

**Deutsche Bank AG - India Branches**  
(Incorporated in Germany with limited liability)

**Management disclosures under Pillar 3 – Period ended December 31, 2015**

**1. Scope of application**

The BASEL III - Pillar 3 disclosures contained herein relate to Deutsche Bank AG, India Branches (herein also referred to as the 'Bank') for the period ended December 31, 2015. These are compiled in accordance with the Reserve Bank of India (the 'RBI') Master Circular – Basel III Capital regulation DBR.No.BP.BC.1/21.06.201/2015-16 dated July 1, 2015.

No entities are required to be consolidated with Deutsche Bank AG, India Branches for the purpose of accounting/disclosure requirements. However as prescribed in the above guidelines, certain prudential guidelines apply on a consolidated basis, including that of capital adequacy computation.

List of group entities operating in India and considered for prudential consolidation are as below:

**(In Rs '000)**

| Sr. No. | Name of entity                             | Principal activity of the entity          | Total balance sheet equity* | Total balance sheet assets* |
|---------|--|---|-----------------------------|-----------------------------|
| 1       | Deutsche India Holdings Private Limited    | Holding company                           | 3,594,208                   | 3,595,162                   |
| 2       | Deutsche Investments India Private Limited | Loans and advances / Portfolio management | 11,077,500                  | 19,471,700                  |

\* Figures as per audited accounts of March 31, 2015

List of Group entities operating in India and not considered for consolidation both under accounting and regulatory scope of consolidation is as under. The bank does not hold any investment in the group entities

**(In Rs '000)**

| Sr. No. | Name of entity                                    | Principal activity of the entity   | Total balance sheet equity* | Total balance sheet assets* |
|---------|---|--|-----------------------------|-----------------------------|
| 1       | Deutsche Asset Management (India) Private Limited | Asset management / Portfolio Management  | 1,131,579                   | 1,399,225                   |
| 2       | Deutsche Securities (India) Private Limited       | Services   | 729,937                     | 804,549                     |
| 3       | Deutsche Equities India Private Limited           | Stock broker / Merchant banking and advisory services                                      | 4,601,800                   | 27,517,100                  |
| 4       | Deutsche Investor Services Private Limited        | Fund accounting  | 192,129                     | 361,414                     |
| 5       | RREEF India Advisors Private Limited              | Sub advisory services  | 200,589                     | 204,686                     |
| 6       | Deutsche Trustee Services (India) Private Limited | Act as Trustees of all schemes launched by Deutsche Mutual funds                           | 43,808                      | 48,160                      |
| 7       | Deutsche CIB Centre Private Limited               | Global processing centre for Back office processing / support services for business lines. | 2,918,400                   | 3,748,500                   |
| 8       | DBOI Global Services Private Limited              | Global processing centre for back office / IT enabled services                             | 4,497,700                   | 8,685,500                   |

\* Figures as per audited accounts of March 31, 2015

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**2. Capital Structure**

**a. Summary information on the terms and conditions of the main features of all capital instruments**

Tier I Capital primarily comprises of interest free capital received from the Head Office, balance in statutory reserves, capital reserves and remittable surplus retained for CRAR requirement.

Tier II Capital primarily comprises of Provision on Standard Assets, General Loan Loss Provision and excess provision on sale of NPA which are created in accordance with the extant RBI guidelines.

**b. Details of Capital Funds**

(In Rs.'000)

| Particulars                                      | 31 Dec 2015       | 31 March 2015     |
|--|-------------------|-------------------|
| Capital - Head Office Account                    | 44,971,087        | 44,971,087        |
| Statutory Reserve                                | 18,985,305        | 18,985,305        |
| Capital Reserve                                  | 177,207           | 177,207           |
| Remittable Surplus Retained for CRAR requirement | 29,311,662        | 28,325,287        |
| Less: Deferred Tax asset*                        | (1,471,827)       | (1,471,827)       |
| Less: Intangible assets*                         | (9,956)           | (9,956)           |
| Less: Defined Benefit Plan*                      | (7,093)           | (7,093)           |
| <b>Tier I Capital</b>                            | <b>91,956,385</b> | <b>90,970,010</b> |
| Investment Reserve                               | 314,023           | 314,023           |
| Provision on Standard Assets*                    | 1,897,703         | 1,897,703         |
| Provision on Country Risk*                       | 57,900            | 57,900            |
| Floating Provision                               | 712,260           | 712,260           |
| Provision made on Sale of NPA                    | 427,500           | 427,500           |
| Countercyclical provisioning buffer              | 150,000           | 150,000           |
| <b>Tier II Capital</b>                           | <b>3,559,386</b>  | <b>3,559,386</b>  |
| <b>Total (Tier I + Tier II Capital)</b>          | <b>95,515,771</b> | <b>94,529,396</b> |

\*Figures as per 31 March 2015, Audited Accounts

**3. Capital adequacy**

**a. Approach to assessing capital adequacy for current and future activities**

The Bank is committed to maintaining its sound capitalisation. Therefore, overall capital demand and supply are constantly monitored and adjusted as necessary in line with the strategic, business and capital plans drawn up annually by the Bank. It should be noted that Deutsche Bank operates as an integrated Group through its business divisions and infrastructure functions. The local Asset and Liability Committee (ALCO) for the Bank is the primary platform for providing strategic direction and follow through action relating to the management of the entity's financial resources. Specifically, the ALCO ensures adequate capitalisation to meet current and future business and regulatory requirements and sets limits for capital usage by business.

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Stress testing and sensitivity analysis are used to assess the Bank’s ability to sustain operations during periods of stress. They provide an insight into the potential impact of significant adverse events on the Bank’s earnings, risk profile and capital position.

**b. Capital requirements for credit risk, market risk, operational risk, and Capital ratios per New Capital Adequacy framework**

The Bank is subject to the Basel III capital adequacy guidelines stipulated by RBI with effect from April 1, 2013. The guidelines provide a transition schedule for Basel III implementation till March 31, 2019.

The capital ratio as per Basel III is 15.34%

| (In Rs.'000)   |                   |                   |
|--|-------------------|-------------------|
| Particulars  | 31 Dec 2015       | 31 March 2015     |
| Capital requirement for credit risk - (Standardised Approach)        |                   |                   |
| - Portfolios subject to Standardised Approach                        | 46,630,216        | 43,900,626        |
| - Portfolios subject to securitisation exposures                     | -                 | -                 |
| Capital requirement for market risk (Standardised Duration Approach) |                   |                   |
| - Interest rate risk   | 1,978,721         | 4,605,172         |
| - Foreign exchange risk (including gold)                             | 1,979,438         | 1,759,500         |
| - Equity risk  | 82,853            | 55,289            |
| Capital requirement for operational risk (Basic Indicator approach)  | 5,375,870         | 4,139,978         |
| <b>Total</b>   | <b>56,047,097</b> | <b>54,460,565</b> |
| <b>Deutsche Bank AG, India Branches</b>                              |                   |                   |
| <b>Tier I Capital adequacy ratio</b>                                 | <b>14.77%</b>     | <b>15.03%</b>     |
| <b>Total (Tier I + Tier II) Capital adequacy ratio</b>               | <b>15.34%</b>     | <b>15.62%</b>     |
| <b>Consolidated Bank</b>   |                   |                   |
| <b>Tier I Capital adequacy ratio</b>                                 | <b>15.30%</b>     | <b>16.41%</b>     |
| <b>Total (Tier I + Tier II) Capital adequacy ratio</b>               | <b>15.86%</b>     | <b>16.99%</b>     |

**4. Risk Exposure & Assessment**

**Risk Management Framework**

The wide variety of the Bank’s businesses requires it to identify, measure, aggregate and manage its risks effectively, and to allocate capital among the businesses appropriately. The Bank operates as an integrated group through its divisions, business units and infrastructure functions. Risk and capital are managed via a framework of principles, organizational structures and measurement and monitoring processes that are closely aligned with the activities of the divisions and business units:

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The Management Board (MB) provides overall risk and capital management supervision for its consolidated Group.

- The Bank operates a three-line of defence risk management model whereby business management, risk management oversight and assurance roles are played by functions independent of one another.
- Risk strategy and risk appetite are defined based on the Group Strategic & Capital Plan and Group Risk Appetite in order to align risk, capital and performance targets.
- Cross risk analysis reviews are conducted across the Group to ensure that sound risk management practices and a holistic awareness of risk exists.
- All major risk classes are managed in a coordinated manner via risk management processes, including credit risk, market risk, operational risk, liquidity risk, business risk and reputational risk. This includes risk concentrations within and across risk types.
- Appropriate monitoring and escalation processes are in place for key capital and liquidity thresholds and metrics. Where applicable, robust modelling and measurement approaches for quantifying risk and capital demand are implemented across the major risk classes.
- Effective systems, processes and procedures are a critical component of the Group's risk management capability.

