

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

Management disclosures under Pillar 3 – Period ended December 31, 2022

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, 2022. These are compiled in accordance with the Reserve Bank of India (the 'RBI') Master Circular – Basel III Capital Regulation RBI/2022-23/12 DOR.CAP.REC.3/21.06.201/2022-23 dated April 1, 2022, and the amendments thereto issued from time to time.

As at Dec 31, 2022, the Bank is required to maintain minimum Common Equity Tier1 (CET1) capital ratio of 5.50%, Capital conservation buffer (CCB) of 2.5%, Global Systemically Important Banks buffer (GSIB) of 2%, minimum Tier-1 capital ratio of 7% and minimum total capital ratio including CCB and GSIB is 13.5%.

List of Group entities operating in India and considered for regulatory scope of consolidation is as under. The Bank does not hold any investment in these 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 India Holdings Private Limited (DIHPL)	NBFC & Holding company	7,802,090	7,833,040
2	Deutsche Investments India Private Limited (DIPL)	NBFC Business / Non-discretionary Portfolio management Services	9,127,620	23,812,320

* Figures as per audited accounts as of March 31,2022

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 these 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	Not Applicable [§]	914,420	1,043,310
2	Deutsche Securities (India) Private Limited	Not Applicable [#]	949,421	950,513
3	Deutsche Equities India Private Limited	Stock broker / Merchant banking and advisory services	3,574,270	66,659,470
4	Deutsche Investor Services Private Limited	Fund accounting	390,500	572,090
5	RREEF India Advisors Private Limited	Not Applicable [#]	251,935	253,764
6	Deutsche Trustee Services (India) Private Limited	Not Applicable [#]	68,915	70,145
7	Deutsche CIB Centre Private Limited	Global processing centre for Back office processing / support services for business lines.	3,584,280	6,043,860
8	Deutsche India Private Limited (formerly known as DBOI Global Services Private Limited)	Global processing centre for back office / IT enabled services	13,793,050	23,103,080
9	DWS India Private Limited	Global processing centre for Back office processing / support services for business lines/ IT enabled services	902	999

* Figures as per unaudited accounts of DWS India Private Limited as of March 31, 2022, and audited accounts as of March 31,2022 for all other entities.

[#] The members have passed a resolution for voluntary winding up

[§] The company does not carry on any operations

Management disclosures under Pillar 3 – Period ended December 31, 2022

2. Capital Structure

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

CET1 and 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 Investment Fluctuation Reserve, Provision on Standard Assets, Provision on Country Risk, Excess provision on sale of Non-Performing Assets (NPA) and Countercyclical provisioning buffer which are created in accordance with the extant RBI guidelines.

b. Details of Capital Funds of the Bank

(In Rs.'000)

Particulars	31 Dec 2022	31 March 2022
Capital - Head Office Account	84,431,087	84,431,087
Statutory Reserve	39,766,974	39,766,974
Capital Reserve	360,607	360,607
Remittable Surplus Retained for CRAR requirement	57,182,523	57,182,523
Less: Earmark for Electronic Trading Platform (ETP)	(50,000)	(50,000)
Less: Illiquid Security Reserve	(54,978)	(57,921)
Less: Intangible assets	(1,684,916)	(1,441,677)
CET1 Capital / Tier I Capital	179,951,297	180,191,593
Investment fluctuation reserve	-	11,765,971
Provision on Standard Assets	11,765,971	5,002,106
Provision on Country Risk	6,580,662	379,740
Provision made on Sale of NPA	48,930	465,000
Countercyclical provisioning buffer	465,000	150,000
Tier II Capital	19,010,563	17,762,817
Total Capital	198,961,860	197,954,410

3. Capital adequacy

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

The Bank is committed to maintaining 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 ALCO is the main platform for monitoring and steering local capital adequacy, providing strategic directions and making decisions on the legal entity's capital management

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.

Management disclosures under Pillar 3 – Period ended December 31, 2022

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.

Standalone capital ratio as per Basel III is 15.22%

Particulars	(In Rs.'000)	
	31 Dec 2022	31 March 2022
Capital requirement for credit risk[#] (Standardised Approach)		
- Portfolios subject to Standardised Approach	141,789,451	136,272,867
- Portfolios subject to securitisation exposures (The Bank invests in Pass Through Certificates (PTCs))	141,941	236,907
Capital requirement for market risk[#] (Standardised Duration Approach)		
- Interest rate risk	16,454,478	12,650,447
- Foreign exchange risk (including gold)	3,538,688	3,538,688
- Equity risk	379,608	301,377
Capital requirement for operational risk[#] (Basic Indicator approach)	14,174,200	12,126,697
Total	176,478,366	165,126,983
Deutsche Bank AG, India Branches		
CET1 Capital / Tier I Capital adequacy ratio	13.77%	14.73%
Total Capital adequacy ratio	15.22%	16.18%
Consolidated Bank*		
CET1 Capital / Tier I Capital adequacy ratio	14.29%	15.25%
Total Capital adequacy ratio	15.73%	16.68%

[#] Capital requirement is arrived at after multiplying the risk weighted assets by 13.5%

*Based on unaudited accounts of DIHPL and DIPL.

4. Risk Exposure & Assessment

Risk Governance

Three Lines of Defence (3LoD)

The Bank follows DB Group's three lines of defence (LoD) organisation structure in order to protect the Bank, its customers and shareholders against risk losses and resulting reputational damages. This structure ensures that all risks are taken on, and managed, in the best and long-term interest of the Bank.

As per the three LoD structure, risks are fully owned by those creating or taking on the risks (1st LoD), while the setting of risk appetite, monitoring of Bank-wide risk levels against the Bank's risk appetite and provision of challenge to risk management decisions is performed by independent control functions (2nd LoD). Independent assurance over the design and operation of controls, in turn, is provided by the 3rd LoD. This set-up ensures that all risks are identified and managed, and that risk management accountabilities are clearly assigned. A role's designation to a line of defence depends on its mandate and activities, not its organisational affiliation, e.g., an infrastructure function such as Risk or Finance may be seen as primarily a 2nd LoD control function, however, will also carry responsibility for managing its own risk portfolio, thereby also having 1st LoD accountability.

Management disclosures under Pillar 3 – Period ended December 31, 2022

Risk accountability – 1st LoD

The 1st LoD refers to roles in the Bank whose activities generate risks, whether financial or non-financial. The 1st LoD, or risk owners are accountable for:

1. All financial and non-financial risks that are generated in their respective organisations.
2. Managing these risks within the defined risk appetite at the appropriate granularity. This includes the timely identification and escalation of risk appetite breaches.
3. Ensuring that the appropriate organisation, governance and structures are in place to identify, monitor, assess and accept or mitigate the risks they generate or are exposed to.

The 1st LoD cannot delegate its accountability for the management of its own risks and must adhere to the standards laid out in this policy as well as additional standards set by the 2nd LoD, and any applicable regulatory requirements. A Business / Infrastructure Function Head may delegate the execution of risk management activities into his / her organisation; however, he / she retains the accountability for the execution of the risk owner mandate. Performing activities outside the risk owner's own organisation requires a formal documented agreement between the Heads of the affected units.

