



Central Bank of Barbados

**INSTRUCTIONS FOR COMPLETING THE BASEL II
CAPITAL ADEQUACY REPORTING FORMS**

Bank Supervision Department
December 2015



**Capital Adequacy Reporting Instructions
Credit Risk, Operational Risk and Market Risk
December 2015**

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General Notes

- There are nine(9) worksheets:
 1. Capital Items and Capital Adequacy Ratio Computation
 2. Standardized Approach - On Balance Sheet Assets (excluding Securitisation tranches)
 3. Standardized Approach - Off Balance Sheet Assets (Non-Derivative)
 4. Standardized Approach - Off Balance Sheet Assets (Derivatives)
 5. Operational Risk
 6. Foreign Exchange Risk
 7. Interest Rate Risk – Specific and Total
 8. Interest Rate Risk – General Risk
 9. Equity Position Risk
 10. Commodities Position Risk

- A trigger worksheet is included between Worksheets 6 and 7 to determine on an ongoing basis whether a licensee needs to complete full reporting and therefore also submit Worksheets 7 to 10.

- The worksheets should be submitted to the Central Bank of Barbados not later than the 21st of the month following the quarter for which the data are reported.



Worksheet 1: Capital Items and Capital Adequacy Ratio Computation

A. CAPITAL ITEMS

Tier I or Core Capital

Tier I Capital or Core Capital consists of equity and disclosed reserves less deductions:

- a. *Paid up ordinary share capital.* This refers to issued and fully paid ordinary shares/common stock;
- b. *Paid up ordinary share capital surplus.* This refers to the share premium on the issued and fully paid ordinary shares/common stock;
- c. *Paid up perpetual non-cumulative preference shares.* These are preferred shares which:
 - do not have a maturity date;
 - cannot be redeemed at the option of the shareholder;
 - gives the issuer the legal right to defer or eliminate preferred dividends; and
 - have no other provisions that will require future redemption of the issue.
- d. *Paid up perpetual non-cumulative preference shares surplus.* This refers to the surplus on the preferred shares;
- e. *Statutory reserves.* This is the reserve fund that licensees are required to maintain in accordance with Sections 18 and 33 of the Financial Institutions Act, Cap. 324A;
- f. *Capital reserves – excluding asset revaluations.* The total amount of surplus on capital items or transactions excluding those covered under Fixed Assets and Securities Revaluation Reserves;
- g. *General reserves - excluding reserves for losses on assets;*
- h. *Retained earnings – audited.* The portion of earnings not paid out as dividends. Report here the figure as stated in the most recent audited financial statements;



- i. *Goodwill*. This arises from the acquisition of assets and is deducted from **Tier I capital before deductions**.

Tier II or Supplementary Capital

Tier II or supplementary capital consists of the following components less deductions:

- a. *Fixed asset revaluation reserves (limited to 20% of Tier I capital)*. This arises from a formal revaluation of the financial institution's real estate property but limited to one revaluation every five years;
- b. *Securities revaluation reserves (discounted)*. This arises from the practice of holding securities in the balance sheet, valued at historic cost. The difference between the historic cost and the market value is discounted by 55%;
- c. *General provisions/reserves for losses on assets (limited to 1.25% of risk-weighted assets)*. General provisions or general loan-loss reserves are created against the possibility of losses not yet identified. Where they do not reflect a known deterioration in the valuation of particular assets, these reserves qualify for inclusion in Tier 2 capital. Where, however, provisions or reserves have been created against identified losses or in respect of an identified deterioration in the value of any asset or group of subsets of assets, they should not be included in the capital base. General provisions or general loan loss reserves, which qualify for inclusion in Tier II, do so subject to a limit of 1.25% of risk-weighted assets;
- d. *Hybrid debt capital instruments*. These are a range of instruments that combine characteristics of equity capital and of debt e.g.:
 - i. Paid-up perpetual cumulative preference shares;
 - ii. Paid-up perpetual cumulative preference shares surplus;
 - iii. Long-term preference shares;
 - iv. Perpetual subordinated term debt; and
 - v. Mandatory convertible debt instruments.

