut that can be applied to a security in which the customer is permitted to invest.
- (c) If it is possible for the customer to replace the securities, and the customer is not restricted to investing in eligible securities only, all the eligible securities will be allocated a single haircut of 50%.

These alternatives will apply to a securities account or a portion thereof, subject to an agreement between the banking corporation and the customer. The limitation on the

⁴⁹ Eligible cash collateral specified in paragraph 145(a).

customer, as mentioned in alternatives (a) and (b) above, will be effective and shall be formalized both legally and electronically.

152. Deleted.

153. For transactions in which the banking corporation lends non-eligible instruments (e.g. non-investment grade corporate debt securities), the haircut to be applied on the exposure should be the same as the one for equity traded on a recognized exchange that is not part of a main index.

154-165. Deleted.

Adjustment for different holding periods and non-daily mark-to-market or remargining

166. For some transactions, depending on the nature and frequency of the revaluation and remargining provisions, different holding periods are appropriate. The directives for collateral haircuts distinguishes between repo-style transactions (i.e. repo/reverse repos and securities lending/borrowing), “other capital-market-driven transactions” (i.e. OTC derivatives transactions and margin lending) and secured lending. In capital-market-driven transactions and repo-style transactions, the documentation contains remargining clauses; in secured lending transactions, it generally does not.

A transaction in which the banking corporation does not have the right to frequently remargin will be treated as secured lending.

167. The minimum holding period for various products is summarized in the following table:

Transaction type	Holding period	Condition
Repo-style transaction	Five business days	Daily remargining
Other capital market transactions	Ten business days	Daily remargining
Secured lending	Twenty business days	Daily revaluation

168. When the frequency of remargining or revaluation is longer than the minimum, the minimum haircut numbers will be scaled up depending on the actual number of business days between remargining or revaluation using the square root of time formula below:

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

where:

H = Enlarged haircut

H_M = haircut under the minimum holding period (from the table in Paragraph 151)

T_M = holding period for the type of transaction (from the table in Paragraph 167).

N_R = actual number of business days between remargining for capital market transactions or revaluation for secured transactions.

169. An example of the use of the equation in Paragraph 168 above: a banking corporation enters into a futures transaction with a customer which is secured by a major index share. The holding period is 10 days. The haircut is 15% (see Paragraph 151 above). The frequency of remargining in the transaction is weekly (i.e. five business days). The enlarged haircut will be:

$$H = H_M \sqrt{\frac{N_R + (T_M - 1)}{T_M}} = 15 \sqrt{\frac{5 + (10 - 1)}{10}} = 17.748$$

Conditions for determining a zero H

170. For repo-style transactions where the following conditions are satisfied, and the counterparty is a *core market participant* (see Paragraph 171 below), a haircut of zero may be applied.
- (a) Both the exposure and the collateral are cash or a sovereign security or PSE security qualifying for a 0% risk weight in the standardized approach;⁵⁰
 - (b) Both the exposure and the collateral are denominated in the same currency;
 - (c) Either the transaction is overnight or both the exposure and the collateral are marked-to-market daily and are subject to daily remargining;

⁵⁰ Securities issued by the Government of Israel or the Bank of Israel which are eligible for a risk weight of 0% according to paragraph 54 fulfill this condition.

- (d) Following a counterparty's failure to remargin, the time that is required between the last mark-to-market before the failure to remargin and the liquidation⁵¹ of the collateral is considered to be no more than four business days;
- (e) The transaction is settled across a settlement system proven for that type of transaction;
- (f) The documentation covering the agreement is standard market documentation for repo-style transactions in the securities concerned;
- (g) The transaction is governed by documentation specifying that if the counterparty fails to satisfy an obligation to deliver cash or securities or to deliver margin or otherwise defaults, then the transaction is immediately terminable; and
- (h) Upon any default event, regardless of whether the counterparty is insolvent or bankrupt, the banking corporation has the unfettered, legally enforceable right to immediately seize and liquidate the collateral for its benefit.

171. Only the following entities will be considered *Core market participants*:

- (a) Sovereigns, central banks and PSEs;
- (b) Banks and securities firms;
- (c) Other financial companies (including insurance companies) eligible for a 20% risk weight according to this directive; and
- (d) Recognized clearing organizations.

172. Where a supervisor from an OECD country that is rated A- or higher applies a specific carve-out to repo-style transactions in securities issued by its domestic government, then banking corporations incorporated in Israel may to adopt the same approach to the same transactions.

Treatment of repo-style transactions covered under master netting agreements

173. The effects of bilateral netting agreements covering repo-style transactions will be recognized on a counterparty-by-counterparty basis if the agreements are legally enforceable in each relevant jurisdiction upon the occurrence of an event of default and regardless of whether the counterparty is insolvent or bankrupt. Only agreements that are accepted in a market for this type of transaction, such as the GMRA 2000 (the TBMA/ISMA Global Master Repurchase Agreement), will be recognized. In addition, netting agreements must:

⁵¹ This does not require the banking corporation to always liquidate the collateral but rather to have the capability to do so within the given time frame.

- (a) provide the non-defaulting party the right to terminate and close-out in a timely manner all transactions under the agreement upon an event of default, including in the event of insolvency or bankruptcy of the counterparty;
- (b) provide for the netting of gains and losses on transactions (including the value of any collateral) terminated and closed out under it so that a single net amount is owed by one party to the other;
- (c) allow for the prompt liquidation or setoff of collateral upon the event of default; and
- (d) be, together with the rights arising from the provisions required in (a) to (c) above, legally enforceable in each relevant jurisdiction upon the occurrence of an event of default and regardless of the counterparty's insolvency or bankruptcy.

174. Netting across positions in the banking and trading book will only be recognized when the netted transactions fulfill the following conditions:

- (a) All transactions are marked to market daily;⁵² and
- (b) The collateral instruments used in the transactions are recognized as eligible financial collateral in the banking book.

175. The formula in Paragraph 147 will be adapted to calculate the capital requirements for transactions with netting agreements.

176. Banking corporations will apply the following instructions in order to take into account the impact of master netting agreements.

$$E^* = \max \{0, [(\sum(E) - \sum(C)) + \sum (E_s \times H_s) + \sum (E_{fx} \times H_{fx})]\}^{53}$$

where:

E^* = the exposure value after risk mitigation

E = current value of the exposure

C = the value of the collateral received

E_s = absolute value of the net position in a given security

H_s = haircut appropriate to E_s

⁵² The holding period for the haircuts will depend as in other repo-style transactions on the frequency of margining.

⁵³ The starting point for this formula is the formula in paragraph 147 which can also be presented as the following: $E^* = \max \{0, [(E - C) + (E \times H_e) + (C \times H_c) + (C \times H_{fx})]\}$.

Efx = absolute value of the net position in a currency different from the settlement currency
Hfx = haircut appropriate for currency mismatch

177. The intention here is to obtain a net exposure amount after netting of the exposures and collateral and have an add-on amount reflecting possible price changes for the securities involved in the transactions and for foreign exchange risk if any. The net long or short position of each security included in the netting agreement will be multiplied by the appropriate haircut. All other rules regarding the calculation of haircuts stated in Paragraphs 147 to 172 equivalently apply for banking corporations using bilateral netting agreements for repo-style transactions.

178-181(i). Deleted

(iii) The simple approach

Minimum conditions

182. For collateral to be recognized in the simple approach, the collateral must be pledged for at least the life of the exposure and it must be marked to market and revalued with a minimum frequency of six months. Those portions of claims collateralized by the market value of recognized collateral receive the risk weight applicable to the collateral instrument. The risk weight on the collateralized portion will be subject to a floor of 20% except under the conditions specified in Paragraphs 183 to 185. The remainder of the claim should be assigned a risk weight appropriate to the counterparty. A capital requirement will be applied to banking corporations on either side of the collateralized transaction: for example, both repos and reverse repos will be subject to capital requirements.

Exceptions to the risk weight floor

183. Transactions which fulfill the criteria outlined in Paragraph 170 and are with a core market participant, as defined in Paragraph 171, receive a risk weight of 0%. If the counterparty to the transactions is not a core market participant the transaction should receive a risk weight of 10%.
184. OTC derivative transactions subject to daily mark-to-market, collateralized by cash and where there is no currency mismatch should receive a 0% risk weight. Such transactions

collateralized by sovereign or PSE securities qualifying for a 0% risk weight according to this directive can receive a 10% risk weight.

185. The 20% floor for the risk weight on a collateralized transaction will not be applied and a 0% risk weight can be applied where the exposure and the collateral are denominated in the same currency, and either:

- the collateral is cash on deposit as defined in Paragraph 145 (a); or
- the collateral is in the form of sovereign/PSE securities eligible for a 0% risk weight, and its market value has been discounted by 20%.

(iv) *Collateralized OTC derivatives transactions*

186. Under the Current Exposure Method, the calculation of the counterparty credit risk charge for an individual contract will be as follows:

$$\text{counterparty charge} = [(\text{RC} + \text{add-on}) - C_A] \times r \times 8\%$$

where:

RC = the replacement cost

add-on = the amount for potential future exposure calculated according to Paragraph 92(i) and 92(ii) of Appendix 4

C_A = the volatility adjusted collateral amount under the comprehensive approach prescribed in Paragraphs 147 to 172, or zero if no eligible collateral is applied to the transaction, and

r = the risk weight of the counterparty.

187. When effective bilateral netting contracts are in place, RC will be the net replacement cost and the add-on will be A_{Net} as calculated according to Paragraphs 96(i) to 96(vi) of Appendix C. The haircut for currency risk (H_{fx}) should be applied when there is a mismatch between the collateral currency and the settlement currency. Even in the case where there are more than two currencies involved in the exposure, collateral and settlement currency, a single haircut assuming a 10-business-day holding period scaled up as necessary depending on the frequency of mark-to-market will be applied.

187(i). As an alternative to the Current Exposure Method for the calculation of the counterparty credit risk charge, banks may also use the Standardized Method as set out in Appendix C.

4. *On-balance-sheet netting*

188. Where a banking corporation,

- (a) has a well-founded legal basis for concluding that the netting or offsetting agreement is enforceable in each relevant jurisdiction regardless of whether the counterparty is insolvent or bankrupt;
- (b) is able at any time to determine those assets and liabilities with the same counterparty that are subject to the netting agreement;
- (c) monitors and controls its roll-off risks; and
- (d) monitors and controls the relevant exposures on a net basis,

it may use the net exposure of loans and deposits as the basis for its capital adequacy calculation in accordance with the formula in Paragraph 147. Loans are treated as exposure and deposits as collateral. The haircuts will be zero except when a currency mismatch exists. A 10-business-day holding period will apply when daily mark-to-market is conducted and all the requirements contained in Paragraphs 151, 168, and 202 to 205 will apply.

5. *Guarantees and credit derivatives*

(i) *Operational requirements*

Operational requirements common to guarantees and credit derivatives

189. A guarantee (counter-guarantee) or credit derivative must represent a direct claim on the protection provider and must be explicitly referenced to specific exposures or a pool of exposures, so that the extent of the cover is clearly defined and incontrovertible. Other than non-payment by a protection purchaser of money due in respect of the credit protection contract, it must be irrevocable; there must be no clause in the contract that would allow the protection provider unilaterally to cancel the credit cover or that would increase the effective cost of cover as a result of deteriorating credit quality in the hedged exposure.⁵⁴ It must also be unconditional; there should be no clause in the protection contract outside the direct control of the banking corporation that could prevent the protection provider from being obliged to pay out in a timely manner in the event that the original counterparty fails to make the payment(s) due.

⁵⁴ Note that the irrevocability condition does not require that the credit protection and the exposure be maturity matched; rather that the maturity agreed *ex ante* may not be reduced *ex post* by the protection provider. Paragraph 203 sets forth the treatment of call options in determining remaining maturity for credit protection.

Additional operational requirements for guarantees

190. In addition to the legal certainty requirements in Paragraphs 117 and 118 above, in order for a guarantee to be recognized, the following conditions must be satisfied:

- (a) On the qualifying default/non-payment of the counterparty, the banking corporation may in a timely manner pursue the guarantor for any monies outstanding under the documentation governing the transaction. The guarantor may make one lump sum payment of all monies under such documentation to the banking corporation, or the guarantor may assume the future payment obligations of the counterparty covered by the guarantee. The banking corporation must have the right to receive any such payments from the guarantor without first having to take legal actions in order to pursue the counterparty for payment.
- (b) The guarantee is an explicitly documented obligation assumed by the guarantor.
- (c) Except as noted in the following sentence, the guarantee covers all types of payments the underlying obligor is expected to make under the documentation governing the transaction, for example notional amount, margin payments etc. Where a guarantee covers payment of principal only, interests and other uncovered payments should be treated as an unsecured amount in accordance with Paragraph 198.