Independent risk control and challenge – 2nd LoD

The 2nd LoD refers to Risk type controller (RTC) roles in the Bank who, as experts for a particular risk type, define the risk appetite and risk management and control standards for that risk type, and facilitate the implementation of these standards in the 1st LoD. RTCs independently oversee and challenge the risk taking and management activities of the 1st LoD. RTCs' mandate includes:

As the 2nd LOD, as experts for their risk type –

1. Define and regularly update the risk management framework for their risk type. This includes the setting of minimum risk management and control standards, as well as facilitating, and independently reviewing and assessing the implementation of these standards. The framework must be compliant with all applicable rules and regulations.
2. Act as an advisor to the 1st LoD on how to identify, assess and manage risks.
3. Regularly update and report their risk type's profile at Group and other aggregation levels. This includes the identification of emerging risks.

As the 2nd LoD control function for their risk type-

1. Define their risk type's risk appetite, both qualitatively and quantitatively.
2. Monitor the adherence to the defined risk appetite levels, veto decisions that would exceed the Bank's risk appetite, escalate confirmed breaches of risk appetite, and enable the application of adequate consequences where risk appetite is breached.
3. Independently assess and challenge the 1st LoD risk profiles and risk management activities to ensure the Bank adheres to the risk management standards set by the 2nd LoD.

Independent assurance – 3rd LoD

As the 3rd LoD, Group Audit provides independent and objective assurance on the effectiveness of 1st and 2nd LoD interaction, risk management, internal controls and governance processes.

Management disclosures under Pillar 3 – Period ended December 31, 2022

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. The chair of the Risk Committee reports on items discussed during the Risk Committee's meetings to the Supervisory Board.

The Management Board (MB) provides overall risk & capital management supervision for the Group and is responsible for day to day management of the company with the objective of creating sustainable value in the interest of its shareholders, employees, regulators 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 is collectively accountable for DB's risk exposure.

The Group Risk Committee (GRC) established by the MB is the central forum for review and decision on all material risk topics. Sub-committees are established to cover the different risk types. The GRC is chaired by the Chief Risk Officer (CRO) and covers the following tasks and duties:

- Review inventory of risks and decide on materiality classification
- Review and recommend DB Group Risk Management Principles to the MB for approval
- Support the MB during group-wide Risk & Capital Planning process and recommend risk appetite parameters to the MB, review risk appetite per material risk type, set risk appetite targets and establish a sanctioning system for excesses
- Review Group-wide Stress Testing results and discuss/recommend actions as required
- Advise the MB on recovery measures in times of crisis and oversee their execution as decided by the MB and decide upon mitigating actions to be taken during periods of anticipated or actual stress. Recommend the Group Risk Appetite Statement to the MB
- Recommend the Group Recovery Plan and the Contingency Funding Plan to the MB for approval and support the authorities in executing the Group resolution plan and coordinate internally
- Review high-level risk portfolios & risk exposure developments as well as overall risk level vs. recovery triggers
- Monitor the development of Risk Culture across DB Group

Country Chief Risk Officer

The roles and responsibilities of DB India, CRO are as follows:-

- Overall responsibility of the risk functions (responsibilities for review and control of all credit, market and operational risks)
- CRO is responsible for supporting the India Branch Management Board (BMB) in its engagement with and oversight of the development of the Bank's risk appetite and for translating the risk appetite into a risk limits structure, extending risk principles into wider business strategy
- Monitoring performance relating to risk taking / risk limits adherence in RMF
- Monitoring and identifying emerging risks and alerting the Board on key risks /regularly engaging with the Board on key risk issues
- Highlight to senior management and the board risk management concerns, such as risk concentrations and violations of risk appetite limits.
- Identifying relationship between risks in separate business units, linkages across business and thus to manage them more effectively-integrated risk approach.
- CRO's responsibilities also include managing and participating in key decision making processes (e.g. strategic planning, capital & liquidity planning, etc.)
- Responsibility for compliance at a strategic level along with appropriate risk functions.

Deutsche Bank AG - India Branches

(Incorporated in Germany with limited liability)

Management disclosures under Pillar 3 – Period ended December 31, 2022

- CRO oversees the development and execution of local objectives, plans and policies, etc.
- CRO is a key personnel in the Bank and will represent risk in the various management committees such as BMB, ALCO, Risk Management Forum (RMF), India Credit Risk Forum (ICRF), etc.
- CRO is also the CRM head, will be the vice chair of the RMF and ICRF to avoid any conflict of interest (RBI approval in place)

The Bank has aligned its management structure in line with the global management structure of Deutsche Bank AG. The Management of the overall affairs of the Bank is vested with the BMB. The Bank has various committees to monitor its functioning and provide necessary direction in view of external / internal developments, including changes in the regulatory environment. An overlap in membership between these committees facilitates a constant and comprehensive information flow.

The ICRF is established by the BMB (“Delegating Person”) in 2018. Its mandate is to approve significant credit risk and underwriting proposals for booking in DB India, Corporate & Investment Bank (CIB) in line with local regulatory requirements. The Chief Country Officer (the Chairperson) is empowered by the Delegating Person to set up the structure of the Forum, including membership, taking into account its aim and its tasks.

Specific Banking Risks:

Credit risk

Credit risk arises from all transactions where actual, contingent or potential claims against any counterparty, borrower, obligor or issuer (which we refer to collectively as “counterparties”) exist, including those claims that we plan to distribute. It captures the risk of loss because of a deterioration of a counterparty's creditworthiness or the failure of a counterparty to meet the terms of any contract with the Bank or otherwise perform as agreed. Credit risk contains five material categories (Level 2) in DB Group's risk taxonomy:

- **Default / migration risk** is the risk that a counterparty defaults on its payment obligations or experiences material credit quality deterioration increasing the likelihood of a default.
- **Country risk** is the risk that otherwise solvent and willing counterparties are unable to meet their obligations due to direct sovereign intervention or policies.
- **Transactional/settlement risk (exposure risk)** is the risk that arises from any existing, contingent or potential future positive exposure
- **Mitigation risk** is the risk of higher losses due to risk mitigation measures not performing as anticipated.
- **Concentration risk** is the risk of an adverse development in a specific single counterparty, country, industry or product leading to a disproportionate deterioration in the risk profile of DB's credit exposures to that counterparty, country, industry or product.

Market risk

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

Operational Risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events, and includes legal risk. Operational Risk excludes business and reputational risk.

Management disclosures under Pillar 3 – Period ended December 31, 2022

Liquidity risk

Liquidity risk is the risk arising from the potential inability to meet all payment obligations when they come due or only being able to meet these obligations at excessive costs.

Other risks

Other risks such as Reputational Risk, Business Risk including Strategic Risk etc. are also considered at Local/Group Level.

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 may be common to a number of risk categories, while others are tailored to the particular features of specific risk categories.

4.1 Credit risk

a. Credit Risk Management Organisation and structure

The Bank has established a RMF by the BMB. The Risk Management Forum is mandated to oversee credit risk, market risk and operational risk, liquidity risk, conduct risk, compliance risk, KYC/AML risk, Pillar II risk and related matters and provide a platform to discuss and review the integrated risk management in line with local regulatory requirements as laid down by The Reserve Bank of India. The committee comprise of Chief Operating Officer, Head-Credit Risk Management (CRM) Corporate & Investment Bank (CIB), Head- Market Risk Management (MRM), Head- CRM International Private Bank (IPB), Head-Compliance, Chief Financial Officer (CFO), Treasurer, Head-Legal and Head-Non Financial Risk (NFRM), Head of IT Risk& Head of Corporate Insurance.

b. CRM CIB

(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 Risk Management Forum. CRM uses its global ratings model for all risks and every counterpart is internally rated. CRM CIB 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 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 Asia Pacific (APAC) or globally, for the final decision, depending on the defined delegated authority.