They should meet the following requirements:

- they should be unsecured, subordinated and fully paid;
- they should not be redeemable at the discretion of the holder;



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- they should be available to absorb losses; and
 - service obligations attached to the instrument should be deferrable.
- e. *Subordinated term debt and limited life preference shares (limited to 50% of Tier I capital.* This includes conventional unsecured subordinated debt capital instruments with a minimum original fixed term to maturity of over five years and limited life redeemable preference shares. Such instruments are subordinated to the claims of both depositors and general creditors and are limited to a maximum of 50% of Tier I capital;
- f. *Investments in financial subsidiaries not consolidated in national systems.* These are subsidiaries engaged in banking and financial activities which are not consolidated in national systems and are deducted from **Tier II capital before deductions** (deductions will be made against total capital base and such investments would not be included in total assets); and
- g. *Other intangibles,* e.g. the capitalization of formation and other preliminary expenses. These are deducted from **Tier II capital before deductions.**



B. CAPITAL ADEQUACY RATIO COMPUTATION

Credit Risk

Report here *Total risk-weighted assets for credit risk*. This is the sum of *Total on-balance sheet (risk-weighted) assets*, which is derived from the calculation on Worksheet 2 and *Total off-balance sheet (risk-weighted assets)* which is the sum of the totals derived from the calculations on Worksheets 3 & 4. *Total capital required against credit risk* is the capital charge derived from the calculations on Worksheets 2, 3 and 4. Goodwill and other intangibles, and investments in financial subsidiaries not consolidated in national systems are deducted from on-balance sheet risk weighted assets.

Operational Risk

Report here *Total risk-weighted assets for operational risk*. First select the *Method for calculating operational risk capital requirements*, either Basic Indicator Approach or Standardised Approach. *Total capital required against operational risk* is the capital charge derived from the calculation on Worksheet 5, depending on the method used. *Total risk-weighted assets for operational risk* are the total risk equivalent assets derived from the calculation on Worksheet 5, depending on the method used.

Market Risk

Report here *Total risk-weighted assets for market risk*. This is the sum of the foreign exchange, interest rate, equity position and commodity position risk assets, derived from the calculations on Worksheets 6, 7 & 8, 9 and 10, respectively. *Total capital required against market risk* is the capital charge derived from the calculations on Worksheets 6 to 10.

Total Risk-Weighted Assets

This is the sum of the total risk-weighted assets each for credit, operational and market risks.

Total Required Capital

This is 8% of *Total risk-weighted assets for credit risk* plus the sum of *Total capital required against operational risk* and *Total capital required against market risk*.

Total Eligible Capital



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This is *Total Qualifying Capital (Tier I and Tier II)* derived from the calculation in Section A of this worksheet.

Capital Surplus/Deficit

This is the excess/shortage when *Total eligible capital* is compared to *Total required capital*.

Capital Adequacy Ratio (Tier I)

This item divides *Total Core Capital - Tier I* in Section A of this worksheet by *Total risk-weighted assets* and is expressed as a percentage. This item must be at least 4% or any percentage as determined by the Central Bank of Barbados.

Capital Adequacy Ratio (Tier II)

This item divides *Total Qualifying Capital (Tier I and Tier II)* in Section A of this worksheet by *Total risk-weighted assets* and is expressed as a percentage. This item must be at least 8% or any percentage as determined by the Central Bank of Barbados.



Worksheet 2: Standardized Approach - On Balance Sheet Assets (excluding Securitisation tranches)

A. Balance Sheet Item

This column lists the various balance sheet items and their applicable risk weights. See section A of the Capital Adequacy Guideline: Standardised Approach to Credit Risk for further details on applying risk weights.

B. Exposures Without CRM

This column is completed for exposures which do not have any allowable credit risk mitigants. The full value of the exposure should be reported.

C. Exposures With CRM

Exposures which have recognised credit risk mitigants would complete both of the columns under *Exposures with CRM*. The first column: *Exposure pre-CRM*, reports the total value of the outstanding exposure (based on the counterparty) while the second column: *Exposure post-CRM*, reports the value of the exposure after applying the applicable CRM techniques. See section C of the Capital Adequacy Guideline: Standardised Approach to Credit Risk for further details.

D. Risk-Weighted Amount

The total risk weighted value after the relevant risk weights and CRMs have been applied.



Worksheet 3: Standardized Approach - Off Balance Sheet Assets (Non-Derivative)

A. Off-Balance Sheet Items

1. Commitments that are unconditionally cancellable without prior notice receive a credit conversion factor of 0%.
2. Commitments with an original maturity up to one year will receive a credit conversion factor of 20%.
3. Short-term self-liquidating trade letters of credit arising from the movement of goods (e.g. documentary credits collateralised by the underlying shipment), will receive a 20% credit conversion factor to be applied to both issuing and confirming banks.
4. Transaction-related contingent items (e.g. performance bonds, bid bonds, warranties and standby letters of credit related to particular transactions) will have a credit conversion factor of 50%.
5. Note issuance facilities¹ (NIFs) and revolving underwriting facilities² (RUFs) will receive a credit conversion factor of 50%.
6. Commitments with an original maturity of over one year will receive a credit conversion factor of 50%.
7. 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 credit conversion factor of 100%.
8. Sale and repurchase agreements and asset sales with recourse, where the credit risk remains with the bank, will receive a credit conversion factor of 100%.
9. A credit conversion factor 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).

