GN 5 – IRB APPROACH
Amended January - 2012

SECTION C

PRUDENTIAL RETURNS

SPECIFIC GUIDANCE NOTES ON

INTERNAL RATING BASED (IRB) APPROACHES

SAMA

BANKING SUPERVISION DEPARTMENT

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SECTION C

SPECIFIC INSTRUCTION ON IRB RETURNS Q17.10 to Q17.20

Return Q17.10

- This return gives a summary of a Bank's risk-weighted amount by IRB classes/subclasses (excluding securitization exposures) calculated under the IRB approached and the effect of the scaling factor. Consequently, only those Banks' assets classes and sub-classes for which SAMA has given approval to apply IRB Approaches should submit these returns. The return should be prepared separately under 1) Total, 2) FIRB Approaches and 3 AIRB Approaches, where total represents the sum of FIRB and AIRB approaches.
- Banks will be rolling over portfolios from Standardized to IRB approaches on an asset class basis.
- Banks will be able to combine the asset classes and sub-classes into single classes for IRB purposes.
- These specific instructions are to be implemented in conjunction with the following.

    1) General Guidance Notes (GN4) Concerning IRB Approaches.
    2) SAMA's Guidance Document of June 2006.

Items 1 to 9. Number of Corresponding Returns Reporting

For each IRB class and subclass, provide the Risk Weighted Assets and indicate the reference of Return from which the figures are reported under column entitled Risk Weighted Assets.

Item 10 Total risk-weighted amount for credit risk (IRB approach) before applying the scaling factor.

This is the sum of items 1 to 10.

Item 11 Total risk-weighted amount for credit risk (IRB approach) after applying the scaling factor

In calculating the total risk-weighted amount under the IRB approach, a Bank should apply a scaling factor specified by the SAMA to the total risk-weighted amount calculated under the IRB approach (item 11). The current best estimate of the scaling factor is 1.06.

This is the figure reported in the section A indicating the Total Risk Weighted Assets for the various portfolios under the IRB approaches.

Return Q17.11

This Return is used for reporting the risk-weighted amounts for exposures to sovereign and central banks, public sector entities (PSE's), banks and securities firms, corporates, and commercial mortgages, small and medium size corporates (SMEs), and other corporate exposures. Specialized Lending (SL) of corporates under supervisory slotting criteria approach should be reported in Return 17.12. In each return, a Bank should specify whether the Foundation IRB approach or Advanced IRB approach is used, the IRB class and subclass for which the Return is completed.
For the current time, there are no PSE's in KSA for capital adequacy purposes.

Item	Nature of item
Columns (1) & (2)	Internal rating system

A Bank using the IRB approach is required to have a minimum of seven grades for non-defaulted obligors and one for defaulted obligors in its internal rating systems. The Bank can insert additional grades into column (1) if its internal obligor grades are more than eight.

Under column (2), enter “N” for a non-defaulted obligor grade and “D” for a defaulted obligor grade.

The obligor grades should be presented in an ascending order of their associated average PD. For consistency purposes, a Bank should report every obligor grade within its internal rating systems in each Return even though there is no exposure falling within a particular obligor grade.

- The use of external ratings associated PD's for rated corporate bonds, sovereign and banks and other financial institution exposures is permitted for SAMA approved External Credit Assessment Institution (ECAI) as given below. These ECAI are approved under SAMA's Standardized Approach.
    - Moodys
    - S&P
    - Fitch IBCA

Columns (3), (4) & (5)	PD range

A Bank should report a distribution of PD bands as is currently used for internal purposes. For each obligor grade, report the average PD (in percentage) under column (5). This estimate will be used for calculation of the risk-weighted amount for each exposure.
The average PD for corporate, sovereign and bank exposures that are not in default is the PD associated with the internal obligor grade to which that exposure is assigned, with a PD floor for corporate and bank exposures of 0.03%. For defaulted exposures, the average PD for corporate, sovereign and bank exposures is 100%.

Report the lower bound and upper bound of the PD band for each obligor grade under columns (3) and (4) respectively. The average PD must lie between the lower and upper boundaries. Where a Bank uses a single PD estimate for each obligor grade (i.e. no PD range), it should enter the same PD estimate as the upper and lower bounds of the range (i.e. the same PD estimates for all columns (3), (4) and (5)).