#### **Risk Management Organisation**

The Supervisory Board exercises strategic control and supervision of DB Group. It monitors DB's risk and capital profile regularly via its designated subcommittee, the Risk Committee of the Supervisory Board. The chair of the Risk Committee reports on items discussed during the Risk Committee's meetings to the Supervisory Board.

The Risk Committee of the Supervisory Board meets regularly. At these meetings, the Management Board reports to the Risk Committee amongst others on credit, market, liquidity, refinancing, operational, strategic, cross-risk (including e.g. industry & country risk), regulatory as well as litigation, and reputational risks. It also reports on loans requiring a Supervisory Board resolution pursuant to law or the Articles of Association, questions of capital resources/leverage and matters of special importance due to the risks they entail. The Risk Committee deliberates with the Management Board on issues of the aggregate risk disposition and the risk strategy.

The Management Board (MB) provides overall risk & capital management supervision for the consolidated Group and is exclusively responsible for day to day management of the company with the objective of creating sustainable value in the interest of its shareholders, employees and other stakeholders. The MB is responsible for defining and implementing comprehensive and aligned business and risk strategies, as well as ensuring well-defined risk management functions and operating processes are in place to ensure that DB's overall performance is aligned to its business and risk strategy.

The MB has delegated certain functions and responsibilities to relevant senior governance committees to support the fulfilment of these responsibilities. For risk-related topics, these are in particular the Capital and Risk Committee (CaR) and Risk Executive Committee (Risk ExCo).

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The MB has mandated that:

- Risk ExCo, as the most senior functional committee of risk management of DB Group, identifies, controls and manages all risks including risk concentrations at Group level,. It is responsible for risk policy, the organisation and governance of risk management as well as ensuring the oversight of the execution of risk and capital management including identification, analysis and risk mitigation, within the scope of the risk and capital strategy (Risk & Capital Demand Plan) approved by the Management Board. The Risk ExCo is supported by subcommittees that are amongst others responsible for oversight on risk portfolios and policies, including the Portfolio Risk Steering Committee (PRSC) and the Group Reputational Risk Committee (GRRC).
- Capital and Risk Committee has responsibility for the alignment of risk appetite, capitalization requirements and funding needs of the Deutsche Bank Group with Group-wide, divisional and sub-divisional business strategies. It steers efficient capital consumption by determining capital availability in support of divisional business portfolios, capital earmarked for fresh investments, as well as other uses. Regular reviews of capital capacity and performance review of business initiatives drawing on Group capital are among its tasks. It provides a platform to discuss and agree strategic issues between risk management, Finance and the business divisions, which impact capital, funding or liquidity. The CaR ensures appropriate actions are defined and/or recommendations are made to the Management Board. It is also responsible for monitoring the performance of DB Group's risk profile against the DB Risk Appetite through the oversight of early warning indicators and ensuring escalation or actions are taken including the recommendation, where appropriate, to the MB to mobilize Recovery Management Governance which would result in the engagement of the Global Response Committee (GRC).

An overlap in membership between the CaR and the Risk ExCo facilitates a constant and comprehensive information flow between both committees.

The Portfolio Risk Steering Committee (PRSC) (to a certain extent the successor of the previous Cross Risk Review Committee (CRRC)) supports the CaR and the Risk ExCo with particular emphasis on the management of Group-wide risk portfolio. Amongst others PRSC, has responsibility for the oversight and control of DB Group's ICAAP ensuring compliance with respective regulatory requirements and policy setting. The PRSC also oversees the inventory of stress tests used for managing our risk appetite, reviews the results and proposes management action if required. It monitors the performance of the stress test process to ensure that it operates effectively and is in line with Group standards.

These committees may delegate some responsibilities to their sub-committees, working groups or designated functions.

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#### Role of the Chief Risk Officer (CRO)

The Chief Risk Officer (CRO) is a member of the Management Board and has Group-wide supradivisional responsibility for the management of all credit, market, and operational risks, and liquidity risk for the control of risk and the continuing development of methods for the risk measurement. In addition, the CRO is responsible for monitoring, analyzing and reporting risk on a comprehensive basis, including asset and liability gap, capital, liquidity, legal, compliance and regulatory risks. The following risk management divisions report directly to the CRO:

- Credit Risk Management (CRM)
- Market Risk Management (MRM)
- Operational Risk Management (ORM)
- Liquidity Risk Control (LRC)
- Chief Operating Office (COO)
- Divisional CRO units (e.g. AWM and NCOU)
- Regional CROs units for the Americas, Asia Pacific and Germany, responsible for Risk oversight of the business and local portfolios within the region and serving as a key contact for Risk related matters with the regional regulators.

Risk Analytics & Living Wills reports to the Chief Credit Officer PBC / Chief Risk Officer Germany and Portfolio & Exposure Management reports to the Chief Credit Officer CB&S/ GTB.

To ensure a wide coverage of risks by the members of the Management Board, the different risk management units ultimately report to different Management Board members. The following risk management functions report to other members of the Management Board:

- Compliance Risk
- Corporate Security & Business Continuity (CSBC)
- Government & Regulatory Affairs (G&RA)
- Legal (including Legal Risk Management (LRM))
- Treasury (including Liquidity Management but not Liquidity Risk Control which reports directly to the CRO).

Other functions of DB Group are also involved in risk management activities, including amongst others

- Group Audit
- Finance (including Group Tax, Group Reporting, Group Strategic Planning and Performance Management (GSPPM) and Group Capital Management)
- Group Strategy (AfK)
- Group Technology & Operations (GTO)

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**Recovery Management Governance**

Recovery Management Governance has been embedded in DB's risk management framework to ensure that DB can proactively identify and respond to severe stress or the threat of a severe stress.

The integration of Recovery Management governance into the day-to-day risk management framework requires an effective ongoing oversight of DB's risk profile.

The key elements forming the basis of the Recovery Management governance in DB include:

- Clear roles and responsibilities in a normal operating environment and in a crisis under the Management Board oversight
- A dedicated set of early warning indicators and recovery triggers to identify potential risks, stimulate management action and a specific regular monitoring process
- An enhanced regime of severe stress tests and defined strategic recovery measures to enable proactive management of our risk profile
- A dedicated sub-committee of the CaR, the Living Wills Committee (LWC) to ensure ongoing monitoring and process readiness.

Key roles and accountabilities include:

- The Management Board owns the recovery plan and plays a key role in its maintenance and execution. This includes review and approval of the Group Recovery Plan on at least an annual basis, including the menu of recovery measures and the results of the scenario testing to prove the effectiveness of the plan. In times of crisis, the Management Board is responsible for invoking the Recovery Plan which mobilizes the Global Response Committee (GRC) in accordance with the status of the recovery triggers, the mobilization and cessation of recovery governance and decisions on the execution of the strategic recovery measures.
- The Global Response Committee is a contingent committee formed in a crisis upon decision of the Management Board. It is responsible for the assessment and definition of the required recovery strategy and oversees the execution plan. The GRC will continue to evaluate and recommend appropriate actions to the Management Board until such time as the Management Board approves the return to the standard risk management governance by exiting the recovery process. The GRC task the Group Recovery Management Committee (GRMC) to manage the operational execution of the approved recovery strategy.
- The CaR is responsible for the oversight and monitoring of the performance of DB's risk profile (under both normal and stressed conditions) against defined qualitative and quantitative recovery triggers approved by the Management Board. In the case of a breach of the defined triggers or an assessment by the CaR of any other qualitative information that would, in its expert opinion, form the basis of a material risk to DB's risk profile, the CaR would escalate an initial assessment and recommendation of appropriate recovery measures to the Management Board.

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- The Living Wills Committee, a sub-committee of the CaR, ensures standards and ongoing process readiness including the updating of tools and methodologies. The LWC also ensures that the Recovery Plan complies with regulatory requirements and is responsible for the continuous assessment of the appropriateness of key input factors in the Recovery Plan including, risk factors, scenarios, recovery measures and triggers. In addition the Living Wills team monitors DB's risk profile against its triggers through a dashboard which is reviewed on a weekly basis. It reports changes in early warning indicators and recovery triggers. The Living Wills team is tasked to escalate to the CaR any material degradation of the risk profile which could lead to a recovery situation

The Group's MB defines the Group's liquidity risk strategy, and in particular the Group's appetite for liquidity risk based on recommendations made by the CaR. At least once every year the Group's MB will review and approve the limits which are applied to the Group to measure and control liquidity risk as well as the Group's long-term funding and issuance plan.