Additional operational requirements for credit derivatives

191. In order for a credit derivative contract to be recognized, the following conditions must be satisfied:

- (a) The credit events specified by the contracting parties must at a minimum cover:
 - failure to pay the amounts due under terms of the underlying obligation that are in effect at the time of such failure (with a grace period that is closely in line with the grace period in the underlying obligation);
 - bankruptcy, insolvency or inability of the obligor to pay its debts, or its failure or admission in writing of its inability generally to pay its debts as they become due, and analogous events; and
 - restructuring of the underlying obligation involving forgiveness or postponement of principal, interest or fees that results in a credit loss event (i.e. charge-off, specific provision or other similar debit to the profit and loss account). When restructuring is not specified as a credit event, refer to Paragraph 192.

- (b) If the credit derivative covers obligations that do not include the underlying obligation, paragraph (g) below governs whether the asset mismatch is permissible.
- (c) The credit derivative shall not terminate prior to expiration of any grace period required for a default on the underlying obligation to occur as a result of a failure to pay, subject to the provisions of Paragraph 203.
- (d) Credit derivatives allowing for cash settlement are recognized for capital purposes insofar as a robust valuation process is in place in order to estimate loss reliably. There must be a clearly specified period for obtaining post-credit-event valuations of the underlying obligation. If the reference obligation specified in the credit derivative for purposes of cash settlement is different than the underlying obligation, paragraph (g) below governs whether the asset mismatch is permissible.
- (e) If the protection purchaser's right/ability to transfer the underlying obligation to the protection provider is required for settlement, the terms of the underlying obligation must provide that any required consent to such transfer may not be unreasonably withheld.
- (f) The identity of the parties responsible for determining whether a credit event has occurred must be clearly defined. This determination must not be the sole responsibility of the protection seller. The protection buyer must have the right/ability to inform the protection provider of the occurrence of a credit event.
- (g) A mismatch between the underlying obligation and the reference obligation under the credit derivative (i.e., the obligation used for purposes of determining cash settlement value or the deliverable obligation) is permissible if (1) the reference obligation ranks pari passu with or is junior to the underlying obligation, and (2) the underlying obligation and reference obligation share the same obligor (i.e., the same legal entity) and legally enforceable cross-default or cross-acceleration clauses are in place.
- (h) A mismatch between the underlying obligation and the obligation used for purposes of determining whether a credit event has occurred is permissible if (1) the latter obligation ranks pari passu with or is junior to the underlying obligation, and (2) both obligations share the same obligor (i.e. the same legal entity) and legally enforceable cross-default or cross-acceleration clauses are in place.

192. When the restructuring of the underlying obligation is not covered by the credit derivative, but the other requirements in Paragraph 191 are met, partial recognition of the credit derivative will be allowed. If the amount of the credit derivative is less than or equal to the

amount of the underlying obligation, 60% of the amount of the hedge can be recognized as covered. If the amount of the credit derivative is larger than that of the underlying obligation, then the amount of eligible hedge is capped at 60% of the amount of the underlying obligation.⁵⁵

193. Only credit default swaps (CDS) and total return swaps (TRS) that provide credit protection equivalent to guarantees will be eligible for recognition. The following exception applies. Where a banking corporation buys credit protection through a total return swap and records the net payments received on the swap as net income, but does not record offsetting deterioration in the value of the asset that is protected (either through reductions in fair value or by an addition to reserves), the credit protection will not be recognized. The treatment of first-to-default and Nth-to-default products is covered separately in Paragraphs 207 to 210.

194. Other types of credit derivatives will not be eligible for recognition at this time.⁵⁶

194a. For purposes of capital relief, only transactions in credit derivatives that are based on agreements accepted in the market, such as the ISDA Master Agreement, will be recognized.

(ii) Range of eligible guarantors (counter-guarantors)/protection providers

195. Credit protection given by the following entities will be recognized:

- (a) sovereign entities⁵⁷, PSEs, banks⁵⁸ and securities firms with a lower risk weight than the counterparty;
- (b) other entities that are externally rated except when credit protection is provided to securitization exposure. This would include credit protection provided by parent, subsidiary and affiliate companies when they have a lower risk weight than the obligor.
- (c) When credit protection is provided to a securitization exposure, other entities that currently are externally rated BBB- or better and that were externally rated A- or better

⁵⁵ Deleted.

⁵⁶ Cash funded credit linked notes (CLN) issued by the banking corporation against exposures in the banking book which fulfill the criteria for credit derivatives will be treated as cash collateralized transactions.

⁵⁷ This includes the Bank for International Settlements, the International Monetary Fund, the European Central Bank and the European Community, as well as those MDBs referred to in footnote 24.

⁵⁸ This includes other MDBs.

at the time the credit protection was provided. This would include credit protection provided by parent, subsidiary and affiliate companies when they have a lower risk weight than the obligor.

(iii) Risk weights

196. The protected portion is assigned the risk weight of the protection provider. The uncovered portion of the exposure is assigned the risk weight of the underlying counterparty.
197. Materiality thresholds on payments below which no payment is made in the event of loss are equivalent to retained first loss positions and must be deducted in full from the capital of the bank purchasing the credit protection.

Proportional cover

198. Where the amount guaranteed, or against which credit protection is held, is less than the amount of the exposure, and the secured and unsecured portions are of equal seniority, i.e. the banking corporation and the guarantor share losses on a pro-rata basis, capital relief will be afforded on a proportional basis: i.e. the protected portion of the exposure will receive the treatment applicable to eligible guarantees/credit derivatives, with the remainder treated as unsecured.

Tranched cover

199. Where the banking corporation transfers a portion of the risk of an exposure in one or more tranches to a protection seller or sellers and retains some level of risk of the loan, and the risk transferred and the risk retained are of different seniority, the banking corporation may obtain credit protection for either the senior tranches (e.g. second loss portion) or the junior tranche (e.g. first loss portion). In this case the rules as set out in Proper Conduct of Banking Business Directive 205 (Credit Risk – Securitization) will apply.

(iv) Currency mismatches

200. Where the credit protection is denominated in a currency different from that in which the exposure is denominated — i.e. there is a currency mismatch — the amount of the exposure deemed to be protected will be reduced by the application of a haircut H_{FX} , i.e.

$$G_A = G \times (1 - H_{FX})$$

where:

G = nominal amount of the credit protection

H_{FX} = haircut appropriate for currency mismatch between the credit protection and the underlying obligation.

The appropriate haircut based on a 10-business-day holding period (assuming daily marking-to-market) will be applied. If a bank uses the supervisory haircuts it will be 8%. The haircuts must be scaled up using the square root of time formula, depending on the frequency of revaluation of the credit protection, as described in Paragraph 168.

(v) *Sovereign guarantees*

201. (a) As specified in Paragraph 54, a risk weight of 0% may be applied to a banking corporation's exposures to the Government of Israel (or the Bank of Israel) when the banking corporation is incorporated in Israel and the exposure is denominated in NIS.
- (b) This treatment is also permitted for portions of claims guaranteed by the Government of Israel (or the Bank of Israel), where the guarantee is denominated and the exposure is funded in NIS.

In order to remove any doubt, a guarantee of the State, like any other guarantee, must meet all the operational and legal conditions set out in Paragraphs 189 and 190 in order to be considered eligible for purposes of capital relief.

- 201a. When a supervisor from an OECD member state applies a reduced risk weight to portions of an exposure, which is secured by a guarantee that is denominated and funded in a local currency, which is issued by the sovereign in that country (or its central bank), banking corporations incorporated in Israel are permitted to adopt that relief, on the condition that the rating of that country is A- or higher.

(vi) *Housing loan insurance*

- 201b. Housing loan insurance will be recognized as eligible credit protection if all of the legal and operational conditions applying to a guarantee are fulfilled. Such credit protection will be

considered as meeting the timely manner criteria described in Paragraphs 189 and 190(a) if the beneficiary of the protection is eligible to receive the full amount of the insurance not later than 24 months from the date of the credit event.

6. *Maturity mismatches*

202. For the purposes of calculating risk-weighted assets, a maturity mismatch occurs when the residual maturity of a hedge is less than that of the underlying exposure.

(i) Definition of maturity

203. The maturity of the underlying exposure and the maturity of the hedge should both be defined conservatively. The effective maturity of the underlying exposure should be gauged as the longest possible remaining time before the counterparty is scheduled to fulfill its obligation, taking into account any applicable grace period. For the hedge, embedded options which may reduce the term of the hedge should be taken into account so that the shortest possible effective maturity is used. Where a call is at the discretion of the protection seller, the maturity will always be at the first call date. If the call is at the discretion of the protection buying banking corporation but the terms of the arrangement at origination of the hedge contain a positive incentive for the banking corporation to call the transaction before contractual maturity, the remaining time to the first call date will be deemed to be the effective maturity. For example, where there is a step-up in cost in conjunction with a call feature or where the effective cost of cover increases over time even if credit quality remains the same or increases, the effective maturity will be the remaining time to the first call.

(ii) Risk weights for maturity mismatches

204. As outlined in Paragraph 143, hedges with maturity mismatches are only recognized when their original maturities are greater than or equal to one year. As a result, the maturity of hedges for exposures with original maturities of less than one year must be matched to be recognized. In all cases, hedges with maturity mismatches will no longer be recognized when they have a residual maturity of three months or less.

205. When there is a maturity mismatch with recognized credit risk mitigants (collateral, on-balance-sheet netting, guarantees and credit derivatives) the following adjustment will be applied.

$$Pa = P \times (t - 0.25) / (T - 0.25)$$

where:

Pa = value of the credit protection adjusted for maturity mismatch

P = credit protection (e.g. collateral amount, guarantee amount) adjusted for any haircuts

t = min (T, residual maturity of the credit protection arrangement) expressed in years

T = min (5, residual maturity of the exposure) expressed in years

7. Other items related to the treatment of CRM techniques

(i) Treatment of pools of CRM techniques

206. In the case where a banking corporation has multiple CRM techniques covering a single exposure (e.g. a banking corporation has both collateral and guarantee partially covering an exposure), the banking corporation will be required to subdivide the exposure into portions covered by each type of CRM technique (e.g. portion covered by collateral, portion covered by guarantee) and the risk-weighted assets of each portion must be calculated separately. When credit protection provided by a single protection provider has differing maturities, they must be subdivided into separate protection as well.

(ii) First-to-default credit derivatives

207. There are cases where a banking corporation obtains credit protection for a basket of reference names and where the first default among the reference names triggers the credit protection and the credit event also terminates the contract. In this case, the banking corporation may recognize regulatory capital relief for the asset within the basket with the lowest risk-weighted amount, but only if the notional amount is less than or equal to the notional amount of the credit derivative.

208. With regard to the banking corporation providing credit protection through such an instrument, if the product has an external credit assessment from an eligible credit assessment institution, the risk weight in Paragraph 567 of Proper Conduct of Banking Business Directive 205 applied to securitization tranches will be applied. If the product is not rated by an eligible external credit assessment institution, the risk weights of the assets included in the basket will be aggregated up to a maximum of 1250% and multiplied by the nominal

amount of the protection provided by the credit derivative to obtain the risk-weighted asset amount.

(iii) *Nth-to-default credit derivatives*

209. In the case where the Nth default among the assets within the basket triggers the credit protection, the banking corporation obtaining credit protection through such a product will only be able to recognize any capital relief if first to N-1 default protection has also be obtained or when N-1 of the assets within the basket has already defaulted.
210. For banking corporations providing credit protection through such a product, the capital treatment is the same as in Paragraph 208 above with one exception. The exception is that, in aggregating the risk weights, the asset with the lowest risk weighted amount can be excluded from the calculation.

Appendix A

Implementing the Mapping Process

1. Because the Supervisor of Banks will be responsible for assigning an eligible External Credit Assessment Institution's (hereafter: ECAI) credit risk assessments to the risk weights available under the standardized approach, he will need to consider a variety of qualitative and quantitative factors to differentiate between the relative degrees of risk expressed by each assessment. Such qualitative factors could include the pool of issuers that each agency covers, the range of ratings that an agency assigns, each rating's meaning, and each agency's definition of default, among others.
2. Quantifiable parameters may help to promote a more consistent mapping of credit risk assessments into the available risk weights under the standardized approach. This Appendix summarizes the Basel Committee's proposals to help the Supervisor with mapping exercises. The parameters presented below are intended to provide guidance and are not intended to establish new or complement existing eligibility requirements for ECAIs.