In cases where a Bank calculates its risk-weighted amount for both default risk and dilution risk of its purchased corporate receivables, only the PD estimate for default risk should be reported.

Item	Nature of Item
Columns (6) to (11)	EAD calculation

For each obligor grade, give a breakdown of the exposures before recognized guarantees/credit derivative contracts by:

- For columns (6): on-balance sheet exposures should be reported.
- For column (7): off-balance sheet exposures (other than OTC derivative transactions and credit derivative contracts) should be reported.
- For column (8): OTC derivative transactions and credit derivative contracts.

Column 6, 7 and 8 the amounts reported should be gross amount before recognized guarantee and credit derivative contracts.

A Bank is required to provide the breakdown of the EAD derivation of off-balance sheet exposures other than OTC derivative transactions and credit derivative contracts for OTC derivative transactions and credit derivative contracts. Specific reporting requirements for off-balance sheet exposures are given in the specific instructions for returns Q17.17 and Q17.18.

Exposures with guarantees/credit derivative contracts recognized under the substitution framework should be reported as follows:

Foundation IRB approach

i. Identify the IRB subclass of an exposure and report the amount of the exposure before recognized guarantees/credit derivative contracts under columns (6) to (8) in the grade applicable to the PD estimate of the underlying obligor.
ii. Divide the exposure amount into two portions: (a) the portion covered by credit protection and (b) the remaining uncovered portion.
iii. Report the uncovered portion as “Exposures after recognized guarantees/credit derivative contracts” under columns (9) to (11) in the grade applicable to the PD estimate of the underlying obligor.
iv. Report the secured portion as “Exposures after recognized guarantees/credit derivative contracts” under columns (9) to (11) in the grade applicable to the PD estimate of the credit protection provider (i.e. PD substitution).

Advanced IRB approach

i. Identify the IRB subclass of an exposure and report the amount of the exposure before recognized guarantees/credit derivative contracts under columns (6) to (8) in the grade applicable to the PD estimate of the underlying obligor.

ii. Where the risk mitigating effects are addressed through:

- PD substitution: report in the way similar to the foundation IRB approach.
- Adjusting the PD estimate of the obligor: report the same exposure amount under columns (9) to (11) of the same form in a grade applicable to the adjusted PD estimate of the underlying obligor.
- Adjusting the LGD estimate: report the same exposure amount under columns (9) to (11) of the same form and in the grade applicable to the PD estimate of the underlying obligor.

Double Default Framework

Exposures with guarantees/credit derivative contracts recognized under the double default framework should be reported as follows:

i. Identify the IRB subclass of an exposure and report the amount of the exposure before recognized guarantees/credit derivative contracts under columns (6) to (8) in the grade applicable to the PD estimate of the underlying obligor.

ii. Divide the exposure amount into two portions: (a) the hedged portion covered by credit protection and (b) the remaining unhedged portion. In respect of the hedged portion, the risk-weighted amount should be calculated according to the risk-weight function set out in paragraph 18[1] (or, where applicable, adjusted by paragraph 20[1] (ii) in respect of SME corporates). The risk-weighted amount of the unhedged exposure should be calculated in the same way as for all other corporate exposures to the same obligor of the underlying exposure according to the risk-weight function set out in paragraph 16 (or, where applicable, adjusted by paragraph 20(i) in respect of SME corporates).

iii. Report both hedged and unhedged portions as “Exposures after recognized guarantees/credit derivative contracts” under columns (9) to (11) in the grade applicable to the PD estimate of the underlying obligor. Defaulted exposures cannot be subject to the double default framework. In case the underlying obligor of a hedged exposure defaults, such exposure should be treated as a direct exposure to the credit protection provider and then risk weighted accordingly. Conversely, if the credit protection provider of a hedged exposure defaults, such exposure should remain with the underlying obligor and should be risk-weighted as an unhedged exposure to the underlying obligor. In case both the underlying obligor and the credit protection provider of a hedged exposure default, such exposure should be treated as a defaulted exposure to either the underlying obligor or the credit protection provider, depending on which party defaulted last.

[1]These refer to General Guidance notes (GN4) concerning IRB Approaches.

For exposures without recognized guarantees/credit derivative contracts or without taking into account the credit risk mitigating effect of recognized guarantees/credit derivative contracts, the same exposure amount should be entered in both columns (6) to (8) and (9) to (11).