The Bank's Treasury function is responsible for the management of the Bank's liquidity and funding risk globally as defined in the liquidity risk strategy. The Bank's liquidity risk management framework is designed to identify, measure and manage the Bank's liquidity risk position. Liquidity Risk Control is responsible for the internal reporting on liquidity and funding across the firm on a global and local level. The Group's MB, in this context, is updated at least weekly via a Liquidity Scorecard. In addition Liquidity Risk Control is responsible for the oversight and validation of the bank's liquidity risk framework. This includes the independent validation of all liquidity risk models as well as the review and back-testing of limits. The Bank's liquidity risk management approach starts at the intraday level forecasting cash flows and factoring in our access to Central Banks. It then covers tactical liquidity risk management dealing with access to secured and unsecured funding sources. Finally, the strategic perspective comprises the maturity profile of all assets and liabilities (Funding Matrix) and the Group's issuance strategy.

The Bank's cash-flow based reporting system provides daily liquidity risk information to global and local management. Stress testing and scenario analysis plays a central role in the Bank's liquidity risk management framework. This also incorporates an assessment of asset liquidity, i.e., the characteristics of the Bank's asset inventory, under various stress scenarios as well as contingent funding requirements from off-balance-sheet commitments. Daily stress test results are used to monitor the Group's ongoing compliance with the Board's overall liquidity risk appetite. Furthermore, the Group's short-term wholesale funding profile limits (both unsecured and secured) which are a key tool of the framework are calibrated against the stress test results on a monthly basis.



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**Specific Banking Risks**

The Group's risk management processes distinguish among four kinds of specific banking risks: credit risk, market risk, operational risk and liquidity risk.

- Credit risk arises from all transactions where actual, contingent or potential claims against any counterparty, borrower or obligor (which we refer to collectively as "counterparties") exist, including those claims that we plan to distribute (see below in the more detailed section Credit Risk). These transactions are typically part of traditional non-traded lending activities (such as loans and contingent liabilities), or our direct trading activity with clients (such as OTC derivatives, FX forwards and Forward Rate Agreements). The Bank distinguishes between three kinds of credit risk:

Default risk is the risk that counterparties fail to meet contractual payment obligations.

Country risk is the risk that DB may experience a loss, in any given country, due to a range of macroeconomic or social events primarily affecting counterparties in that jurisdiction including a possible deterioration of economic conditions, political and social upheaval, nationalization and expropriation of assets, government repudiation of indebtedness, or disruptive currency depreciation or devaluation. Country risk includes transfer risk which arises when debtors are unable to meet their obligations owing to an inability to transfer assets to non-residents due to direct sovereign intervention.

Settlement risk is the risk that the settlement or clearance of transactions will fail. It arises whenever the exchange of cash, securities and/or other assets is not simultaneous.

- Market risk arises from the uncertainty concerning changes in market prices and rates (including interest rates, equity prices, foreign exchange rates and commodity prices), the correlations among them and their levels of volatility.
- Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events. It includes legal risk but excludes business and reputational risk.
- Liquidity risk is the risk arising from our potential inability to meet all payment obligations when they come due or only being able to meet these obligations at excessive costs.

Other risks such as Reputational Risk, Business Risk including Strategic Risk and Insurance Risk are also monitored by the Group.

**Risk Management Tools**

The Bank uses a comprehensive range of quantitative and qualitative methodologies for assessing and managing risks. As a matter of policy, the Group continually assesses the appropriateness and the reliability of its quantitative tools and metrics in light of the Group's changing risk environment. Some of these tools are common to a number of risk categories, while others are tailored to the particular features of specific risk categories.

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**4.1 Credit risk**

**a. Credit Risk Management Organisation and structure**

DB India has established a Risk Management Committee (RMC) by the Executive Committee (EXCO). The Risk Management Committee is mandated to oversee credit risk, market risk and operational risk related matters. The committee comprise of Head, CRM CBS & GTB, Head MRM, Head CRM PWM, Head CRM PBC, Country Operational Risk Manager, Chief Operating Officer, Head, Compliance, Chief Financial Officer, ICAAP coordinator and Treasurer, India.

**b. CRM CIB / CB&S**

**(i) Credit Risk policies and procedures**

All business requests that involve credit risk need to be presented to CRM for its approval. Loan policy is updated annually and is also approved by the local Executive Committee. CRM uses its global ratings model for all risks and every counterpart is internally rated. CRM CIB / CB&S has a policy of annual reviews of all risk limits. This policy is strictly followed and any overdue reviews are regularly monitored and explained. The annual review is a comprehensive exercise which covers the Industry scenario, key business drivers, key risk factors, business and financial risk (including forex risk), management quality and transparency and a peer analysis along with downside scenarios in projections.

CRM CIB / CB&S in India has significant delegation of approval authority, to enable timely credit decisions, based on an understanding of local market conditions. In line with the global policy, CRM takes decisions in India on the 4 eyes principle.

In the event the credit authority of the local CRM team is not equipped to take a decision on complex / structured products, large ticket transactions, etc, the local CRM team forwards its recommendation on the request to senior CRM officers in APAC or globally, for the final decision, depending on the defined delegated authority.

CRM globally operates on the “Batch Strategy” concept, where each Industry / sector is reviewed globally in detail for risk drivers, along with an analysis of DB’s exposures in that sector globally – exposure amounts, counterparty ratings, products, risk profile, etc. This system enables DB to quantitatively focus on its global exposures in different Industries / sectors, as well as the credit ratings / facility ratings of the exposures within those sectors.

The Bank globally subjects all risk types covered under its Economic Capital (EC) concept and liquidity risk to regular stress tests. The Bank’s stress tests consider macroeconomic, business related and quantitative aspects to derive implications for its risk profile.

Risk limits and exposures on lower rated counterparties are intensively monitored. There is a quarterly CRM exercise to discuss all watch-list names. Deutsche Bank in India follows all the exposure norms and provisioning requirements as laid down by the RBI in its master circulars.

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Within the CRM CIB / CB&S portfolio, concentration risk monitoring and mitigation plays an important role. CRM has guidelines in terms of maximum exposures on counterparties at different rating levels, with different levels of market access and in different categories of country risk.

The Bank globally has a separate and independent Asset Quality Review function, which periodically reviews the quality of portfolios globally after intensive review and discussions with the local CRM teams. Based on these reviews, counterparty ratings may be adjusted and inconsistencies resolved, using local / global peer analysis as an effective tool. The timeliness of annual reviews as well as quality of the reviews are also looked into and corrective measures stipulated.

The credit risk assessment of exposures that are off-balance sheet are subject to the same vigorous scrutiny and approval process, as is followed for the balance sheet exposures. There is no differentiation between balance sheet and off-balance sheet exposures in the Bank's risk assessment and monitoring standards.

#### (ii) Credit risk on trading instruments

CRM CIB / CB&S has global systems in place to monitor the Mark to Market risk on all foreign currency and rates derivative transactions undertaken by the clients. DB uses the Potential Future Exposure at 95% confidence levels as the basis to determine the limit requirements for such products.

Internally, the Bank manages credit risk on all trading instruments by reference to three measures:

- Current Credit Exposure (“CCE”), which is the current value of any contract, at current market rates, as shown in the Bank's records. CCE will be reported net of enforceable collateral, and may be aggregated to reflect enforceable netting arrangements
- Potential Future Exposure (“PFE”), which is an estimate of the Current Credit Exposure that trading instruments could potentially assume in the future
- Stress Testing, which reflects the short term sensitivity of the portfolio CCE to market parameters.

To reduce derivatives-related credit risk, the Bank regularly seeks the execution of master agreements (such as the International Swap Dealers Association contract) with clients. A master agreement allows the offsetting of the obligations arising under all of the derivatives contracts that the agreement covers upon the counterparty's default, resulting in one single net claim against the counterparty (called “close-out netting”).

For credit exposure measurement purposes, as the replacement values of the portfolios fluctuate with movements in market rates and with changes in the transactions in the portfolios, the Bank also estimates the potential future replacement costs of the portfolios over their lifetimes. This is based on the Current Exposure method as per RBI master circular on Exposure norms.