Evaluating Cumulative Default Rates (CDRs): two proposed measures

3. To help ensure that a particular risk weight is appropriate for a particular credit risk assessment, ECAIs will present the Banking Supervision with the cumulative default rate (CDR) associated with all issues assigned the same credit risk rating. ECAIs will present Bank Supervision with two separate measures of CDRs associated with each risk rating contained in the standardized approach, using in both cases the CDR measured over a three-year period.
 - In order for the Bank Supervisor to have a sense of the long-run default experience overtime, ECAIs will present the Banking Supervision Department with the ten-year average of the three-year CDR when this depth of data is available.²³¹ New rating agencies or those that have compiled less than ten years of default data may be asked by the Supervisor of Banks what they believe the 10-year average of the three-year

²³¹ In 2002, for example, a supervisor would calculate the average of the three-year CDRs for issuers assigned to each rating grade (the "cohort") for each of the ten years 1990 to 1999.

CDR would be for each risk rating, and they will be accountable for such an evaluation thereafter for the purpose of risk weighting the claims they rate.

- The other measure that an ECAI will present to the Banking Supervision Department is the most recent three-year CDR associated with each credit risk assessment of that ECAI.
4. Both measurements would be compared to aggregate, historical default rates of credit risk assessments that were compiled by the Basel Committee and that are believed to represent an equivalent level of credit risk.
 5. Since in general, three-year CDR data is expected to be available from other ECAIs as well, the Supervisor of Banks will compare the default experience of a particular ECAI's assessments with those issued by other rating agencies, in particular major agencies rating a similar population.

Mapping risk ratings to risk weights using CDRs

6. In order to determine the appropriate risk weights to which an ECAI's risk ratings should be mapped, each of the CDR measures mentioned above could be compared to the following reference and benchmark values of CDRs:
 - For each step in an ECAI's rating scale, a ten-year average of the three-year CDR would be compared to a long run "reference" three-year CDR that would represent a sense of the long-run international default experience of risk assessments.
 - Likewise, for each step in the ECAI's rating scale, the two most recent three-year CDR would be compared to "benchmarks" for CDRs. This comparison would be intended to determine whether the ECAI's most recent record of assessing credit risk remains within the CDR supervisory benchmarks.

7. Table 1 below illustrates the overall framework for such comparisons.

Table 1
Comparison of CDR Measures²³²

International Experience (derived from the combined experience of major rating agencies)	 	External Credit Assessment Institution for which the mapping process was carried out
<i>Set by the Basel Committee as guidance</i>		<i>Default data of entities rated by the ECAI</i>
Long-run “reference” CDR		Ten-year average of the three-year CDR
CDR Benchmarks		Two most recent three-year CDR

1. Comparing an ECAI’s long-run average three-year CDR to a long-run “reference” CDR

8. For each credit risk category used in the standardized approach, the corresponding long-run reference CDR (as presented in Table 2 below) would provide information on what its default experience has been internationally. The ten-year average of an eligible ECAI’s particular assessment would not be expected to exactly match the long-run reference CDR. The recommended long-run “reference” three-year CDRs for each of the Committee’s credit risk categories are presented in Table 2 below, based on the Committee’s observations of the default experience reported by major rating agencies internationally.

Table 2
Proposed long-run “reference” three-year CDRs

S&P Assessment <i>(Moody’s)</i>	AAA-AA <i>(Aaa-Aa)</i>	A <i>(A)</i>	BBB <i>(Baa)</i>	BB <i>(Ba)</i>	B <i>(B)</i>
20-year average of three-year CDR	0.10%	0.25%	1.00%	7.50%	20.00%

²³² It should be noted that each major rating agency would be subject to these comparisons as well, in which its individual experience would be compared to the aggregate international experience.

2. Comparing an ECAI's most recent three-year CDR to CDR Benchmarks

9. Since an ECAI's own CDRs are not intended to match the reference CDRs exactly, it is important to provide a better sense of what upper bounds of CDRs are acceptable for each assessment, and hence each risk weight, contained in the standardized approach.
10. Exceeding the upper bound for a CDR would therefore not necessarily require the Supervisor to increase the risk weight associated with a particular assessment in all cases if the Supervisor is convinced that the higher CDR results from some temporary cause other than weaker credit risk assessment standards.
11. In order for the Supervisor to interpret whether a CDR falls within an acceptable range for a risk rating to qualify for a particular risk weight, two benchmarks would be set for each assessment, namely a "monitoring" level benchmark and a "trigger" level benchmark.

(a) "Monitoring" level benchmark

12. Exceeding the "monitoring" level CDR benchmark implies that a rating agency's current default experience for a particular credit risk assessment grade is markedly higher than international default experience. Although such assessments would generally still be considered eligible for the associated risk weights, the Supervisor will likely consult with the relevant ECAI to understand why the default experience appears to be significantly worse. If the Supervisor determines that the higher default experience is attributable to weaker standards in assessing credit risk, it can be expected that he will assign a higher risk category to the ECAI's credit risk assessment.

(b) "Trigger" level

13. Exceeding the "trigger" level benchmark implies that a rating agency's default experience is considerably above the international historical default experience for a particular assessment grade. Thus there is a presumption that the ECAI's standards for assessing credit risk are either too weak or are not applied appropriately. If the observed three-year CDR exceeds the trigger level in two consecutive years, it can be expected that the Supervisor will move the risk assessment into a less favorable risk category. However, if the Supervisor determines

that the higher observed CDR is not attributable to weaker assessment standards, then he may exercise judgment and retain the original risk weight.²³³

14. In all cases where the Supervisor decides to leave the risk category unchanged, he may wish to rely on Directive 211 (Capital Adequacy Assessment) and encourage banking corporations to hold more capital.
15. When the Supervisor of Banks has increased the associated risk category, there would be the opportunity for the assessment to again map to the original risk category if the ECAI is able to demonstrate that its three-year CDR falls and remains below the monitoring level for two consecutive years.

(c) Calibrating the benchmark CDRs

16. After reviewing a variety of methodologies, the Basel Committee decided to use Monte Carlo simulations to calibrate both the monitoring and trigger levels for each credit risk assessment category. In particular, the proposed monitoring levels were derived from the 99th percentile confidence interval and the trigger level benchmark from the 99.9th percentile confidence interval. The simulations relied on publicly available historical default data from major international rating agencies. The levels derived for each risk assessment category are presented in Table 3 below, rounded to the first decimal:

Table 3
Proposed three-year CDR benchmarks

S&P Assessment (Moody's)	AAA-AA (Aaa-Aa)	A (A)	BBB (Baa)	BB (Ba)	B (B)
Monitoring Level	0.8%	1.0%	2.4%	11.0%	28.6%
Triggering Level	1.2%	1.3%	3.0%	12.4%	35.0%

²³³ For example, if the Supervisor determines that the higher default experience is a temporary phenomenon, perhaps because it reflects a temporary or exogenous shock such as a natural disaster, then the risk weighting proposed in the standardized approach could still apply. Likewise, a breach of the trigger level by several ECAIs simultaneously may indicate a temporary market change or exogenous shock as opposed to a loosening of credit standards. In either scenario, it can be expected that the Supervisor will monitor the ECAI's assessments to ensure that the higher default experience is not the result of a loosening of credit risk assessment standards.

Appendix B

Capital Treatment for Failed Trades and Non-DvP Transactions

I. Overarching principles

1. Banking corporations should continue to develop, implement and improve systems for tracking and monitoring the credit risk exposures arising from unsettled and failed transactions as appropriate for producing management information that facilitates action on a timely basis, pursuant to Paragraph 88 and 89 of the Directive.
2. Transactions settled through a delivery-versus-payment system (DvP)²³⁴, providing simultaneous exchanges of securities for cash, expose banking corporations to a risk of loss on the difference between the transaction valued at the agreed settlement price and the transaction valued at current market price (i.e. positive current exposure). Transactions where cash is paid without receipt of the corresponding receivable (securities, foreign currencies, gold, or commodities) or, conversely, deliverables were delivered without receipt of the corresponding cash payment (non-DvP, or free-delivery) expose banking corporations to a risk of loss on the full amount of cash paid or deliverables delivered. The current rules set out specific capital charges that address these two kinds of exposures.
3. The following capital treatment is applicable to all transactions on securities, foreign exchange instruments, and commodities that give rise to a risk of delayed settlement or delivery. This includes transactions through recognized clearing houses and central counterparties, that are subject to daily mark-to-market and payment of daily variation margins and that involve a mismatched trade.^{234a} Repurchase and reverse-repurchase

²³⁴ For the purpose of this directive, DvP transactions include payment-versus-payment (PvP) transactions.

^{234a} An exposure value of zero can be attributed to payment transactions (e.g., funds transfer transactions) and other spot transactions that are outstanding with a central counterparty (CCP) (e.g., a clearing house), when the CCP's counterparty credit risk exposures with all participants in its arrangements are fully collateralized on a daily basis.

agreements as well as securities lending and borrowing that have failed to settle are excluded from this capital treatment.²³⁵

4. In cases of a system wide failure of a settlement or clearing system, or of a central counterparty, the Supervisor may use his discretion to waive capital charges until the situation is rectified.
5. Failure of a counterparty to settle a trade in itself will not be deemed a default for purposes of credit risk according to this directive.
6. In applying a risk weight to failed free-delivery exposures, banking corporations using the IRB approach for credit risk may assign PDs to counterparties for which they have no other banking book exposure on the basis of the counterparty's external rating. Banking corporations using the Advanced IRB approach may use a 45% LGD in lieu of estimating LGDs so long as they apply it to all failed trade exposures. Alternatively, banking corporations using the IRB approach may opt to apply the standardized approach risk weights or a 100% risk weight.

II. Capital requirements

7. For DvP transactions, if the payments have not yet taken place five business days after the settlement date, banking corporations must calculate a capital charge by multiplying the positive current exposure of the transaction by the appropriate factor, according to Table 1 below.

Table 1

Number of working days after the agreed settlement date	Corresponding risk multiplier
From 5 to 15	8%
From 16 to 30	50%

²³⁵ All repurchase and reverse-repurchase agreements as well as securities lending and borrowing, including those that have failed to settle, are treated in accordance with Appendix C or Section 4 on credit risk mitigation.

From 31 to 45	75%
46 or more	100%

A reasonable transition period may be allowed for banking corporations to upgrade their information system to be able to track the number of days after the agreed settlement date and calculate the corresponding capital charge.

8. For non-DvP transactions (i.e. free deliveries), after the first contractual payment/delivery leg, the banking corporation that has made the payment will treat its exposure as a loan if the second leg has not been received by the end of the business day.²³⁶ This means that a banking corporation under the IRB approach will apply the appropriate IRB formula set out in this Directive, for the exposure to the counterparty, in the same way as it does for all other banking book exposures. Similarly, banking corporations under the standardized approach will use the standardized risk weights set forth in this Directive. However, when exposures are not material, banking corporations may choose to apply a uniform 100% risk-weight to these exposures, in order to avoid the burden of a full credit assessment. If five business days after the second leg contractual payment/delivery date, the second leg has not yet effectively taken place, the banking corporation that has made the first payment leg will risk weight at 1,250% the full amount of the value transferred plus replacement cost, if any. This treatment will apply until the second payment/delivery leg is effectively made.

²³⁶ If the dates when two payment legs are made are the same according to the time zones where each payment is made, it is deemed that they are settled on the same day. For example, if a bank in Tokyo transfers Yen on day X (Japan Standard Time) and receives corresponding US Dollar via CHIPS on day X (US Eastern Standard Time), the settlement is deemed to take place on the same value date.

Appendix C

Treatment of Counterparty Credit Risk and Cross-Product Netting

1. This appendix identifies permissible methods for estimating the Exposure at Default (EAD) or the exposure amount for instruments with counterparty credit risk (CCR) under this Directive.²³⁷ As alternatives banking corporations may use the standardized method or the current exposure method.

I. Definitions and general terminology

2. This section defines terms that will be used throughout this appendix.

A. General terms

- **Counterparty Credit Risk (CCR)** is the risk that the counterparty to a transaction could default before the final settlement of the transaction's cash flows. An economic loss would occur if the transactions or portfolio of transactions with the counterparty has a positive economic value at the time of default. Unlike a firm's exposure to credit risk through a loan, where the exposure to credit risk is unilateral and only the lending bank faces the risk of loss, CCR creates a bilateral risk of loss: the market value of the transaction can be positive or negative to either counterparty to the transaction. The market value is uncertain and can vary over time with the movement of underlying market factors.
- **A central counterparty (CCP)** is a clearing house that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the future performance of open contracts. A CCP becomes counterparty to trades with market participants through novation, an open offer system, or another legally binding arrangement. For the purposes of the capital framework, a CCP is a financial institution.
- **A qualifying central counterparty (QCCP)** is an entity that is licensed to operate as a CCP (including a license granted by way of confirming an exemption), and is permitted

²³⁷ In this appendix, the terms “exposure at default” and “exposure amount” are used together in order to identify measures of exposure under both an IRB and a standardized approach for credit risk.

by the appropriate regulator/overseer to operate as such with respect to the products offered. This is subject to the provision that the CCP is based and prudentially supervised in a jurisdiction where the relevant regulator/overseer has established, and publicly indicated that it applies to the CCP on an ongoing basis, domestic rules and regulations that are consistent with the CPSS-IOSCO Principles for Financial Market Infrastructures. Where the CCP is in a jurisdiction that does not have a CCP regulator applying the Principles to the CCP, then the banking supervisor may make the determination of whether the CCP meets this definition.