Bank has established an ICRF to approve significant credit risk and underwriting proposal in line with the regulatory requirements. ICRF has a Terms of Reference (ToR) approved by the BMB highlighting roles and responsibilities, membership, etc.

Deutsche Bank AG - India Branches

(Incorporated in Germany with limited liability)

Management disclosures under Pillar 3 – Period ended December 31, 2022

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.

Within the CRM CIB 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 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.

CRM is globally organized and carries out risk identification, assessments, management, monitoring and reporting of credit risks. The CRM department is independent from the business. Accordingly, the credit policies of DB Group are adopted and the Head of CRM is responsible for establishing local policies and procedures to ensure compliance with DB Group principles.

All new credit risks incurred within the DB Group (including DB India) have to be approved by individuals with appropriate credit authority (sufficient to cover the entire DB Group exposure according to a “one obligor” principle). All credit risk decisions relevant to DB India are subject to the approval of Deutsche Bank’s CRM.

Credit Risk is managed for DB Group on the basis of a “one obligor principle”; new credit exposures as well as reviews of credit exposures require approval by the appropriate authority holder covering the entire DB Group exposure. All credit risk decisions relevant to DB India are subject to the approval of DB Group’s CRM.

The management of credit risk follows a clearly defined credit process. Key processes are:

- deriving a credit rating for the counterparties
- approving credit limits with the required Credit Authority
- setting credit limits for a certain counterparty or portfolio
- deciding on the requirement for credit risk mitigants and risk transfers
- monitoring of the credit exposures on a counterparty as well as on a portfolio level. This includes stress testing.
- managing higher risk counterparties via watchlist process and transfer to workout unit.
- proactively managing concentration risks and identifying quality trends.

Adequate documentation and storage for future reference are ensured along the complete credit process.

Deutsche Bank AG - India Branches

(Incorporated in Germany with limited liability)

Management disclosures under Pillar 3 – Period ended December 31, 2022

(ii) Credit risk on trading instruments

CRM CIB 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 and Derivatives Association” - ISDA contract) with clients. A master agreement allows the offsetting of the obligations arising under all 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”).

The Bank also enters credit support annexes (CSA) to master agreements to further reduce the derivatives related credit risk. These annexes generally provide risk mitigation through periodic, usually daily, margining of the covered exposure. The CSAs also provide for the right to terminate the related derivative transactions upon the counterparty’s failure to honour a margin call. As with netting, when the Bank believes the annex is enforceable, it reflects this in the exposure measurement.

Certain CSAs to master agreements provide for rating dependent triggers, where additional collateral must be pledged if a party’s rating is downgraded. We also enter into master agreements that provide for an additional termination event upon a party’s rating downgrade. These downgrading provisions in CSAs and master agreements usually apply to both parties but may also apply to us only. The Bank analyses and monitors its potential contingent payment obligations resulting from a rating downgrade in its stress testing approach for liquidity risk on an ongoing basis.

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.

(iii) Credit rating policy

DB Group’s risk assessment procedures consider both the creditworthiness of the counterparty and the risks related to the specific type of credit facility or exposure. This risk assessment not only affects the structuring of the transaction and the outcome of the credit decision, but also influences the level of decision-making authority required to extend or materially change the credit and the monitoring procedures DB Group applies to the ongoing exposure.

Management disclosures under Pillar 3 – Period ended December 31, 2022

DB Group has its own in-house assessment methodologies, scorecards and rating scale for evaluating the creditworthiness of its counterparties. Its granular 21-grade rating scale, which is in compliance with the Internal Ratings Based approach in Basel III and is calibrated on a probability of default measure based upon a statistical analysis of historical defaults in its portfolio, enables the comparison of its internal ratings with common market practice and ensures comparability between different sub-portfolios of its institution. Several default ratings therein enable the incorporation of the potential recovery rate of defaulted exposure. DB Group generally rates all its credit exposures individually. When DB Group assigns its internal risk ratings, DB Group compares them with external risk ratings assigned to counterparties by the major international rating agencies, where possible.

The credit ratings are the core element of the Bank's risk management framework and determine the –

- Level of authority required for approval
- Reflect the asset classification, i.e. Performing or Non-Performing.

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 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

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 IPB (ex-wealth) - Credit risk policies and procedures

CRM IPB (ex-wealth) India manages the credit risk of Retail Banking portfolio in India. All lending product launched within IPB (ex-wealth) are approved by CRM IPB 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 IPB unit in India and details the following.

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

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

Management disclosures under Pillar 3 – Period ended December 31, 2022

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 behavior (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

Credit in WM is governed by the Risk Management (RM) WM – Credit Policy and Process Guide. Other related policies governing the credit linked business in WM are the Principles for Managing Credit Risk–DB Group, the India Credit policy and local regulations.

The above credit policy framework details the following:

- Credit principles
- Credit Risk Management process (including initial due diligence, credit reports, rating models used, annual rating review process, credit approval process, credit review process)
- Credit Rating and Credit Limit guidelines (including the relevant rating model to be applied, one-obligor principle)
- Credit Authority guidelines (including delegation of credit authority, approvals under ‘4-eye’)
- Credit Risk Mitigation and Monitoring of risk positions (including collateral monitoring and credit limit excess monitoring)
- Management of distressed exposures (covering watch-list and workout accounts)
- Risk Tools (including credit systems, stress testing)

e. Total Gross Credit exposures

Category	(In Rs.’000)	
	31 Dec 2022	31 March 2022
Bills purchased and discounted	51,453,042	52,007,566
Cash credits, overdrafts and loans repayable on demand	245,156,499	211,338,358
Term loans	305,695,536	327,417,495
Inter Bank	2,102,700	102,792,409
Others	102,954	163,501
Total Fund-based Exposures	604,510,731	693,719,329
Guarantees given on behalf of customers	287,897,002	300,881,091
Acceptances, endorsements and other obligations	33,456,482	44,473,444
Derivative exposures	205,543,123	182,501,664
Undrawn Commitment	74,569,580	53,279,430
Total Non-fund based Exposures	601,466,187	581,135,629

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 and RBI circular dated March 30, 2021.

Note: Investment in Non-SLR instruments not included here, covered under market risk.