Column (12) EAD

This is the sum of columns (9) to (11), which is the EAD figure for calculating the risk-weighted amount of an exposure.

Column (13) **Loss Given Default**

LGD is reported as a percentage and for Senior debt a LGD of 60% is to be used, and for sub-ordinated debt a LGD of 75% is to be used.

In this event, a bank has SAMA acceptable collateral for the subject exposure, the above regulatory LGD's have to be adjusted as give below.

$$\text{Exposure weighted average LGD} = \frac{LGD * E^*}{E}$$

where: E = Current Value of exposure

E* = Exposure value after risk mitigation determined using the Comprehensive approach – refer to SAMA's document of March 2007.

For further details refer to item # 32 of GN4

Column (14) Exposure weighted average maturity value

M is reported in years. Also refer to items 44-46 of GN4.

FIRB

- Under, the FIRB a bank should use 2.5 years for all exposures.
- Under, the AIRB, a Bank should compute exposure weighted average maturity value $=\sum_i M_i * EAD_i / \sum EADi$

where:

M_I = the M associated with the ith exposure in a grade.

EAD_i = the EAD associated with the ith exposure allocated to a grade.

Columns (15) to (18) Risk-weighted amount

Calculate the risk-weighted amount of each exposure (refer to item 15 to 23 of GN4) and report the sum of risk-weighted amount (including the risk-weighted amount under the double default framework and for dilution risk and residual value risk, where applicable) for each obligor grade under column (15).

Report under column (16) the risk-weighted amount of hedged exposures that are calculated according to the risk-weight function set out in item 18 of GN4 (or, where applicable, adjusted by item # 20 of GN20 (ii) in respect of SME corporates) under the double default framework.

Report under column (17b) the risk-weighted amount for dilution risk for purchased receivables.

Report under column (17c) the risk-weighted amount for residual value risk for leasing transactions.

Columns (19) & (20) Memorandum items

Report under column (18) the sum of the expected loss amount of exposures for each obligor grade. Refer to GN4 item # 147 – 148.

Report under column (19) the total number of obligors and credit protection providers for the exposures reported in column (12) for each obligor grade.

Return Q17.12

Corporate Exposures

Specialized Lending (SL)

This return is used for reporting SL under supervisory slotting criteria approach. In each return, a Bank should specify the SL subclass for which the form is completed i.e. Project finance, Object finance, Commodity Finance, Income Producing Real Estate.

Item	Nature of item
Columns (1) & (2)	Internal Rating System

A Bank using the supervisory slotting criteria approach for SL is required to map its internal grades for the SL into five supervisory rating grades: “strong”, “good”, “satisfactory”, “weak” and “default”, each of which is assigned a supervisory risk-weight (SRW) as given in column (2).

Columns (3) to (8)	EAD Calculation

For each supervisory rating grade, give a breakdown of the exposures before recognized guarantees/credit derivative contracts by:

- For columns 3: on-balance sheet exposures, the gross amount of an exposure should be reported.
- For column (4): off-balance sheet exposures (other than OTC derivative transactions and credit derivative contracts) should be reported.
- For column (5): OTC derivative transactions and credit derivative contracts should be reported.

A Bank is required to provide the breakdown of the EAD derivation of off-balance sheet exposures, for exposures other than OTC derivative transactions and credit derivative contracts and for OTC derivative transactions and credit derivative contracts. Specific reporting requirements for off-balance sheet exposures are given in the specific instructions for return Q17.17 and Q17.18.

Exposures with recognized guarantees/credit derivative contracts should be reported as below:

i. Identify the IRB subclass of a SL and report the exposure amount before guarantees/credit derivative contracts under columns (3) to (5) in the supervisory rating grade applicable to the obligor.

ii. Divide the exposure amount into two portions: (a) the portion secured by credit protection; and (b) the remaining unsecured portion.

iii. Report the uncovered portion as “Exposures after recognize guarantees/credit derivative contracts” under columns (6) to (8) of the return, in the supervisory rating grade applicable to the obligor.

iv. Report the unsecured portion as “Exposures after recognized guarantees/credit derivative contracts” under columns (9) to (11) of the Return for the IRB subclass applicable for the credit protection provider and in the grade applicable to the PD estimate of the credit protection provider (i.e. PD substitution).