The Supervisor of Banks reserves the right to require banking corporations to hold additional capital against exposures to qualifying central counterparties, through the second pillar (Proper Conduct of Banking Business Directive 211), for example, when an external assessment finds material shortcomings in the CCP or its regulation, and the CCP and/or the CCP regulator have not since publicly addressed the issues identified.

- **A clearing member** is a member of, or a direct participant in, a CCP that is entitled to enter into a transaction with the CCP, regardless of whether it enters into trades with a CCP for its own hedging, investment or speculative purposes or whether it also enters into trades as a financial intermediary between the CCP and other market participants.^{237a}
- **A 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.
- **Initial margin** means a clearing member's or client's funded collateral posted to the CCP to mitigate the potential future exposure of the CCP to the clearing member arising from the possible future change in the value of their transactions. For the purposes of this Appendix, initial margin does not include contributions to a CCP for mutualized loss sharing arrangements (ie in case a CCP uses initial margin to mutualize losses among the clearing members, it will be treated as a default fund exposure).
- **Variation margin** means a clearing member's or client's funded collateral posted on a daily or intraday basis to a CCP based upon price movements of their transactions.
- **Trade exposures** (in section IX of this Appendix) include the current and potential future exposure of a clearing member or a client to a CCP arising from OTC derivatives,

^{237a} For the purposes of this Appendix, where a CCP has a link to a second CCP, that second CCP is to be treated as a clearing member of the first CCP. Whether the second CCP's collateral contribution to the first CCP is treated as initial margin or a default fund contribution will depend upon the legal arrangement between the CCPs.

exchange traded derivatives transactions or SFTs, as well as initial margin. For the purpose of this definition, the clearing member's current exposure includes the amount of variation margin that is to be paid to the clearing member and which has not yet been paid.

- **Default funds, also known as clearing deposits or guaranty fund contributions (or any other names)**, are clearing members' funded or unfunded contributions towards, or underwriting of, a CCP's mutualized loss sharing arrangements. The description given by a CCP to its mutualized loss sharing arrangements is not determinative of their status as a default fund; rather, the substance of such arrangements will govern their status.
- **Offsetting transaction** means the transaction leg between the clearing member and the CCP when the clearing member acts on behalf of a client (e.g., when a clearing member clears or novates a client's trade).
- **Margin period of risk** means the estimated period of time between the last exchange of collateral covering a system of offsetting transactions with a failing counterparty until that counterparty is closed out and the market risk created is re-hedged.

B. Transaction types

- **Long Settlement Transactions** are transactions where a counterparty undertakes to deliver a security, a commodity, or a foreign exchange amount against cash, other financial instruments, or commodities, or vice versa, at a settlement or delivery date that is contractually specified as more than the lower of the market standard for this particular instrument and five business days after the date on which the banking corporation enters into the transaction.
- **Securities Financing Transactions (SFTs)** are transactions such as repurchase agreements, reverse repurchase agreements, security lending and borrowing, and margin lending transactions, where the value of the transactions depends on market valuations and the transactions are often subject to margin agreements.
- **Margin Lending Transactions** are transactions in which a banking corporation extends credit in connection with the purchase, sale, carrying or trading of securities. Margin lending transactions do not include other loans that happen to be secured by securities collateral. Generally, in margin lending transactions, the loan amount is collateralized by securities whose value is greater than the amount of the loan.

- **OTC derivatives:** Foreign currency contracts: currency swap transactions, cross-currency interest rate swaps, foreign exchange forward transactions, foreign exchange futures contracts, foreign exchange options, gold contracts; interest rate contracts: interest rate swap transaction, interest rate basis swap, interest rate forward transaction, interest rate futures contracts, interest rate options; equities contracts: futures contracts, forwards, swaps and options; precious metals contracts: futures contracts, forwards, swaps and options; other commodity contracts: futures contracts, forwards, swaps and options; credit derivatives; other contracts with similar characteristics.

C. Netting sets, hedging sets, and related terms

- **Netting Set** is a group of transactions with a single counterparty that are subject to a legally enforceable bilateral netting arrangement and for which netting is recognized for regulatory capital purposes under the provisions of Paragraphs 96(i) to 96 (v) of this Appendix and credit risk mitigation techniques according to this directive. Each transaction that is not subject to a legally enforceable bilateral netting arrangement that is recognized for regulatory capital purposes should be interpreted as its own netting set for the purpose of these rules.
- **Risk Position** is a risk number that is assigned to a transaction under the CCR standardized method (set out in this Appendix) using a regulatory algorithm.
- **Hedging Set** is a group of risk positions from the transactions within a single netting set for which only their balance is relevant for determining the exposure amount or EAD under the CCR standardized method.
- **Current Market Value (CMV)** refers to the net market value of the portfolio of transactions within the netting set with the counterparty. Both positive and negative market values are used in computing CMV.

D. Deleted

E. Exposure measures and adjustments

- **Current Exposure** is the larger of zero, or the market value of a transaction or portfolio of transactions within a netting set with a counterparty that would be lost upon the default of the counterparty, assuming no recovery on the value of those transactions in bankruptcy. Current exposure is often also called Replacement Cost.

II. Scope of application

3. The methods for computing the exposure amount under the standardized approach for credit risk or EAD under the internal ratings-based (IRB) approach to credit risk described in this Appendix are applicable to SFTs and derivatives (OTC derivatives, derivatives traded on stock exchanges and embedded derivatives that were separated from the host contract in accordance with the accounting rules detailed in Reporting to the Public Directives – "Derivative Instruments and Hedging Activities").
4. Such instruments generally exhibit the following abstract characteristics:
 - The transactions generate a current exposure or market value.
 - The transactions have an associated random future market value based on market variables.
 - The transactions generate an exchange of payments or an exchange of a financial instrument (including commodities) against payment.
 - The transactions are undertaken with an identified counterparty.²³⁸
5. Other common characteristics of the transactions to be covered may include the following:
 - Collateral may be used to mitigate risk exposure and is inherent in the nature of some transactions.
 - Short-term financing may be a primary objective in that the transactions mostly consist of an exchange of one asset for another (cash or securities) for a relatively short period of time, usually for the business purpose of financing. The two sides of the transactions are not the result of separate decisions but form an indivisible whole to accomplish a defined objective.
 - Netting may be used to mitigate the risk.
 - Positions are frequently valued (most commonly on a daily basis), according to market variables.
 - Remargining may be employed.

²³⁸ Deleted.

- 6(i) Exposures to central counterparties arising from OTC derivatives, exchange traded derivatives transactions and SFTs will be subject to the counterparty credit risk treatment laid out in paragraphs 106 to 127 of this Appendix. Exposures arising from the settlement of cash transactions (equities, fixed income, spot FX and spot commodities) are not subject to this treatment. The settlement of cash transactions remains subject to the treatment described in Appendix B.
- 6(ii) When the clearing member-to-client leg of an exchange traded derivatives transaction is conducted under a bilateral agreement, both the client banking corporation and the clearing member are to capitalize that transaction as an OTC derivative.
- 6(iii) The banking corporation's activity on the stock exchange and with customers who are active in the stock exchange will be carried out through netting agreements.
7. Under the two methods identified in this Appendix, when a banking corporation purchases credit derivative protection against a banking book exposure, or against a counterparty credit risk exposure, it will determine its capital requirement for the hedged exposure subject to the criteria and general rules for the recognition of credit derivatives, i.e. substitution or double default rules as appropriate. Where these rules apply, the exposure amount or EAD for counterparty credit risk from such instruments is zero.
- 7a. Paragraph 7 above does not apply to credit derivatives purchased as protection for exposure in respect of which a capital deduction in respect of CVA risk is to be calculated. In such a case, the allocation of capital in respect of CVA risk must also reflect the CVA risk of the credit protection. In other words, the capital deduction in respect of the CVA risk must also be calculated for exposure to the protection seller.
8. The exposure amount or EAD for counterparty credit risk is zero for sold credit default swaps in the banking book where they are treated in the framework as a guarantee provided by the banking corporation and subject to a credit risk charge for the full notional amount.

9. Under the two methods identified in this Appendix, the exposure amount or EAD for a given counterparty is equal to the sum of the exposure amounts or EADs calculated for each netting set with that counterparty.

The “EAD balance” in respect of a given OTC derivative of a counterparty is defined as the greater of zero and the sum of the EADs across all netting sets with the counterparty minus the CVA loss in respect of that counterparty which has already been recognized by the banking corporation. This CVA loss is calculated without taking into account any netting of debit valuation adjustments deducted from capital pursuant to Section 5f of Directive 202.^{238a}

Risk weighted assets for a given OTC derivative of a counterparty may be calculated as the risk weight attributed through the Standardized Approach or the IRB Approach, multiplied by the EAD balance of the counterparty.

10-67. Deleted.^{239,240,241,242,243,244}

68. A banking corporation that makes use of collateral to mitigate its CCR must have internal procedures to verify that, prior to recognizing the effect of collateral in its calculations, the collateral meets the appropriate legal certainty standards as set out in Section D which deals with the mitigation of credit risk.

VI. Standardized Method

69. The standardized method can be used only for OTC derivatives; SFTs are subject to the treatment in Section D. The exposure amount (under the standardized approach for credit risk) or EAD is to be calculated separately for each netting set. It is determined as follows:

$$\text{exposure amount or EAD} = \beta \cdot \max \left(CMV - CMC; \sum_j \left| \sum_i RPT_{ij} - \sum_l RPC_{lj} \right| \times CCF_j \right)$$

where:

^{238a} The CVA loss that is caused, which is deducted from exposures in order to determine the EAD balance is the gross total CVA loss of all DVAs deducted separately from the capital. When the DVAs are not deducted separately from the banking corporation’s capital, the CA loss used to determine the EAD balance shall be minus these DVAs.

²³⁹ Deleted.

²⁴⁰ Deleted.

²⁴¹ Deleted.

²⁴² Deleted.

²⁴³ Deleted.

²⁴⁴ Deleted.

CMV = current market value of the portfolio of transactions within the netting set with a counterparty gross of collateral, i.e. is the CMV_i where $CMV = \sum_i CMV_i$

current market value of transaction i.

CMC = current market value of the collateral assigned to the netting set, i.e. $CMC = \sum_l CMC_l$, where CMC_l is the current market value of collateral l.

i = index designating transaction.

l = index designating collateral.

j = index designating supervisory hedging sets. These hedging sets correspond to risk factors for which risk positions of opposite sign can be offset to yield a net risk position on which the exposure measure is then based.

RPT_{ij} = Risk position from *transaction* i with respect to hedging set j.²⁴⁵

RPC_{lj} = Risk position from collateral l with respect to hedging set j.

CCF_j = Supervisory credit conversion factor with respect to the hedging set j.²⁴⁶

β = Supervisory scaling parameter.

Collateral received from a counterparty has a positive sign; collateral posted to a counterparty has a negative sign.

Collateral that is recognized for the standardized approach is confined to the collateral that is eligible under Paragraphs 146 of this Directive and 703 of Proper Conduct of Banking Business Directive 208 regarding credit risk mitigation.

70. When an OTC derivative transaction with a linear risk profile (e.g. a forward, a future or a swap agreement) stipulates the exchange of a financial instrument (e.g. a bond, an equity, or a commodity) for a payment, the payment part is referred to as the payment leg. Transactions that stipulate the exchange of payment against payment (e.g. an interest rate swap or a foreign exchange forward) consist of two payment legs. The payment legs consist of the contractually agreed gross payments, including the notional amount of the transaction. Banking

²⁴⁵ E.g. a short-term FX forward with one leg denominated in the firm's domestic currency will be mapped into three risk positions: 1. an FX risk position, 2. a foreign currency interest rate risk position, 3. a domestic currency risk position.

²⁴⁶ Calibration has been made assuming at-the-money forwards or swaps and given a forecasting horizon of one year.

corporations may disregard the interest rate risk from payment legs with a remaining maturity of less than one year from the following calculations. Banking corporations may treat transactions that consist of two payment legs that are denominated in the same currency (e.g. interest rate swaps) as a single aggregate transaction. The treatment for payment legs applies to the aggregate transaction.

