Basel Committee on Banking Supervision

DIS

Disclosure requirements

DIS50

Market risk

Version effective as of 15 Dec 2019

First version in the format of the consolidated framework.

BANK FOR INTERNATIONAL SETTLEMENTS

Introduction

50.1 The market risk section includes the market risk capital requirements calculated for trading book and banking book exposures that are subject to a market risk charge in MAR10 to MAR30. It also includes capital requirements for securitisation positions held in the trading book. However, it excludes the counterparty credit risk capital charges that apply to the same exposures, which are reported in DIS42.

50.2 The disclosure requirements under this section are:

General information about market risk:

(1) Table MRA - Qualitative disclosure requirements related to market risk

Market risk under the standardised approach:

(2) Template MR1 - Market risk under standardised approach

Market risk under the Internal Models Approach (IMA):

(3) Table MRB - Qualitative disclosures for banks using the IMA

(4) Template MR2 - Risk-weighted asset (RWA) flow statements of market risk exposures under an IMA

(5) Template MR3 - IMA values for trading portfolios

(6) Template MR4 - Comparison of value-at-risk (VaR) estimates with gains /losses

FAQ

FAQ1 *What is the intended relationship between the stressed value-at-risk (sVaR) and the stress testing under Section A of Table MRB, for item (g) (Description of stress testing applied to the modelling parameters)?*

The requirement in Section B, item (g) applies to VaR and sVaR models. Banks should describe the main scenarios that they have developed to capture the characteristics of the portfolios to which the VaR and sVaR models apply at the group-wide level, including the methodology for the selection of the stress period.

FAQ2 *According to the description of the scope of application in Table MRB, "the commentary must include the percentage of capital requirements covered by the models described for each of the regulatory models (VaR, sVaR, [incremental risk capital requirement, or] IRC, Comprehensive Risk Measure)." Given that the breakdown of capital charges due to each of the components is disclosed under Template MR2, is the qualitative disclosure still required?*

The purpose of this percentage is to inform how representative the internal models used within the group that are described in the qualitative part for VaR/sVaR/IRC/comprehensive risk measure are, relative to the main models used within the group. This would not be relevant if only one model was used for all the entities included in the consolidated group for each internal model of VaR/sVaR/IRC /comprehensive risk measure. For instance, for disclosure requirements in Template MRB, if within a banking group of six entities, five consolidated banking entities use an "X" VaR model representing 90% of the total capital charge calculated based on the VaR model of the consolidated banking group, and one entity uses a "Y" VaR model (different from the "X" model), the banking group should specify that the description of the qualitative characteristics of the internal VaR model represents 90% of the capital charge calculated based on the VaR model of the banking group, to give users an indication of how representative the model described is.

FAQ3 *For Internal Models Approach (IMA) banks, the market risk capital charge is the maximum of (i) quarter-end figures; and (ii) average figures of the last 60 days, with the multiplier applicable to those banks. Given that Template MR2 row 1 states "at previous quarter-end" and row 8 states "at the end of reporting period", does the template require flow analysis based upon quarter-end figures (ie the amount presented in the rows in this template do not necessarily match the actual market risk capital charge under the Pillar 1 requirement)?*

*As specified in the definitions: "Total RWA at end of reporting period: derived risk-weighted assets corresponding to the [total capital requirements for market risk on the basis of internal model approaches * 12.5]"; this amount must reconcile with the amounts shown in Template OV1. Therefore, row 1 must reflect "the end of previous reporting period", and the rows in this template must match the actual market risk charge under the Pillar 1 requirement. As the linkage in Template OV1 states that "OV1: Amount in OV1:22/a, is equal to [MR2: 8/f]", the amount in [OV1:22/b] is equal to [MR2:1/f].*

If the derived RWA from the capital requirement for any of the columns (a)–(d) / rows 1 or 8, is not directly provided by the model, but is instead calculated from the 60-day average (for VaR and sVaR), the 12-week average measure or the floor measure (for CRM), the bank may add an additional row for regulatory adjustment in order to be able to provide the reconciliation required in Template MR2 as well as the key drivers' amounts in rows 2–6. Refer to DIS99.3 for a worked example.

