



## ICRA Rating Feature

### Rating Methodology for Banks

This rating methodology updates and supersedes ICRA's earlier rating methodology note on banks, published in February 2016. This note also supersedes ICRA's earlier rating methodology for Basel III compliant non-equity capital instruments, published in November 2014, and the rating criteria for new capital instruments under Basel II, published in March 2006.

ICRA's rating is an opinion on the credit risk of a bank, which in turn, is a function of its exposure to business and financial risks as well as the likelihood of it receiving extraordinary financial support from the parent (or an affiliate) in case of distress. The broad list of rating factors that ICRA assesses while analysing banks is covered in this methodology note. While these do not necessarily represent an exhaustive set of factors that ICRA considers while assigning credit ratings, these are intended to provide an overall perspective to lenders, investors and other market participants on the rating considerations that are usually considered the most important. The key factors considered in the credit analysis are:

#### Business Risk Analysis

- Operating Environment
- Regulatory Environment
- Franchise
- Management, Governance, Information Systems and Strategy
- Risk Management

#### Ownership Structure

#### Financial Risk Analysis

- Asset Quality
- Diversity of Funding and Liquidity
- Profitability, Earnings Stability and Prospects
- Capital Adequacy and Management

#### Notching Approach for Various Capital Instruments

### Business Risk Analysis

#### Operating Environment

The assessment of the operating environment is one of the most important parameters for the credit risk evaluation of a bank, as it could affect its growth, asset quality and earnings. The operating environment is a reflection of prevailing economic conditions, Gross Domestic Product (GDP) growth prospects, deposits and credit growth outlook as well as the legal environment.

Besides the above, the structure of the financial market, its stages of development and competitive intensity also form an important part of the evaluation of a bank's operating environment.

## Regulatory Environment

A well regulated and supervised system is the backbone for credibility and stability of banks even when the operating environment is unfavourable. ICRA's evaluation of the regulatory system involves evaluation of norms related to capital and other countercyclical measures to absorb risk and prevent related party transactions; the extent of regulatory supervision and changes in response to the macro environment; key norms (such as Non Performing Asset (NPA) recognition, provisioning, capital adequacy, liquidity, benchmark lending rate, expansion and directed lending) and prospective regulatory changes (driven by financial sector reforms as well as international environment/leanings).

The degree, to which the central bank is likely to allow new entrants in banking and open the banking system to further disintermediation, could increase competition from new banks and non-bank lenders. Further development of the capital market could allow potential and existing clientele to access capital markets directly, thus making product innovation an important criterion for future performance. As for the international environment, the global meltdown has triggered several regulatory changes for higher core capital, quality of non-equity capital and better liquidity under Basel III.

## Franchise

The franchise strength of a bank determines its capacity to grow while maintaining a reasonable cost to income ratio and profitability, thereby providing resilience of earnings. ICRA evaluates the franchise strength of a bank in terms of scale of operations and market share for various activities at the pan-India level or business niche; performance and strengths relative to competition; complexity of key segments; diversification across various performance metrics like branches, advances, liabilities, sources of other income etc and access to special Government support or privileges relative to other banks. A strong franchise of the bank is expected to result in a granular asset and liability base. ICRA also considers the brand recognition, history and background of banks under its franchise strength analysis.

## Management, Governance, Information Systems and Strategy

Quality of management and governance, information systems and the strategy followed to manage the stakeholders' expectations are evaluated on the following parameters:

Quality of management and governance:

- **Size and constitution of the board of directors:** A board consisting of qualified and independent members with effective oversight is a positive factor and is reflected in the operational and financial performance of the bank.
- **Management depth and breadth:** Presence of qualified and experienced professionals and track record of a stable top management.
- **Established policies:** Established policies on factors such as capital cushions vis-à-vis regulatory levels, stressed asset provisioning beyond regulatory minimum levels, calibrated growth while maintaining liquidity and improving diversification are some positive attributes.

Information system and strategy:

- **Quality of disclosures:** A well established information system is a pre-requisite for adequate disclosures. Some of the positive attributes of quality information disclosures include timeliness, disclosures beyond the minimum regulatory requirements to improve transparency and consistency of such disclosures.
- **Financial reporting and systems:** A well established information system also supports accuracy in financial reporting on a consistent basis and limited instances of regulatory non-compliances. High instances of regulatory non-compliances or divergence in financial reporting vis-à-vis regulatory audits reflect weakness in information systems and are negative attributes.
- **Credit monitoring:** A strong information system enables efficient monitoring of asset quality while

generating early warning signals. Management's opinion on corrective action plans on potential stressed assets form a key part of the discussions by ICRA.

- **Strategy:** A well laid-out business plan with regular disclosures on strategy and progress on goal achievements are some positive attributes.

## Risk Management

A careful evaluation of the bank's risk management policies is conducted as it provides important guidance for its future asset quality, liquidity, profitability and capitalisation. The bank's risk management policy is evaluated for the following:

- **Credit risk:** Discussion is held with management on quality of fresh exposures, performance of vulnerable accounts with corrective action plan and movements in concentration of exposures.
- **Market risk:** Discussion is held with management on their interest rate outlook, the positioning of the investment portfolio as well as the sensitivity of the investment portfolio to interest rate risks and cushion available in the investment book to absorb losses because of adverse movements.
- **Operational risk:** Instances of frauds and amount involved in such frauds and corrective actions to strengthen the system are discussed with management.

## Ownership Structure

The Indian banking system consists of public sector banks (PSBs), private sector banks (PVBs), foreign banks, co-operative banks, regional rural banks, small finance banks and payment banks. While ICRA draws comfort from the sovereign ownership of public sector banks, the ability of the bank to raise capital from promoters/other key shareholders, as and when required, is an important credit driver. ICRA views positively a public sector bank with Government of India (GoI) shareholding well in excess of 51%, as it would have greater flexibility in raising capital by diluting the GoI shareholding.

Apart from ownership, the bank's importance in the domestic financial system has a bearing on the possibility of Government support at times of financial stress. Apart from balance sheet size, proxies for a bank's systemic importance could include share of business in the region of operation, participation in payment systems and scale of quasi-fiscal responsibilities (such as directed lending) carried out for the Government.

## Financial Risk Analysis

Financial performance analysis is one of the key parameters used to compare a bank's performance over a period and across its peer group. ICRA conducts a detailed financial analysis of the banks being rated on the parameters given below:

### Asset Quality

A bank's asset quality reflects its risk appetite, depth of its franchise and effectiveness of its management, strategy, systems and processes. Asset quality holds the potential to affect earnings (higher NPAs could dilute the yields and necessitate higher credit provisions) and capital (lower earnings could slow down internal capital generation or in extreme situations (loss) could weaken the capital or impact a bank's ability to raise capital from external investors). Asset quality evaluation includes the loan book as well as the non-Statutory Liquidity (SLR) investment portfolio of a bank. Key aspects of asset quality evaluation are discussed below:

- **Credit underwriting:** ICRA assesses the quality of a bank's credit appraisal process and lending/investment norms; the riskiness of its exposure mix; the availability of data to facilitate credit decision-making and its track record in managing its loan book through lifecycles. ICRA also assesses the quality of credit administration as reflected in the design and implementation of appraisal and loan pricing methodologies and adherence to periodic review.