71. Transactions with linear risk profiles that have equity (including equity indices), gold, other precious metals or other commodities as the underlying financial instruments are mapped to a risk position in the respective equity (or equity index) or commodity (including gold and the other precious metals) hedging set. The payment leg of these transactions is mapped to an interest rate risk position within the appropriate interest rate hedging set. If the payment leg is denominated in a foreign currency, the transaction is also mapped to a foreign exchange risk position in the respective currency.
72. Transactions with linear risk profiles that have a debt instrument (e.g. a bond or a loan) as the underlying instrument are mapped to interest rate risk positions with one risk position for the debt instrument and another risk position for the payment leg. Transactions with linear risk profiles that stipulate the exchange of payment against payment (including foreign exchange forwards) are mapped to an interest rate risk position for each of the payment legs. If the underlying debt instrument is denominated in a foreign currency, the debt instrument is mapped to a foreign exchange risk position in the respective currency. If a payment leg is denominated in a foreign currency, the payment leg is also mapped to a foreign exchange risk position in this currency.²⁴⁷ The exposure amount or EAD assigned to a foreign exchange basis swap transaction is zero.
73. For all but debt instruments, the size of a risk position from a transaction with a linear risk profile is the effective notional value (market price multiplied by quantity) of the underlying financial instruments (including commodities) converted to the firm's domestic currency.
74. For debt instruments and the payment legs of all transactions, the size of the risk position is the effective notional value of the outstanding gross payments (including the notional

²⁴⁷ E.g. a short-term FX forward with one leg denominated in the firm's domestic currency will be mapped into three risk positions: 1. an FX risk position, 2. a foreign currency interest rate risk position, 3. a domestic currency risk position.

amount) converted to the firm's domestic currency, multiplied by the modified duration of the debt instrument or payment leg, respectively.

75. The size of a risk position from a credit default swap is the notional value of the reference debt instrument multiplied by the remaining maturity of the credit default swap.
76. The size of a risk position from an OTC derivative with a non-linear risk profile (including options and swaptions) is equal to the delta equivalent effective notional value of the financial instrument that underlies the transaction, except in the case of an underlying debt instrument.
77. For OTC derivatives with non-linear risk profiles (including options and swaptions), for which the underlying is a debt instrument or a payment leg, the size of the risk position is equal to the delta equivalent effective notional value of the financial instrument or payment leg multiplied by the modified duration of the debt instrument or payment leg.
78. Banking corporations may use the following formulas to determine the size and sign of a risk position:
 - a. for all but debt instruments:

effective notional value, or delta equivalent notional value = $p_{ref} \frac{\partial v}{\partial p}$

where

- | | |
|-----------|--|
| p_{ref} | price of the underlying instrument, expressed in the reference currency |
| v | value of the financial instrument (in the case of an option: option price; in the case of a transaction with a linear risk profile: value of the underlying instrument itself) |
| p | price of the underlying instrument, expressed in the same currency as v |

- b. for debt instruments and the payment legs of all transactions:
 effective notional value multiplied by the modified duration, or delta equivalent in notional value multiplied by the modified duration

$$\frac{\partial v}{\partial r}$$

where

v value of the financial instrument (in the case of an option: option price; in the case of a transaction with a linear risk profile: value of the underlying instrument itself or of the payment leg, respectively)

r interest level

If v is denominated in a currency other than the reference currency, the derivative must be converted into the reference currency by multiplication with the relevant exchange rate.

79. The risk positions are to be grouped into hedging sets. For each hedging set, the absolute value amount of the sum of the resulting risk positions is computed. This sum is termed the “net risk position” and is represented as

$$| \sum_i RPT_{ij} - \sum_l RPC_{lj} |$$

in the formulas in Paragraph 69 of this Appendix.

80. Interest rate positions arising from debt instruments of low specific risk are to be mapped into one of six hedging sets for each represented currency. A debt instrument is classified as being of low specific risk when it is subject to a 1.6 percent or lower capital charge according to Paragraphs 710 to 711(ii) of Proper Conduct of Banking Business Directive 208. Interest rate positions arising from the payment legs are to be assigned to the same hedging sets as interest rate risk positions from debt instruments of low specific risk. Interest rate positions arising from money deposits received from the counterparty as collateral are also to be assigned to the same hedging sets as interest rate risk positions from debt instruments of low specific risk. The six hedging sets per currency are defined by a combination of two criteria:
- (i) The nature of the referenced interest rate — either a sovereign (government) rate or some other rate.
 - (ii) The remaining maturity or rate-adjustment frequency — less than one year, between one and five years, or longer than five years.

Table 1

Hedging Sets for Interest Rate Risk Positions Per Currency

Remaining maturity or rate-adjustment frequency	Sovereign-referenced interest rates	Non-sovereign referenced interest rates
--	--	--

One year or less	X	X
Over one year to five years	X	X
Over five years	X	X

81. For underlying debt instruments (e.g. floating rate notes) or payment legs (e.g. floating rate legs of interest swaps) for which the interest rate is linked to a reference interest rate that represents a general market interest level (e.g. government bond yield, money market rate, swap rate), the rate-adjustment frequency is the length of the time interval up to the next re-adjustment of the reference interest rate. Otherwise, the remaining maturity is the remaining life of the underlying debt instrument, or, in the case of a payment leg, the remaining life of the transaction.
82. The banking corporation will determine one hedging set for each issuer of a reference debt instrument that underlies a credit default swap.
83. The banking corporation will determine one hedging set for each issuer of a debt instrument of high specific risk, i.e. debt instruments to which a capital charge of more than 1.60 percent applies under the standardized measurement method for interest rate risk in Paragraph 710 of Proper Conduct of Banking Business Directive 208. The same applies to money deposits that are posted with a counterparty as collateral when that counterparty does not have debt obligations of low specific risk outstanding. When a payment leg emulates a debt instrument of high specific risk (e.g. in the case of a total return swap with one leg that emulates a bond), there is also one hedging set for each issuer of the reference debt instrument. Banking corporations may assign risk positions that arise from debt instruments of a certain issuer or from reference debt instruments of the same issuer that are emulated by payment legs or that underlie a credit default swap to the same hedging set.
84. Underlying financial instruments other than debt instruments (equities, precious metals, commodities, other instruments) are assigned to the same respective hedging sets only if they are identical or similar instruments. The similarity of instruments is established as follows:

- For equities, similar instruments are those of the same issuer. An equity index is treated as a separate issuer.
- For precious metals, similar instruments are those of the same metal. A precious metal index is treated as a separate precious metal.
- For commodities, similar instruments are those of the same commodity. A commodity index is treated as a separate commodity.
- For electric power, delivery rights and obligations that refer to the same peak or off-peak load time interval within any 24 hour interval are similar instruments.

85. The credit conversion factor that is applied to a net risk position from a hedging set depends on the supervisory hedging set category as given in Paragraphs 86 to 88 of this Appendix.
86. The credit conversion factors for underlying financial instruments other than debt instruments and for foreign exchange rates are given in Table 2.

Table 2

Exchange Rates	Gold	Equity	Precious Metals (except gold)	Electric Power	Other Commodities (excluding precious metals)
2.5%	5.0%	7.0%	8.5%	4%	10.0%

87. The credit conversion factor for risk positions from debt instruments are as follows:
- 0.6 percent for risk positions from a debt instrument or reference debt instrument of high specific risk.
 - 0.3 percent for risk positions from a reference debt instrument that underlies a credit default swap and that is of low specific risk.
 - 0.2 percent otherwise.
88. Underlying instruments of OTC derivatives that are not in any of the categories above are assigned to separate individual hedging sets for each category of underlying instrument. A credit conversion factor of 10 percent is applied to the net equivalent amount.

89. There may be transactions with a non-linear risk profile for which the bank cannot determine the delta with a model that the Supervisor has approved for the purposes for determining the minimum capital requirements for market risk (instrument models approved for the purposes of the standardized approach for market risk, or instrument models approved as part of the firm's admission to the internal modeling approach for market risk). In the case of payment legs and transactions with debt instruments as underlying, there may be transactions for which the bank cannot determine the modified duration with such a model. For these transactions, the Supervisor will determine the size of the risk positions and the applicable credit conversion factors conservatively. Alternatively, the Supervisor may require the use of the current exposure method. Netting will not be recognized: in other words, the exposure amount or EAD is to be determined as if there were a netting set that comprises just the individual transaction.
90. The supervisory scaling parameter β (beta) is set at 1.4.

VII. Current Exposure Method

91. The current exposure method is to be applied to OTC derivatives only; SFTs are subject to the treatments set out in Section D.
92. (Deleted)
- 92(i) Under the Current Exposure Method, banking corporations must calculate the current replacement cost by marking contracts to market, thus capturing the current exposure without any need for estimation, and then adding a factor (the "add-on") to reflect the potential future exposure over the remaining life of the contract. It has been agreed that, in order to calculate the credit equivalent amount of these instruments under this current exposure method, a banking corporation would sum:
- The total replacement cost (obtained by "marking to market") of all its contracts with positive value; and
 - An amount for potential future credit exposure calculated on the basis of the total notional principal amount of its book, split by residual maturity as follows:

	Interest Rates	FX and Gold	Equities	Precious Metals Except Gold	Other Commodities
One year or less	0.0%	1.0%	6.0%	7.0%	10.0%
Over one year to five years	0.5%	5.0%	8.0%	7.0%	12.0%
Over five years	1.5%	7.5%	10.0%	8.0%	15.0%

Notes:

1. For contracts with multiple exchanges of principal, the factors are to be multiplied by the number of remaining payments in the contract.
2. For contracts that are structured to settle outstanding exposure following specified payment dates and where the terms are reset such that the market value of the contract is zero on these specified dates, the residual maturity would be set equal to the time until the next reset date. In the case of interest rate contracts with remaining maturities of more than one year that meet the above criteria, the add-on factor is subject to a floor of 0.5%.
3. Forwards, swaps, purchased options and similar derivative contracts not covered by any of the columns of this matrix are to be treated as "other commodities".
4. No potential future credit exposure would be calculated for single currency floating/floating interest rate swaps; the credit exposure on these contracts would be evaluated solely on the basis of their mark-to-market value. No potential future credit exposure would be calculated for options written by the banking corporation.
5. The add-on factor to be applied to shekel/CPI transactions will be that applied to interest rate transactions.
6. The add-on factor to be applied to transactions composed of two types of transaction (such as, interest rate and foreign exchange) will be the higher of the two possibilities.

92(ii). The Supervisor of Banks will ensure that the add-ons are based on effective rather than apparent notional amounts. In the event that the stated notional amount is leveraged or enhanced by the structure of the transaction, banking corporations must use the effective notional amount when determining potential future exposure.

93. Banking corporations can obtain capital relief for collateral as defined in Paragraphs 146 of this Directive and 703 of Proper Conduct of Banking Business Directive 208. The methodology for the recognition of eligible collateral follows that of the applicable approach for credit risk.
94. The counterparty credit risk exposure amount or EAD for single name credit derivative transactions in the trading book will be calculated using the potential future exposure add-on factors set out in Paragraph 707 of Proper Conduct of Banking Business Directive 208.
95. To determine capital requirements for hedged banking book exposures, the treatment for credit derivatives in this Directive applies to qualifying credit derivative instruments.
96. Where a credit derivative is an n^{th} -to-default transaction (such as a first-to-default transaction), the treatment specified in Paragraph 708 of Proper Conduct of Banking Business Directive 208 applies.

Bilateral netting

- 96(i). The Basel Committee gave careful consideration to the issue of **bilateral netting**, i.e. weighting the net rather than the gross claims with the same counterparties arising out of the full range of forwards, swaps, options and similar derivative contracts.²⁴⁸ The Committee is concerned that if a liquidator of a failed counterparty has (or may have) the right to unbundle netted contracts, demanding performance on those contracts favorable to the failed counterparty and defaulting on unfavorable contracts, there is no reduction in counterparty risk.
- 96(ii). Accordingly, it has been agreed for capital adequacy purposes that:
- (a) Banking corporations may net transactions subject to novation under which any obligation between a banking corporation and its counterparty to deliver a given

²⁴⁸ Payments netting, which is designed to reduce the operational costs of daily settlements, will not be recognized in the capital framework since the counterparty's gross obligations are not in any way affected.

currency on a given value date is automatically amalgamated with all other obligations for the same currency and value date, legally substituting one single amount for the previous gross obligations.

- (b) Banking corporations may also net transactions subject to any legally valid form of bilateral netting not covered in (a), including other forms of novation.
- (c) In both cases (a) and (b), a banking corporation will need to satisfy the Supervisor that it has²⁴⁹:
 - i. A netting contract or agreement with the counterparty which creates a single legal obligation, covering all included transactions, such that the banking corporation would have either a claim to receive or obligation to pay only the net sum of the positive and negative mark-to-market values of included individual transactions in the event a counterparty fails to perform due to any of the following: default, bankruptcy, liquidation or similar circumstances;
 - ii. Written and reasoned legal opinions that, in the event of a legal challenge, the relevant courts and administrative authorities would find the banking corporation's exposure to be such a net amount under:
 - The law of the jurisdiction in which the counterparty is chartered and, if the foreign branch of a counterparty is involved, then also under the law of the jurisdiction in which the branch is located;
 - The law that governs the individual transactions; and
 - The law that governs any contract or agreement necessary to effect the netting.