¹ A syndicate of banks that have agreed to purchase any short to medium-term notes that a borrower is unable to sell in the euro currency market.

² A form of revolving credit in which a group of underwriters agrees to provide loans in the event that a borrower is unable to sell in the Eurocurrency market. These loans are generally provided through the purchase of short-term Euronotes.



10. Forward asset purchases, forward deposits and partly-paid shares and securities, which represent commitments with certain drawdown, will receive a credit conversion factor of 100%.

B. Exposures Without CRM

This column is completed for exposures, which do not have any allowable credit risk mitigants. The *Credit Equivalent Exposure* column calculates automatically after inputting the *Notional Amount before CCF*.

C. Exposures with CRM

Exposures which have recognised credit risk mitigants would complete all columns under *Exposures with CRM section*. See section C of the Capital Adequacy Guideline: Standardised Approach to Credit Risk for further details. The *Credit Equivalent Exposure pre-CRM* column calculates automatically after inputting the *Notional Amount before CCF*.

D. Risk Weights Amount

The total risk weighted value after the relevant risk weights and CRMs have been applied. The risk weight is determined by the counterparty as outlined in section A of the Capital Adequacy Guideline: Standardised Approach to Credit Risk.

Notional Principal Amount

The notional principal amount is the face value or gross amount of a given off-balance sheet transaction and not the fair value. Absolute values should be reported.

Credit Conversion Factor (CCF)

A CCF is the percentage value used to convert an off-balance sheet exposure into an on-balance sheet equivalent (i.e. the Credit equivalent). CCFs are generally pre-defined in the off-balance sheet work sheets.

Credit Equivalent Exposure (CEE)

A CEE is the on-balance sheet equivalent of an off-balance sheet exposure.



Worksheet 4: Standardized Approach - Off Balance Sheet Assets (Derivatives)

The treatment of forwards, swaps, purchased options and other similar derivatives needs special attention because institutions are not exposed to credit risk for the full face value of their contracts (notional principal amount), but only to the potential cost of replacing the cash flow (on contracts showing a positive value) if the counterparty defaults. The credit equivalent amounts are calculated automatically using the **current exposure method**. The licensee should 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:

Residual Maturity	Interest Rate	Exchange Rate And Gold	Equity	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:

- For contracts with multiple exchanges of principal, the factors are to be multiplied by the number of remaining payments in the contract.
 - 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 should 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%.
 - 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".
-



- No potential future credit exposure should be calculated for single currency floating/floating interest rate swaps; the credit exposure on these contracts should be evaluated solely on the basis of their mark to market value.

B. Exposures Without CRM

These columns are completed for exposures, which do not have any allowable credit risk mitigates. The *Credit Equivalent Exposure* column calculates automatically after inputting the *Replacement Cost of Contracts* and *Notional Principal amounts*.

C. Exposures with CRM

Exposures which have recognised credit risk mitigates would complete all columns under Exposures with CRM section. See section C of the Capital Adequacy Guideline: Standardised Approach to Credit Risk for further details. The *Credit Equivalent Exposure pre-CRM* column calculates automatically after inputting the *Replacement Cost of Contracts* and *Notional Principal Amounts*.

D. Risk Weights Amount

The total risk weighted value after the relevant risk weights and CRMs have been applied. Exposures are risk weighted according to the category of counterparty as outlined in section A of the Capital Adequacy Guideline: Standardised Approach to Credit Risk.

Notional Principal Amount

The notional principal amount is the face value or gross amount of a given off-balance sheet transaction and not the fair value. Absolute values should be reported.

Credit Equivalent Exposure (CEE)

A CEE is the on-balance sheet equivalent of an off-balance sheet exposure.

Replacement Cost

The current exposure amount for each type of market-related off-balance sheet exposure is the sum of the positive mark-to-market value (or replacement cost) of each individual contract within each classification.



Worksheet 5: Operational Risk

There are two methods for calculating operational risk capital charges:

1. Basic Indicator Approach (BIA); and
2. Standardised Approach (SA).

Licensees are advised that they will need permission from the Central Bank to apply the Standardised Approach. Licensees, who fail to meet the qualifying criteria listed in Annex 2 of the Capital Adequacy Guideline: Measurement of Operational Risk, will be required to use the Basic Indicator Approach.

Panel A – Reporting Period

In the first column the three most recent years are entered and in the second column the date of the institution's year-end is entered.