- **Diversification of portfolio:** The extent of diversification is also an important indicator of a bank's asset quality. In assessing diversification, the common factors include loan mix, portfolio granularity, sectoral mix, geographical diversification, share of domestic and overseas exposure and borrower profile. The bank's exposure to top borrowers and groups is analysed to gauge the extent of the bank's credit concentration. High levels of diversification can shield a bank from the impact of a downturn in any one segment/industry. At the same time, diversification into riskier segments may not improve resilience and, therefore, may not translate into superior ratings. However, a bank's ability to manage diversification, especially in multiple businesses and/or new geographies is as important an issue as management depth and ability to adopt the skills and techniques needed to run different businesses. Some of the key measures of diversification/concentration are:
  - a) Share of top/top group exposures to total exposures
  - b) Share of top/top group exposures as a percentage of Common Equity Tier 1 (CET1) capital
  - c) Share of top industries as a percentage of total exposure
  - d) Share of top geographies as a percentage of total exposure

A comparison of the above parameters with the industry average provides an indication of potential asset quality issues. An analysis of the trend over the years helps in understanding the bank's strategy towards various sectors.

- **Secured vs unsecured:** The share of secured and unsecured exposure in the overall portfolio helps determine the provisioning levels and expected loss in case of defaults.
- **Rating wise distribution:** ICRA also studies the movement in distribution of exposure across various rating categories for corporate credit to estimate the asset quality trends in overall credit portfolio and likelihood of future asset quality stress.
- **Asset classification and provisioning:** Advances are classified into standard, standard restructured and non-performing assets (NPAs). NPAs are further classified into substandard, doubtful and loss assets, depending on the time period for which an asset has been an NPA. ICRA examines the incremental provisioning requirements (as per ageing of the portfolio in accordance with RBI guidelines or based on ICRA's assessment of vulnerability of large exposures) versus provisions made by the bank. The purpose is to estimate further provisioning or recovery that eventually affects the bottom line and financial position of the bank.
- **Extent of divergence reported by the bank:** As per RBI's guidelines, banks are required to disclose the divergence in the asset classification and provisioning, if the additional provisioning requirements assessed by the RBI exceed 15% of published net profit after tax, or additional Gross NPAs identified by the RBI exceed 15% of published incremental Gross NPA during the reference period. A high level of divergence in asset classification and provisioning on a consistent basis weakens the reliability of reported financials.
- **Vulnerability analysis:** ICRA does a vulnerability analysis of the top exposures of the bank to arrive at the expected loss (EL) on credit portfolio based on the probability of defaults (PD) and loss given default (LGD). Standard advances are classified based on their external rating for computation of PD, while LGDs are based on expected losses in the underlying accounts in the event of default. This EL, along with the EL on other stressed assets, like NPAs, restructured assets and security receipts, are arrived at to estimate the overall vulnerability as a percentage of the credit portfolio for relative benchmarking across peers. The EL on the assets is also adjusted from the CET1 to estimate the adjusted CET1 for the bank. Capital cushion over and above the adjusted CET1 reflects the strength of the bank against unexpected loss and is considered a credit strength.
- **Growth rate of advances/exposure:** ICRA monitors growth in advances/exposure for the bank compared to the industry average and in relation to its base. Higher-than-industry growth is monitored closely to understand the quality of the incremental borrowers, the borrower segments and impact on granularity/concentration because of incremental lending. Higher growth while compromising the quality

of the portfolio is perceived negatively.

- **Movement in risk weighted assets (RWAs):** RWAs are an outcome of credit exposure, investment exposure and operational risks, with credit exposure forming a major portion of risk weighted assets. RWAs, in relation to advances/exposures, is analysed in relation to peers and reasons for sharp movements in RWAs in relation to advances/exposures are also analysed.
- **Performance on targeted segment lending:** Banks are required to lend a part of their advances to certain priority sectors as identified by the regulatory guidelines. These sectors include agriculture, small scale industries and the weaker sections of society. Ability of banks to meet these targets requires a trade-off between asset quality and profitability, as inability to meet the targets results in banks investing the shortfall in lending with other developmental financial institutions or resorting to buy-out of low-yielding priority sector lending(PSL) compliant loan portfolios. At the same time, the asset quality in these segments can be relatively weaker and, hence, if lending targets are achieved, the ability to also maintain good asset quality can be a challenge.
- **Performance of subsidiaries:** ICRA assesses the risk of devolvement of obligations onto a bank from its underperforming subsidiaries. The devolvement may arise legally or due to the publicly perceived moral obligation of a parent to support a subsidiary organisation. While weak-performing subsidiaries may be a drag on a bank's financial position, well-performing subsidiaries or investments can provide a cushion to a bank's profitability in events of stress.

**Key financial indicators** for measuring asset quality of a bank are its fresh NPA generation rate, Gross NPA percentage, stressed advances percentage (Gross NPA percentage + standard restructured percentage + advances under regulatory forbearance schemes of RBI + security receipts), Net NPA percentage, provision coverage and Net NPAs in relation to net worth.

### Diversity of Funding and Liquidity

ICRA analyses the funding profile of the bank in terms of the sources and mix of funds as well as the cost of funds to the bank, along the following lines:

- **Deposit mix:** Of the deposits, current and savings accounts (CASA) are low cost and sticky in nature. Certificate of Deposits (CDs) and bulk deposits from corporate and institutional depositors are typically more volatile than retail and household deposits. A higher portion of retail deposits also lends stability to earnings as the cost of these tends to be less volatile than bulk deposits. In its rating process, ICRA views positively a higher proportion of retail deposits in the total mix. Further, the quality of the deposit base is measured by some of the following parameters and is benchmarked with peers:
  - a) CASA growth and share of CASA in overall deposits
  - b) Share of retail deposits in overall term deposits
  - c) Share of bulk deposits/certificate of deposits in term deposits
  - d) Top 20 depositors in overall deposits

With deregulation in interest rates on savings accounts, some banks have been able to improve their CASA balances by offering higher interest rates on savings deposits. Such CASA deposits may exhibit relatively higher volatility in terms of flow compared to normal CASA deposits. Accordingly, CASA balances are analysed in relation to the deposit rates offered on these products.