The provider of the opinion must be external and independent and must possess legal expertise and professional experience in the specific area in which he is providing the opinion.

The legal opinion will be in the format recognized by the legal community in the firm's home country or in the form of a legal memo that deals with all relevant issues in a reasoned manner.

²⁴⁹ In cases where an agreement as described in 96(ii) has been recognized prior to July 1994, the Supervisor will determine whether any additional steps are necessary to satisfy itself that the agreement meets the requirements set out below.

The Supervisor, must be satisfied that the netting is enforceable under the laws of each of the relevant jurisdictions;²⁵⁰

- iii. The banking corporation will have internal procedures in place to ensure that the legal characteristics of netting arrangements are kept under review in the light of possible changes in relevant law. The procedures will ensure, among other things, the carrying out of periodic legal reviews, as prescribed in Paragraph 118a.
- iv. The banking corporation will have internal procedures to ensure that prior to the inclusion of the transaction within the netting arrangements, that transaction will be included in the legal opinions that fulfill the criteria mentioned above.
- v. The banking corporation will save all the required documents in its records.

96(iii). Contracts containing walkaway clauses will not be eligible for netting for the purpose of calculating capital requirements pursuant to this Directive. A walkaway clause is a provision which permits a non-defaulting counterparty to make only limited payments, or no payment at all, to the estate of a defaulter, even if the defaulter is a net creditor.

96(iv). Credit exposure on bilaterally netted forward transactions will be calculated as the sum of the net mark-to-market replacement cost (the replacement cost of all transactions), if positive, plus an add-on based on the notional underlying principal. The add-on for netted transactions (A_{Net}) will equal the weighted average of the gross add-on (A_{Gross})²⁵¹ and the gross add-on adjusted by the ratio of net current replacement cost to gross current replacement cost (NGR). This is expressed through the following formula:

$$A_{Net}=0.4*A_{Gross}+0.6*NGR*A_{Gross}$$

where :

NGR= level of net replacement cost divided by level of gross replacement cost for transactions subject to legally enforceable netting agreements.²⁵²

²⁵⁰ Thus, if any of these supervisors is dissatisfied about enforceability under its laws, the netting contract or agreement will not meet this condition and neither counterparty could obtain supervisory benefit.

²⁵¹ A_{Gross} equals the sum of individual add-on amounts (calculated by multiplying the notional principal amount by the appropriate add-on factors set out in paragraph 92(i) of this Appendix) of all transactions subject to legally enforceable netting agreements with one counterparty.

²⁵² The NGR calculation will be carried out for each counterparty individually.

96(v). The scale of the gross add-ons to apply in this formula will be the same as those for non-netted transactions as set out in Paragraphs 91 to 96 of this Appendix. The Supervisor will continue to review the scale of add-ons to make sure they are appropriate. For purposes of calculating potential future credit exposure to a netting counterparty for forward foreign exchange contracts and other similar contracts in which notional principal is equivalent to cash flows, notional principal is defined as the net receipts falling due on each value date in each currency. The reason for this is that offsetting contracts in the same currency maturing on the same date will have lower potential future exposure as well as lower current exposure.

Risk weighting

96(vi). Once the banking corporation has calculated the credit equivalent amounts, they are to be **weighted** according to the category of counterparty in the same way as in the main framework, including concessionary weighting in respect of exposures backed by eligible guarantees and collateral. The Basel Committee will keep a close eye on the credit quality of participants in these markets and reserves the right to raise the weights if average credit quality deteriorates or if loss experience increases.

Examples

96a. An example for the calculation of counterparty credit risk according to the current exposure approach:

A bank has 4 contracts with a counterparty that are subject to a legal and enforceable netting agreement.

1. A futures transaction to buy 1 million euro for 1.53 million dollars with a 3-month maturity.
2. A futures transaction to sell 1 million euro for 1.5 million dollars with a 1-month maturity.
3. A futures transaction to sell 0.4 million euro for 0.6 million dollars with a 3-month maturity.
4. A futures transaction to buy 1 million euro for 1.6 million dollars with a 2-year maturity.

Euro/dollar rate = 1.6; dollar/shekel rate = 4; market values of the transactions are given in the table.

Transaction	Nominal value (purchased currency in euro terms)	Period till maturity (in years)	Add-on factor	Current replacement cost (MTM)	Add_on	Max (MTM,0)	CCR of the transaction
1	1,000,000	0.25	1.0%	89,000	10,000	89,000	99,000
2	937,500	0.083	1.0%	- 106,000	9,375	0	9,375
3	375,000	0.25	1.0%	- 47,600	3,750	0	3,750
4	1,000,000	2	5.0%	152,000	50,000	152,000	202,000
Total				87,400	73,125	241,000	314,125

All the data are expressed in euros.

- (1) The counterparty credit risk without taking into account netting agreements is calculated as the arithmetic sum of the CCR values of the individual transactions.

CCR value of an individual transaction = $MAX(MTM,0) + Add_on$

Total counterparty credit risk without taking into account netting agreements: 314,125 euro or 2,010,400 shekels.

- (2) Calculation of counterparty credit risk with account taken of netting agreements is calculated as the sum of the net current replacement cost (MTM) of all the transactions with the addition of A_{Net} .

Net current replacement cost (MTM) = 87,400.

Calculation of A_{Net} according to the formula:

$$A_{Gross} = 73,125$$

$$NGR = (87,400/241,000) = 0.36$$

$$A_{Net} = 0.4 \times 73,125 + 0.6 \times 0.36 \times 73,125 = 45,045$$

Total counterparty credit risk: $87,400 + 45,045 = 132,445$ euros or 847,648 shekels.

- (3) In the above example, transactions 1 and 3 fulfill the conditions in Paragraph 96(v) of this appendix and therefore can be netted. In this case, in order to calculate counterparty credit risk of the netting set, a table is created containing the transactions after netting.

In the following table, transactions 1 and 3 have been netted:

Transaction	Nominal value (purchase d currency in euro terms)	Period till maturity (in years)	Add-on factor	Current replacement cost (MTM)	Add-on	Max (MTM,0)	CCR of the transaction
1+3	600,000	0.25	1.0%	41,400	6,000	41,400	47,400
2	937,500	0.083	1.0%	- 106,000	9,375	0	9,375
4	1,000,000	2	5.0%	152,000	50,000	152,000	202,000
Total				87,400	65,375	193,400	258,775

In this case, NGR = 0.45.

The recalculation of the total counterparty credit risk (CCR) produces the following result: 130,391 euro or 834,504 shekels.

96b. An example of the calculation of counterparty credit risk according to the Standardized Approach:

Source: "The Application of Basel II to Trading Activities and the Treatment of Double Default Effects", Basel Committee on Banking Supervision, July 2005

A bank reporting in US dollars has 5 transactions with one counterparty that are subject to a netting agreement as described in the table below.

Stages of the calculation:

- (1) In the first transaction (IRS): nominal value of 80 dollars; on the payee's side, an adjusted maturity of 8 years. Therefore, a risk position of 640 (80*8) is recorded in the dollar interest rate hedging set for a period of over 5 years. On the payer's side, the same transaction is recorded with the same nominal value but with an adjusted maturity

of -0.25. A risk position of -20 (-0.25×80) is recorded in the dollar interest rate hedging set for a period of less than one year.

- (2) The other transactions are recorded similarly.
- (3) The positions in each hedging set are summed in a way that full netting is possible between long and short positions in each hedging set.
- (4) The calculation of net credit position for each hedge set: the absolute value of the position amounts in the hedging set.
- (5) Multiplication of the net risk position of a hedging set by its conversion factor.
- (6) Calculation of present value of the entire transactions portfolio.
- (7) Selection of the maximum between (5) and (6).
- (8) Multiplication of (7) by 1.4.

VIII. CVA Risk Capital Charge

97. In addition to the default risk capital requirements for counterparty credit risk determined based on the standardized or internal ratings-based (IRB) approaches for credit risk, a banking corporation must add a capital charge to cover the risk of mark-to-market losses on the expected counterparty risk (such losses being known as credit value adjustments, CVA) to OTC derivatives. The CVA capital charge will be calculated in the manner set forth below depending on the banking corporation's approved method of calculating capital charges for counterparty credit risk and specific interest rate risk. A banking corporation is not required to include in this capital charge (i) transactions with a central counterparty (CCP); and (ii) securities financing transactions (SFT), unless the Supervisor determines that the banking corporation's CVA loss exposures arising from SFT transactions are material.

A. Banks with IMM approval and Specific Interest Rate Risk VaR model^{252a} approval for bonds:
 Advanced CVA risk capital charge

98. Deleted.

99. Deleted.^{252b,252c}

100. Deleted.^{252d}

101. Deleted.

102. Deleted.

103. Deleted.

B. All other banking corporations: Standardized CVA risk capital charge

104. The bank must calculate a portfolio capital charge using the following formula:

$$K = 2.33 \cdot \sqrt{h} \cdot \sqrt{\left(\sum_i 0.5 \cdot w_i \cdot (M_i \cdot EAD_i^{total} - M_i^{hedge} B_i) - \sum_{ind} w_{ind} \cdot M_{ind} \cdot B_{ind} \right)^2 + \sum_i 0.75 \cdot w_i^2 \cdot (M_i \cdot EAD_i^{total} - M_i^{hedge} B_i)^2}$$

Where

- h is the one-year risk horizon (in units of a year), h = 1.

^{252a} Deleted

^{252b} Deleted.

^{252c} Deleted.

^{252d} Deleted.

- w_i is the weight applicable to counterparty 'i'. Counterparty 'i' must be mapped to one of the seven weights w_i based on its external rating, as shown in the table of this Paragraph below. When a counterparty does not have an external rating, the w_i weight shall be 1.5 percent for a counterparty that is a corporation, and 2 percent for another counterparty. When the counterparty is an Israeli bank, the w_i weight shall be 1 percent, unless the bank's rating allows for the application of a lower weight. In this matter, "Bank" is as defined in Paragraph 60 of this Directive.
- EAD_i^{total} is the exposure at default of counterparty 'i' (summed across its netting sets), including the effect of collateral as per the existing SM or CEM rules as applicable to the calculation of counterparty risk capital charges for such counterparty by the bank. The exposure should be discounted by applying the factor $(1 - \exp(-0.05 * M_i)) / (0.05 * M_i)$.
- B_i is the notional of purchased single name CDS hedges and equivalent hedging instruments (summed if more than one position) referencing counterparty 'i', and used to hedge CVA risk. This notional amount should be discounted by applying the factor $(1 - \exp(-0.05 * M_i^{hedge})) / (0.05 * M_i^{hedge})$.

Only hedges used for the purpose of mitigating CVA risk, and managed as such, shall be eligible to be included in the calculation pursuant to this paragraph. For example, if a CDS transaction referencing an issuer is included in the banking corporation's inventory, and that issuer also happens to be an OTC counterparty but the CDS is not managed as a hedge of CVA, then the CDS transaction shall not be eligible to offset the CVA as part of the calculation.

Other types of counterparty risk hedges not mentioned in this bullet shall not be reflected within the calculation of the CVA capital charge. Thus, tranching CDSs or n^{th} -to-default CDSs are not eligible as CVA hedges.

Hedges that are not eligible for inclusion in the CVA formula shall be treated as any other instrument in the banking corporation's inventory for regulatory capital purposes. Eligible hedges that are included in the CVA capital charge shall not be included in the banking corporation's market risk capital charge calculation.

- B_{ind} is the full notional of one or more index CDS of purchased protection, used to hedge CVA risk. This notional amount should be discounted by applying the factor $(1 - \exp(-0.05 * M_{ind})) / (0.05 * M_{ind})$.
- w_{ind} is the weight applicable to index hedges. In the first stage, the banking corporation must identify the external ratings of the index components and apply the appropriate weight

(w_i) to each component as detailed in the table below. In the second stage, the W_{ind} index weight must be set by calculating the weighted average of the weights obtained in the first stage.

- M_i is the effective maturity of the transactions with counterparty 'i'. This component is the notional weighted average maturity as referred to in the third bullet point of Paragraph 320 of Proper Conduct of Banking Business Directive 204. However, for this purpose, M_i should not be capped at 5 years. If the banking corporation has more than one netting set against the counterparty, it must determine a separate effective maturity period for each netting set.
- M_i^{hedge} is the maturity of the hedge instrument with notional B_i (the quantities $M_i^{hedge} * B_i$ are to be summed if these are several positions).
- M_{ind} is the maturity of the index hedge 'ind'. In case of more than one index hedge position, it is the notional weighted average maturity.