No double default framework is available for SL under supervisory slotting criteria approach.

For exposures without recognized guarantees/credit derivative contracts or without taking into account the credit risk mitigating effect of recognized guarantees/credit derivative contracts, the same exposure amount should be entered in both columns (3) to (5) and (6) to (8).

Column (9) <u>EAD</u>

This is the sum of columns (6) to (8), which is the EAD figure for calculating the risk-weighted amount of an exposure.

Column (10) <u>Exposure weighted average maturity value</u>

Specific instructions for column (14) of Retrun Q17.11 apply i.e. exposure weighted average maturity value. The supervisory estimates of M under the foundation IRB approach are not applicable to SL under supervisory slotting criteria approach.

Column (11) <u>Risk-weighted amount</u>

This is calculated as follows: SRW (column (2)) x EAD (column (9)).

Columns (12) & (13) <u>Memorandum items</u>

Report the sum of the expected loss amount of exposures for each supervisory rating grade under column (12). Report under column (13) the total number of obligors and credit protection providers for the exposures reported in column (9) for each supervisory rating grade.

Return Q17.13

This return is used for reporting the different IRB subclasses of retail exposures. These may include different pools for 1) Retail Non-Mortgage, 2) SBFE's, 3) Credit cards, 4) Car loans, 5) Residential Mortgages, 6) Other Personal Finance. In the Return, a Bank should state the retail IRB subclass (pool) for which the return is completed.

Item	Nature of item
Columns (1) & (2)	Internal rating system

There is no minimum number of pools for retail exposures. Under column (2), enter "N" for a non-defaulted pool and "D" for a defaulted pool. The pools should be presented in an ascending order of their associated average PD. For consistency purposes, a Bank should report every obligor grade within its internal rating systems in each form even though there is no exposure falling within a particular obligor grade.

Columns (3), (4) & (5)	PD Range

A Bank should report a distribution of PD bands as is currently used for internal purposes. For each pool (i.e. PD band), report the average PD (in percentage) under column (5). This estimate will be used for calculation of risk-weighted amount of each pool.

The average PD for retail exposures that are not in default should not be less than 0.03%. For defaulted exposures, the average PD is 100%.

Report the lower bound and upper bound of the PD band for each pool under columns (3) and (4) respectively. The average PD must lie between the lower and upper boundaries. Where a Bank uses a PD estimate for each pool (i.e. no PD range), it should enter the same PD estimate as the upper and lower bounds of the range (i.e. the same PD estimates for all columns (3), (4) and (5)).

In cases where a Bank calculates its risk-weighted amount for both default risk and dilution risk of its purchased retail receivables, only the PD estimate for default risk should be reported.

Columns (6) to (11)	EAD Calculation

For each pool, give a breakdown of the exposures before recognized guarantees/credit derivative contracts by:

- For column (6:) on-balance sheet exposures, the gross amount of an exposure should be reported
- For column (7): off-balance sheet exposures (other than OTC derivative transactions and credit derivative contracts) should be reported.

- For column (8): OTC derivative transactions and credit derivative contracts should be reported.

A Bank is required to provide the breakdown of the EAD derivation of off-balance sheet exposures other than OTC derivative transactions and credit derivative contracts, and for OTC derivative transactions and credit derivative contracts. Specific reporting requirements for off-balance sheet exposures are given in the specific instructions for returns Q17.17 and Q17.18.

Exposures with guarantees/credit derivative contracts recognized under the substitution framework should be reported as below:

i. Identify the IRB subclass of an exposure and report the amount of the exposure before recognized guarantees/credit derivative contracts under columns (6) to (8) in the pool applicable to the underlying obligor.
ii. Where the credit risk mitigating effects are addressed through adjusting the PD estimate or the LGD estimate, report the same exposure amount under columns (9) to (11) of the same Return in the pool applicable to the adjusted PD/LGD estimates of the underlying pool of obligors.

For exposures without recognized guarantees/credit derivative contracts or without taking into account the credit risk mitigating effect of guarantees/credit derivative contracts, the same exposure amount should be entered in both columns 6(ii) to (8) and (9) to (11).

Column (12) <u>EAD</u>

This is the sum of columns (9) to (11), which is the EAD figure for calculating the risk-weighted amount of an exposure.