Panel B - Basic Indicator Approach

Under the Basic Indicator Approach, banks must hold capital for operational risk equal to a fixed percentage of average annual gross income over the past three years.

In panel B a bank should report its total gross income for the three years specified.

Total gross income is defined as net interest income plus net non-interest income. It is intended that this measure should:

- be gross of any provisions (e.g. for unpaid interest);
- be gross of operating expenses, including fees paid to outsourcing service providers³;
- exclude reversals of provisions and write-offs;
- exclude realised profits/losses from the sale of securities in the banking book;
- exclude extraordinary or irregular items such as income or expenses arising from the sale of fixed assets or from natural disasters; and
- exclude income derived from insurance recoveries.

³ In contrast to fees paid for services that are outsourced, fees received by licensees that provide outsourcing services shall be included in the definition of gross income.



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Total Gross Income (after negative GI adjustment)

The worksheet will automatically calculate an average of its total gross income over the years for which gross income is positive.

Panel C - Standardised Approach

Under the Standardised Approach banks' activities are divided into eight business lines.

A capital charge for each business line is calculated by multiplying the gross income generated by that business line (to be entered in panel C) by a factor (denoted beta and given in the table below) assigned to that business line.

The total capital charge is the summation of the regulatory capital charges across each of the eight business lines, averaged over the previous three years. The sum of gross income for the eight business lines under the Standardised Approach to operational risk should equal total gross income under the Basic Indicator Approach.

Business Lines	Beta Factors
Corporate Finance (β_1)	18%
Trading and Sales (β_2)	18%
Retail Banking (β_3)	12%
Commercial Banking (β_4)	15%
Payment and Settlement (β_5)	18%
Agency Services (β_6)	15%
Asset Management (β_7)	12%
Retail brokerage (β_8)	12%

If a bank is not active in a given business line then it should enter "NA" (i.e. not applicable) in the corresponding cell. If a bank is active in a given business line but is unable to estimate it, it should enter "NI" (i.e. no information) in the corresponding cell.

The worksheet will automatically calculate a simple three-year average of gross income for each of the eight business lines.



Worksheet 6: Foreign Exchange Risk

Assets and Liabilities – Row 1.1 and Row 2.1

All assets and liabilities including accrued interest denominated in US Dollars, Canadian Dollars, Pound Sterling, and Euros (and/or any other Foreign Currency in which licensees have significant exposure) should be reported separately in the relevant columns and should be converted to domestic currency at spot rates on the reporting date. All other foreign currency assets and liabilities should be converted to domestic currency at spot rates on the report date and reported in aggregate in the “Other column.

Net Spot Position – Row 3.0

Represents all asset items (Row 1.1.12) less all liability items (Row 2.1.11) for the respective currencies.

Net Forward Position – Row 4.3

Represents all amounts to be received (Row 4.1) less all amounts to be paid (Row 4.2) under forward foreign exchange transactions including currency futures and the principal of currency swaps that are not included in the ‘Net Spot Position’.

Guarantees certain to be called – Row 5.0

Represents guarantees (and similar transactions) that are certain to be called and are likely to be irrecoverable.

Net Open Position – Row 6.0

Represents the sum of ‘Net Spot Position’ (Row 3.0), Net Forward Position (Row 4.3) and ‘Guarantees certain to be called’ (Row 5.0) for each foreign currency (and the domestic currency equivalent of the aggregate of all other foreign currencies).

Aggregate of Long Positions – Row 7

This reflects the sum of all long foreign currency positions derived in Row 6.0.

Aggregate of Short Positions – Row 8

This reflects the sum of all short foreign currency positions derived in Row 6.0.

Assessed Foreign Exchange Risk – Row 10



This represents the exposure in the mix of long and short positions in the institution's foreign currency business and is equal to the higher absolute value of the aggregated long foreign currency positions as against the aggregate of short foreign currency positions plus gold.

Capital Charge – Row 11

This represents the capital charge calculated by multiplying the assessed foreign exchange risk (Row 10) by 8%.

Capital Required Against Foreign Exchange Options⁴ – Row 12

This represents the capital requirement calculated under the carved out method for options.

Total Capital Required Against Foreign Exchange Risk – Row 13

This represents the sum of the capital requirements at Rows 11 and 12.

Foreign Exchange Risk Equivalent Assets – Row 14

The risk equivalent assets in relation to foreign exchange risk positions are determined by multiplying the total capital required by the reciprocal of the required Capital Adequacy Ratio (or 12.5).

⁴ Please note that the worksheets to capture option activity will be forthcoming.