A banking corporation that wishes to use the possibility of hedging, whether by way of a specific CDS or by way of an index CDS, must send a letter in advance to the Supervisor of Banks showing how it meets all of the benchmark requirements for recognition of the hedge.

For any counterparty that is also a constituent of an index on which a CDS is used for hedging counterparty credit risk, the notional amount attributable to that single name (as per its reference entity weight) may, with supervisory approval, be subtracted from the index CDS notional amount and treated as a single name hedge (B_i) of the individual counterparty with maturity based on the maturity of the index.

The weights are given in this table, and are based on the external rating of the counterparty:^{252e}

Rating	Weight w_i
AAA	0.7%
AA	0.7%
A	0.8%

^{252e} The notations follow the methodology used by one institution, Standard & Poor's. The use of Standard & Poor's credit ratings is an example only; those of some other approved external credit assessment institutions could be used on an equivalent basis. The ratings used throughout this document, therefore, do not express any preferences or determinations on external assessment institutions by the Committee.

BBB	1.0%
BB	2.0%
B	3.0%
CCC	10.0%

105. Calculation of the aggregate CCR and CVA risk capital charges

This Paragraph deals with the aggregation of the default risk capital charge and the CVA risk capital charge for potential mark-to-market losses. Note that outstanding EAD referred to in the default risk capital charges below is net of incurred CVA losses according to the second paragraph in Paragraph 9 of this Appendix, which affects all items “i” below. In this Paragraph, “CEM capital charge” or “SM capital charge” refer to the default risk capital charge for CCR based on the RWAs obtained when multiplying the outstanding EAD of each counterparty under the CEM or SM approaches, respectively, by the applicable credit risk weight (under the Standardized or IRB approach), and summing across counterparties.

The total CCR capital charge for such banking corporations is determined as the sum of the following components:

- i. The total capital charge of all counterparties, based on the CEM or on the SM (in accordance with the approach implemented by the banking corporation for CCR), where the EADs are determined according to Paragraphs 91 or 69, respectively.
- ii. The standard CVA risk capital charge determined pursuant to Paragraphs 104.

IX. Central Counterparties

106. Regardless of whether a CCP is classified as a QCCP, a banking corporation retains the responsibility to ensure that it maintains adequate capital for its exposures. Under Proper Conduct of Banking Business Directive no. 211 on the issue of Capital Adequacy Assessment, a banking corporation should consider whether it might need to hold capital in excess of the minimum capital requirements if, for example, (a) its dealings with a CCP give rise to more risky exposures or (b) where, given the context of that banking corporation’s dealings, it is unclear that the CCP meets the definition of a QCCP as in Paragraph 2a.

107. Where the banking corporation is acting as a clearing member, the banking corporation should assess through appropriate scenario analysis and stress testing whether the level of capital held against exposures to a CCP adequately addresses the inherent risks of those transactions. This assessment will include potential future or contingent exposures resulting from future drawings on default fund commitments, and/or from secondary commitments to take over or replace offsetting transactions from clients of another clearing member in case of this clearing member defaulting or becoming insolvent.
108. A banking corporation must monitor and report to senior management and the appropriate committee of the Board on a regular basis all of its exposures to CCPs, including exposures arising from trading through a CCP and exposures arising from CCP membership obligations such as default fund contributions.
109. Where a banking corporation is trading with a Qualifying CCP (QCCP) as defined in Paragraph 2a of this Appendix, then paragraphs 110 to 125 of this Appendix will apply. In the case of non-qualifying CCPs, paragraphs 126 and 127 of this Appendix will apply. Within three months of a central counterparty ceasing to qualify as a QCCP, unless the Supervisor of Banks determines otherwise, the trades with a former QCCP may continue to be capitalized as though they are with a QCCP. After that time, the bank's exposures with such a central counterparty must be capitalized according to paragraphs 126 and 127 of this Appendix.

Exposures to Qualifying CCPs

A. Trade exposures

(i) Clearing member exposures to CCPs

110. Where a banking corporation acts as a clearing member of a CCP for its own purposes, a risk weight of 2 percent must be applied to the bank's trade exposure to the CCP in respect of OTC derivatives, exchange traded derivative transactions and SFTs. Where the clearing member offers clearing services to clients, the 2% risk weight also applies to the clearing

member's trade exposure to the CCP that arises when the clearing member is obligated to reimburse the client for any losses suffered due to changes in the value of its transactions in the event that the CCP defaults.

111. The exposure amount for such trade exposure is to be calculated in accordance with this Appendix 4 using the CEM or Standardized Method or the method, as consistently applied by such banking corporation to such an exposure in the ordinary course of its business, or Part 3 of Chapter D in Proper Conduct of Banking Business Directive no. 203 (Paragraphs 145–187(i)), together with credit risk mitigation techniques set forth in Basel II for collateralized transactions.^{252f}

Where the respective exposure methodology allows for it, margining can be taken into account.

112. 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:^{252g}

- Paragraph 173 and, where applicable, also 174 of Proper Conduct of Banking Business Directive no. 203, in the case of repo-style transactions
- Paragraphs 96(i) to 96(iii) of this Appendix in the case of derivative transactions,
- Cancelled

To the extent that rules referenced above include the term “master netting agreement”, this term should be read as including any “netting agreement” that provides legally enforceable rights of set-off.^{252h} If the banking corporation cannot demonstrate that netting agreements meet these rules, each single transaction will be regarded as a netting set of its own for the calculation of trade exposure.

^{252f} In particular, see paragraphs 151 or 151a for standard supervisory haircuts.

^{252g} For the purposes of this section IX, the treatment of netting also applies to exchange traded derivatives.

^{252h} This is to take account of the fact that for netting agreements employed by CCPs, no standardization has currently emerged that would be comparable to the level of standardization with respect to OTC netting agreements for bilateral trading.

(ii) Clearing member exposures to clients

113. A banking corporation serving as clearing member will always capitalize 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. However, to recognize the shorter close-out period for cleared transactions, clearing members that adopt the standardized method or the current exposure method described in this Appendix can capitalize the exposure to their clients by multiplying the EAD by a scalar in accordance with the following table:

Margin period of risk	Scalar
5 or fewer business days	0.71
6 business days	0.77
7 business days	0.84
8 business days	0.89
9 business days	0.95
10 business days	1

Notwithstanding the above, at this stage a margin period of risk shorter than 10 business days may not be used.

(iii) Client exposures

114. Where a banking corporation is a client of a clearing member:

- (1) and enters into a transaction with the clearing member acting as a financial intermediary (i.e., the clearing member completes an offsetting transaction with a CCP); or
 - (2) enters into a transaction with the CCP, with a clearing member guaranteeing its performance,
- the client banking corporation's exposures to the clearing member or to the CCP may receive the treatment in Paragraphs 110 to 112 of this Appendix if the following two conditions below are met:

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- (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: (i) the default or insolvency of the clearing member, (ii) the default or insolvency of the clearing member's other clients, and (iii) the joint default or insolvency of the clearing member and any of its other clients.²⁵²ⁱ

The client banking corporation must be in a position to provide to the Supervisor of Banks, 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:

- the law of the jurisdiction(s) of the client, clearing member and CCP;
- if the foreign branch of the client, clearing member or CCP are involved, then also under the law of the jurisdiction(s) in which the branch is located;
- the law that governs the individual transactions and collateral; and
- the law that governs any contract or agreement necessary to meet this condition (Condition a).

- (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.

115. 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 preceding paragraph are met, a risk weight of 4 percent will apply to the client's exposure to the clearing member.

²⁵²ⁱ That is, upon the insolvency of the clearing member, there is no legal impediment (other than the need to obtain a court order to which the client is entitled) to the transfer of the collateral belonging to clients of a defaulting clearing member to the CCP, to one or more other surviving clearing members or to the client or the client's nominee.

116. Where the banking corporation is a client of the clearing member and the requirements in Paragraphs 114 or 115 above are not met, the banking corporation will capitalize its exposure (including potential CVA risk exposure) to the clearing member as a bilateral trade.

(iv) Treatment of posted collateral

117. In all cases, any assets or collateral posted must, from the perspective of the banking corporation—as a clearing member or as a client of a clearing member—posting such collateral, receive the risk weights that otherwise applies to such assets or collateral under the capital adequacy framework, 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 banking corporation posting such assets or collateral must also recognize credit risk based upon the assets or collateral being exposed to risk of loss based on the creditworthiness of the entity^{252j} holding such assets or collateral.

118. Collateral posted by a clearing member banking corporation (including cash, securities, other pledged assets, and excess initial or variation margin, also called overcollateralization), that is held by a custodian^{252k}, and is bankruptcy remote from the CCP, is not subject to a capital requirement for counterparty credit risk exposure to such bankruptcy remote custodian.

119. Collateral posted by a client banking corporation, that is held by a custodian, and is bankruptcy remote from the CCP, the clearing member and other clients, is not subject to a capital requirement for counterparty credit risk. If the collateral is held at the CCP on a client's behalf and is not held on a bankruptcy remote basis, a 2 percent risk-weight must be applied

^{252j} Where the entity holding such assets or collateral is the CCP, a risk-weight of 2% applies to collateral included in the definition of trade exposures. The relevant risk-weight of the CCP will apply to assets or collateral posted for other purposes.

^{252k} In this paragraph, the word “custodian” may include a trustee, agent, pledgee, secured creditor or any other person that holds property in a way that does not give such person a beneficial interest in such property and will not result in such property being subject to legally-enforceable claims by such person's creditors, or to a court-ordered stay of the return of such property, should such person become insolvent or bankrupt.

to the collateral if the conditions established in Paragraph 114 of this Appendix are met; or 4 percent if the conditions in Paragraph 115 of this Appendix are met.

B. Default fund exposures

120. Where a default fund is shared between products or types of business with settlement risk only (e.g., equities and bonds) and products or types of business which give rise to counterparty credit risk (i.e., OTC derivatives, exchange traded derivatives or SFTs), all of the default fund contributions by clearing members will receive the risk weight determined according to the formulae and methodology set forth below, 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 below must be calculated for each specific product giving rise to counterparty credit risk.

121. Whenever a banking corporation is required to capitalize for exposures arising from default fund contributions to a qualifying CCP, clearing member banking corporations may apply Method 2 below:

Method 1

122. Cancelled.

123. Cancelled.

124. Cancelled.

Method 2

125. A clearing member banking corporation may apply a risk-weight of 1250% to its default fund exposures to the CCP, subject to an overall cap on the risk-weighted assets from all its

exposures to the CCP (ie including trade exposures) equal to 20% times the trade exposures to the CCP. More specifically, under this approach, the Risk Weighted Assets (RWA) for both bank i 's trade and default fund exposures to each CCP are equal to:²⁵²¹

$$\text{Min} \{ (2\% * TE_i + 1250\% * DF_i); (20\% * TE_i) \}$$

where

- TE_i is banking corporation i 's trade exposure to the CCP, as measured by the banking corporation according to Paragraphs 110 to 112 of this Appendix; and
- DF_i is bank i 's pre-funded contribution to the CCP's default fund.

Exposures to Non-qualifying CCPs

126. Banking corporations must apply the Standardized Approach for credit risk, as per the provisions of Proper Conduct of Banking Business Directive no. 203, according to the category of the counterparty, to their trade exposure to a non-qualifying CCP.

127. Banking corporations must apply a risk weight of 1250% to their default fund contributions to a non-qualifying CCP. For the purposes of this paragraph, the default fund contributions of such banks will include both the funded and the unfunded contributions which are liable to be paid should the CCP so require. Where there is a liability for unfunded contributions (ie unlimited binding commitments) the Supervisor of Banks shall determine in Pillar 2 assessments the amount of unfunded commitments to which a 1250% risk weight should apply to.

²⁵²¹ Under this approach the 2 percent risk weight on trade exposures given by paragraph 110 does not apply as it is included in the equation in paragraph 125.

Appendix D

Illustrative Examples: Calculating the Effect of Credit Risk Mitigation under Supervisory Formula

Some examples are provided below for determining how collateral and guarantees are to be recognized under the SF.

Illustrative Example Involving Collateral — proportional cover

Assume an originating banking corporation purchases a NIS 500 securitization exposure with a credit enhancement level in excess of K_{IRB} for which an external or inferred rating is not available. Additionally, assume that the SF capital charge on the securitization exposure is NIS 8 (when multiplied by 12.5 results in risk weighted assets of NIS 100). Further assume that the originating banking corporation has received NIS 400 of collateral in the form of cash that is denominated in the same currency as the securitization exposure. The capital requirement for the position is determined by multiplying the SF capital requirement by the ratio of adjusted exposure amount and the original exposure amount, as illustrated below.