- **Demographic classification of deposits (i.e. mix of rural, urban and metropolitan deposits):** Typically, rural deposits display lower fluctuation than urban and metropolitan deposits, thus reflecting the lower availability of investment options compared to the options available in urban and metropolitan areas.
- **Cost of interest bearing funds:** The cost of interest bearing funds is determined by the mix of deposits

(current, savings and time deposits) and other borrowings of the bank. The tenure of deposits and the bank's market standing influences the interest rate structure that it offers on deposits and borrowings. Other factors include the bank's reliance on bulk deposits, money market funding (from call money markets, CDs, refinance lines and the like), and money market conditions prevalent and foreseen in future. Banks with overseas operations may have foreign currency deposits, which typically have differentiated cost compared to domestic deposits and the same is suitably adjusted to arrive at peer comparisons.

- **Payment services:** Despite the commencement of various payment services like digital wallets, payment banks etc, banks continue to have a near-monopoly in operating the payment systems, which provide banks with a stable and low-cost base of settlement balances. ICRA assesses the bank's ability to offer value-added payment services like bill payments, online transfer facility, investment facilities etc (often driven by technology), which hold the key to a bank retaining the benefits from these services.

A strong deposit base which is granular, stable and low-cost in nature is a reflection of the bank's deposit franchise and is an outcome of not only its branch network but also its customer service, level of trust with depositors, competitive pricing and brand image. A sustained effort on these fronts is critical to maintain this competitive advantage and also critical for long-term liquidity. ICRA attempts to capture the liquidity of a bank by analysing the following qualitative and quantitative parameters:

- **Bank's statement of structural liquidity:** ICRA studies the asset liability mismatch (ALM) statement of the bank and the associated assumptions in the ALM statement to analyse the overall match between the maturity profile of its assets and liabilities across various time frames, trends over the past few years and the comparison of the same with peers.
- **Liquidity coverage ratio (LCR)<sup>1</sup>:** Banks are required to maintain an LCR in accordance with the RBI guidelines. The trends in a bank's LCR are analysed for comfort on the liquidity position.
- **Market perceptions of the bank:** Perceptions affect a bank's ability to access funds during a crisis. An indicator of such perceptions could be relative cost of funds for a bank in the inter-bank market. ICRA places considerable emphasis on the implicit backing arising from the significant shareholding of a strong entity in the bank. This benefit naturally accrues to all nationalised banks, as the GoI has demonstrated its support over the years by infusion of equity or directed measures to bail out banks.
- **Degree of the bank's reliance on volatile funds in relation to total assets:** Some short-term funding sources like bulk deposits are more sensitive than others to adverse developments. ICRA views inter-bank funding by domestic banks and domestic deposits by non-bank depositors in descending order of confidence.

### Profitability, Earning Stability and Prospects

A bank's ability to generate adequate returns is important from the perspective of its shareholders as well as debt holders. Adequate operating profitability of a bank helps in absorbing credit costs and other losses emanating from the various risks that a bank is exposed to. The bank's historical performance is analysed for stability and quality of earnings. The purpose of ICRA's evaluation here is to assess the level of future earnings and quality of earnings of the bank concerned by analysing its interest spreads, fee income, operating expenses and credit costs.

The future profitability of a bank is evaluated by analysing its interest spreads (yields minus cost of funds) and the likely trajectory of the same in the light of the changes in its operating environment, its liquidity position, its status on priority sector lending (PSL) requirements, loan mix and its overall strategy. A bank failing to meet its PSL requirements is required to invest in priority sector lending certificates (PLSC) issued by other banks or rural infrastructure bonds (RIDF) at much lower yields. ICRA also assesses the bank's

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<sup>1</sup> Stock of high quality liquid assets as a percentage of total net cash outflow over the next 30 days; As per regulatory requirements, banks need to achieve 100% LCR from January 1, 2019.

ability to complement its interest income with fee income. A large fee income allows greater diversification, which, in turn, can improve a bank's resilience of earnings and earning profile. However, sustainability of the income is an important parameter. Any one-off income like gain on sale of investments is, therefore, factored in our assessment. After assessing the operating income stream, ICRA evaluates the bank's operating efficiency (operating expenses in relation to total assets and cost-to-income ratio) and compares the same with that of its peers. Finally, credit costs are estimated on the basis of the bank's asset quality profile and management's guidance on target provision cover against NPAs. The ability of the operating income to absorb credit losses is an important parameter. The trading income of the bank, which is typically volatile in nature, is evaluated to assess the sustained level of income/losses under an adverse interest rate scenario. The profitability indicators are compared across peers. Importantly, a very high return on equity may not necessarily translate into a high credit rating, given that the underlying risk could be very high or leveraging could be excessive as well.

### Capital Adequacy and Management

Capital provides the second level of protection to debt holders (earnings being the first) and, therefore, its quality and adequacy (in relation to the embedded credit, market, and operational risk) is an important consideration for ratings. In evaluating the bank's true capital in relation to the risks in its business, ICRA focuses on the following aspects:

- **Conformance with regulatory capital requirement:** As per the Basel III guidelines, banks are required to achieve and maintain capitalisation ratios as mentioned below:

**Table 1: Regulatory capital requirements under Basel III as % of risk weighted assets**

	March 31, 2016	March 31, 2017	March 31, 2018	March 31, 2019
Minimum Common Equity Tier 1 (CET1)	5.50%	5.50%	5.50%	5.50%
Capital Conservation Buffer (CCB)	0.625%	1.25%	1.875%	2.50%
Minimum CET1 + CCB	6.125%	6.75%	7.375%	8.00%
Minimum Tier I	7.00%	7.00%	7.00%	7.00%
Minimum Tier I Capital + CCB	7.625%	8.25%	8.875%	9.50%
Minimum Total Capital	9.00%	9.00%	9.00%	9.00%
Minimum Total Capital + CCB	9.625%	10.25%	10.875%	11.50%

Source: RBI, ICRA research

ICRA also assesses the capital cushion available on the regulatory requirement and the internal policy of the bank to maintain a cushion over and above the regulatory requirement.

- **Adequacy of capital and its sustainability:** Besides evaluating a bank's conformance to regulatory capital requirements, ICRA assesses the adequacy of capital in relation to its growth plans, its internal capital generation, its present and prospective asset quality, which may impact capitalisation, the bank's risk appetite and interest rate sensitivity of the balance sheet. Based on this, the bank's medium term capital requirement is computed. A stress analysis is done at various growth levels and internal capital generation.
- **Ability to raise capital:** The capitalisation of the bank can be enhanced by internal capital generation or by raising fresh equity capital or hybrid instruments. ICRA evaluates the internal capital generation capacity of the bank and the ability and leeway available to augment capital to support growth or withstand the stress. For public sector banks, capital support announced by the GoI to the sector is an important aspect. Also, considering the Government shareholding is required to be at least 51%, ability of the bank to meet its capital requirements without any dependence on GoI is analysed. For private banks, ability to meet the capital requirements from the markets is analysed. A bank can also look at other options such as divestment of non-core investments and reduction in risk weighted assets to meet its capital requirements.