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**(iii) Credit rating policy**

The Bank's rating system uses a granular, transparent 21 grade rating scale, which is in compliance with the Internal Ratings Based approach in Basel III. The credit ratings are the core element of the Bank's risk management framework and determine the –

- Level of authority required for approval
- The SEC classification (performing / non performing) and FED classification (Special Mention, Sub standard, Doubtful, Loss)

The accuracy and consistency of ratings are ensured through Front End Management, Portfolio Reviews including independent Asset Quality Reviews and validation by Risk Analytics and Instruments.

Each and every facility in the banking book is rated based on the internal rating model of DB. For each counterparty, the Credit Risk management assigns a Counterparty Probability of Default ('CPD') and for each facility, a Facility Probability of Default ('FPD') is assigned, along with the Loss Given Default ('LGD') and Country of Risk.

The Bank's ratings scale closely mirrors the scales used by key global rating agencies such as S & P and Moody's.

**(iv) Definition and classification of past due and impaired (NPAs)**

Loans and Advances are classified into performing and non-performing loans in accordance with the extant RBI guidelines.

Past due advances understood to mean Non Performing Advances are identified by periodic appraisals of the portfolio by the management and appropriate provisions are made which meets the prudential accounting norms prescribed by the RBI for asset classification, income recognition and provisioning after considering subsequent recoveries.

**c. CRM PBC - Credit risk policies and procedures**

CRM PBC India manages the credit risk of Retail Banking portfolio in India. All lending product launched within PBC are approved by CRM PBC before the launch. Credit Risk policies are clearly documented through Product Program for each product.

The scope of India Credit Policy covers the credit process for the PBC unit in India and details the following.

- Credit principles
- Generic credit process
- Credit authority guidelines
- Loan Loss Allowance / Write off guidelines

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The precise nature of the credit assessment, decision and monitoring process depends primarily on the type of product, exposure and the existence and quality of collateral.

The credit decision on a loan request involves rule based risk assessment which takes into account the following:

- Customer information given in the application form (general customer data / financial information)
- Information on the borrower's behaviour (external data/account movements, where available)
- Specific information of the application itself (credit volume / collateral)

When deciding on a loan request, all required information and documents are considered. The credit officer assesses the profile of the applicant and ability to repay the loan based on various reports available, viz. verification, bureau and policy results etc. as part of the loan file.

The portfolio is reviewed at periodic intervals and analysis is made to understand the behaviour of the portfolio in terms of repayment, delinquency, transactions etc.

**d. CRM WM**

CRM WM adopts similar credit risk and rating policies as CRM CB&S.

**e. Total Gross Credit exposures**

| Category   | 31 Dec 2015        | 31 March 2015      |
|--|--------------------|--------------------|
|  | (In Rs.'000)       |                    |
| Bills purchased and discounted                         | 91,744,319         | 66,732,704         |
| Cash credits, overdrafts and loans repayable on demand | 217,019,054        | 226,279,975        |
| Term loans   | 85,969,650         | 68,807,779         |
| Inter Bank   | 19,073,139         | 26,631,663         |
| Bonds  | 2,904,996          | 4,757,883          |
| <b>Total Fund-based Exposures</b>                      | <b>416,711,158</b> | <b>393,210,004</b> |
| Guarantees given on behalf of customers                | 137,493,083        | 145,054,905        |
| Acceptances, endorsements and other obligations        | 77,443,710         | 98,224,964         |
| Derivative exposures                                   | 130,844,072        | 158,516,762        |
| Undrawn Commitment and others                          | 68,960,119         | 107,854,781        |
| <b>Total Non-fund based Exposures</b>                  | <b>414,740,984</b> | <b>509,651,412</b> |

Exposure for the purposes of tables in this section reflect actual notional, except for derivative exposures which is based on the current exposure method prescribed by RBI vide its master circular on Exposure norms.

The Bank renders its services within one geographical segment and has no offices outside India.

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**f. Industry Type distribution of exposures (period ended 31 Dec 2015)**

(In Rs.'000)

| Sector ID    | Sector Name                                      | Funded             | Non Funded         | Total              | Percentage of Total |
|--------------|--|--------------------|--------------------|--------------------|---------------------|
| 1            | Mining & Quarrying                               | 729,730            | 1,039,985          | 1,769,715          | 0.21%               |
| 2            | Food Processing                                  | 6,247,386          | 20,292,745         | 26,540,131         | 3.19%               |
| 3            | Beverages  | 6,882,556          | 140,076            | 7,022,632          | 0.84%               |
| 4            | Textile  | 2,718,498          | 128,144            | 2,846,642          | 0.34%               |
| 5            | Leather & Leather Products                       | 403,217            | 138,279            | 541,496            | 0.07%               |
| 6            | Wood and Wood products                           | 182,494            | 47,535             | 230,029            | 0.03%               |
| 7            | Paper and paper Products                         | 2,880,216          | 5,000              | 2,885,216          | 0.35%               |
| 8            | Petroleum, Coal Products and Nuclear Fuels       | 759,806            | 13,672,133         | 14,431,939         | 1.74%               |
| 9            | Chemical and chemical products                   | 21,376,753         | 11,338,196         | 32,714,949         | 3.93%               |
| 10           | Rubber Plastic and their products                | 2,409,223          | 847,623            | 3,256,846          | 0.39%               |
| 11           | Glass & Glassware                                | 261,772            | 249,281            | 511,053            | 0.06%               |
| 12           | Cement and Cement Products                       | 1,983,445          | 279,251            | 2,262,696          | 0.27%               |
| 13           | Basic Metal and Metal Products                   | 23,045,200         | 16,241,278         | 39,286,478         | 4.73%               |
| 14           | All Engineering                                  | 32,556,013         | 46,456,415         | 79,012,428         | 9.50%               |
| 15           | Vehicles, Vehicle Parts and Transport Equipments | 15,501,155         | 20,931,465         | 36,432,620         | 4.38%               |
| 16           | Gems and Jewellery                               | 191,037            | 39,693             | 230,730            | 0.03%               |
| 17           | Construction                                     | 351,190            | 1,993,821          | 2,345,011          | 0.28%               |
| 18           | Infrastructure                                   | 13,656,034         | 36,121,840         | 49,777,874         | 5.99%               |
| 19           | Other Industries                                 | 107,919,278        | 137,709,457        | 245,628,735        | 29.54%              |
| 20           | Residuary Other Advances                         | 176,656,155        | 107,068,767        | 283,724,922        | 34.13%              |
| <b>Total</b> |  | <b>416,711,158</b> | <b>414,740,984</b> | <b>831,452,142</b> | <b>100.00%</b>      |

**Industry Type distribution of exposures (financial year ended 31 March 2015)**

(In Rs.'000)

| Sector ID    | Sector Name                                      | Funded             | Non Funded         | Total              | Percentage of Total |
|--------------|--|--------------------|--------------------|--------------------|---------------------|
| 1            | Mining & Quarrying                               | 754,800            | 1,847,630          | 2,602,430          | 0.29%               |
| 2            | Food Processing                                  | 7,257,161          | 21,984,433         | 29,241,594         | 3.24%               |
| 3            | Beverages  | 9,232,047          | 1,670,973          | 10,903,020         | 1.21%               |
| 4            | Textile  | 2,367,132          | 413,830            | 2,780,962          | 0.31%               |
| 5            | Leather & Leather Products                       | 428,089            | 206,533            | 634,622            | 0.07%               |
| 6            | Wood and Wood products                           | 325,557            | 86,040             | 411,597            | 0.05%               |
| 7            | Paper and paper Products                         | 2,655,125          | 37,849             | 2,692,974          | 0.30%               |
| 8            | Petroleum, Coal Products and Nuclear Fuels       | 5,569,241          | 23,479,356         | 29,048,596         | 3.22%               |
| 9            | Chemical and chemical products                   | 28,442,161         | 20,783,642         | 49,225,803         | 5.45%               |
| 10           | Rubber Plastic and their products                | 4,158,600          | 3,347,094          | 7,505,694          | 0.83%               |
| 11           | Glass & Glassware                                | 340,447            | 1,638,340          | 1,978,788          | 0.22%               |
| 12           | Cement and Cement Products                       | 2,186,926          | 3,556,784          | 5,743,710          | 0.64%               |
| 13           | Basic Metal and Metal Products                   | 32,568,596         | 28,791,836         | 61,360,432         | 6.80%               |
| 14           | All Engineering                                  | 27,146,262         | 43,441,604         | 70,587,865         | 7.82%               |
| 15           | Vehicles, Vehicle Parts and Transport Equipments | 9,012,662          | 18,247,068         | 27,259,730         | 3.02%               |
| 16           | Gems and Jewellery                               | 288,229            | 62,163             | 350,392            | 0.04%               |
| 17           | Construction                                     | 12,526,469         | 3,104,941          | 15,631,411         | 1.73%               |
| 18           | Infrastructure                                   | 12,339,754         | 37,929,999         | 50,269,752         | 5.57%               |
| 19           | Other Industries                                 | 7,526,120          | 10,835,012         | 18,361,131         | 2.03%               |
| 20           | Residuary Other Advances                         | 228,084,627        | 288,186,286        | 516,270,913        | 57.16%              |
| <b>Total</b> |  | <b>393,210,004</b> | <b>509,651,412</b> | <b>902,861,416</b> | <b>100.00%</b>      |