Step 1: Adjusted Exposure Amount (E^*) = $\max \{0, [E \times (1 + H_e) - C \times (1 - H_c - H_{fx})]\}$

$E^* = \max \{0, [500 \times (1 + 0) - 400 \times (1 - 0 - 0)]\} = \text{NIS } 100$

where (based on the information provided above):

E^* = the exposure value after risk mitigation (NIS 100)

E = current value of the exposure (NIS 500)

H_e = haircut appropriate to the exposure (This haircut is not relevant because the originating banking corporation is not lending the securitization exposure in exchange for collateral.)

C = the current value of the collateral received (NIS 400)

H_c = haircut appropriate to the collateral (0)

H_{fx} = haircut appropriate for mismatch between the collateral and exposure (0)

Step 2:

Capital requirement = $(E^* / E) \times \text{SF capital requirement}$

where (based on the information provide above):

Capital requirement = $\text{NIS } 100 / \text{NIS } 500 \times \text{NIS } 8 = \text{NIS } 1.6$

Illustrative Example Involving a Guarantee — proportional cover

All of the assumptions provided in the illustrative example involving collateral apply except for the form of credit risk mitigant. Assume that the banking corporation has received an eligible, unsecured guarantee in the amount of NIS 400 from a bank. Therefore, a haircut for currency mismatch will not apply. The capital requirement is determined as follows.

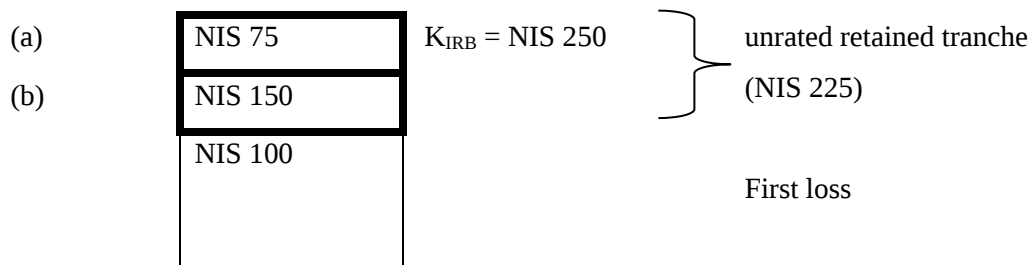
- The protected portion of the securitization exposure (NIS 400) is to receive the risk weight of the protection provider. The risk weight for the protection provider is equivalent to that for an unsecured loan to the guarantor bank, as determined under the IRB approach. Assume that this risk weight is 10%. Then, the capital charge on the protected portion would be: $\text{NIS } 400 \times 10\% \times 0.08 = \text{NIS } 3.2$.
- The capital charge for the unprotected portion (NIS 100) is derived by multiplying the capital charge on the securitization exposure by the share of the unprotected portion to the exposure amount. The share of the unprotected portion is: $\text{NIS } 100 / \text{NIS } 500 = 20\%$. Thus, the capital requirement will be: $\text{NIS } 8 \times 20\% = \text{NIS } 1.6$.

The total capital requirement for the protected and unprotected portions is:

$\text{NIS } 3.2 \text{ (protected portion)} + \text{NIS } 1.6 \text{ (unprotected portion)} = \text{NIS } 4.8$.

Illustrative example — the case of credit risk mitigants covering the most senior parts

Assume an originating bank that securitizes a pool of loans of NIS 5000. The K_{IRB} of this underlying pool is 5% (capital charge of NIS 250). There is a first loss position of NIS 100. The originator retains only the second most junior tranche: an unrated tranche of NIS 225. We can summarize the situation as follows:



1. Capital charge without collateral or guarantees

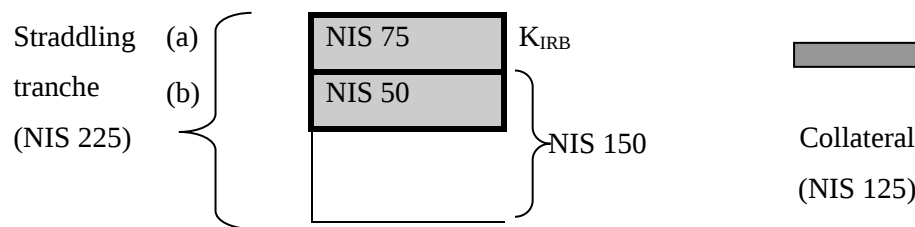
According to this example, the capital charge for the unrated retained tranche that is straddling the K_{IRB} line is the sum of the capital requirements for tranches (a) and (b) in the graph above:

- (a) Assume the SF risk weight for this subtranche is 820%. Thus, risk-weighted assets are $0.75 \times 820\% = \text{NIS } 615$. Capital charge is $\text{NIS } 615 \times 8\% = \text{NIS } 49.2$.
- (b) The subtranche below K_{IRB} must be deducted. Risk-weighted assets: $\text{NIS } 150 \times 1250\% = \text{NIS } 1875$. Capital charge of $1875 \times 8\% = \text{NIS } 150$

Total capital charge for the unrated straddling tranche = $\text{NIS } 49.2 + \text{NIS } 150 = \text{NIS } 199.2$.

2. Capital charge with collateral

Assume now that the originating banking corporation has received NIS 125 of collateral in the form of cash that is denominated in the same currency as the securitization exposure. Because the tranche is straddling the K_{IRB} level, we must assume that the collateral is covering the most senior subtranche above K_{IRB} (subtranche (a) covered by NIS 75 of collateral) and, only if there is some collateral left, the coverage must be applied to the subtranche below K_{IRB} beginning with the most senior portion (e.g. tranche (b) covered by NIS 50 of collateral). Thus, we have:



The capital requirement for the position is determined by multiplying the SF capital requirement by the ratio of adjusted exposure amount and the original exposure amount, as illustrated below. We must apply this for the two subtranches:

- (a) The first subtranche has an initial exposure of NIS 75 and collateral of NIS 75, so in this case it is completely covered. In other words:

Step 1: Adjusted Exposure Amount

$$E^* = \max \{0, [E \times (1 + H_e) - C \times (1 - H_c - H_{fx})]\} = \max \{0, [15 - 15]\} = \text{NIS } 0$$

where:

$$E^* = \text{the exposure value after risk mitigation (0)}$$

E = current value of the exposure (NIS 75)
 C = the current value of the collateral received (NIS 75)
 He = haircut appropriate to the exposure (not relevant here, thus 0)
 Hc and Hfx = haircut appropriate to the collateral and that for the mismatch between the collateral and exposure (to simplify, 0)

Step 2: Capital requirement = $(E^* / E) \times \text{SF capital requirement}$

Capital requirement = $0 \times \text{NIS } 49.2 = \text{NIS } 0$

(b) The second subtranche has an initial exposure of NIS 150 and collateral of NIS 50, which is the amount left after covering the subtranche above K_{IRB} . Thus, these NIS 50 must be allocated to the most senior portion of the NIS 150 subtranche.

Step 1: Adjusted Exposure Amount

$E^* = \max \{0, [30 \times (1 + 0) - 10 \times (1 - 0 - 0)]\} = \text{NIS } 100$

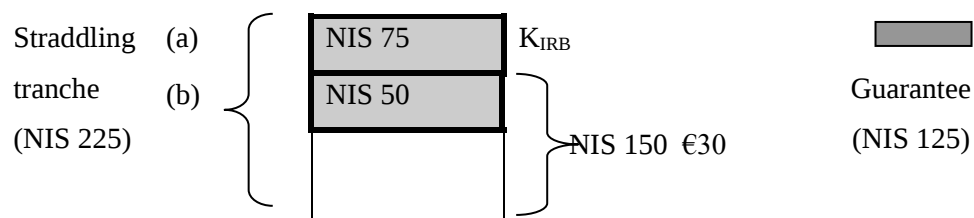
Step 2: Capital requirement = $(E^* / E) \times \text{SF capital requirement}$

Capital requirement = $\text{NIS } 100 / \text{NIS } 150 \times \text{NIS } 150 = \text{NIS } 100$

Finally, the total capital charge for the unrated straddling tranche = $\text{NIS } 0 + \text{NIS } 100 = \text{NIS } 100$.

3. Guarantee

Assume now that instead of collateral, the banking corporation has received an eligible, unsecured guarantee in the amount of NIS 125 from another banking corporation. Therefore the haircut for currency mismatch will not apply. The situation can be summarized as:



The capital requirement for the two subtranches is determined as follows:

- (a) The first subtranche has an initial exposure of NIS 75 and a guarantee of NIS 75, so in this case it is completely covered. The NIS 75 will receive the risk weight of the protection provider. The risk weight for the protection provider is equivalent to that for an unsecured loan to the guarantor banking corporation, as determined under the IRB approach. Assume that this risk weight is 20%.

Capital charge on the protected portion is $\text{NIS } 75 \times 20\% \times 8\% = \text{NIS } 1.2$.

- (b) The second subtranche has an initial exposure of NIS 150 and guarantee of NIS 50 which must be applied to the most senior portion of this subtranche. Accordingly, the protected part is NIS 50 and the unprotected part is NIS 100.

- Again, the protected portion of the securitization exposure is to receive the risk weight of the guarantor bank.

Capital charge on the protected portion is $\text{NIS } 50 \times 20\% \times 8\% = \text{NIS } 0.8$

The capital charge for the unprotected portion (for an unrated position below K_{IRB}) is $\text{NIS } 100 \times 1250\% \times 8\% = \text{NIS } 100$

Total capital charge for the unrated straddling tranche = NIS 1.2 (protected portion, above K_{IRB}) + NIS 0.8 (protected portion, below K_{IRB}) + NIS 100 (unprotected portion, below K_{IRB}) = **NIS 102.**

Appendix E

Overview of Methodologies for the Capital Treatment of Transactions

Secured by Financial Collateral under the Standardized Approach

1. The rules set forth in the standardized approach—Credit Risk Mitigation (CRM), for collateralized transactions generally determine the treatment under the standardized approach for claims in the banking book that are secured by financial collateral of sufficient quality.
2. Collateralized exposures that take the form of repo-style transactions (i.e. repo/reverse repos and securities lending/borrowing) are subject to special considerations. Such transactions that are held in the trading book are subject to a counterparty risk capital charge as described below. Further, all banking corporations must follow the methodology in the CRM section, which is outlined below, for repo-style transactions booked in either the banking book or trading book that are subject to master netting agreements if they wish to recognize the effects of netting for capital purposes.

Standardized Approach

3. Banking corporations under the standardized approach may use either the simple approach or the comprehensive approach for determining the appropriate risk weight for a transaction secured by eligible financial collateral. Under the simple approach, the risk weight of the collateral substitutes for that of the counterparty. Apart from a few types of very low risk transactions, the risk weight floor is 20%.
4. Under the comprehensive approach, eligible financial collateral reduces the amount of the exposure to the counterparty. The amount of the collateral is decreased and, where appropriate, the amount of the exposure is increased through the use of haircuts, to account for potential changes in the market prices of securities and foreign exchange rates over the holding period. This results in an adjusted exposure amount, E^* . Banking corporations will use supervisory haircuts set by the Basel Committee. Once E^* is calculated, the standardized banking corporation will assign that amount a risk weight appropriate to the counterparty.

Special Considerations for Repo-Style Transactions

5. Repo-style transactions booked in the trading book, will, like OTC derivatives held in the trading book, be subject to a counterparty credit risk charge. In calculating this charge, a banking corporation under the standardized approach must use the comprehensive approach to collateral; the simple approach will not be available.
6. The capital treatment for repo-style transactions that are not subject to master netting agreements is the same as that for other collateralized transactions. However, for banking corporations using the comprehensive approach, a haircut of zero may be used where the transaction is with a core market participant and meets certain other criteria (so-called carve-out treatment). Where repo-style transactions are subject to a master netting agreement whether they are held in the banking book or trading book, a banking corporation may choose not to recognize the netting effects in calculating capital. In that case, each transaction will be subject to a capital charge as if there were no master netting agreement.
7. If a banking corporation wishes to recognize the effects of master netting agreements on repo-style transactions for capital purposes, it must apply the treatment the CRM section sets forth in that regard on a counterparty-by-counterparty basis. This treatment would apply to all repo-style transactions subject to master netting agreements, regardless of whether the transactions are held in the banking or trading book. Under this treatment, the banking corporation would calculate E^* as the sum of the net current exposure on the contract plus an add-on for potential changes in security prices and foreign exchange rates. The add-on will be determined through the supervisory haircuts.
8. The calculated E^* is in effect an unsecured loan equivalent amount that would be used for the exposure amount under the standardized approach.

Revisions

Circular 06 number	Version	Details	Date
2268	1	Original version	20/6/10
2284	2	Update	27/12/10
2379	3	Update	30/5/13
2485	4	Update	22/10/15
2541	5	Update	22/10/17
2556	6	Update	15/3/18
2563	7	Update	4/7/18
2577	8	Update	13/11/18
2596	9	Update	1/12/19
2628	10	Update	29/09/20