- **Quality of capital:** A higher percentage of core Tier I capital (more specifically common equity Tier I capital) is viewed more favourably, given its greater permanence, followed by hybrids and subordinated bonds. ICRA also analyses any hidden reserves (such as unrealised gains on investment book, revaluation reserves on fixed assets), which may help boost the capital.
- **Ability to raise additional tier I instruments:** Additional Tier 1 (AT1) instruments are debt capital instruments with loss absorption features and comprise Tier I capital for banks under Basel III regulations. Due to the loss absorption features of these instruments and the coupon payments restricted from either current year profits or reserves created through appropriation of profits, the bank's profitability, distributable reserves and capitalisation profile determines the attractiveness of AT1 bonds to investors. Weak performance on these parameters may constrain the bank's ability to raise AT1 bonds.
- **Solvency profile:** This is calculated as the extent of Net NPAs of the bank in relation to its net worth. It measures the capital coverage for the unprovided portion of the bank's NPAs.

## Summing up

ICRA's credit ratings are a symbolic representation of its opinion on the relative credit risk associated with the entity and instruments being rated. ICRA arrives at this opinion by conducting a detailed evaluation of the bank's business and financial risks and using such an evaluation to project its future financial performance in various scenarios. While several parameters are used to assess the risk profile of a bank, the relative importance of each of these qualitative and quantitative parameters can vary across banks, depending on its potential to change the overall risk profile of the bank concerned.

## Guidelines for rating various capital instruments

### Basel II instruments:

Prior to the January 2006 announcement of guidelines by the RBI on the use of new instruments for capital raising by banks, apart from internal generation, the only options available to Indian banks to shore up their capital were equity issues and subordinated debt. Detailed guidelines were issued in January 2006 for the raising of capital via the following capital instruments:

- Innovative capital instruments for inclusion in Tier I (referred to as Lower Tier I in this note)
- Hybrid debt instruments for inclusion in Tier II (referred to as Upper Tier II in this note)

A comparison between the Lower Tier II instruments and the new instruments, Lower Tier I and Upper Tier II, has been presented below. The rating for the Lower Tier II instruments is equated to the base rating of the bank due to the following reasons:

- Lower Tier II instruments are free from the deferral clauses on debt servicing, i.e. even if the capital adequacy is below the regulatory minimum or losses have been incurred, banks do not face any constraint in servicing the conventional instruments. In India and most other markets, banks are observed to have greater willingness to avoid defaults (in most cases, systemic support is also extended by sovereign authorities) to avoid reputation risk (or even systemic instability).
- There is not much of a difference in the superiority of claims between Senior Unsecured Debt and Lower Tier II.
- Lower Tier II issuances are of relatively shorter term maturity (usually 10 years) in comparison to Lower Tier I and Upper Tier II, implying that these are a less permanent form of capital and, hence, debt-like.

## Key Differentiating Factors: Rating Implications

**Table 2: Comparison of regulatory features of Basel II capital instruments**

Key Features Impacting	Bonds-Lower Tier I (Basel II Norms)	Bonds-Upper Tier II (Basel II Norms)	Bonds-Lower Tier II (Basel II Norms)	Rating Implications
<b>Right to defer payments</b>	<p>Issuer not liable to pay interest if capital to risk weighted assets ratio (CRAR) falls/is likely to fall below the minimum regulatory requirement. In the event of a loss, the coupon payment is subject to approval from the RBI, provided that upon the payment of coupon, the CRAR remains above the regulatory threshold.</p> <p>Similarly, the principal redemption at call option dates is subject to CRAR being above regulatory levels.</p> <p>Interest, if not paid, cannot be accumulated.</p>	<p>Issuer not liable to pay either interest or principal if CRAR falls/is likely to fall below the minimum regulatory requirement.</p> <p>However, servicing of interest and principal possible, subject to RBI approval, in a loss situation provided the regulatory condition on CRAR is met.</p> <p>Interest can be accumulated and paid once the conditions are met.</p>	No such restriction	<p>Although deferral of interest is allowed according to the terms of the issue, non-payment would mean economic loss to investor/s and would, therefore, be construed as default by ICRA on such instrument.</p> <p>Further, besides the traditional default triggers<sup>2</sup>, the Lower Tier I and Upper Tier II bonds have an additional trigger, which is a decline in capital adequacy below the regulatory minimum of 9%. The trigger arises from the restrictions imposed by the lock-in clause (right to defer payments). The probability of default on these capital instruments is, therefore, higher than that on the Lower Tier II instruments. Thus, even though the regulatory norm on CRAR was breached by some banks in the past, there was no instance of default on their traditional debt. However, this is not the case with Lower Tier I and Upper Tier II bonds, and the capital adequacy-linked deferral trigger has led to default on such instruments in the past.</p> <p>In light of the higher probability of default on the Lower Tier I and Upper Tier II bonds, ICRA notches down the credit ratings of these instruments from the level assigned to Lower Tier II, which does not have any capital adequacy-linked default triggers.</p>
<b>Nature of interest</b>	Non-cumulative interest	Cumulative interest	No such restriction	<p>Although the loss, given default in the case of Lower Tier I, is likely to be higher<sup>3</sup> versus Upper Tier II because of the differences in the nature of interest, ICRA does not make any rating distinction between the two. This is because ICRA's ratings primarily reflect the probability of default and not loss given default.</p>

Source: RBI, ICRA research

<sup>2</sup> Such as loss on account of asset quality impairment or mark-to-market losses, inability to refinance, or asset-liability mismatch.

<sup>3</sup> On account of the non-cumulative nature of interest, as any missed interest repayments would tantamount to permanent loss for the investor. In the case of Upper Tier II however, interest can be accumulated and is, therefore, subject to potentially lower losses.