**Management disclosures under Pillar 3 – Period ended December 31, 2015**

**g. Residual contractual maturity breaks down of Total Assets\* –**

(In Rs'000)

| Maturity buckets           | 31 Dec 2015        | 31 March 2015      |
|----------------------------|--------------------|--------------------|
| Day 1                      | 90,046,217         | 86,980,853         |
| 2 to 7 days                | 32,783,234         | 64,905,694         |
| 8 to 15 days               | 32,707,555         | 20,731,776         |
| 15 to 28 days              | 30,905,432         | 38,720,315         |
| 29 days to 3 months        | 111,861,615        | 77,149,303         |
| Over 3 months to 6 months  | 41,640,502         | 66,342,374         |
| Over 6 months to 12 months | 63,816,805         | 42,904,529         |
| Over 1 Year to 3 Years     | 124,304,742        | 129,115,734        |
| Over 3 Years to 5 Years    | 15,203,857         | 11,025,889         |
| Over 5 Years               | 85,969,874         | 78,464,304         |
| <b>Total</b>               | <b>629,239,833</b> | <b>616,340,771</b> |

\*Gross of depreciation on investments

**h. Amount of Non Performing Assets**

(In Rs'000)  
**31 Dec 2015**

| NPA Classification | Gross NPAs | Net NPAs |
|--------------------|------------|----------|
| Substandard        | 888,335    | 629,727  |
| Doubtful           | 492,373    | 169,048  |
| - Doubtful 1       | 193,197    | 138,306  |
| - Doubtful 2       | 294,938    | 30,742   |
| -Doubtful 3        | 4,238      | -        |
| Loss               | 373,988    | -        |
| Total              | 1,754,696  | 798,775  |
| NPA Ratio          | 0.45%      | 0.20%    |

(In Rs'000)  
**31 March 2015**

| NPA Classification | Gross NPAs | Net NPAs |
|--------------------|------------|----------|
| Substandard        | 507,719    | 424,149  |
| Doubtful           | 293,455    | 37,659   |
| - Doubtful 1       | 9,339      | 4,007    |
| - Doubtful 2       | 8,480      | -        |
| - Doubtful 3       | 373,988    | -        |
| Loss               | 1,192,981  | 465,815  |
| Total              | 1,192,981  | 465,815  |
| NPA Ratio          | 0.33%      | 0.13%    |

**Management disclosures under Pillar 3 – Period ended December 31, 2015**

**i. Movement in NPAs**

(In Rs'000)

| <b>Movement in NPAs (funded)</b>   | <b>31 Dec 2015</b> | <b>31 March 2015</b> |
|--|--------------------|----------------------|
| <b>(i)</b> Net NPAs to Net Advance (%)   | 0.2049%            | 0.1289%              |
| <b>(ii)</b> Movement of Gross NPAs   |                    |                      |
| a) Opening balance   | 1,192,981          | 1,673,409            |
| b) Additions during the year   | 987,009            | 947,858              |
| c) Reductions during the year  | (425,294)          | (1,428,286)          |
| d) Closing Balance   | 1,754,696          | 1,192,981            |
| <b>(iii)</b> Movement of Net NPAs  |                    |                      |
| a) Opening balance   | 465,815            | 254,434              |
| b) Additions during the year   | 683,546            | 795,592              |
| c) Reductions during the year  | (350,586)          | (584,211)            |
| d) Closing Balance   | 798,775            | 465,815              |
| <b>(iv)</b> Movement of Provisions for NPAs<br>(excluding provisions on standard assets) |                    |                      |
| a) Opening balance   | 727,166            | 1,418,975            |
| b) Provisions made during the year   | 303,463            | 152,266              |
| c) Write off/write back of excess provisions during<br>the year                          | (74,708)           | (844,075)            |
| d) Closing Balance   | 955,921            | 727,166              |

**j. Amount of NPIs**

(In Rs'000)

| <b>Particulars</b>             | <b>31 Dec 2015</b> | <b>31 March 2015</b> |
|--------------------------------|--------------------|----------------------|
| Closing balance for the period | 3,000              | 3,000                |
| Total provisions held          | 3,000              | 3,000                |
| <b>Net book Value</b>          | -                  | -                    |

**k. Movement in Provision for Depreciation on Investments**

(In Rs'000)

| <b>Provisions for depreciation on investments</b>                    | <b>31 Dec 2015</b> | <b>31 March 2015</b> |
|--|--------------------|----------------------|
| Opening balance  | 368,940            | 357,376              |
| Add: Provisions made during the period / year                        | 12,930             | 11,564               |
| Less: Write-off/write back of excess provisions during<br>the period | -                  | -                    |
| <b>Closing balance</b>   | <b>381,870</b>     | <b>368,940</b>       |



**Management disclosures under Pillar 3 – Period ended December 31, 2015**

**4.2 Credit risk – Portfolios subject to Local Standardised Approach**

**a. Credit rating agencies**

The Bank uses short-term and long-term instrument/bank facilities' ratings from CARE, CRISIL, ICRA and India Ratings and Research Private Limited (Fitch) to assign risk weights in terms of RBI guidelines. In respect of claims on non-resident corporate and foreign banks, ratings assigned by international rating agencies i.e. Standard & Poor's, Moody's and Fitch are used. The Bank uses credit ratings that are publicly available for assigning risk weights.

The Bank assigns Long term credit ratings accorded by the chosen credit rating agencies for assets which have a contractual maturity of more than one year. However, in accordance with the guidelines of RBI the bank classifies all cash credit exposures as long term exposures and accordingly the long term ratings accorded by the chosen credit rating agencies are assigned.

The Bank uses issuer and issue ratings for both fund as well as non fund based exposures. The Bank has used the solicited ratings assigned by the above approved credit rating agencies for all eligible exposures, both on balance sheet and off balance sheet, whether short term or long term, in the manner permitted in the RBI guidelines. The Bank does not have an assigned ratings agency for a given type of claim.

**b. Outstanding amounts**

Bucket wise break up of exposure amounts subject to the standardised approach is as under

(In Rs'000)

| <b>Exposure Category</b>              | <b>31 Dec 2015</b> | <b>31 March 2015</b> |
|---------------------------------------|--------------------|----------------------|
| Under 100% risk weight                | 158,050,000        | 165,278,860          |
| 100% risk weight                      | 249,588,025        | 219,105,938          |
| Above 100% risk weight                | 9,073,133          | 8,825,206            |
| <b>Total Fund-based Exposures</b>     | <b>416,711,158</b> | <b>393,210,004</b>   |
| Under 100% risk weight                | 222,356,102        | 283,719,733          |
| 100% risk weight                      | 182,147,821        | 208,811,904          |
| Above 100% risk weight                | 10,237,061         | 17,119,775           |
| <b>Total Non Fund-based Exposures</b> | <b>414,740,984</b> | <b>509,651,412</b>   |

**Management disclosures under Pillar 3 – Period ended December 31, 2015**

**4.3 Credit risk mitigation policy**

**a. Collateral valuation and management**

As stipulated by the RBI guidelines, the Bank uses the Comprehensive Approach for collateral valuation. Under this approach, the Bank reduces its credit exposure to counterparty when calculating its capital requirements to the extent of risk mitigation provided by the eligible financial collateral.

**b. Types of collaterals taken by the Bank and main types of guarantor counterparties and Credit risk concentration within mitigation taken**

Collateral Risk Management is undertaken through the mechanism of the Facility Probability of Default (FPD) assignment.

If there is no liquid collateral and no guarantor mitigating the credit risk, then the FPD will be the same as the Counterparty Probability of Default (CPD).

If the facility risk can be shifted to the guarantor, the guarantor CPD becomes the FPD. In cases of received guarantees from un-correlated third parties, covering a Separate primary DB exposure, where for the Bank to incur a loss there needs to be a default by both the primary obligor as well as the guarantor, the Joint Default Probability ('JDP') applies. The Bank has in place a matrix indicating this JDP for the entire scale of primary obligor and guarantor CPDs.