Column (13) <u>LGD</u>

LGD for a pool is measured in percentage.

Column (14) to (16) Risk-weighted amount

Calculate the risk-weighted amount (including dilution risk and residual value risk, where applicable) for each pool under column (14).

Report under column (15) the risk-weighted amount for dilution risk for purchased receivables.

Report under column (16) the risk-weighted amount for residual value risk for leases.

Columns (17) & (18) <u>Memorandum items</u>

Report under column (17) the sum of the expected loss amount of exposures for each pool.

Report under column (18) the total number of obligors and credit protection providers for the exposures reported in column (12) for each pool.

Equity Exposures

Return Q17.14

This return is used for reporting the risk-weighted amount of equity exposures that are subject to the simple risk-weight method.

Item	Nature of item
Columns (1) & (2)	Portfolio A Bank having equity exposures subject to the simple risk-weight method is required to divide such exposures into two portfolios: (i) publicly traded equity exposures and (ii) all other equity exposures. These portfolios are assigned with a supervisory risk-weight of 300% and 400% respectively.
Column (3)	EAD Calculation For each portfolio, report the exposure amount in column 3.
Column (4)	Risk-weighted amount This is calculated as follows: SRW (column (2)) x EAD (column (3)).
Column (5)	Memorandum item Report the number of equity exposures reported under publicly traded equity exposures and all other equity exposures.

Equity Exposures

Internal Model

Return Q17.15

This return is used for reporting the risk-weighted amount of equity exposures that are subject to the internal models method.

Item	Nature of item
Column (1)	Portfolio

A Bank having equity exposures subject to the internal models method is required to divide such exposures into two portfolios: (i) publicly traded equity exposures and (ii) all other equity exposures.

EAD calculation

Column (2): Provide the total exposures value for the two portfolios.

Column (3) Same as Col. 2 above where minimum risk weights apply.

Columns (4) to (5) Risk-weighted amount calculation: minimum risk-weights

Under column (4), report the EAD of the equity exposures for which the minimum risk-weights are applied in calculating the risk-weighted amount, which are 200% for publicly traded equity exposures and 300% for all other equity exposures.

Under column (5), the amount of risk-weighted amount of the equity exposures where the minimum risk-weights are applied is calculated as follows: EAD (column (3)) x minimum risk-weight (column (4)).

Columns (6) to (8) Risk-weighted amount calculation: internal models

Under column (6), report the EAD of the equity exposures whose risk-weighted amount is calculated using the internal models and where the minimum risk-weights are not applicable.

Under column (7), report the potential loss on the equity exposures from an assumed instantaneous shock equivalent to the one-tailed 99% confidence interval of the difference between quarterly returns and an appropriate risk free rate computed over a long-term sample period.

Under column (8), the risk-weighted amount of the equity exposures is calculated as potential loss (column (7)) x 12.5).

Column (9) Risk-weighted amount

This is the sum of the risk-weighted amount calculated under the minimum risk-weights (column (5)) and under the internal models (column (8)).

Column (10) Memorandum item

Report the number of equity exposures reported under publicly traded equity exposures and all other equity exposures.

Equity Exposure

Return Q17.16

This return is used for reporting the risk-weighted amount and credit risk components of equity exposures subject to the PD/LGD approach. In each return, a Bank should state the IRB subclass for which the return is completed. The major sub-classes include:

1. Publicly traded hold for long term investments.
2. Privately owned equity exposures for long term investments.
3. Other publicly traded equity exposures.
4. Other equity exposures.

Item	Nature of item
Columns (1) to (5)	Internal rating system: obligor grade and PD range. Specific instructions for columns (1) to (5) – Refer to instruction for Q17.11.
Columns (6) & (7)	EAD calculation For each obligor grade, give a breakdown of exposures (there being no distinction required between on-balance sheet exposures and off-balance sheet exposures in relation to equity exposures) before recognized guarantees/credit derivative contracts by exposures. Exposures with recognized guarantees/credit derivative contracts should be reported as follows: i. Identify the IRB subclass of an exposure and report the amount of the exposure before recognized guarantees/credit derivative contracts under column (6) in the grade applicable to the PD estimate of the underlying obligor. ii. Divide the exposure amount into two portions: (a) the portion covered by credit protection and (b) the remaining uncovered portion. iii. Report the uncovered portion as “Exposures after recognized guarantees/credit derivative contracts” under column (7) return in the grade applicable to the PD estimate of the underlying obligor. iv. Report the secured portion as “Exposures after recognized guarantees/credit derivative contracts” under for example in Q17.11 in columns (9) to (11) applicable for the credit protection provider and in the grade applicable to the PD estimate of the credit protection provider (i.e. PD substitution). For exposures without recognized guarantees/credit derivative contracts or without taking into account the credit risk mitigating effect of recognized guarantees/credit derivative contracts, the same exposure amount should be entered in both columns (6) and (7).