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

Management disclosures under Pillar 3 – Period ended December 31, 2022

f. Industry Type distribution of exposures (period ended 31 Dec 2022) (In Rs.'000)

Sl.No.	Sector Name	Funded	Non Funded	Total	Percentage of Total
1	Mining & Quarrying	266,892	683,519	950,411	0.08%
2	Food Processing	13,295,821	9,054,418	22,350,239	1.85%
3	Beverages	5,072,579	1,962,775	7,035,354	0.58%
4	Textile	36,121,898	72,402	36,194,300	3.00%
5	Leather & Leather Products	1,033,855	8,712	1,042,567	0.09%
6	Wood and Wood products	1,854,176	22,907	1,877,083	0.16%
7	Paper and paper Products	2,896,105	34,035	2,930,140	0.24%
8	Petroleum, Coal Products and Nuclear Fuels	148,453	8,938,260	9,086,713	0.75%
9	Chemical and chemical products	22,380,986	16,837,938	39,218,924	3.25%
10	Rubber Plastic and their products	7,294,071	124,051	7,418,122	0.62%
11	Glass & Glassware	691,139	342,105	1,033,244	0.09%
12	Cement and Cement Products	418,680	0	418,680	0.03%
13	Basic Metal and Metal Products	16,748,391	18,796,430	35,544,821	2.95%
14	All Engineering	48,991,920	104,941,302	153,933,222	12.76%
15	Vehicles, Vehicle Parts and Transport Equipments	17,656,590	5,307,096	22,963,686	1.90%
16	Gems and Jewellery	10,964,594	45,000	11,009,594	0.91%
17	Construction	-	700,629	700,629	0.06%
18	Infrastructure	39,463,728	34,494,078	73,957,806	6.13%
19	Other Industries	12,613,049	3,152,572	15,765,621	1.31%
20	Residuary Other	366,597,804	395,947,958	762,545,762	63.24%
Total		604,510,731	601,466,187	1,205,976,918	100.00%

Industry Type distribution of exposures (year ended 31 March 2022) (In Rs.'000)

Sl.No.	Sector Name	Funded	Non Funded	Total	Percentage of Total
1	Mining & Quarrying	335,963	721,281	1,057,244	0.08%
2	Food Processing	8,906,764	2,924,911	11,831,675	0.93%
3	Beverages	6,011,318	1,833,238	7,844,556	0.62%
4	Textile	35,640,180	155,591	35,799,470	2.81%
5	Leather & Leather Products	1,974,159	1,146	1,975,305	0.15%
6	Wood and Wood products	1,552,391	82,391	1,634,782	0.13%
7	Paper and paper Products	2,569,257	44,501	2,613,758	0.21%
8	Petroleum, Coal Products and Nuclear Fuels	319,288	25,557,558	25,876,846	2.03%
9	Chemical and chemical products	25,053,526	14,123,416	39,176,942	3.07%
10	Rubber Plastic and their products	5,902,227	552,771	6,454,998	0.51%
11	Glass & Glassware	841,418	277,833	1,119,251	0.09%
12	Cement and Cement Products	427,807	-	427,807	0.03%
13	Basic Metal and Metal Products	20,905,620	11,602,944	32,508,564	2.55%
14	All Engineering	41,144,263	94,867,480	136,011,743	10.67%
15	Vehicles, Vehicle Parts and Transport Equipments	16,407,643	6,255,473	22,663,116	1.78%
16	Gems and Jewellery	5,546,136	45,000	5,591,136	0.44%
17	Construction	350,275	138,018	488,293	0.04%
18	Infrastructure	46,146,949	42,939,809	89,086,758	6.99%
19	Other Industries	123,619,936	19,398,994	143,018,930	11.22%
20	Residuary Other Advances	350,064,209	359,613,274	709,677,484	55.65%
Total		693,719,329	581,135,629	1,274,854,958	100.00%

Management disclosures under Pillar 3 – Period ended December 31, 2022

g. Residual contractual maturity break down of Total Assets

(In Rs'000)

Maturity buckets	31 Dec 2022
Day – 1	-
2-7 Days	410,165,311
8-14 Days	48,272,250
15-30 Days	109,663,683
31 Days to 2 months	32,293,653
Over 2 Months to 3 months	14,325,769
Over 3 Months to 6 months	19,548,216
Over 6 Months to 12 months	41,600,334
Over 1 Year to 3 years	238,348,378
Over 3 Years to 5 years	83,540,559
Over 5 years	271,438,723
Total	1,269,196,877

(In Rs'000)

Maturity buckets	31 March 2022
Day – 1	321,086,156
2-7 Days	310,309,628
8-14 Days	109,109,696
15-30 Days	56,494,053
31 Days to 2 months	21,130,615
Over 2 Months to 3 months	30,780,039
Over 3 Months to 6 months	10,988,658
Over 6 Months to 12 months	28,288,186
Over 1 Year to 3 years	263,838,989
Over 3 Years to 5 years	108,257,336
Over 5 years	219,265,258
Total	1,479,548,614

h. Amount of NPA

(In Rs'000)

NPA Classification (31 Dec 2022)	Gross NPAs	Net NPAs
Substandard	5,548,926	2,350,686
Doubtful		
- Doubtful 1	6,515,354	2,324,350
- Doubtful 2	4,347,277	1,083,487
- Doubtful 3	2,236,793	-
Loss		
Total	18,648,350	5,758,523
NPA Ratio	3.10%	0.98%

(In Rs'000)

NPA Classification (31 March 2022)	Gross NPAs	Net NPAs
Substandard	17,022,495	10,360,987
Doubtful		
- Doubtful 1	4,123,727	1,520,698
- Doubtful 2	4,564,745	1,163,868
- Doubtful 3	1,605,079	-
Loss		
Total	27,316,046	13,045,553
NPA Ratio	4.62%	2.26%

Management disclosures under Pillar 3 – Period ended December 31, 2022

i. Movement in NPAs

(In Rs'000)

	31 Dec 2022	31 March 2022
Movement in NPAs (funded)		
(i) Net NPAs to Net Advance (%)	0.98%	2.26%
(ii) Movement of Gross NPAs		
a) Opening balance	27,316,046	14,566,177
b) Additions during the year	6,130,948	30,461,726
c) Reductions during the year	(14,798,644)	(17,711,857)
d) Closing Balance	18,648,350	27,316,046
(iii) Movement of Net NPAs		
a) Opening balance	13,045,553	4,533,866
b) Additions during the year	1,752,173	18,049,843
c) Reductions during the year	(9,039,203)	(9,538,156)
d) Closing Balance	5,758,523	13,045,553
(iv) Movement of Provisions for NPAs		
a) Opening balance	14,270,493	10,032,311
b) Provisions made during the year	4,378,775	12,411,883
c) Write off/write back of excess provisions during the year	(5,759,441)	(8,173,701)
d) Closing Balance	12,889,827	14,270,493
(v) Movement of General Provisions (provisions on Standard Assets)*		
a) Opening balance	5,002,106	4,209,361
b) Provisions made during the year	1,578,556	792,745
c) Write off/write back of excess provisions during the year	-	-
d) Closing Balance	6,580,662	5,002,106

* The above includes provision on account of Unhedged Foreign Currency Exposure (UFCE), Large exposure and provision on stressed and restructured assets

j. Amount of 'Non-Performing Investment'(NPIs)

(In Rs'000)

Particulars	31 Dec 2022	31 March 2022
Closing balance for the period	37	37
Total provisions held	37	37
Net book Value	-	-

k. Movement of Provision for Depreciation on Investments

(In Rs'000)

Provisions for depreciation on investments*	31 Dec 2022	31 March 2022
Opening balance	10,163,687	2,795,430
Add: Provisions made during the period / year	5,925,060	7,368,257
Less: Write-off/write back of excess provisions during the period	-	-
Closing balance	16,088,747	10,163,687

*Includes provision on NPIs.