The Bank accepts security in the form of charge on receivables / inventories for working capital facilities, charge on fixed assets in certain cases, besides guarantees for various obligations by the primary obligor. The guarantees could be received from the local holding company of the obligor, or a stronger company within the same group or from the MNC parent of the local subsidiary. In certain cases, facilities to obligors may be supported by partial / full insurance protection purchased. Hence, since there are varied sources of credit protection acquired through different guarantors, there is no concentration of guarantor risk.

The Bank records the Joint Obligor Risk Limit on the various guarantors, which ensures that the amounts of guarantees received from various sources are monitored for risk management purposes, e.g. the amount of insurance protection acquired from different insurance companies. The facility ratings for Joint Obligor Risk Limits are determined in accordance with the matrix in the Credit Ratings Policy of the Bank. This matrix captures the counterparty Probability of Default of the obligor as well as that of the guarantor, in determining the JPD.

**c. Exposure covered by eligible financial collateral:**

(In Rs'000)

| <b>Exposures covered by financial collateral</b>  | <b>31 Dec 2015</b> | <b>31 March 2015</b> |
|---|--------------------|----------------------|
| Exposures before Credit Risk Mitigation Technique   | 44,836,499         | 35,642,592           |
| Exposures after Credit Risk Mitigation Technique (after application of haircut on collateral) | 9,475,232          | 5,665,379            |

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**d. Details of Loans Securitised**

(In Rs.'000)

|  | 31 Dec 2015 | 31 March 2015 |
|--|-------------|---------------|
| 1 Total number of loan assets securitised                | -           | -             |
| 2 Total book value of loan assets securitised            | -           | -             |
| 3 Sale consideration received for the securitised assets | -           | -             |
| 4 Net gain/(loss) on account of securitisation           | -           | -             |

**4.4 Market risk in trading book**

**a. Market risk management framework**

The Bank uses a combination of risk sensitivities, Value-at-Risk and stress testing metrics to manage market risks and establish limits. Value-at-Risk is a common metric used in the management of trading market risks.

The MB and Group Risk Committee, supported by Group Market Risk Management, which is part of the independent risk management function, set a Group-wide Value-at-Risk limit for the market risks in the trading book. Group Market Risk Management sub-allocates this overall limit to the Group Divisions. Below that, limits are allocated to specific business lines and trading portfolio groups and geographical regions. In addition to the Bank's main market risk Value-at-Risk limits, also stress testing and sensitivity limits are also operated.

The Bank's Value-at-Risk for the trading businesses is based on internal model. In October 1998, the German Banking Supervisory Authority (now the BaFin) approved the internal Value-at-Risk model for calculating market risk capital for the Group for both general and specific market risks. Since then the model has been periodically refined and approval has been maintained.

**b. Types of market risk**

Substantially all of the Bank's businesses are subject to the risk that market prices and rates will move and result in profits or losses. The Bank distinguishes among four types of market risk:

- Interest rate risk including credit spread
- Equity price risk (where applicable)
- Foreign exchange risk
- Commodity price risk (where applicable)

The interest rate and equity price risks consist of two components each. The general risk describes value changes due to general market movements, while the specific risk has issuer-related causes.

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**c. Risk Management Tools**

The following are the most important quantitative tools and metrics currently used to measure, manage and report market risk:

- **Value-at-Risk.** The Bank uses the Value-at-Risk approach to derive quantitative measures for trading book market risks under normal market conditions. The Value-at-Risk figures play a role in both internal and external (regulatory) reporting. For a given portfolio, Value-at-Risk measures the potential future loss (in terms of market value) that, under normal market conditions, will not be exceeded with a defined confidence level in a defined period. The Value-at-Risk for a total portfolio represents a measure of diversified market risk (aggregated using pre-determined correlations) in that portfolio.
- **Stress Testing.** While Value-at-Risk, calculated on a daily basis, supplies forecasts for potential large losses under normal market conditions, it is not adequate to measure the tail risks of the portfolios. The Bank therefore also performs regular stress tests in which it values the trading portfolios under severe market scenarios not covered by the confidence interval of the Value-at-Risk model.

**d. Value-at-Risk Analysis**

The Value-at-Risk approach derives a quantitative measure for the trading book market risks under normal market conditions, estimating the potential future loss (in terms of market value) that will not be exceeded in a defined period of time and with a defined confidence level. The Value-at-Risk measure enables to apply a constant and uniform measure across all of the trading businesses and products. It also facilitates comparisons of market risk estimates both over time and against the daily trading results.

The Bank calculates Value-at-Risk using a 99% confidence level and a holding period of one day.

The Bank's Value-at-Risk model is designed to take into account the following risk factors- interest rates, equity prices, foreign exchange rates and commodity prices, as well as their implied volatilities. The model incorporates both linear and, especially for derivatives, nonlinear effects of the risk factors on the portfolio value. The statistical parameters required for the Value-at-Risk calculation are based on a 261 trading day history (corresponding to at least one calendar year of trading days) with equal weighting being given to each observation. The Bank calculates Value-at-Risk using the Monte Carlo simulation technique and assuming that changes in risk factors follow a normal or logarithmic normal distribution.

To determine the aggregated Value-at-Risk, the Bank uses historically observed correlations between different general market risk classes. However, when aggregating general and specific market risks, it is assumed that there is zero correlation between them.

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The Value-at-Risk analysis should also be viewed in the context of the limitations of the methodology the Bank uses and are therefore not maximum amounts that can be lost on the market risk positions. The limitations of the Value-at-Risk methodology include the following:

- The use of historical data as a proxy for estimating future events may not capture all potential events, particularly those that are extreme in nature.
- The assumption that changes in risk factors follow a normal or logarithmic normal distribution. This may not be the case in reality and may lead to an underestimation of the probability of extreme market movements.
- The correlation assumptions used may not hold true, particularly during market events that are extreme in nature.
- The use of a holding period of one day assumes that all positions can be liquidated or hedged in that period of time. This assumption does not fully capture the market risk arising during periods of illiquidity, when liquidation or hedging in that period of time may not be possible.
- The use of a 99 % confidence level does not take account of, nor makes any statement about, any losses that might occur beyond this level of confidence.
- The Bank calculates Value-at-Risk at the close of business on each trading day. The Bank does not subject intraday exposures to intraday Value-at-Risk calculations.
- Value-at-Risk does not capture all of the complex effects of the risk factors on the value of positions and portfolios and could, therefore, underestimate potential losses.

The Group acknowledges the limitations in the Value-at-Risk methodology by supplementing the Value-at-Risk limits with other position and sensitivity limit structures, as well as with stress testing, both on individual portfolios and on a consolidated basis.

The calculated Value-at-Risk numbers for India are used for internal control purposes only, the calculation of regulatory capital being based on the Standardised Approach specified by the RBI. At the Group level, however, Value-at-Risk numbers are used for both internal control and Regulatory Capital calculation for market risk.

#### **e. Back-Testing**

The Bank uses back-testing in the trading units to verify the predictive power of the Value-at-Risk calculations. In back-testing, the hypothetical daily profits and losses are compared under the buy-and-hold assumption with the estimates from the Value-at-Risk model. The Bank analyzes performance fluctuations and assesses the predictive power of the Value-at-Risk model, which in turn allows improvement of the risk estimation process.

#### **f. Hedging**

The Bank manages its risk from derivatives activity on a portfolio basis. Specific hedges undertaken, if any are ring fenced from the transactions undertaken for trading/market making purposes and held in separate designated portfolio for easy identification and control.

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**g. Capital requirements for market risk**

| (In Rs'000)                              |                  |                  |
|--|------------------|------------------|
| Particulars                              | 31 Dec 2015      | 31 March 2015    |
| Capital requirement for market risk      |                  |                  |
| - Interest rate risk                     | 1,978,721        | 4,605,172        |
| - Foreign exchange risk (including gold) | 1,979,438        | 1,759,500        |
| - Equity risk                            | 82,853           | 55,289           |
| <b>Total</b>                             | <b>4,041,012</b> | <b>6,419,961</b> |

**4.5 Operational risk**

**a. Operational risk management framework**

The Head of Operational Risk Management (“ORM”) chairs the Non-Financial Risk Operating Forum (NFR OpFo), which is a permanent decision preparing Council of the Non-Financial Risk Executive Committee (NFR ExCo) and is composed of the divisional control officers from our 1<sup>st</sup> Line of Defense divisions and our internal control officers or key Risk Type control function from the 2<sup>nd</sup> Line of Defense. The Head of ORM has the authority to execute veto on key decision and the operational risk policy framework. The NFR ExCo owns the mandate to ensure the oversight, governance and coordination of the Non-Financial Risk management in the Deutsche Bank Group on behalf of the Management Board and to establish a cross-risk and holistic perspective of the key Non-Financial Risks of the Group.