Trigger Sheet

The Measuring Capital Adequacy for Market Risk Guideline applies to all entities that are incorporated in Barbados and licensed under the Financial Institutions Act, Cap. 324A and the International Financial Services Act, Cap 325 where:

- a. The combined trading book open positions normally **exceed 5% of** total banking and trading book business or the trading book positions normally **exceed \$100 million; whichever is lowest**; or
- b. There is exposure to foreign exchange and/or commodity risk, irrespective of whether these exposures arise from a banking or trading position.

Where a licensee's trading book exceeds the threshold in (a) above for a short period only, the licensee may not be required to fill the remaining worksheets 7 – 10. However where a licensee reports an average trading book size over the threshold, the Bank may require full reporting. This Worksheet therefore introduces a mechanism to signal whether a licensee needs to complete Worksheets 7 to 10. Please see detailed instructions below.

Trading book size

Enter the size of the trading book open positions for the current quarter (Qn), the previous quarter (Qn-1) and the quarter before (Qn-2).

Average trading book size

This calculates the average trading book size over three quarters. By using the moving average it should smooth out short-term fluctuations and highlight longer-term trends.

Total assets

Enter this figure from the Schedule 1: Statement of Assets and Liabilities.

Ratio

This ratio is computed by dividing the average trading book size by the total assets.



Worksheet 7: Interest Rate Risk – Specific and Total

Securities Categories

For each category of Securities in Rows 1.0, 2.0 and 3.0, report the net long or short position.

Capital Required Against Specific Risk – Row 4.0

Capital required is the sum of the individual securities categories 'Net long or Short Position' multiplied by the stated 'Risk Charge' for each security category.

Capital Required Against General Risk – Row 5.0

This represents the capital requirement derived from Worksheet 8A/B.

Capital Required Against Interest Rate Options – Row 6.0

This represents the capital requirement calculated under the carved out method for options.

Total Capital Required Against Interest Rate Risk – Row 7.0

This represents the sum of the capital requirements at Rows 4.0, 5.0 and 6.0.

Interest Rate Risk Equivalent Assets – Row 8.0

The risk equivalent assets in relation to interest rate risk positions are determined by multiplying the total capital required by the reciprocal of the required Capital Adequacy Ratio (or 12.5).



Worksheet 8A⁵/8B⁶: Interest Rate Risk – General Risk

WORKSHEET 8A

Step 1: Positions (Row 1.1 and Row 1.2)

Enter the long or short positions in debt securities and other sources of interest rate exposures, including derivative instruments, into a maturity ladder comprising thirteen time bands (or fifteen time bands in the case of instruments with coupons of less than 3%). These time bands are specified in the table 2. Fixed-rate instruments should be allocated according to the residual term to maturity and floating-rate instruments according to the residual term to the next re-pricing date. **Opposite positions of the same amount in the same issues can be omitted from the interest rate maturity framework.**

Step 2: 'Weight (%)' (Row 1A)

Weight the positions in each time band by a factor designed to reflect the price sensitivity of those positions to assumed changes in interest rates. These factors range from 0% to 12.5% depending on the maturity of the instrument. Zero coupon bonds and deep discount bonds are treated as bonds with coupons less than 3%. This derives the weighted long (Row 1.3) and weighted short (Row 1.4) positions.

Step 3: Capital Charge – Level 1 (Row 1.7)

- a. Offset the weighted longs and shorts within each time band against each other yielding a single short or long position for each band to determine the matched positions i.e. the smaller absolute value of the weighted long or weighted short positions) for each time band and record in Row 1.5. The remaining (open) unmatched position should be reported in Row 1.6, indicating the sign/direction of the position.
- b. Levy a 10 % capital charge on the smaller of the offsetting (long or short) positions in each time band (i.e. the matched position) to reflect basis risk and gap risk, given that each band includes different instruments and different maturities. This gives rise to:

⁵ All licenses will be required to use the time-to-maturity method.

⁶ Licensees wishing to use modified duration (or any other duration method) will be subject to supervisory request and approval.



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- i. net long or short position in each time band;
- ii. vertical disallowances which have no sign.

Scale of Capital Charges

ZONES	TIME-BAND	CAPITAL CHARGES REQUIRED:			
		Within each Time Band	Within Each Zone	Between Adjacent Zones	Net Open Position in Portfolio
Zone 1	0 - 1 month	10%	40%	40%	100%
	1 - 3 months	10%			
	3 - 6 months	10%			
	6- 12 months	10%			
Zone 2	1 – 2 years	10%	30%	40%	
	2 - 3 years	10%			
	3 – 4 years	10%			
Zone 3	4 – 5 years	10%	30%	40%	
	5 – 7 years	10%			
	7 – 10 years	10%			
	10 – 15 years	10%			
	15 – 20 years	10%			
	over 20 years	10%			

Step 4: Capital Charge – Level 2 (Row 2.3)

Calculate capital charges which is related to matched positions across time zones and is termed 'horizontal disallowances'.