Management disclosures under Pillar 3 – Period ended December 31, 2022

I. Industry wise classification of NPA, Provision held and Write off (period ended 31 Dec 2022) (In Rs.'000)

Sl. No.	Sector Name	Gross NPA	Provision for NPA	Write off during the period
1	Mining & Quarrying	2,846	2,846	3,653
2	Food Processing	135,479	87,214	6,585
3	Textile	1,081,117	704,336	74,028
4	Leather & Leather Products	150,562	113,829	3,011
5	Wood and Wood products	4,779	3,030	-
6	Paper and paper Products	609,269	580,929	7,398
7	Chemical and chemical products	133,493	94,605	6,507
8	Rubber Plastic and their products	342,988	216,257	11,588
9	Glass & Glassware	84,292	45,276	-
10	Cement and Cement Products	37,727	23,534	213
11	Basic Metal and Metal Products	897,347	559,113	33,306
12	All Engineering	871,270	620,432	28,799
13	Vehicles, Vehicle Parts and Transport Equipments	73,374	41,825	3,422
14	Gems and Jewellery	197,498	119,944	-
15	Other Industries	262,155	163,097	14,511
16	Residuary Other Advances	13,764,154	9,513,560	435,812
Total		18,648,350	12,889,827	628,833

Industry wise classification of NPA, Provision held and Write off (period ended 31 March 2022) (In Rs.'000)

Sl.No.	Sector Name	Gross NPA	Provision for NPA	Write off during the period
1	Mining & Quarrying	36,644	211	23
2	Food Processing	217,884	1,277	348
3	Beverages	-	-	24
4	Textile	1,034,115	6,702	856
5	Leather & Leather Products	133,956	1,022	145
6	Wood and Wood products	2,816	23	746
7	Paper and paper Products	602,994	5,736	4,259
8	Chemical and chemical products	24,296	197	276
9	Rubber Plastic and their products	931,313	3,596	387
10	Glass & Glassware	4,035	40	23
11	Cement and Cement Products	1,089	11	30
12	Basic Metal and Metal Products	785,472	4,527	506
13	All Engineering	998,960	6,605	4,607
14	Vehicles, Vehicle Parts and Transport Equipments	62,976	401	203
15	Other Industries	357,814	210,529	-
16	Residuary Other Advances	22,121,682	14,029,616	2,113,005
Total		27,316,046	14,270,493	2,125,438

Management disclosures under Pillar 3 – Period ended December 31, 2022

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 such as Standard & Poor’s, Moody’s and Fitch are used. The Bank uses credit ratings that are publicly available for assigning risk weights.

In accordance with the guidelines of RBI, the Bank classifies all cash credit exposures and assets which have a contractual maturity of more than one year as long term exposures and accordingly the solicited 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 after considering credit risk mitigation (including NPA provision) is as under:

Exposure Category	(In Rs’000)	
	31 Dec 2022	31 March 2022
Under 100% risk weight	223,892,885	337,429,711
100% risk weight	220,150,257	207,137,784
Above 100% risk weight	130,924,405	123,748,319
Total Fund-based Exposures	574,967,547	668,315,814
Under 100% risk weight	195,094,953	209,064,728
100% risk weight	79,464,513	79,917,130
Above 100% risk weight	151,595,533	144,542,985
Total Non Fund-based Exposures	426,154,999	433,524,843

4.3 Credit risk mitigation policy

Credit risk is generally mitigated at DB Group level. The Bank employs the different techniques available for the management of credit risk in line with the strategy established at DB Group level. The Bank takes into account the local laws / local market practice for the use of credit risk mitigants. The Bank may also apply guarantees or other instruments to transfer credit risk to DB AG or other legal entities within DB Group.

Management disclosures under Pillar 3 – Period ended December 31, 2022

Mitigation of credit risk on counterparty level

In addition to determining counterparty credit quality and the risk appetite, the Bank actively uses various credit risk mitigation techniques to optimize the Bank's credit exposure and reduce potential credit losses. While those techniques might ensure or can be an alternative source of repayment, they do not substitute for high quality underwriting standards and thorough due diligence. Key credit risk mitigation techniques comprise:

- Comprehensive and enforceable credit documentation with adequate terms and conditions (including covenants where deemed adequate)
- Collateral in its various forms. Key principles for collateral management include assigning realistic collateral valuations, risk and regulatory capital reduction effectiveness and cost efficiency.
- Risk transfers shifting the probability of default risk of an obligor to a third-party including hedging executed by the Credit Portfolio Strategies Group (CPSG). Other de-risking tools such as securitizations etc. may also be employed.
- Netting and collateral arrangements which reduce the credit exposure from derivatives as well as repo- and repo-style transactions.

Collateral

The Bank regularly agrees on collateral to be received from or to be provided to customers in contracts that are subject to credit risk. Collateral is security in the form of an asset or third-party obligation that serves to mitigate the inherent risk of credit loss in an exposure, by either substituting the borrower default risk or improving recoveries in the event of a default. While collateral can be an alternative source of repayment, it generally does not replace the necessity of high-quality underwriting standards and a thorough assessment of the debt service ability of the counterparty.

The Bank segregates collateral received into the following two types:

- Financial and other collateral, which enables us to recover all or part of the outstanding exposure by liquidating the collateral asset provided, in cases where the borrower is unable or unwilling to fulfil its primary obligations. Cash collateral, securities (equity, bonds, mutual funds), collateral assignments of other claims or inventory, equipment (i.e., plant, machinery and aircraft) and real estate typically fall into this category.
- Guarantee collateral, which complements the borrower's ability to fulfil its obligation under the legal contract and as such is provided by third parties. Letters of credit, insurance contracts, export credit insurance, guarantees, credit derivatives and risk participations typically fall into this category.

The Bank's processes seek to ensure that the collateral we except for risk mitigation purposes is of high quality. This includes seeking to have in place legally effective and enforceable documentation for realizable and measureable collateral assets which are evaluated regularly by dedicated teams. The assessment of the suitability of collateral for a specific transaction is part of the credit decision and must be undertaken in a conservative way, including collateral haircuts that are applied. We have collateral type specific haircuts in place which are regularly reviewed and approved. In this regard, we strive to avoid "wrong-way" risk characteristics where the borrower's counterparty risk is positively correlated with the risk of deterioration in the collateral value. For guarantee collateral, the process for the analysis of the guarantor's creditworthiness is aligned to the credit assessment process for counterparties.

Management disclosures under Pillar 3 – Period ended December 31, 2022

Netting and collateral arrangements for derivatives and securities financing transactions (SFT)

Netting is applicable to both exchange traded derivatives and over the counter (OTC) derivatives. Netting is also applied to SFT as far as documentation, structure and nature of the risk mitigation allow netting with the underlying Credit Risk.

All exchange traded derivatives are cleared through central counterparties (CCP), which interpose themselves between the trading entities by becoming the counterparty to each of the entities. The rules and regulations of CCPs usually provide for the bilateral set off of all amounts payable on the same day and in the same currency (“payment netting”) and thereby reducing the settlement risk. Depending on the business model applied by the CCP, this payment netting applies either to all of Bank’s derivatives cleared by the CCP or at least to those that form part of the same class of derivatives. Many CCP rules and regulations also provide for the termination, close-out and netting of all cleared transactions upon the CCP’s default (“close-out netting”), which reduced the bank’s Credit Risk. In its risk measurement and risk assessment processes the Bank applies close-out netting only to the extent that the Bank has satisfied itself of the legal validity and enforceability of the relevant CCP’s close-out netting provisions.