While the day-to-day operational risk management lies with the group’s business divisions and infrastructure functions, the Operational ORM function manages the cross divisional and cross regional operational risk as well as risk concentrations and ensures a consistent application of the group’s operational risk management strategy across the bank. Based on this business partnership model the group ensures close monitoring and high awareness of operational risk.

**Strengthening controls through “Three Lines of Defense”**

The three lines of defense program is an integral part of Deutsche Bank’s strategic agenda. It was initiated in the fourth quarter of 2013 by the Management Board in the context of heightened regulatory standards. The program builds on lessons learned from past control failures and aims to reinforce Deutsche Bank’s non-financial risk management capabilities and compliance culture across all corporate divisions and infrastructure functions. Furthermore, it is intended to maintain consistency across the ongoing control enhancement initiatives throughout the bank.

Deutsche Bank defines the three Lines of Defense as follows:

- The first Line of Defense includes all corporate divisions and selected infrastructure functions. First Line of Defense units are ultimately accountable for all risks and controls in their business processes.
- The second Line of Defense encompasses all control functions such as Risk, Compliance, Legal, Human Resources, Finance and Tax. These are responsible for the design of Deutsche Bank’s policy framework and independent risk assessment. Second Line of Defense units are independent from the First Line of Defense.

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- The third Line of Defense is Group Audit which is responsible for providing independent and objective assurance on the effectiveness of risk management, internal controls and governance processes.

In 2014, the program performed a systematic review of Deutsche Bank's non-financial risk and control organizations and supporting management processes. This led to the following changes:

- The Bank established dedicated control units in each first Line of Defense to reinforce the division's accountability for the management of their control environment.
- The risk and control responsibilities across the second Line of Defense control functions were realigned within a common risk and control framework. For selected risks new initiatives were launched to further strengthen Deutsche Bank's control framework.
- The risk and control assessment approach was enhanced towards an integrated framework shared by all three Lines of Defense to ensure the use of common standards.

Key action going forward are the further build-out of the control organization, the rollout of the enhanced risk and control assessment framework as well as continuing the work across all three Lines of Defense regarding specific control enhancements. This also includes the rollout of the enhanced three Lines of Defense model into the regions.

#### **b. Risk management tools**

The group manages operational risk based on a Group-wide consistent framework that enables the group to determine the group's operational risk profile in comparison to our risk appetite and systematically identify operational risk themes and concentrations to define risk mitigating measures and priorities. The group applies a number of techniques to efficiently manage the group's operational risk in the business, for example:

- The continuous collection of operational risk loss events is a prerequisite for operational risk management including detailed analyses, definition of mitigating actions and timely information to senior management. All losses above € 10,000 are captured and tracked through the "db-Incident Reporting System" ("dbIRS").
- The lessons learned process is required for events, including near misses, above € 1 million. This process includes but is not limited to:
  - systematic risk analyses including a description of the business environment in which the loss occurred, including previous events, near misses and event specific Key Risk Indicators ("KRI")
  - consideration of any risk management decisions in respect of the specific risk taken
  - root cause analyses
  - identification of control improvements and other actions to prevent and/or mitigate recurrence
  - assessment of the residual operational risk exposure.

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The Lessons Learned process serves as an important mean to identify inherent areas of risk and to define appropriate risk mitigating actions. All corrective actions are captured and monitored for resolution via actions plans in our tracking system “dbTrack”. Issues with the performance of all corrective actions is managed in the NFR Framework implementation Forum and reported on a monthly basis to senior management via the NFR OpFo.

- All available information on external events occurring in the banking industry are systematically analysed to prevent similar incidents from happening e. g. via deep dive analysis or risk profile reviews.
- In addition to internal and external loss information, scenarios are utilized and actions are derived from them. The set of scenarios consists of relevant external scenarios provided by a public database and internal scenarios. The latter are generated to complete our risk profile.

Regular operational risk profile reports at Group level for the business divisions, countries of operations and for infrastructure functions are reviewed and discussed with the department’s senior management. The regular performance of the risk profile reviews enables us to detect changes to the business unit’s risk profile as well as risk concentrations across the Group early and to take corrective actions.

- The impact of changes to risk profile as a result of new products, outsourcings, strategic initiatives and acquisitions and divestments are also assessed and approved.
- Once operational risks are identified, mitigation is required following the “as low as reasonably practicable (ALARP)” principle by balancing the cost of mitigation with the benefits thereof and formally accepting the residual operational risk. Risks which contravene applicable national or international regulations and legislation cannot be accepted once identified, such risks must always be mitigated.
- Risk mitigating measures identified via operational risk management techniques for resolution within the tracking tool “dbTrack” are monitored. Higher than important residual operational risks need to be risk accepted by the impacted first line divisions by fulfilling the minimum requirements of the relevant Policies and Procedures.
- 
- Top risk analyses are performed in which the results of the aforementioned activities are considered. The Top Risk Analyses are a primary input for the annual operational risk management strategy and planning process. Besides the operational risk management strategic and tactical planning, capital is defined and expected loss targets are monitored on a regular basis via a quarterly forecasting process.
- The approach is to enhance the process to assess whether identified issues require a broader approach across multiple entities and locations within Deutsche Bank. A review of material findings is performed in order to assess their relevance to areas of the Bank other than where they originated.

KRIs are used to monitor the operational risk profile and alert the organization to impending problems in a timely fashion. They allow the “dbScore” to monitor the bank’s control culture and business environment and trigger risk



## Deutsche Bank AG - India Branches

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mitigating actions. KRIs facilitate the forward looking management of operational risk based on early warning signals returned by the KRIs.

In the bottom-up Self Assessment (“SA”) process, which is conducted at least annually, areas with high risk potential are highlighted and risk mitigating measures to resolve issues are identified. . On a regular basis risk workshops are conducted to evaluate risks specific to countries and local legal entities we are operating in and take appropriate risk mitigating actions.

Additional methodologies and tools implemented by the responsible divisions are utilized to complement the global operational risk framework and specifically address the individual risk types. These include but are not limited to:

- A “Legal Risk Management” (“LRM”) function in the Legal Department was established in 2013. This function is exclusively dedicated to the identification and management of legal risk. In addition to being used for reporting purposes, LRM’s analysis is applied to the control framework as it relates to legal risk in order to promote that it is sufficiently robust, including remediation of highlighted issues (whether via new or existing initiatives); and also as a further means of Legal’s input being a significant decision-making criterion for business. The LRM function has a mandate to undertake a broad variety of tasks aimed at proactively managing legal risk, including devising, implementing and overseeing an annual Legal Risk Assessment Program, agreeing and participating in resulting portfolio reviews and mitigation plan and administering the legal lessons Learned process. The LRM function also coordinates Legal’s response to DB’s Three Lines of Defense program.
- The “Legal Risk Assessment Program” enables analysis of existing and historic legal risks and, importantly, assessment of the potential for future legal risk events. This requires the participation of the business division (represented by Divisional Control Officer, “DCO”), Legal Advisory, LRM and ORM, and involves a primary self-assessment on pre-defined terms by the business and a secondary assessment by the relevant Legal Advisory teams in order to form a global view of that business’ products, activities and locations.
- The “Legal Lessons Learned process” is a means of identifying, on a quarterly basis, legal risks arising from any activities and of devising appropriate steps to remediate, mitigate or prevent such risks in future. The Legal Lessons Learned process is a retrospective one, whereby existing or completed matters are considered with a view to identifying legal lessons that can be learned from those matters and taking such steps as may be necessary for those legal lessons to be learned. Overall management of the Legal Lessons Learned process is the responsibility of the LRM function, working with ORM, DCO and the Legal Department via its Operating Committees.
- The operational risk from outsourcing is managed by the Vendor Risk Management (VRM) Process and documented in the VRM database. The outsourcing risk is assessed and managed for all outsourcing arrangements individually, following the Vendor Risk Management Policy and in line with the overall ORM framework. A broad governance structure is established to promote appropriate risk levels.