FAQ4 *Is the disclosure in Template MR4 necessary? It could reveal sensitive information such as capital multipliers.*

The daily VaR measures in the template are to be reported before additional capital charges at the supervisor's discretion, but Template MR4 should show the number and the extent of the backtesting exceptions, with an analysis of the main outliers. Template MR4 provides backtesting information on the daily regulatory VaR calibrated to a one-day holding period to compare with the 99% confidence level with its trading outcome. To the extent that the template is intended to provide information on the reliability of the VaR estimates in highlighting the frequency and the extent of the outliers in the backtesting results, the daily VaR value is the same as that disclosed in Template MR3, meaning that it does not include additional capital charges at the supervisor's discretion. The narrative information should provide information on the number and the extent of the backtesting exceptions.

FAQ5 *Both hypothetical and actual backtesting results are requested in Template MR4, but are actual results needed if they are not reported to regulators?*

Except when national supervisors have explicitly limited the backtesting to one of these two approaches, banks must present a meaningful comparison of the daily VaR measures on trading outcomes for actual and hypothetical changes in the corresponding portfolio's value.

Table MRA: Qualitative disclosure requirements related to market risk

Purpose: Provide a description of the risk management objectives and policies concerning market risk as defined in MAR10.1.

Scope of application: The table is mandatory for all banks that are subject to a market risk capital requirement for their trading activities.

Content: Qualitative information.

Frequency: Annual.

Format: Flexible.

(A) Banks must describe their risk management objectives and policies for market risk according to the framework below (the granularity of the information should support the provision of meaningful information to users):

(a)	Strategies and processes of the bank: this must include an explanation of management's strategic objectives in undertaking trading activities, as well as the processes implemented to identify, measure, monitor and control the bank's market risks, including policies for hedging risk and strategies/processes for monitoring the continuing effectiveness of hedges.
(b)	Structure and organisation of the market risk management function: description of the market risk governance structure established to implement the strategies and processes of the bank discussed in row (a) above, and describing the relationships and the communication mechanisms between the different parties involved in market risk management.
(c)	Scope and nature of risk reporting and/or measurement systems. For example, banks should include descriptions relating to positions covered by the approach and the underlying trading activities that impact each type of market risk factor (eg interest rate risk factors, equity risk factors, foreign exchange risk factors, commodity risk factors). These may include: (a) their risk analysis and risk management systems; (b) how (a) corresponds to the nature and volume of transactions; (c) how reporting and measurement systems provide an overall understanding of all the risks associated with the bank's market activities, including, at least on a day-to-day basis, the risks resulting from trading book positions; (d) a description of the organisational and internal control procedures; (e) the communication mechanisms between the different parties involved in risk management (management body, senior management, business lines and central risk management function); and (f) the frequency of reporting and the process set up to regularly update and assess the reporting and measurement systems.

Template MR1: Market risk under standardised approach

Purpose: Display the components of the capital requirement under the standardised approach for market risk.

Scope of application: The template is mandatory for banks using the standardised approach for market risk.

For banks using other than the standardised approach for most of their market risk exposures, exposures and RWA amounts under the standardised approach may be negligible. In such circumstances, and to provide only meaningful information to users, the bank may choose not to disclose the template for the exposures treated under the standardised approach. The bank must however explain why it considers the information not to be meaningful to users. The explanation must include a description of the exposures included in the respective portfolios and the aggregate total of RWA from such exposures.

Content: Risk-weighted assets.

Frequency: Semiannual.

Format: Fixed.

Accompanying narrative: Banks are expected to supplement the template with a narrative commentary to explain any significant changes in the reporting period and the key drivers of such changes.

		a
		RWA
	Outright products	
1	Interest rate risk (general and specific)	
2	Equity risk (general and specific)	
3	Foreign exchange risk	
4	Commodity risk	
	Options	
5	Simplified approach	
6	Delta-plus method	
7	Scenario approach	
8	Securitisation	
9	**Total**	

Definitions

Outright products refer to positions in products that are not optional.