To reduce the Credit Risk resulting from OTC derivative transactions, where CCP clearing is not available, the Bank regularly seeks the execution of standard master agreements (such as master agreements for derivatives published by the International Swaps and Derivatives Association, Inc. (ISDA) or the German Master Agreement for Financial Derivative Transactions) with its counterparts. A master agreement allows for the close-out netting of rights and obligations arising under derivative transactions that have been entered into under such a master agreement upon the counterparty’s default, resulting in a single net claim owed by or to the counterparty. For parts of the derivatives business (i.e., foreign exchange transactions) the Bank also enters into master agreements under which payment netting applies in respect to transactions covered by such master agreements, reducing the settlement risk. In its risk measurement and risk assessment processes the Bank applies close-out netting only to the extent it has satisfied itself of the legal validity and enforceability of the master agreement in all relevant jurisdictions. With effect from financial year ending March 31, 2022, bank has implemented bilateral netting for counterparty derivatives MTM in line with RBI circular dated March 30, 2021.

Also, the Bank enters CSA to master agreements to further reduce its derivatives related Credit Risk. These annexes generally provide risk mitigation through periodic, usually daily margining of the covered exposure. The CSAs also provide for the right to terminate the related derivative transactions upon the counterparty’s failure to honour a margin call. As with netting, when the Bank believes the annex is enforceable, it gets reflected in its exposure measurement.

Certain CSAs to master agreements provide for rating dependent triggers, where additional collateral must be pledged if a party’s rating is downgraded. The Bank also enters into master agreements that provide for an additional termination event upon a party’s rating downgrade. These downgrading provisions in CSAs and master agreements usually apply to both parties but may also apply to us only. The Bank analyses and monitors the potential contingent payment obligations resulting from a rating downgrade in its stress testing approach for liquidity risk on an ongoing basis.

Management disclosures under Pillar 3 – Period ended December 31, 2022
Concentrations within credit risk (CR) mitigation

Concentrations within Credit Risk mitigations taken may occur if several guarantors and credit derivative providers with similar economic characteristics are engaged in comparable activities with changes in economic or industry conditions affecting their ability to meet contractual obligations. The Bank uses a range of quantitative tools and metrics to monitor its Credit Risk mitigating activities. These also include monitoring of potential concentrations within collateral types supported by dedicated stress tests.

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

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 and property collateral for mortgage loans to retail banking clients. 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:

Exposures covered by financial collateral	(In Rs'000)	
	31 Dec 2022	31 March 2022
Exposures before Credit Risk Mitigation Technique	190,856,298	215,442,412
Exposures after Credit Risk Mitigation Technique (after application of haircut on collateral)	27,879,915	16,181,752

Management disclosures under Pillar 3 – Period ended December 31, 2022

d. Securitisation Exposure

Primary recourse for securitization exposures lies with the underlying assets. The related risk is mitigated by credit enhancement typically in the form of overcollateralization, subordination, excess interest, cash collateral in form of first loss and second loss credit enhancement. The initial due diligence usually includes any or all of the following, depending on the specifics of the transaction: (a) the review of the relevant documents including term sheets, servicer reports or other historical performance data, third-party assessment reports such as rating agency analysis (if externally rated), etc., (b) modeling of base and downside scenarios through asset-class specific cash-flow models, (c) servicer reviews to assess the robustness of the servicer's processes and financial strength. The result of this due diligence is summarized in a credit and rating review which requires approval by an appropriate level of credit authority, depending on the size of exposure and internal rating assigned. Compliance with the regulatory requirements for risk retention, due diligence and monitoring according to the applicable regulatory requirements is part of our credit review process and the relevant data is gathered for reporting purposes. Ongoing regular performance reviews include checks of the periodic servicer reports as well as the overall performance trend in the context of economic, geographic, sector and servicer developments. For lending-related commitments an internal rating review is required at least annually. Significant negative or positive changes in asset performance can trigger an earlier review date. Full credit reviews are also required annually, or, for highly rated exposures, every other year. Furthermore, there is a separate, usually quarterly, watch list process for exposures identified to be at a higher risk of loss, which requires a separate assessment of asset and servicer performance. It includes a review of the exposure strategy and identifies next steps to be taken to mitigate loss potential. Evaluation of structural integrity is another important component of risk management for securitization, focusing on the structural protection of a securitization as defined in the legal documentation (i.e., perfection of security interest, segregation of payment flows, and rights to audit). These securitization positions are managed by a dedicated team that uses a combination of market standard systems and to monitor performance and manage market and credit risks. Market Risk Management aims to accurately measure all types of market risks by a comprehensive set of risk metrics reflecting economic and regulatory requirements.

The Bank invests in Pass Through Certificates (PTCs). We have exposure to third-party securitizations which are reported as investments.

The investments of the Bank in PTCs have been marked to market on the basis of the Base Yield Curve and the applicable spreads as per the spread matrix relative to the Weighted Average Maturity of the paper as notified by Fixed Income Money Market and Derivative Association of India (FIMMDA).

The Bank has made investments in Pass Through Certificates (PTCs) of Rs. 5,257,073 thousand as at 31 Dec 2022. The risk weights applied under the Standardized approach are prescribed by the RBI and are based on the asset class to which the exposure is assigned.

Management disclosures under Pillar 3 – Period ended December 31, 2022

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.

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

Var is a key component of Deutsche Bank's Risk Measurement Framework, which is the overall framework used for measuring and managing risk. It provides the foundation for Deutsche Bank's calculations of Regulatory and Economic Capital, with Var and Stressed Var ("SVaR") inputs into Regulatory Capital as well as important internal risk measures.

Deutsche Bank AG - India Branches

(Incorporated in Germany with limited liability)

Management disclosures under Pillar 3 – Period ended December 31, 2022

- VaR is reported both internally and externally for regulatory and reporting purposes, based on an industry standard 99% confidence level.
- The VaR framework simulation are based on a 261 trading day history (corresponding to one calendar year) with equal weighting being given to each observation.
- Calculation of VaR in the Hist Sim framework requires revaluation of current trading portfolio positions based on market data from the historical time series, using one of two approaches
 - o Where possible, revaluation is performed by using the pricing model that is used for Front Office pricing and risk management of the position. This approach is called Full revaluation and is used for positions that have been on boarded to the Full revaluation framework.
 - o Where Full revaluation is not available, a Sensitivity based approach is used. This approach approximates the result that would have been obtained by using Full revaluation based on the sensitivities (“Greeks”) of the position combined with the historical risk data. Typically first order (“delta”) and second order (“gamma”) sensitivities are used.

The main limitations of the VaR framework are as follows:

- Not all risks can be incorporated into the main VaR model. This limitation is remediated by the RNIV framework.
- Where idiosyncratic and general market risk components of risk factors are modelled separately, the revaluation for the idiosyncratic component is always Sensitivity – based, but the general component may be either Sensitivity or Full reval - based
- Aggregation of general and (modelled) specific risk is based on VaR aggregation.
- Risk-P&Ls are based on sensitivities for some books and Full revaluation for others depending on Full revaluation onboarding status.
- Hist sim VaR is based on 1 year of daily P&L estimates. The VaR 99% quantile does not correspond directly to a P&L observation but has to be interpolated.
- In case historical data does not exist, proxies may be used.