Columns (8) to (11) Risk-weighted amount

Calculate the risk-weighted amount of each exposure and report the sum of risk-weighted amount for each grade under column (8).

A Bank should report the supplementary information on the risk-weighted amount reported under column (8):

- For column (9): report the risk-weighted amount of the equity exposures where the factor of 1.5 is applied to the risk-weight derived from the corporate risk-weight function. Refer to item 62 of GN 4.
- For column (10): report the risk-weighted amount of the equity exposures where the minimum risk-weight is applied (i.e. 100% for publicly traded equity exposures and privately owned equity exposures held for longterm investment, 200% for other publicly traded equity exposures and 300% for other equity exposures). Refer to item 65 of GN 4.
- For column (11): report the risk-weighted amount of the equity exposures where the maximum risk-weight of 1250% is applied. Refer to item 67 of GN 4.

Column (12) & (13) Memorandum item

Report the sum of the expected loss amount of exposures for each grade under column (12).

Report the number of equity exposures reported for each grade under column (13).

Return Q17.17 : Off Balance Sheet exposures (Other than OTC Derivatives and Credit Derivative Contract

This return is used for reporting the breakdown of off-balance sheet exposures other than OTC derivative transactions and credit derivative contracts in the banking book for corporate, sovereign, bank and retail exposures. For corporate, sovereign and bank exposures, a Bank using the foundation IRB approach to derive the risk-weighted amount for these exposures should report information under (A1) and those using the advanced IRB approach should report information under (A2) and (B) is for reporting of retail exposures.

Item	Nature of item
Columns (1) to (11)	Off-balance sheet exposures (other than OTC derivative transactions and credit derivative contracts) A Bank is required to report in columns (1) to (11) each of its off-balance sheet exposures other than OTC derivative transactions and credit derivative contracts in the banking book as listed out in the table to item 85 of IRB Guidance Notes (GN4). A Bank should provide, in all cases, principal amount and credit equivalent amount of the exposures before and after recognized guarantees/credit derivative contracts. The Bank is also required to estimate CCFs for those types without prescribed CCFs. For such types of off-balance sheet exposures, the Bank is required to indicate the CCF (or a range of CCFs).
Columns (CT & DT)	Total credit equivalent amount Report under column CT the sum of the credit equivalent amount (before recognized guarantees/credit derivative contracts) reported in columns (1) to (11). Report under column DT the sum of the credit equivalent amount (after recognized guarantees/credit derivative contracts) reported in columns (1) to (11).

Return Q17.18 : Off Balance Sheet Exposures, Other Derivative Transaction and Credit Derivative Contract

This Return is used for reporting the breakdown of OTC derivative transactions and credit derivative contracts in the trading book for corporate, sovereign, bank and retail exposures. Such off balance sheet exposures should be reported by residual maturity of i) one year or less ii) 1-5 years iii) over 5 years.

Item	Nature of item
Columns (1) to (7)	OTC derivative transactions and credit derivative contracts in the trading book A Bank is required to report in columns (1) to (7) each of its OTC derivative transactions and credit derivative contracts in the trading book by IRB class as listed out in the tables to items 86 to 91 of GN 4. A Bank should provide, in all cases, principal amount, current exposure, potential exposure and credit equivalent amount of the exposures before and after recognized guarantees/credit derivative contracts under column (7).
Columns (A(iv) & A(v))	Subtotal credit equivalent amount Report under column A (iv) the sum of the credit equivalent amount (before recognized guarantees/credit derivative contracts reported in columns (1) to (5). Report under column A(v) the sum of the credit equivalent amount (after recognized guarantees/credit derivative contracts reported in columns (1) to (5).
Columns (B(iv) & B(v))	Total credit equivalent amount Report under column B (iv) the sum of the credit equivalent amount (before recognized guarantees/credit derivative contracts reported in columns (1) to (7) for different IRB classes. Report under column B(v) the sum of the credit equivalent amount (after recognized guarantees/credit derivative contracts reported in columns (1) to (7) for different IRB classes.