The first layer of capital charges, 'Capital Charge – Level 2' relates specifically to the matched positions across the Time Bands in each of the three zones i.e. Zone 1, Zone 2 and Zone 3.

i. Zone 1

From residual unmatched positions (Row 1.6) in Zone 1 (e.g. Compare unmatched positions for Time Bands '0-1 month', '1-3 months', '3-6 months' and '6-12 months'), determine the position that is matched (e.g. The lower of



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the aggregate of all short positions vs. the aggregate of all long positions). This value is inserted under Zone 1 in Row 2.1. The remaining unmatched position is inserted under Zone 1 in Row 2.2. A capital charge of 40% is calculated against the residual matched position for the Time Zone.

ii. Zone 2

A similar process to that done for Zone 1 is repeated for Zone 2. Note however that there are 3 Time Bands to be compared within Zone 2 and that the capital charge taken is 30% of the residual matched position.

iii. Zone 3

A similar process to that followed in Zones 1 and 2 is repeated for Zone 3. Note however that there are 6 time bands (8 where low coupon rate instruments are involved) for which positions must be compared. The capital charge taken on the matched position is 30%.

- iv. The three capital charges calculated for Zone 1, Zone 2 and Zone 3 respectively, are summed to give 'Capital Charge 2' in the 'Capital Charges' column – Row 2.3

Step 5: Capital Charge - Level 3 (Charge across Zones 1 and 2)

Compare residual unmatched positions in Zones 1 and 2 and determine the matched position if any (i.e. the lower of a long and short position, or 'zero' if both positions are in the same direction). The matched position is inserted in Row 3.1. Determine the unmatched position and insert in Row 3.2. A capital charge of 40% is calculated on the matched position and recorded in Row 3.3.

Step 6: Capital Charge - Level 4 (Charge across Zones 1 & 2 vs Zone 3)

Compare the residual unmatched position from Zone 1 and Zone 2 comparison (Row 3.2) and compare against the unmatched position under Zone 3 (Row 2.2). Determine the matched position and insert Row 4.1. Determine the unmatched position and insert in Row 4.2. A capital charge of 40% is taken against the matched position, and recorded in Row 4.3.



Step 7: Capital Charge - Level 5: Overall Net Open Position

The remaining unmatched or open position (as recorded in Row 4.2) is subject to a capital charge of 100% and recorded in Row 5.1.

Step 8: Total Capital Charge

The total capital charge in relation to general market risk in interest rate instruments is equal to the sum of the five layers of capital charges determined. This **total is carried forward to Row 5.0 of Worksheet 7** for summing with the capital charges in relation to specific risk for interest rate related instruments.

WORKSHEET 8B

Step 1: Positions (Row 1.1 and Row 1.2)

Long or short positions in debt securities and other sources of interest rate exposures (including derivative instruments) must be multiplied by their modified duration and slotted into the relevant time bands. Fixed and floating rate instruments are allocated based on their duration. The price sensitivity of each instrument is calculated in terms of a change in interest rates of between 0.6 to 1.0 percentage points depending on the maturity of the instrument. The resulting sensitivities are slotted into a duration –based ladder with the fifteen time bands set out in Table 3.

Step 2: 'Weight (%)' (Row 1A)

Weight the positions in each time band by a factor designed to reflect the price sensitivity of those positions to assumed changes in interest rates. These factors range from 0% to 12.5% depending on the maturity of the instrument. This derives the weighted long (Row 1.3) and weighted short (Row 1.4) positions.

Step 3: Capital Charge – Level 1 (Row 1.7)

- a. Offset the weighted longs and shorts within each time band against each other yielding a single short or long position for each band to determine the matched positions i.e. the smaller absolute value of the weighted long or weighted short positions) for each time band and record in Row 1.5. The remaining (open)



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unmatched position should be reported in Row 1.6, indicating the sign/direction of the position.

- b. Levy a 5% capital charge on the smaller of the offsetting (long or short) positions in each time band (i.e. the matched position) to reflect basis risk and gap risk, given that each band includes different instruments and different maturities, This gives rise to:
 - i. net long or short position in each time band;
 - ii. vertical disallowances which have no sign.