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- Fraud Risk is managed based on section 25a of the German Banking Act (KWG) as well as other legal and regulatory requirements via a risk based approach, governed by the Global Anti-Fraud Policy and corresponding Compliance and Anti-Money-Laundering (AML) framework. In line with regulatory requirements, a global risk assessment is performed on a regular basis. Within the general management of operational risks, dedicated Fraud Risk relevant aspects are part of the self assessment process.
- Deutsche Bank manages Business Continuity (BC) Risk with its Business Continuity Management (BCM) Program which outlines core procedures for the relocation or the recovery of operations in response to varying levels of disruption. Within this program, each of the core businesses functions and infrastructure groups set up, maintain and periodically test business continuity plans (“BC Plans”) to promote continuous and reliable service. The BCM Program has defined roles and responsibilities which are documented in corporate standards. Compliance with these standards is monitored regionally by dedicated business continuity teams. Reporting to the Group Resiliency Committee, which is a sub-committee of the Group Operating Committee, is a quarterly requirement. Furthermore, key information on the established BCM control environment feed into operational risk KRIs.
- The operational risk in Technology is managed within the technology area, following international standards for IT management. Applications and IT infrastructure are catalogued and assessed on a regular basis. Stability monitoring is established. Key outcomes of the established assessment and control environment are used as input for operational risk metrics such as KRIs or self assessments.
- A new Operational Risk Assessment Policy for Change-the-Bank Processes has been implemented for material systems and process changes. All material change initiatives are assessed for operational risks stemming from process/systems changes via an embedded ORM framework for change-the-bank operational risk assessments. Identified risks and mitigating actions are tracked in Deutsche Bank’s system as mentioned above.

#### c. **Measuring Operational Risks**

The regulatory and economic capital for operational risk is calculated and measured using the internal Advanced Measurement Approach (“AMA”) methodology. The AMA capital calculation is based upon the loss distribution approach (“LDA”). Gross losses from historical internal and external loss data (Operational Riskdata exchange Association (“ORX”) consortium data), adjusted for direct recoveries, and external scenarios from a public database (IBM OpData) complemented by internal scenario data are used to estimate the risk profile (that is, a loss frequency and a loss severity distribution). Thereafter, the frequency and severity distributions are combined in a Monte Carlo simulation to generate potential losses over a one year time horizon. Finally, the risk mitigating benefits of insurance are applied to each loss generated in the Monte Carlo simulation. Correlation and diversification benefits are applied to the net losses in a manner compatible with regulatory requirements to arrive at a net loss distribution at Group level, covering expected and unexpected losses. Capital is then allocated to each of the business divisions and both, a qualitative adjustment and an expected loss deduction, are performed.

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The qualitative adjustment (“QA”) reflects the effectiveness and performance of the day-to-day operational risk management activities via KRIs and self assessment scores, focusing on the business environment and internal control factors. The qualitative adjustment is applied as a percentage adjustment to the final capital number. This approach makes qualitative adjustments transparent to the management of the businesses and provides feedback on their risk profile as well as on the success of their management of operational risks. It thus provides incentives for the businesses to continuously improve the management of operational risks in their areas.

The expected loss (“EL”) for operational risk is based on historical loss experience and expert judgment, considering business changes denoting the expected cost of operational losses for doing business. To the extent it is considered in the divisional business plans, it is deducted from the AMA capital figure within certain constraints. The unexpected losses per business division (after QA and EL) are aggregated to produce the Group AMA capital figure.

Regulatory and economic capital for operational risk is calculated on a quarterly basis. The used internal data is captured in a snapshot at the beginning of the quarterly production cycle and undergo a quality assurance and sign-off process. Therefore, the complete history of previous quarters’ internal losses is taken into account in the calculation of the capital figures. ORX external data is submitted by the ORX members and also undergo as quality assurance and sign-off. These data are recognized in the capital calculation at the earliest after six months. For the additional external loss data sourced from the IBM OpData (formerly named OpVantage), we use data that is available twice a year (in the first and third quarters).

Economic capital is derived from the 99.98 % percentile, allocated to the business divisions, and used for performance measurement and resource allocation purposes, providing an incentive to manage operational risks, and optimizing the utilization of economic capital. The regulatory capital for operational risk applies the 99.9 % percentile. Economic and regulatory capital are calculated for a time horizon of one year.

In India, the group uses the Basic Indicator Approach for computing capital for Operational Risk.

**5. Interest rate risk in the banking book**

The vast majority of the interest rate risk and foreign exchange risk arising from the non-trading assets and liability positions in the Banking book are transferred through internal hedges to the Global Markets business line within the Corporate Banking and Securities Division and is managed on the basis of Value-at-Risk as reflected in the trading Value-at-Risk numbers. The treatment of interest rate risk in the Group’s trading portfolios and the application of the Value-at-Risk model is discussed above. The bank considers this risk to be a part of the overall market risk framework.

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**6. Counterparty Credit Risk**

**Credit Limits and Collaterals**

Counterparty credit risk (CCR) is the risk that a Bank's counterparty defaults in a FX, interest rate, commodity or credit derivative contract prior to or at the maturity date of the contract and that the Bank at the time has a claim on the counterparty.

The credit risk arising from all financial derivatives is managed as part of the overall credit limits to both financial institutions and other clients and customers.

Exposure values for regulatory capital purposes on over the counter traded products are calculated according to the Current Exposure Method as defined by RBI. This is calculated as the sum of the current replacement cost and the PFE. The current replacement cost is the amount owed by the counterparty to the Bank for various financial derivative transactions. The PFE is an add-on based on a percentage of the notional principal of each transaction. These percentages are prescribed by the RBI in the guidelines and vary according to the underlying asset class and tenor of each trade.

The Bank seeks to negotiate Credit Support Annexes (CSA) to International Swaps and Derivatives Association master agreements with counterparties on a case-by-case basis, where collateral is deemed a necessary or desirable mitigant to the exposure. The credit terms of the CSA are specific to each legal document and determined by the credit risk approval unit responsible for the counterparty. The nature of the collateral will be specified in the legal document and will typically be cash or highly liquid securities. A daily operational process takes place to calculate the MTM on all trades captured under the CSA. Additional collateral will be called from the counterparty if total uncollateralised MTM exposure exceeds the threshold and minimum transfer amount specified in the CSA. Additional collateral may be required from the counterparty to provide an extra buffer to the daily variation margin process.

The Bank further reduces its credit exposures to counterparties by entering into contractual netting agreements which result in a single amount owed by or to the counterparty through netting the sum of the positive (amounts owed by the counterparty) and negative (amounts owed by the Bank) MTM values of these transactions.

In India, the Bank follows SA for credit risk and hence no credit reserve is set aside. However, provisioning for the exposures on derivative contracts is made as per extant RBI guidelines.

**Wrong Way Risk**

Wrong way risk occurs when an exposure increase is coupled with a decrease in the credit quality of the obligor. The Group/Bank employs various policies and procedures to ensure that risk exposures are monitored. For example, as the MTM on a derivative contract increases in favour of the Bank, the counterparty may increasingly be unable to meet its payment, margin call or collateral posting requirements.

**Impact of Credit Rating Downgrade**

In line with market convention, the Bank negotiates CSA terms for certain counterparties where the thresholds related to each party are dependent on their

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External Credit Assessment Institution (ECAI) long term rating. Such clauses are typically mutual in nature. It is therefore recognised that a downgrade in the Group’s rating could result in counterparties seeking additional collateral calls to cover negative MTM portfolios where thresholds are lowered.

(in Rs '000)

| Particulars*   | 31-Dec-2015 |
|--|-------------|
| Gross positive fair value of contracts                                   | 31,212,780  |
| Netting benefits   | -           |
| Netted current credit exposure   | 31,212,780  |
| Collateral held (including type, e.g. cash, government securities, etc.) | -           |
| Net derivatives credit exposure  | 31,212,780  |
| Potential future exposure  | 99,631,292  |
| Measures for exposure at default or exposure amount under CEM            | 130,844,072 |
| The notional value of credit derivative hedges                           | -           |
| Distribution of current credit exposure by types of credit exposure:     | -           |
| - Interest Rates   | 29,265,463  |
| - Fx   | 101,578,609 |

\* Based on current exposure method

**Regulatory Capital Instruments:** The Bank has not issued any Regulatory Capital Instruments during the period. Regulatory capital increases have taken place via capital infusion from our Head Office and retention of Remittable Surplus for CRAR Requirements.

**Disclosure Requirements for Remuneration:** In accordance with the requirements of the RBI Circular No. DBOD.NO.BC. 72/29.67/001/2011-12 dated 13 January 2012, the Asia-Pacific Head Office of the Bank has submitted a declaration to RBI that the Bank’s compensation policies including that of CEO’s, is in conformity with the Financial Stability Board principles and standards.

**7. Comparative figures**

Certain comparative figures have been reclassified to conform to the current year’s preparation.