SVaR

In addition to VaR, Deutsche Bank also calculates Stressed VaR (SVaR). Rather than calculating VaR using market scenarios taken from the recent past (i.e. most recent 261 day period as for VaR), SVaR uses scenarios generated from a 261 day period where the relevant market factors were subject to severe financial stress. SVaR is intended to replicate the VaR calculation that would be generated on the institution’s current portfolio but with scenarios where risk factor movements are significantly more severe than in the standard window.

Regulatory VaR

VaR and SVaR are used as inputs to the determination of the overall regulatory capital requirement for market risk, as well as local regulatory requirements in certain jurisdictions. 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.

Management disclosures under Pillar 3 – Period ended December 31, 2022

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.

g. Capital requirements for market risk

Particulars	(In Rs'000)	
	31 Dec 2022	31 March 2022
Capital requirement for market risk [#]		
- Interest rate risk	16,454,478	12,650,447
- Foreign exchange risk (including gold)	3,538,688	3,538,688
- Equity risk	379,608	301,377
Total	20,372,774	16,490,512

[#] Capital requirement is arrived at after multiplying the risk weighted assets by 13.5%

4.5 Operational risk

a. Definition of Operational Risk

Operational Risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events, and includes legal risk. Operational Risk (OR) excludes Business and Reputational Risk.

b. Operational Risk Management Framework:

The Bank has established the Operational Risk Management Framework (ORMF) to identify and manage its operational risks. Building on the ORMF, Risk Type Controllers (RTCs) establish risk type specific frameworks for the OR type they control. The ORMF is designed to support three key objectives:

- Proactive identification and mitigation of operational risks where they originate
- Acceptance and understanding of risk ownership by the 1st LoD and strong challenge, engagement and facilitation by the 2nd LoD control functions
- Standardisation and aggregation to allow reporting of the OR profile on bank / unit / risk type levels and the quantification of OR (OR capital calculation).

It comprises of several interconnected components, following the cycle of risk identification, assessment, mitigation, and monitoring.

Deutsche Bank AG - India Branches

(Incorporated in Germany with limited liability)

Management disclosures under Pillar 3 – Period ended December 31, 2022

Organisational and Governance structure for India:

The roles and responsibilities of the NFRM function with respect to Country Coverage are defined as part of the Operational Risk Country Coverage Key Operating Document (KOD).

- o The Country Head of NFRM is responsible for overseeing the adequate implementation of the local NFRM governance process in India.
- o The Country Head of NFRM is a permanent member of the Operating Committee (OpCo) and RMC of DB AG India the Bank and updates the Committee/Councils about the Operational Risk profile of the country through the Country Risk Report (CRR) that includes, but is not limited to:
 - The aggregated operational OR loss reporting and the outline of material events
 - Specific insights on divisional relevant risks
 - Operational Risk capital developments
 - Overview of the management of issues and findings
 - Relevant Key Risk Indicators

c. Operational Risk identification:

The bank identifies, captures and analyses – in various levels of depth - its materialised Operational Risks (internal events). In addition, the bank identifies emerging Operational Risks, reviews a selection of external events and analyses scenarios in order to enable proactive risk management decisions.

The bank's OR Profile, among others, is a reflection of OR events that have already occurred, both internally and externally. It is also shaped by emerging risks which have the potential to materialise.

The Bank uses an industry-wide OR event definition which comprises both, events with an impact on the Bank's P&L (e.g., losses), and those with no P&L impact (e.g., near misses). For DB AG India, the OR events are captured according to defined thresholds as mentioned below:

- Private Bank: Private and Commercial Clients Business and Operations: All losses (i.e., zero threshold)
- Private Bank: Wealth Management Business & Operations: €1,000
- Corporate Banking Business & Operations: €10,000
- Investment Banking Business: €10,000
- Investment Banking Operations: €2,500

For emerging risks (that have not yet materialised), the bank considers all identified material emerging risks and reflects them in the set of internal and external scenarios. It further identifies emerging risk by reviewing a selection of external events.

To facilitate more detailed analysis of material events, additional data is captured. Lessons Learned, Read Across and external event reviews identify the root causes of incidents above a defined threshold and document mitigation decisions.

d. Operational Risk assessment:

The Bank performs OR assessments, including standardised assessments of its OR, the adequacy of the control environment and the resulting residual risks. These assessments are performed by the 1st LOD, and then challenged and utilised by its independent risk control functions, to gain a holistic view of the operational risk profile.

Management disclosures under Pillar 3 – Period ended December 31, 2022

The Bank's central risk assessment process is the Risk Control Assessment (RCA). The RCA allows to capture its inherent risks, assesses its control environment and, ultimately, determine the residual risks. It allows the Bank's risk control functions to obtain insight into the risk assessment across units and OR types, to facilitate the oversight and an independent challenge of the risk assessments.

The Control Framework ensures that the bank's key controls are identified, captured and documented in a Control Inventory and that the effectiveness of the control environment is assessed and monitored to support the RCA.

The bank performs Transformation Risk Assessments (TRA) to identify and manage all risks (as per the GRIT) impacted by transformations and the subsequent impact to the DB Group risk profile.

Cross-risk processes capture and aggregate the assessments of various risk control functions, e.g. of new transactions, new products or vendors.

Further risk assessments are performed by risk control functions, e.g. Legal, Compliance and AFC.

e. Operational Risk mitigation:

The Bank mitigates the assessed risks to a level where the residual risk fits into the defined risk appetite. Issues are identified, mitigating actions clearly tracked and are sufficient to reduce the residual risk to within risk appetite.

Identified and assessed operational risks can be further reduced by performing mitigation activities, e.g. by improving the control environment, by transferring risks (i.e. insurance), or by ultimately reducing / ceasing the business activity. The transferring of risks using insurance activities is managed and governed by Corporate Insurance Deukona (CID).

Mitigation activities are monitored by the Group's resolution monitoring process, the findings management framework.

The bank proactively identifies and addresses control deficiencies and gaps through the findings management framework. For issues rated important or above, the risk control functions can opt in to review and challenge the mitigation plan and may exercise a veto where the planned mitigation is insufficient to bring the residual risk back within Risk Appetite. Where the issue is rated critical and the issue was raised by the RTC against the 1st LoD, then the RTC must perform the review.

If the residual risk is within Risk Appetite – qualitatively and quantitatively - a related issue can be risk accepted for a certain time frame and not mitigated further during this time. If residual risks remain above important and considered applicable for OR acceptance, the Risk Appetite process as defined in the ORMF is followed. The 2nd LoD has a veto authority and must consider the impact of risk acceptance on risk appetite as part of their risk acceptance decisioning

Management disclosures under Pillar 3 – Period ended December 31, 2022

f. Operational Risk monitoring

To enable a pro-active management of OR, the Bank constantly monitors its business and control environment, and the risk level for each OR type against the defined OR appetite. Early warning signals ensure that trends in the development of the risk profiles are identified before they materialize, including the major known but also emerging risks.