RWA: for consistency throughout the document, RWA are disclosed instead of capital requirements, banks must derive the market risk RWA by multiplying the capital requirements by 12.5.

Table MRB: Qualitative disclosures for banks using the Internal Models Approach (IMA)

Purpose: Provide the scope, the main characteristics and the key modelling choices of the different models (VaR, sVaR, incremental risk capital - or IRC, comprehensive risk measure) used for regulatory calculation of market risks.

Scope of application: The table is mandatory for all banks using an internal model to calculate its market risk capital requirements.

To provide meaningful information to users on their use of internal models, the bank must describe the main characteristics of the models used at the group-wide level (according to the scope of regulatory consolidation) and explain to what extent they represent all the models used at the group-wide level. The commentary must include the percentage of capital requirements covered by the models described for each of the regulatory models (VaR, sVaR, IRC, Comprehensive Risk Measure).

Content: Qualitative information.

Frequency: Annually.

Format: Flexible.

(A) For VaR models and stressed VaR models, banks must provide the following information:

(a)	Description of activities and risks covered by the VaR models and sVaR models. Where applicable, banks must also describe the main activities and risks not included in VaR/sVaR regulatory calculations (due to lack of historical data or model constraints) and treated under other model risk measures (such as specific treatments allowed in some jurisdictions).
(b)	Specify which entities in the group use the models or if a single model (VaR/sVaR) is used for all entities with market risk exposure.
(c)	General description of the models (VaR/sVaR).
(d)	Discussion of the main differences, if any, between the model used for management purposes and the model used for regulatory purposes (10 day 99%). For VaR and sVaR models.
(e)	For VaR models, banks must specify:
(e) (i)	Data updating frequency;
(e) (ii)	Length of the data period that is used to calibrate the model. Describe the weighting scheme that is used (if any);
(e) (iii)	How the bank determines the 10-day holding period. For example, does it scale up a one-day VaR by the square root of 10, or does it directly model the 10-day VaR.
(e) (iv)	Aggregation approach (method for aggregating the specific and general risk: (ie does the bank calculate the specific charge as a standalone charge by using a different method than the one used to calculate the general risk or does the bank use a single model that diversifies general and specific risk?)

(e) (v)	Valuation approach (full revaluation or use of approximations);
(e) (vi)	Describe whether, when simulating potential movements in risk factors, absolute or relative returns (or a mixed approach) are used (ie proportional change in prices or rates or absolute change in prices or rates).
(f)	For stressed VaR models, banks must specify:
(f) (i)	How the 10-day holding period is determined. For example, does the bank scale up a one-day VaR by the square root of 10, or does it directly model the 10-day VaR? If the approach is the same as for the VaR models, the bank may confirm this and refer to disclosure (e) (iii) above.
(f) (ii)	The stress period chosen by the bank and the rationale for this choice.
(f) (iii)	Valuation approach (full revaluation or use of approximations);
(g)	Description of stress testing applied to the modelling parameters;
(h)	Description of the approach used for backtesting/validating the accuracy and internal consistency of data and parameters used for the internal models and modelling processes.
(B) Banks using internal models to measure the risk for the incremental risk capital charge must provide the following information:	
(a)	General description of the methodology;
(a) (i)	Information about the overall modelling approach (notably use of spread-based models or transition matrix-based models);
(a) (ii)	Information on the calibration of the transition matrix;
(a) (iii)	Information about correlation assumptions;
(b)	Approach used to determine liquidity horizons;
(c)	Methodology used to achieve a capital assessment that is consistent with the required soundness standard (consistent with MAR30.34);
(d)	Approach used in the validation of the models.
(C) Banks using internal models to measure the risk for the comprehensive risk capital charge must provide the following information:	
(a)	General description of the methodology