Return Q17.19 LGD for Corporate, Sovereign and Bank Exposure.

This return is used for reporting the LGD information for corporate, sovereign and bank exposures under the foundation IRB approach. For each return (under return #17.11 series) covering corporate, sovereign and bank exposures under the foundation IRB approach (except SL under supervisory slotting criteria approach), a Bank should file a corresponding return under Q17.20 series.

In each reporting return of Q17.20, a Bank should state the IRB class and subclass for which the form is completed.

Item	Nature of item
Columns (1) & (2)	Obligor grade
	Report the average PD for exposures assigned to each grade. The number of grades and the average PD figures reported should be the same as those reported in column (5) of return Q17.11 series for that particular IRB subclass.
Column (3)	EAD
	Report the sum of EAD for exposures of each grade. This figure should be the same as column (12) of return Q17.11 series for that particular IRB class and subclass.
Columns (4) to (7)	LGD

Allocate or apportion the EAD of each exposure according to the following facility/collateral types:

Column (4): Subordinated exposures (LGD: 75%)
Column (5): Unsecured senior exposures (LGD: 60%)

- If the exposure is a subordinated exposure, report the full amount of EAD to column (4).
- If the exposure is an unsecured senior exposure, report the full amount of EAD to column (5).

Col. (6)

- If a senior exposure is collateralized by recognized financial collateral (including gold), then the Bank should calculate and adjusted LGD percentage by employing the following formula.

$$LGD^* = \frac{LGD \times E^*}{E}$$

For details refer to note # 32 of GN 4.

Column (7) Exposure weighted average LGD

Report the exposure weighted average LGD for each obligor grade. These figures should be the same as those reported under column (13) of return Q17.11 for that particular IRB subclass/portfolio type.

Return Q17.20 and Q17.20.1: EL-EP Calculations under IRB Approach

This Return is used for reporting the EL amount and eligible provisions by IRB class/subclass and calculating the difference between the total EL amount and total eligible provisions (if any) for the computation of capital base.

Items (1) to (4) <u>Corporate, sovereign, bank and retail exposures</u>

A Bank should report by IRB class/subclass the EL amount and eligible provisions for non-defaulted (columns (a) and (d)) and defaulted exposures (columns (b) and (e)).

Item (5) <u>Total</u>

This is the sum of items (1) to (4).

Items (6) to (9) <u>EL-EP calculation</u>

Excess of total EL amount over total eligible provisions will be reported in item 6. This figure will be deducted from an Bank's core capital and supplementary capital.

Surplus of total eligible provisions over total EL amount will be reported in item 7. This figure will be compared to a ceiling reported in item 8 (i.e. 0.6% x item 8 of Return Q17.10) and then reported the lower amount in item 9. This figure will be added to a Bank's supplementary capital.

Saudi Arabian Monetary Agency
December 2011

(NOT INCLUDED)

Illustrative Example of IRB Approaches[1]

Example (SME corporate exposure partially guaranteed by a bank)

Corporate B, classified as grade 5 under the Bank XYZ's internal rating system, borrowed a subordinated loan of SR100 Mn from Bank XYZ. SR40 Mn of this exposure is guaranteed by Bank C, classified as grade 2 under the Bank XYZ's internal rating system. The guaranteed commitment is a senior claim on Bank C.Given:

- Corporate B's group total annual revenue = SR50 Mn or below
- Specific provision = SR1.72 Mn
- No currency and maturity mismatch between the transaction and the guarantee
- PD substitution (i.e. not subject to double default framework)

Workings:

Corporate B:

- Estimated PD (grade 5) for Corporate B = 3%
- LGD of the uncovered portion = 75%
- RW = 162.63%
- M = 2.5 years

(a) Exposures before recognized guarantees/credit derivative contracts (on-balance sheet exposures before/after netting) = SR100 Mn

(b) Exposures after recognized guarantees/credit derivative contracts (on-balance sheet exposures after netting)

= SR100 - SR40 Mn
= SR60 Mn (i.e. EAD)