**Superiority of Claims**

**Table 3: Comparison among instruments on the parameter of superiority of claims**

Key Features Impacting	Bonds-Lower Tier I (Basel II Norms)	Bonds-Upper Tier II (Basel II Norms)	Bonds-Lower Tier II (Basel II Norms)	Implications
<p><b>Severity of loss</b></p>	<p>Superior to claims of investors in equity shares</p>	<p>Superior to claims of investors in equity shares and investors in instruments eligible for Tier I</p>	<p>Superior to claims of investors in equity shares and investors in instruments eligible for Tier I and Upper Tier II</p>	<p>Superiority of claims makes the loss absorption capacity offered by Lower Tier I and Upper Tier II bonds relatively higher compared to traditional debt. This could make the probability of default higher for Lower Tier I vis-à-vis Upper Tier II (higher than Lower Tier II for both). However, the clause would have credit implications primarily at the stage of liquidation - a relatively low possibility for higher-rated issuers. Therefore, although Lower Tier I is inferior to Upper Tier II in the priority of claims, given that the probability of liquidation is rather remote for better-rated issuers, this feature may not lead to notching of Lower Tier I to below Upper Tier II for the higher rating categories. However, for issuers in the lower rating categories, Lower Tier I may be notched to below Upper Tier II. For the latter class, the clauses on nature of interest and superiority of claims may well warrant a notching-down of Lower Tier I to below Upper Tier II. This, however, would be decided by ICRA's Rating Committee on a case-to-case basis.</p>

Source: RBI, ICRA research

## Basel III instruments:

RBI guidelines on Basel III Capital Regulations raised the minimum core Tier I capital to be maintained by banks to 8% from 3.6% (under Basel II). Overall capital adequacy has been raised to 11.5% from 9%. Further, if counter-cyclical capital buffers (CCCBs) are introduced at the highest levels, the Common Equity requirement could be higher at 10.5%, while the overall capital adequacy requirement would be as high as 14%.

**Table 4: Tier I capital requirements significantly higher under Basel III**

RBI Norms under	Basel II	Basel III*
Minimum Common Equity Tier I Ratio (CET1)	3.6%	5.5%
Capital Conservation Buffer (consisting of CET1)	Nil	2.5%
Minimum CET1 Ratio (including Capital Conservation Buffer - CCB)	3.6%	8.0%
Additional Tier I Capital	2.4%	1.5%
Minimum Tier I Capital (including CCB)	6.0%	9.5%
Tier II Capital	3.0%	2.0%
Minimum Total Capital Ratio (including CCB)	9.0%	11.5%
Additional CCCBs to be Maintained in the Form of CET1	Nil	0-2.5%

\*By March 31, 2019

Source: RBI, ICRA research

RBI guidelines on Basel III introduce stringent loss absorption clauses for hybrid instruments so that loss absorption kicks in before the “public injection of funds”. While both Tier I and Tier II instruments have significant loss absorption features, Tier I instruments are meant to absorb losses on a going-concern basis, which means the loss absorption trigger kicks in fairly early. The high loss absorption features of Tier I are likely to bail out depositors as well as investors in Tier II instruments well ahead of stress. The triggers for Tier II instruments, which also have loss absorption features, are meant to be invoked at the point of non-viability (PONV)<sup>4</sup>, and therefore, are likely to protect depositors and senior lenders on a gone-concern basis.

<sup>4</sup> The PONV Trigger event is the earlier of:

- A decision that a conversion or write-off, without which the firm would become non-viable<sup>^</sup>, is necessary, as determined by the RBI
- The decision to make a public sector injection of capital, or equivalent support, without which the firm would have become non-viable, as determined by the relevant authority.

<sup>^</sup>Under Basel III regulations, a non-viable bank has been defined as a bank which, owing to its financial and other difficulties, may no longer remain a going concern on its own, in the opinion of the RBI, unless appropriate measures are taken to revive its operations and thus enable it to continue as a going concern. The difficulties faced by a bank should be such that these are likely to result in financial losses and raising the CET1 capital of the bank should be considered as the most appropriate way to prevent the bank from turning non-viable. Such measures would include write-off/conversion of non-equity regulatory capital into common shares in combination with or without other measures as considered appropriate by the RBI.

### ICRA's Approach to Rating Basel III Compliant Tier II Instruments

The key features of Tier II capital instruments under Basel II and III and their implications for the probability of default and severity of loss are presented in *Table 5*.

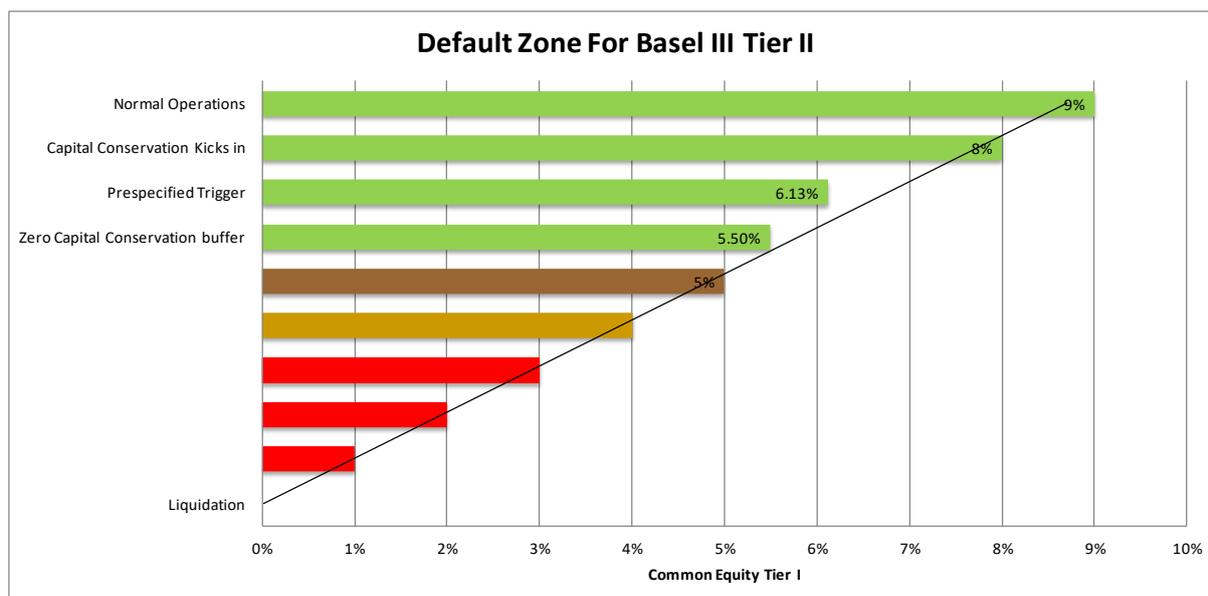
**Table 5: Key features of Tier II instruments under Basel II and Basel III and implications for probability of default and severity of loss**

Key Features Impacting	Bonds-Lower Tier II (Basel II Norms)	Bonds-Upper Tier II (Basel II Norms)	Bonds-Tier II Capital (Basel III Norms)	Implications
<b>Probability of default</b>	No constraint for coupon or redemption; however, subordinated to depositors on liquidation	<p>Bank shall not be liable to pay interest if its CRAR is below the minimum regulatory requirement or interest payment will result in the banks' CRAR to go below the minimum regulatory requirement.</p> <p>In an event of a loss, the coupon payment is subject to approval from the RBI, provided that upon the payment of the coupon, the CRAR remains above the regulatory threshold.</p> <p>Similarly, the principal redemption at call option dates is subject to CRAR being above regulatory levels.</p> <p>However, the bank may pay interest with prior RBI approval when the impact of such payment may result in net loss or increase in net loss, provided the CRAR remains above the regulatory norm.</p>	<p>No constraint for coupon or redemption until the occurrence of PONV.</p> <p>Upon invocation of PONV, at the option of the RBI, bonds may either be written off or converted into common equity.</p>	Probability of default for Basel III compliant Tier II bonds is higher than that for Basel II Lower Tier II instruments; however, it is likely to be significantly lower than that for Upper Tier II bonds as the probability of PONV trigger invocation is likely to be much lower than the probability of a bank breaching the capital adequacy threshold.
<b>Severity of loss</b>	No write-down clause until liquidation	No write-down clause until liquidation	High severity of loss upon PONV	Under Basel III, severity of loss is likely to be significantly higher as a PONV trigger could lead to write off/conversion prior to any public sector injection of capital.