Scale of Capital Charges

ZONES	TIME-BAND	CAPITAL CHARGES REQUIRED:			
		Within each Time Band	Within Each Zone	Between Adjacent Zones	Net Open Position in Portfolio
Zone 1	0 - 1 month	5%	40%	40%	100%
	1 - 3 months	5%			
	3 - 6 months	5%			
	6- 12 months	5%			
Zone 2	1.0 to 1.9 years	5%	30%	40%	
	1.9 to 2.8 years	5%			
	2.8 to 3.6 years	5%			
Zone 3	3.6 to 4.3 years	5%	30%	40%	
	4.3 to 5.7 years	5%			
	5.7 to 7.3 years	5%			
	7.3 to 9.3 years	5%			
	9.3 to 10.6 years	5%			
	10.6 to 12 years	5%			
	12 to 20 years	5%			
	Over 20 years	5%			



Step 4: Capital Charge – Level 2 (Row 2.3)

Calculate capital charges which is related to matched positions across time zones and is termed 'horizontal disallowances'.

The first layer of capital charges, 'Capital Charge – Level 2' relates specifically to the matched positions across the Time Bands in each of the three zones i.e. Zone 1, Zone 2 and Zone 3.

i. Zone 1

From residual unmatched positions (Row 1.6) in Zone 1 (e.g. Compare unmatched positions for Time Bands '0-1 month', '1-3 months', '3-6 months' and '6-12 months'), determine the position that is matched (e.g. The lower of the aggregate of all short positions vs. the aggregate of all long positions). This value is inserted under Zone 1 in Row 2.1. The remaining unmatched position is inserted under Zone 1 in Row 2.2. A capital charge of 40% is calculated against the residual matched position for the Time Zone.

ii. Zone 2

A similar process to that done for Zone 1 is repeated for Zone 2. Note however that there are 3 Time Bands to be compared within Zone 2 and that the capital charge taken is 30% of the residual matched position.

iii. Zone 3

A similar process to that followed in Zones 1 and 2 is repeated for Zone 3. Note however that there are 6 time bands (8 where low coupon rate instruments are involved) for which positions must be compared. The capital charge taken on the matched position is 30%.

iv. The three capital charges calculated for Zone 1, Zone 2 and Zone 3 respectively, are summed to give 'Capital Charge 2' in the 'Capital Charges' column – Row 2.3

Step 5: Capital Charge - Level 3 (Charge across Zones 1 and 2)

Compare residual unmatched positions in Zones 1 and 2 and determine the matched position if any (i.e. the lower of a long and short position, or 'zero' if both positions are in the same direction). The matched position is inserted in Row 3.1. Determine the



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unmatched position and insert in Row 3.2. A capital charge of 40% is calculated on the matched position and recorded in Row 3.3.

Step 6: Capital Charge - Level 4 (Charge across Zones 1 & 2 vs Zone 3)

Compare the residual unmatched position from Zone 1 and Zone 2 comparison (Row 3.2) and compare against the unmatched position under Zone 3 (Row 2.2). Determine the matched position and insert Row 4.1. Determine the unmatched position and insert in Row 4.2. A capital charge of 40% is taken against the matched position, and recorded in Row 4.3.

Step 7: Capital Charge - Level 5: Overall Net Open Position

The remaining unmatched or open position (as recorded in Row 4.2) is subject to a capital charge of 100% and recorded in Row 5.1.

Step 8: Total Capital Charge

The total capital charge in relation to general market risk in interest rate instruments is equal to the sum of the five layers of capital charges determined. This **total is carried forward to Row 5.0 of Worksheet 7** for summing with the capital charges in relation to specific risk for interest rate related instruments.



Worksheet 9: Equity Position Risk

This schedule applies to positions in equities in the trading book including long and short positions in all instruments that exhibit market behaviour similar to equities. The instruments covered include common stocks, whether voting or non-voting, convertible securities that behave like equities, and commitments to buy or sell equity securities. Non-convertible preference shares are included in the interest rate risk requirements and as such are excluded from the equity position. Long and short positions in identical equity issues may be reported on a net basis.

A separate worksheet should be done for each national market in which the reporting institution holds equities. Equity securities listed in more than one country must be allocated to either the country where the issuer is incorporated and listed or the country where the security was purchased or sold, but not both. Calculation should be expressed in the domestic currency equivalent of the denomination of the equity, converted at spot rates at the reporting date.

Columns A and B: 'Gross Long' / 'Gross Short'

The net position in each equity should be entered into either Column A 'Gross Long' if it is a long position or Column B 'Gross Short' if it is a short position. Note that long and short positions in each equity may be reported on a net basis for the purposes of calculating open positions. However, positions in different equities cannot be offset in this fashion.

Column C – Gross Equity Position

Column A is added to the total of Column B, with the signs (direction of position) ignored.

Column D – Net Open Position

The total of Column A is subtracted from the total of Column B to derive the net open position.