(c) Risk-weighted amount for the exposure to Corporate B (i.e. portion not covered by the guarantee issued by Bank C)

= EAD x RW
= SR60 Mn x 1.6263
= SR97.578 Mn

(d) EL-eligible provisions calculation:

(1) EL amount

= EAD x PD x LGD
= SR60 Mn x 0.03 x 0.75
= SR1.35 Mn

[1]Note: This example assess on LGD under FIRB of 45%

(2) Eligible provisions

= SR1.72 Mn x 60/100 (or a risk-weighted basis, such as based on the EL amount i.e. 1.35/(1.35 + 0.045))

= SR1.032 Mn

Bank C:

- Estimated PD (grade 2) for Bank C = 0.25%
- LGD of the guaranteed portion = 45
- RW = 49.47%
- M = 2.5 years

(e) Exposures after recognized guarantees/credit derivative contracts (on-balance sheet exposures after netting) = SR40 Mn (i.e. EAD)

(f) Risk-weighted amount of the exposure to Bank C (i.e. the guaranteed portion)

= EAD x RW
= SR40 Mn x 0.4947
= SR19.788 Mn

(g) EL-eligible provisions calculation:

(1) EL amount

= EAD x PD x LGD
= SR40 Mn x 0.0025 x 0.45
= SR0.045 Mn

(2) Eligible provisions

= SR1.72 Mn x 40/100 (or a risk-weighted basis, such as based on the EL amount i.e. 0.045/(1.35 + 0.045))

= SR0.688 Mn

(iii) Example 3 (Secured corporate exposure fully guaranteed by a sovereign)

Corporate D, classified as grade 5 under the Bank XYZ's internal rating system, borrowed a senior loan of SR100 M from Bank XYZ. The transaction is secured by a BBB rated six-year corporate **bond** of SR40 Mn and an other recognized IRB collateral of SR50 Mn. Also, the exposure is fully guaranteed by Central Bank E which is classified as grade 4 under the Bank XYZ's internal rating system.

Given:

- Corporate D's group total annual revenue = HK$500 Mn or more

- Haircut for the BBB rated six-year corporate bond (i.e. credit quality grade 3 of residual maturity >5 years) = 12%
- No currency and maturity mismatch between the transaction and the collateral/guarantee
- No specific provisions made

Workings:

Corporate D:

- Estimated PD (grade 5) for Corporate D = 3%
- M = 2.5 years

(a) Exposures before recognized guarantees/credit derivative contracts (on-balance sheet exposures before/after netting) = SR100 Mn

(b) Exposures after recognized guarantees/credit derivatives (on-balance sheet exposures after netting)

= SR100 Mn - SR100 Mn
= SR$0 Mn

(c) Eligible provisions = SR0 Mn

Sovereign E:

- Estimated PD (grade 4) for Sovereign E = 1.5%
- M = 2.5 years

(d) Exposures after recognized guarantees/credit derivative contracts (on-balance sheet exposures after netting) = SR100 Mn (i.e. EAD)

(e) Allocation of EAD according to collateral type:

(1) Portion fully secured by recognized financial collateral:

= C x (1 - Hc - Hfx)
= SR40 Mn x (1 - 0.12 - 0)
= SR35.2 Mn (LGD = 0%)

(2) Portion fully secured by other recognized IRB collateral:

- Value of the physical collateral42:

= C x (1 - Hc - Hfx)
= SR50 Mn x (1 - 0 - 0)
= SR50 Mn

- Ratio of the value of the other recognized IRB collateral to the reduced exposure (after recognizing the effect of recognized financial collateral):

= [SR50 Mn / (SR100 Mn - SR35.2 Mn)] x 100%
= 77% (between C* of 30% and C** of 140%)

(viii) Portion fully secured by other recognized IRB collateral:

= Value of the other recognized IRB collateral / C**
= SR50 Mn / 140%
= SR35.714 Mn (LGD = 40%, RW = 93.86%)

(3) Unsecured portion:

= SR100 Mn - SR35.2 Mn - SR35.714 Mn
= SR29.086 Mn (LGD = 45%, RW = 105.59%)

(f) Exposure weighted average LGD

= (Efinancial x 0% + Eother x 40% + Eunsecured x 45%) / E
42 Haircut (Hc) for eligible IRB collateral is 0%.