Source: RBI, ICRA research

The Basel III Tier II bonds issued by banks are expected to provide an additional layer of protection to depositors and senior creditors. According to the Basel III guidelines issued by the RBI, Basel III-compliant Tier II bonds do not have any interest deferral clause, but they are expected to absorb losses when the PONV trigger is invoked. As and when the PONV trigger is invoked, Tier II instruments, at the option of the RBI, are either to be written off or converted into common equity.

Chart1: Default Zone for Tier II Instruments<sup>5</sup>



Source: RBI, ICRA research

In the past, the GoI, as a shareholder, has provided support to PSBs to achieve growth as well as maintain financial stability. In ICRA’s current assessment, it is likely that the GoI would infuse equity in PSBs well in advance so that their capital remains well above the PONV triggers. Further, considering the GoI’s stance on maintaining regulatory capital ratios and the likely severe restrictions on banks’ operations (which may hinder policy implementation) on PONV invocation, the probability of the trigger getting breached appears quite low, in ICRA’s opinion. Going forward, any significant change in the GoI’s current stance on providing regular capital support to PSBs would be a key rating sensitivity for Basel III Tier II instruments.

ICRA’s ratings of PVBs will continue to hinge on their standalone fundamental strength. Ratings of both PSBs and PVBs will continue to benefit from prudent regulatory provisions, as well as the close supervision and oversight of the RBI.

ICRA’s ratings of Tier II instruments continue to be driven by the bank’s relative standalone financial/fundamental strength discussed earlier, i.e.

- ICRA’s assessment of its asset quality
- Bank’s past trends and the outlook for its core profitability
- Bank’s relative ranking on its expected capitalisation levels under stress testing scenarios
- Bank’s track record and philosophy on maintaining excess capital
- Bank’s franchise, relative standing in the equity market, its demonstrated ability in attracting fresh equity, and the quality and diversity of its investors

For banks scoring well on these parameters, the probability of capital erosion would be much less, and therefore, the ratings on Basel III Tier II could be closer to those of conventional instruments. However, banks scoring relatively low on these parameters would have a relatively higher probability of capital erosion, and therefore, the ratings on Basel III Tier II could be notched down accordingly.

<sup>5</sup> Assuming a scenario of zero counter-cyclical capital buffer and nil additional capital requirement for domestic systemically important banks (SIBs).

## ICRA's Approach to Rating Basel III Compliant Additional Tier I (AT I) Instruments

The key features of Tier I capital instruments under Basel II and Basel III and their implications for probability of default and severity of loss are presented in *Table 6*.

**Table 6: Key Features of Tier I instruments under Basel II and III, and implications for probability of default and severity of loss**

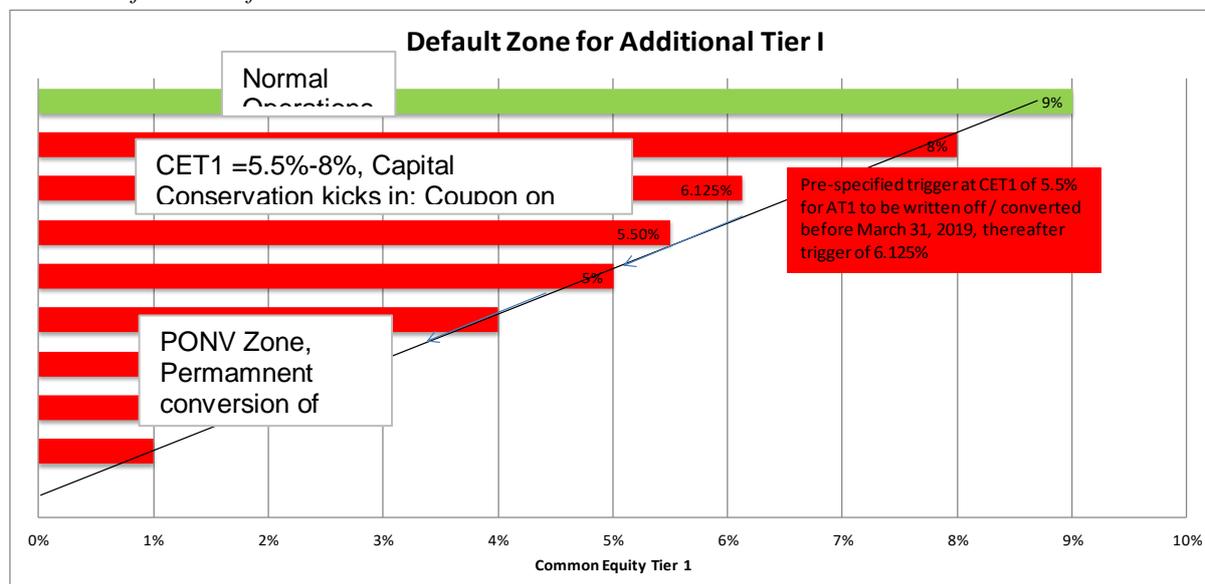
Key Features impacting	Perpetual Bonds Tier I (Basel II norms)	Additional Tier I (Basel III norms)	Implication
<b>Probability of default</b>	<p>Bank shall not be liable to pay interest if its CRAR falls below the minimum requirement or interest payment results in bank's CRAR falling below the minimum regulatory requirement</p> <p>However, the bank may pay interest with prior approval of the RBI when the impact of such payment may result in a net loss or an increase in net loss, provided the CRAR remains above the regulatory norm</p>	<p>Basel III capital instruments, upon the occurrence of the trigger event, will have to be either permanently written off or the capital has to be converted to CET, at the option of RBI.</p> <p>Two pre-specified triggers for Basel III compliant AT I instruments issued before March 31, 2019; a lower pre-specified trigger at CET of 5.5% of RWA will apply and remain effective before March 31, 2019, after which this trigger would be raised to CET of 6.125% of RWAs.</p> <p>Capital conservation (by restricting dividend payouts etc) to kick in once CET1 (including CCB) drops below 8%. If a bank wants to make payouts in excess of the amount that the norm on capital conservation allows, it would have the option of raising capital for such excess amount.</p> <p>Bank have full discretion at all times to cancel distribution/payments. Cancellation of discretionary payments is not an event of default.</p> <p>If the bank reports a loss in the current year, coupon on AT I can be serviced only by dipping into the reserves created through the appropriation of profits defined as distributable items<sup>6</sup>, subject to meeting minimum regulatory requirements for CET1, Tier I and CRAR including the additional capital requirements for domestic SIBs at all times and subject to the restrictions under the capital buffer frameworks (i.e. CCB and CCCB).</p>	<p>Since discretionary (coupon/dividend) payments on other Tier I capital instruments would be restricted in case Common Equity (including CCB) falls below 8%, the threshold for default on Basel III Tier I interest could be 8% Common Equity.</p> <p>Thus, the default event has shifted from breach of overall capital adequacy of 9% (under Basel II) to Common Equity Tier I of 8% (for non-payment of coupon) and 5.5%/6.125% (for principal conversion/write-off) under Basel III.</p> <p>Though the trigger events are not strictly comparable, the probability of breaching the Basel III Common Equity threshold is higher than that of breaching capital adequacy under Basel II.</p> <p>Banks can only use distributable reserves pertaining to previous years to make coupon payments on additional tier I capital instruments in years of net losses.</p>
<b>Severity of loss</b>	Non-cumulative coupon/dividend.	<p>Non-cumulative coupon</p> <p>High severity of loss upon CET1 declining below the pre-specified trigger levels and RBI opting for conversion of AT I bonds to equity or upon invocation of PONV by RBI</p>	<p>While Basel II provisions could have led to a permanent loss on interest/coupon payments, there was no impact on principal. However, under Basel III, severity of loss is likely to be significantly higher and permanent as PONV trigger could lead to write-off/conversion to equity capital.</p>