Risk Appetite is the level of risk the bank is willing to accept as a consequence of doing business. The NFR Appetite Framework provides a common approach to measure and monitor the level of Operational Risk appetite across the bank, an overall picture for end-to-end risk management, ensures that breaches are highlighted for review and action, and provides a consistent risk measure that can then be used in the risk assessments and for capital allocation.

The key elements of the NFR Appetite Framework are qualitative Risk Appetite statements that set the level of risk taking across the Bank at Level 2 of the NFRTT, event, risk and control metrics and thresholds, expert analysis / judgment, risk appetite reporting and breach management.

In line with DB Group's NFR Appetite Framework, the bank identifies risk relevant metrics to constantly monitor risk levels and utilization of risk appetite. These metrics act as a warning signal, indicating a potential shift in the business environment. When breaches of appetite occur, the bank manages the breaches in line with the 'Group Risk Appetite Policy' and the Non-Financial Risk Appetite minimum standards. This ensures that risks are identified and addressed early before they lead to losses from operational risks.

In case of a Risk Appetite breach, consequences should be considered in line with the Consequence Management section of the DB Group's Risk Appetite Policy and the Group's Integrated Consequence Management Framework (iCMF). Consequences should be applied on a business basis (i.e. Group, divisional and / or business unit level) and/or an individual basis (e.g. Red Flags, employee counselling, disciplinary proceedings) and be appropriate to the nature of the breach.

Monitoring - Risk Profile and Top-Risk Reporting

The bank reports regularly (ongoing risk reporting) as well as on an ad-hoc basis (escalations) on its units' / risk type / bank Operational Risk profile, including particular focus on non-Financial top risks. Reporting on the operational risk profile takes into account all ORMF components and follows Global reporting standards.

Requirements for risk data aggregation and reporting: effective risk data aggregation and risk reporting are cornerstones of an effective risk management framework. The Group has defined a governance and control framework to reinforce and strengthen practices in risk data aggregation and risk reporting, to improve the quality of information used for key risk decision-making, and ultimately to evidence compliance to the principles in BCBS 239 and MaRisk.

To allow for meaningful aggregation and an adequate representation of the bank's OR Profile, the identification of its top risks and utilization of NFR appetite, the ORMF contains respective reporting standards.

Management disclosures under Pillar 3 – Period ended December 31, 2022

The bank's business units provide quality assured data that feed into the bank's OR reporting, following the scope and frequency defined by the risk control functions. High quality reporting, i.e. accurate, timely and comprehensive, enables the bank to take informed risk and business decisions and contributes to transparency on various aggregation levels of the bank. Ad-hoc escalations are necessary to ensure material and highly material events receive immediate senior management attention.

Top Risk Reduction Programmes (TRRP) ensure that the bank's Top Risks are undergoing significant mitigation activities that are key to bring the Top Risk onto an effective risk reduction path.

4.6 Liquidity Risk

Treasury plays a key role in the management of capital and liquidity to deliver high value balance sheet steering and risk management decisions and support the strategic goals of the businesses. Treasury aims to protect and commercially steer the firm's financial resources to enable the execution of the bank's strategy in all environments. Key responsibilities for Treasury are to make sure that there is enough liquidity at any given point in time; to ensure that there is capital available when needed and that funds can be raised as and when necessary through appropriate levels of debt issuance: all at a reasonable cost whilst balancing the needs of business growth and regulatory demands.

Liquidity Risk Management (LRM) forms the 2nd Line of Defence which provides independent oversight of liquidity risk management undertaken within Treasury and the Lines of Business.

Treasury manages the Bank's liquidity and funding in accordance with the approved risks via developing liquidity models and implementing tools to measure and monitor liquidity risks and ensure compliance.

Treasury manages capital, funding, liquidity, FTP and Asset & Liability Management ("ALM") of the Bank. Under the stewardship of local Treasury, DB AG India ALCO provides the forum for managing capital, funding and liquidity risk of DB AG India. The main objectives of the local ALCO are to :

- Align local demand for capital, liquidity and funding with its local availability
- Review the usage of capital, liquidity and funding to ensure it is employed in the most efficient way
- Ensure compliance with DB Group policies and procedures, as well as external rules and regulations
- Establish a link between the local, regional and Group perspective on capital, liquidity and funding.

Ongoing liquidity management is discussed as a regular item at the local ALCO meeting. At each ALCO meeting, the liquidity position, the limit utilization, changes in exposure and liquidity policy compliance are presented to the committee. Other topics of discussion may include changes to the asset/liability profile if warranted by stress testing results, review and estimation of additional funding capabilities and other possible sources of liquidity.

Management disclosures under Pillar 3 – Period ended December 31, 2022

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 trading desks in Global Markets (w.e.f. May 2016 the position has been transferred is to Treasury) 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.

The impact on market value of equity for a 200 basis point upward move is INR 4,622,400 thousands as at December 31,2022 (March 31,2022 : INR 3,477,000 thousands).

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 the Standardised Approach (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.

Management disclosures under Pillar 3 – Period ended December 31, 2022

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

Credit ratings are formally reviewed at least annually and additionally reviewed whenever there is any major credit event / releases of regular earning statements of companies. CRM monitors credit ratings of all counterparties on an on-going basis and initiates rating actions throughout the year based on changes in business conditions / specific credit events /changes in sector outlooks / views of external rating agencies.

In case of a rating downgrade, CRM reviews the credit strategy and gets it approved by the respective authority holder. CRM follows the Global Credit Approval Authority Scheme which defines the authority delegation level per type of counterparty (corporate / bank / financial institution etc), size of facility, credit rating of counterparty and type of approval- limit approval / temporary excess approval.

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

Quantitative Disclosures

	(In Rs '000)	
Particulars*	31 Dec 2022	31 March 2022
Gross positive fair value of contracts	93,294,621	65,303,339
Netting benefits	(59,422,788)	(43,183,457)
Netted current credit exposure	33,871,832	22,119,882
Collateral held (Cash held under Credit Support Annex)	(19,123,347)	-
Net derivatives credit exposure	14,748,485	22,119,882
Potential future exposure	171,671,292	160,381,782
Measures for exposure at default or exposure amount under CEM	186,419,777	182,501,664
The notional value of credit derivative hedges	-	-
Distribution of current credit exposure by types of credit exposure:	-	-
- Interest Rates	47,984,121	54,678,020
- Fx	138,435,656	127,823,644

* Based on current exposure method

Deutsche Bank AG - India Branches

(Incorporated in Germany with limited liability)

Management disclosures under Pillar 3 – Period ended December 31, 2022

7. Regulatory Capital Instruments

The Bank has not issued any Regulatory Capital Instruments during the period. Regulatory capital increases for the Bank generally take place via capital infusion from the Head Office, increase in statutory/ regulatory reserves and/or retention of Remittable Surplus for CRAR requirements.

8. Disclosure Requirements for Remuneration

In accordance with the requirements of the RBI Circular No. DOR.Appt.BC.No.23/29.67.001/2019-20 dated November 4, 2019, (for foreign banks operating in India under branch mode) the Bank has submitted a declaration to RBI annually from its Head Offices to the effect that their compensation structures in India, including that of CEO's, is in conformity with the Financial Stability Board (FSB) Principles and Standards.

9. Comparative figures

Certain comparative figures have been reclassified to conform to the current period's preparation.