Column E – 8% of Gross Position

The capital charge to cover specific risk, (defined as the bank's gross equity positions i.e., the sum of all long equity positions and of all short equity positions) is calculated as 8% of the gross position (8% of the Total of Column C).



Column F – 8% of Net Open

The Capital charge to cover general market risks (defined as the difference between the sum of the long vs the sum of the short positions i.e., the overall net position in an equity market) is calculated as 8% of the net open position (8% of the total of Column D).

Capital Required Against Specific Risks – Row 21

This represents the total value reflected in Row 20 under Column E.

Capital Required Against General Risks – Row 22

This represents the total value reflected in Row 20 under Column F.

Capital Required Against Equity Options – Row 23

This represents the capital requirement calculated under the carved out method for options.

Total Capital Requirement Against Equity Position Risk – Row 24

This represents the sum of the capital requirements at Rows 21, 22 and 23.

EQUITY DERIVATIVES

Equity derivatives and off-balance-sheet positions which are affected by changes in equity prices should be included in the measurement system. This includes futures and swaps on both individual equities and on stock indices. The derivatives are to be converted into positions in the relevant underlying.

Matched positions in each identical equity or stock index in each country may be fully offset, resulting in a single net short or long position to which the specific and general market risk charges will apply.

Calculation of Positions

In order to calculate the specific and general market risk, positions in derivatives should be converted into notional equity positions as follows:

- a. futures and forward contracts relating to individual equities should be reported at current market prices;
- b. futures relating to stock indices should be reported as the mark-to-market value of the notional underlying equity portfolio;



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- c. equity swaps are to be treated as two notional positions; and
- d. equity options and stock index options can be 'carved out' together with the associated underlying assets (that is, the options and their associated hedges are excluded from the calculations performed for all other equity positions and a separate risk charge is obtained using the simplified approach under the Section 'Treatment of Options').

Risk in relation to an Index

Besides general market risk, a further capital charge of 2% will apply to the net long or short position in an index contract comprising a diversified portfolio of equities. This capital charge is intended to cover factors such as execution risk. This risk factor is to be applied specifically to well-diversified indices and not for example, to sectoral indices.



Worksheet 10: Commodity Position Risk

A commodity is defined as a physical product which is, or can be traded on a secondary market, e.g., agricultural products, minerals (including oil) and precious metals (excluding gold). All commodity derivatives and off-balance sheet positions which are affected by changes in commodity prices should be included in this schedule. E.g. commodity futures, and commodity swaps.

Commodity Types - Each long and short commodity position (spot and forward) should be expressed in terms of the standard unit of measurement e.g. barrels, kilos, grams etc.

Columns A and B: 'Gross Long' / 'Gross Short'

The net position in each commodity should be converted at current spot rates into domestic currency and entered into either Column A 'Gross Long' if it is a long position or Column B 'Gross Short' if it is a short position. Note that long and short positions in each commodity may be reported on a net basis for the purposes of calculating open positions. However, positions in different commodities do not enjoy this treatment.

Column C – Gross Position

The total of column A is added to the total of Column B, with the signs (direction of position) ignored.

Column D – Net Open Position

The total of Column A is subtracted from the total of Column B to derive the net open position.

Column E – 15% of Net Open

The Capital charge to cover directional risk (risk of a change in spot prices) is calculated as 15% of the net open position (15% of the total of Column D).

Column F – 3% of Gross Position

The capital charge to cover basis risk, interest rate risk and forward gap risks is calculated as 3% of the gross position (3% of the Total of Column C).



Capital Required Against Directional Risk – Row 21

Represents the total value reflected in Row 20 under Column E.

Capital Required Against Basis, Interest Rate and Forward Gap Risks – Row 22

Represents the total value reflected in Row 20 under Column F.

Capital Required Against Commodity Options – Row 23

This represents the capital requirement calculated under the carved out method for options.

Total Capital Required Against Commodity Position Risk – Row 24

This represents the sum of the capital requirements at Rows 21, 22 and 23.

Commodity Position Risk Equivalent Assets – Row 25

The risk equivalent assets in relation to commodity positions are determined by multiplying the total by the reciprocal of the required Capital Adequacy Ratio (or 12.5).



Appendix 1

Currency Codes

Country	Currency Codes
Netherlands Antillean Guilder	ANG
Barbados Dollar	BBD
Bahamian Dollar	BSD
Belize Dollar	BZD
Canadian Dollar	CAD
Euro	EUR
British Pound	GBP
Jamaican Dollar	JMD
Cayman Islands Dollar	KYD
Trinidad & Tobago Dollar	TTD
United States Dollar	USD
Eastern Caribbean Dollar	XCD