Source: RBI, ICRA research

<sup>6</sup> RBI circular dated February 2, 2017 has defined distributable items as: (i) profits brought forward from previous years and/or (ii) reserves representing appropriation of net profits, including statutory reserves, and excluding share premium, revaluation reserve, foreign currency translation reserve, investment reserve and reserves created on amalgamation. The accumulated losses and deferred revenue expenditure, if any, shall be netted off from (i) and (ii) to arrive at the available balances for payment of coupon.

As Table 6 brings out, the loss absorption capacity of AT I instruments under Basel III is higher than that of Basel II Tier I instruments. While there was no clause on write-off/conversion in the earlier instruments, the AT I instruments would have to be converted/written off even when the bank concerned is far from being unviable (with CET1 of 5.5%/6.125% under Basel III). Further, as seen in Chart 2, the trigger for “non-payment of coupon on AT I” is a breach of the 8% CET1 unlike 9% overall CRAR under Basel II. Additionally, the provisions under PONV could translate into permanent loss for AT I investors by way of write off/conversion to equity in case of injection of public funds under PONV.

Chart 2: Default Zone for Additional Tier I Instruments<sup>7</sup>



Source: RBI, ICRA research

For PSBs, conventional ratings are backed by the strong likelihood of Government support. However, the restriction on coupon on “capital conservation trigger” (CET1 falling below 8%) or principal conversion/write-off at the pre-specified Common Equity trigger of 6.125% could get tested ahead of equity support from the Government. Additionally, the restrictions on coupon payments from current year profits or through distributable reserves (in a year of loss) may pose challenges in coupon servicing for banks with weaker profitability/lower levels of distributable reserves. For such banks, even the capital infusion (either from the Govt or market sources) will not augment the level of distributable reserves, thereby increasing their vulnerability to coupon skip on their AT I bonds in a year of loss.

Although PVBs have typically maintained better asset quality, superior and stable profitability and excess capital, the probability of a drop in CET1 levels to 8% is relatively higher than the likelihood of default on conventional instruments. Considering these riskier features, ICRA would notch down the ratings for AT I instruments from conventional instruments for both PSBs and PVBs. ICRA’s assessment on the level of notching takes into account various factors, including:

- ICRA’s assessment of its asset quality, past trends and the outlook for its core profitability
- Bank’s level of distributable reserves
- Bank’s relative ranking on its expected capitalisation levels under stress testing scenarios
- Bank’s track record and philosophy on maintaining excess capital
- Bank’s franchise, relative standing in the equity market, its demonstrated ability in attracting fresh equity, and the quality and diversity of its investors

The probability of reporting losses and consequent erosion of capital and distributable reserves for banks (both public and private) with relatively higher scores on the above parameters would be much lower, and therefore, the notching of rating could be correspondingly lesser. However, banks scoring relatively low on these parameters would have a relatively higher probability of reporting losses and consequent erosion of capital and distributable reserves, and therefore, the notching of rating in such cases could be greater.

<sup>7</sup> Assuming a scenario of zero counter-cyclical capital buffer and nil additional capital requirement for domestic SIBs

**Capital Conservation Buffer (CCB):** According to the Basel III guidelines, banks are required to maintain a CCB of 2.5% (by March 31, 2019 in a phased manner<sup>8</sup>), consisting of CET1 capital, which is above the regulatory minimum CET1 requirement of 5.5%. The CCB is required to be maintained across all the regulatory capital levels, i.e. CET1, Tier I and CRAR. There are restrictions on the distribution of capital on some elements (that is, paying dividend, coupon on AT 1 bonds, share buybacks or bonus in any form, among others) in case the conservation capital level falls below 2.5%. For instance, if the CCB falls to 2% (or Common Equity Tier I falls to 5.5% + 2%), the bank concerned has to conserve 40% of its earnings<sup>9</sup>, and payouts to “elements subjected to discretion” can be made only to the extent of 60% of the earnings.

**Table 7: Capital conservation after Common Equity drops below 8%**

CET1 ratio after including current period's retained earnings	Minimum capital conservation ratios (expressed as percentage of earnings)
5.5% - 6.125%	<b>100%</b>
>6.125% - 6.75%	<b>80%</b>
>6.75% - 7.375%	<b>60%</b>
>7.375% - 8.0%	<b>40%</b>
>8.0%	<b>0%</b>

Source: RBI, ICRA research

However, the RBI may allow some distribution of earnings by banks that are in breach of the CCB. If a bank wants to make payments in excess of the amount that the norm on CCB allows, it would have the option of raising capital for such excess amount with the prior permission of the RBI. Overall, restrictions on dividend distribution and bonuses during times of stress would help banks conserve internal capital.