(a) (i)	Information about the overall modelling approach (notably choice of model correlation between default/migrations and spread: (i) separate but correlated stochastic processes driving migration/default and spread movement; (ii) spread changes driving migration /default; or (iii) default/migrations driving spread changes);
(a) (ii)	Information used to calibrate the parameters of the base correlation: loss-given-default pricing of the tranches (constant or stochastic);
(a) (iii)	Information on the choice whether to age positions (profits and losses based on the simulated market movement in the model calculated based on the time to expiry of each position at the end of the one-year capital horizon or using their time to expiry at the calculation date);
(b)	Approach used to determine liquidity horizons;
(c)	Methodology used to achieve a capital assessment that is consistent with the required soundness standard;
(d)	Approach used in the validation of the models. For example, a general description of the process developed to ensure that the internal models have been adequately validated by suitable parties (ie independent and qualified to ensure that the models are conceptually sound and capture all material risks, including specific criteria related to incremental default and migration risk) should be provided. Banks should also explain how the validation process is implemented, when the models are initially developed as well as when any significant changes are made to the models, and how they ensure a periodic validation to capture any significant structural changes in the market or in the composition of the portfolios covered by the models.

Template MR2: RWA flow statements of market risk exposures under an IMA

Purpose: Present a flow statement explaining variations in the market RWA determined under an internal model approach.

Scope of application: The template is mandatory for banks using an internal model approach for their market risk exposures.

Content: Risk-weighted assets for market risk. Changes in RWA amounts over the reporting period for each of the key drivers should be based on a bank's reasonable estimation of the figure.

Frequency: Quarterly.

Format: Fixed format. The columns and rows 1 and 8 are fixed. Banks may add additional rows between rows 7 and 8 to disclose additional elements that contribute to RWA variations.

Accompanying narrative: Banks are expected to supplement the template with a narrative commentary to explain any significant changes over the reporting period and the key drivers of such changes.

		a	b	c	d	e	f
		VaR	sVaR	IRC	Comprehensive risk measure	Other	Total RWA
1	RWA at previous quarter end						
2	Movement in risk levels						
3	Model updates /changes						
4	Methodology and policy						
5	Acquisitions and disposals						
6	Foreign exchange movements						
7	Other						
8	RWA at end of reporting period						

Definitions

Rows

Movement in risk levels: changes due to position changes.

Model changes: Significant updates to the model to reflect recent experience (eg recalibration), as well as significant changes in model scope; if more than one model update has taken place, additional rows could be necessary.

Methodology and policy: Methodology changes to the calculations driven by regulatory policy changes.

Acquisitions and disposals: Modifications due to acquisition or disposal of business/product lines or entities.

Foreign exchange: Changes in RWA under the market risk internal models approach arising from foreign currency translation movements.

Other: this category must be used to capture changes that cannot be attributed to any other category. Banks should add additional rows between rows 6 and 7 to disclose other material drivers of RWA movements over the reporting period.

Columns

RWA at end of reporting period *column VaR:* derived risk-weighted assets corresponding to the [capital requirements reflecting the Regulatory Value at Risk (10 day 99%), as well as additional capital charge related to VaR model on the supervisor's decision] x 12.5.

RWA at end of reporting period *column Stressed VaR:* derived risk-weighted assets corresponding to the [capital requirements reflecting the Stressed Regulatory Value at Risk (10 day 99%) as well as additional capital charge on the supervisor's decision] x 12.5.

RWA at end of reporting period *column IRC:* derived risk-weighted assets corresponding to the [capital requirements as used for computing the incremental risk charge as well as additional capital charge on the supervisor's decision (multiplier)] x 12.5.

RWA at end of reporting period *column comprehensive risk measure:* derived risk-weighted assets corresponding to the [capital requirements as used for computing the comprehensive risk capital charge as well as any additional capital charge on the supervisor's decision] x 12.5.

RWA at end of reporting period column Other: derived risk-weighted assets corresponding to specific capital charges (jurisdiction- or firm-specific) on the basis of model approaches not reported in VaR/sVaR/IRC/comprehensive risk mesure. Additional columns can be disclosed where the jurisdictions provide more than one specific capital charge.

Total RWA at end of reporting period: derived risk-weighted assets corresponding to the [total capital requirements for market risk in the basis of internal model approaches x 12.5]; this amount must reconcile with the amounts shown in template OV1 (see Part 2).