<sup>8</sup> CCB, as a percentage of RWA required to be maintained, increases in phases by 0.625% every year from March 31, 2016 so as to eventually reach 2.5% by March 31, 2019.

<sup>9</sup> Earnings are defined as distributable profits (before any distributions) after tax. If a bank does not have positive earnings and the CET1 ratio is less than 5.5% + applicable CCB, it should not make any distributions.

## Summing up

Instrument	Risk of Coupon Skip	When is Coupon Skipped?	Risk of Write Down/ Conversion into CET1	When is the Instrument Written Down?	Rating
<b>Basel II Lower Tier II</b>	No	-	No	-	Base rating
<b>Basel II Upper Tier II</b>	Yes	In case bank breaches CRAR. Coupon, if not paid, is cumulative	No	-	Notched down rating
<b>Basel II Lower Tier I</b>	Yes	In case bank breaches CRAR. Coupon, if not paid, is non-cumulative	No	-	Notched down rating
<b>Basel III Tier II</b>	Yes	Invocation of PONV	Yes	At PoNV	Base rating; however, may be notched down for banks faring weak on parameters mentioned in Page 15
<b>Basel III AT-I</b>	Yes	In case bank breaches (CET1 or Tier I or CRAR including CCB/CCCB) or it incurs losses and does not have sufficient distributable reserves to service the coupon. Coupon, if not paid, is non-cumulative.	Yes	AT CET1 < 5.5% of RWA (until March 2019 and 6.125% of RWA thereafter) at the option of the RBI	Notched down rating

Source: ICRA research

## Annexure 1

### Key Ratios analysed for Bank Analysis<sup>10</sup>

#### Bank Profile

Total asset base	: Scale of operations
Net worth	: Net worth as reported by the bank (excluding revaluation reserves)
Net income	: Net income as reported by the bank
Age of the bank	: Number of years the bank has been in operation

#### Capital Adequacy

Net worth as a percentage of assets	: The period-end balances of equity and reserves (excluding revaluation reserves) as a percentage of the period-end balance of total assets
Capital formation rate	: Net income less cash dividends declared as a percentage of net worth at the beginning of the year
CRAR, Tier I, CET1	: Regulatory capitalisation ratios as reported by the bank
Net NPA/tangible net worth	: Total non-performing assets less period-end balance of provisions for NPAs as a percentage of net worth of the bank adjusted for revaluation reserves, accumulated losses and other deferred expenses

#### Resources

Deposit growth rate	: Increase in deposits as a percentage of previous period-end balance
Composition of deposits	: Mix of deposits like term, retail term, savings and current
Demographic profile of deposits	: Mix of deposits according to branch classification (urban, rural, metropolitan)
Concentration of deposits	: Share of top 20 deposits and large ticket deposits (>Rs. 5 crore)

#### Asset Quality

NPA as a percentage of credit	: Total NPAs as a percentage of period end credit
Stressed advances	: Gross NPA percentage + Standard Restructured Advances + Standard Assets under various forbearance schemes such as SDR, S4A <sup>11</sup> and 5/25 refinancing + security receipt.
Gross NPA generation rate	: Fresh NPAs added as a percentage of opening stock of performing assets
Net NPA generation rate	: Fresh NPAs less recoveries, upgrades and write-offs as a percentage of opening stock of performing assets
Provision coverage ratio	: The period-end balance of the provision for credit losses as a percentage of total NPAs
Loan growth	: The annualised change in period-end total loans as a percentage of the previous period-end balance

#### Profitability

Return on assets	: Net income as a percentage of average assets
Return on net worth	: Net income as a percentage of average balances of equity and reserves
Yield on earning assets	: Interest income as a percentage of average interest-earning assets
Cost of interest bearing liabilities	: Interest expense as a percentage of average interest-bearing liabilities
Gross interest spread	: Yield on earning assets less cost of interest-bearing liabilities
Net interest margins	: Interest income less interest expense, as a percentage of average total assets

<sup>10</sup> Average here indicates the average of the year-end figure of the current financial year and the previous financial year

<sup>11</sup> SDR – Strategic debt restructuring; S4A - Scheme for Sustainable Structuring of Stressed Assets

Non-interest revenue/ATA	: Total of income from fees, commissions, gains or losses from foreign exchange trading and other non-interest income, as a percentage of average assets
Credit cost/ATA	: Total provision/write offs (related to credit) in relation to total assets
Non-interest expense/ATA	: Total of personnel, administrative, and other miscellaneous non-interest expenses, as a percentage of average total assets
Trading income/ATA	: Income from sale of investments as a percentage of average total assets
Operating profits/ATA	: Income, net of interest expenses and operating expenses, as a percentage of average total assets
Core operating profits/ATA	: Total income excluding trading income less interest expenses and operating expenses but excluding credit cost as a percentage of average total assets
Dividend payout	: Total dividends on equity share capital as a percentage of net profits

## Liquidity

Liquid assets/deposits	: Non-interest bearing and interest-bearing deposits with other banks, plus other cash assets and marketable securities as a percentage of deposits
CDs to deposit	: Certificate of deposits as a percentage of deposits
Credit deposit ratio	: Outstanding advances as a percentage of deposits
Liquidity coverage ratio (LCR)	: Stock of high quality liquid assets as a percentage of total net cash outflow over the next 30 days



## ICRA Limited

### CORPORATE OFFICE

Building No. 8, 2<sup>nd</sup> Floor, Tower A; DLF Cyber City, Phase II; Gurgaon 122 002

Tel: +91 124 4545300; Fax: +91 124 4050424

Email: [info@icraindia.com](mailto:info@icraindia.com), Website: [www.icra.in](http://www.icra.in)

### REGISTERED OFFICE

1105, Kailash Building, 11<sup>th</sup> Floor; 26 Kasturba Gandhi Marg; New Delhi 110001

Tel: +91 11 23357940-50; Fax: +91 11 23357014

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Branches: **Mumbai:** Tel.: + (91 22) 24331046/53/62/74/86/87, Fax: + (91 22) 2433 1390 **Chennai:** Tel + (91 44) 2434 0043/9659/8080, 2433 0724/ 3293/3294, Fax + (91 44) 2434 3663 **Kolkata:** Tel + (91 33) 2287 8839 /2287 6617/ 2283 1411/ 2280 0008, Fax + (91 33) 2287 0728 **Bangalore:** Tel + (91 80) 2559 7401/4049 Fax + (91 80) 559 4065 **Ahmedabad:** Tel + (91 79) 2658 4924/5049/2008, Fax + (91 79) 2658 4924 **Hyderabad:** Tel +(91 40) 2373 5061/7251, Fax + (91 40) 2373 5152 **Pune:** Tel + (91 20) 2556 1194/0195/0196, Fax + (91 20) 2556 1231

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