Template MR3: IMA values for trading portfolios

Purpose: Display the values (maximum, minimum, average and period ending for the reporting period) resulting from the different types of models used for computing the regulatory capital charge at the group level, before any additional capital charge is applied by the jurisdiction.
Scope of application: The template is mandatory for all banks using an internal model approach for their market risk exposures.
Content: Outputs of internal models for regulatory capital purposes at the group-wide level (according to the scope of regulatory consolidation).
Frequency: Semiannual.
Format: Fixed.
Accompanying narrative: Banks are expected to supplement the template with a narrative commentary to explain any significant changes over the reporting period and the key drivers of such changes.

		a
VaR (10 day 99%)		
1	Maximum value	
2	Average value	
3	Minimum value	
4	Period end	
sVaR (10 day 99%)		
5	Maximum value	
6	Average value	
7	Minimum value	
8	Period end	
Incremental Risk capital requirement (99.9%)		
9	Maximum value	
10	Average value	
11	Minimum value	
12	Period end	
Comprehensive Risk capital charge (99.9%)		

13	Maximum value	
14	Average value	
15	Minimum value	
16	Period end	
17	Floor (standardised measurement method)	

Definitions

VaR refers in this template to the regulatory VaR used to compute the capital charge. The amounts reported do not include additional capital charges at supervisor's discretion (related to the multiplier, for instance).

sVaR refers in this template to the regulatory stressed VaR used to compute the capital charge. The amounts reported do not include additional capital on the supervisor's decision (multiplier).

IRC refers in this template to the IRC as used for computing the capital charge. The amounts reported do not include additional capital on the supervisor's decision (multiplier).

Comprehensive Risk capital charge: the rows 13, 14, 15 and 16 are unfloored numbers; the floor calculation is reflected for reporting period-end in row 17.

Floor: 8% of the capital charge for specific risk according to MAR30.36.

Template MR4: Comparison of VaR estimates with gains/losses

Purpose: Present a comparison of the results of estimates from the regulatory VaR model with both hypothetical and actual trading outcomes, to highlight the frequency and the extent of the backtesting exceptions, and to give an analysis of the main outliers in backtested results, as per MAR99.22 to MAR99.38.

Scope of application: The template is mandatory for all banks using an internal model approach for their market risk exposures.

To provide meaningful information to users on the backtesting of their internal models, the bank must include in this template the key models used at the group-wide level (according to the scope of regulatory consolidation) and explain to what extent they represent the models used at the group-wide level. The commentary must include the percentage of capital requirements covered by the models for which backtesting results are shown here.

Content: VaR model outcomes.

Frequency: Semiannual.

Format: Flexible.

Accompanying narrative: Banks must present an analysis of "outliers" (backtesting exceptions) in backtested results, specifying the dates and the corresponding excess (VaR-P&L). The analysis should at least specify the key drivers of the exceptions.

Banks must disclose similar comparisons for actual profit and loss (P&L) and hypothetical P&L (developed in accordance with MAR99.31 to MAR99.33). For the key models used at the group-wide level, banks must disclose a comparison between the daily VaR measures and the trading outcomes corresponding to hypothetical changes in the portfolio's values (based on a comparison between the portfolio's end-of-day value and, assuming unchanged positions, its value at the end of the subsequent day), as well as a comparison between the daily VaR measure and the trading outcomes corresponding to actual changes in the portfolio's values (based on a comparison between the portfolio's end-of-day value and its actual value at the end of the subsequent day). Daily VaR should reflect the risk measures (used for regulatory purposes) calibrated to a one-day holding period to compare with the 99% confidence level with its trading outcomes for both actual and hypothetical P&L.

For actual P&L: banks must provide information about actual gains/losses, and especially clarify whether they include reserves, and if not, how reserves are integrated into the backtesting process; banks must also clarify whether actual P&L includes commissions and fees or not.

Definitions

Daily VaR in this template should reflect the risk measures (used for regulatory purposes) calibrated to a one-day holding period to compare with the 99% of confidence level with its trading outcomes.

Hypothetical gain/loss is based on hypothetical changes in portfolio values that would occur if end-of-day positions remain unchanged.