

Risk-adjusted profitability management at banks

A precarious balancing act for banks in India

Since the global financial crisis in 2008, there have been significant structural changes and reforms in the banking sector worldwide. Regulators in many countries have undertaken measures to strengthen risk and financial reporting and supervision practices. Banks in addition are strengthening their management reporting framework.

In India, credit offtake has been low owing to sluggish economic activity. On a year-on-year (y-o-y) basis, non-food bank credit growth decelerated to 6.7 per cent in March 2020 from 12.3 per cent in March 2019 and 8.4 per cent in March 2018.¹

This, coupled with an increase in non-performing assets (NPA), has led to capital scarcity in the banking sector. India has a vibrant banking sector with a number of private and public sector banks vying for increased market share resulting in the launch of a plethora of products/channels to try and attract customers. Indian banks are, therefore, constantly walking the tight rope between compliance and regulation on the one hand and heightened competition and ever-changing consumer demands on the other.

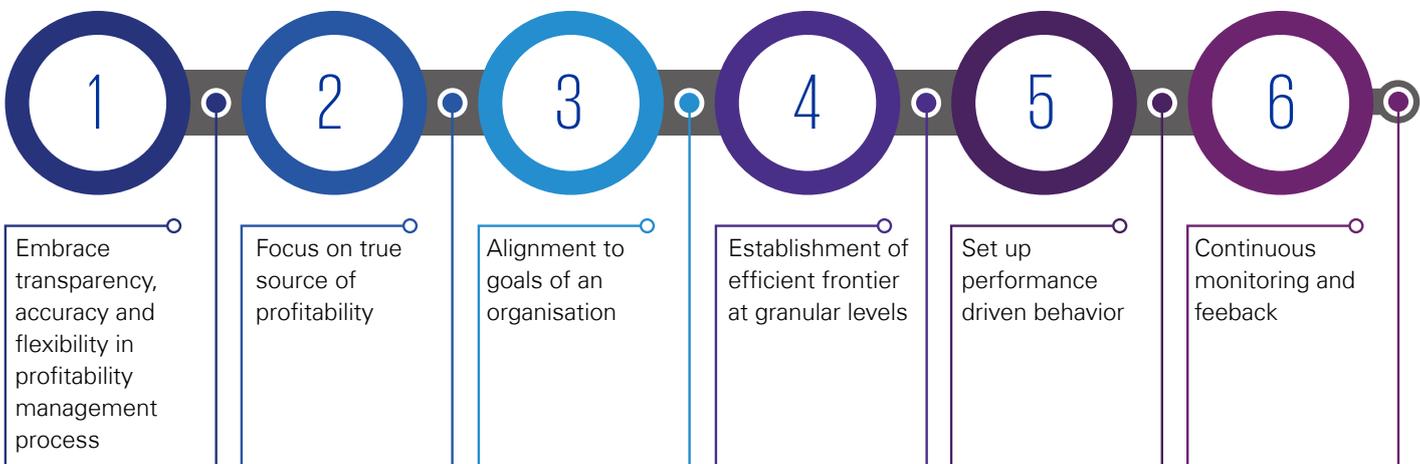
The promotion of government schemes, such as

Jan Dhan Yojna, special loans schemes for distress sectors and loan-waiver schemes for farmers etc. have further hit the bottom line of banks. To adapt to these new operating scenarios, banks need to reassess and adjust their business strategies and models, including their balance sheet structure, cost base, scope of activities and geographic presence to optimise their profitability and capital needs.

The importance of a credible profitability management process

A profitability management process within a bank helps to identify, measure, control and monitor risk-adjusted returns. Common financial metrics or key performance indicators (KPIs) in the financial services sector, such as net interest income, net interest margin, annual growth, cost-to-income ratio, return on assets (RoA), and return on equity (RoE) at the enterprise level do not provide actionable insights to management. Business decisions involve optimising the trade-off between risk and return at varying levels of granularity, including account, customer, customer segment, product, business unit, channel and sector. There is, therefore, a need for banks to incorporate risk-adjusted profitability measures across each of these parameters.

Sound profitability management process



1. Risk-adjusted profitability management at banks – Reserve bank of India – 30 April 2019 and 30 April 2020 - Data on sectoral deployment of Bank Credit

Risk-adjusted profitability measurement places exposures with different implicit risks on the same risk scale and makes their profitability directly comparable. Risk-adjusted profitability measures enable banks to establish a good risk-management culture that, in turn, brings forth the power of collective intelligence to create a competitive advantage and improve shareholder value.

Apart from having the right set of KPIs, there are many other challenges that need to be resolved. A sound profitability management process is built on the following principles –

- **Incorporate measurement of diverse KPIs and risk-adjusted returns at various levels of granularity, including customer and individual accounts**
- **Applying the same principles to budgeting and ensuring methodologies for assigning financial targets and evaluating financial performance are in line**
- **Encourage transparency in the process so that business units have a clear understanding of the profitability management components and are empowered to take strategic decisions based on these profitability metrics**
- **A flexible and forward-looking process such that current and future market trends can be factored in**
- **Accepted by various stakeholders leading to the latter's alignment with financial goals of the enterprise.**

Benefits of risk-adjusted profitability management

Traditional performance measurement at banks rewards projects with better returns against ones offering lower returns. Performance measurement based on risk-adjusted parameters will, however, normalise financial performance by the amount of risk undertaken. For example, it helps to identify projects that appear to generate a profit but also have a considerable capital requirement alongside. It also helps to monitor sales volume at the expense of large expected losses in the future. Risk-adjusted profitability management enables a bank to objectively measure the performance of each branch, product, customer, business unit and take corrective action related to pricing, service levels/differentiation, market segments/product etc. It helps senior management set up product and organisational-level structures to support higher levels of profitable performance.

The key benefits of risk-adjusted profitability management are as follows –

- **Identification of true sources of profitability and, hence, better alignment of resources**
- **Formulation of better market strategy related to pricing and offerings**
- **Improved focus on growth of product portfolio by targeted sales and negotiations**

- **Assist in setting up targets and incentives of individual employees at relationship manager level**
- **Addresses the issue of capital management from the point of view of maximising performance.**

Various risk-adjusted profitability measures and their components

Risk-adjusted profitability measures, such as risk-adjusted return on capital (RAROC), return on risk-adjusted capital (RORAC) and return on risk-weighted assets (RORWA), have been widely accepted as performance evaluation indicators at banks. Each measure has its own specific application, such as RORWA that tracks the potential to maximise return at a branch level vis-à-vis appetite for risk. In case of RORAC, it does not adjust return, but it considers the risk of unexpected loss by allocating capital and is commonly used to evaluate projects or investments involving a high-risk element relative to the capital required. On the other hand, RAROC adjusts both return and allocated capital for the risks associated and is a ratio of profitability used to compare alternative investments based on risks involved at the business unit level. RORAC is a step in the right direction and RAROC is the ultimate goal for an organisation for risk-adjusted profitability management. These risk-adjusted profitability measures can be computed at various levels in an organisation (bank wide, business units, branch, product, relationship manager, customer segment, customer, portfolio or account level) in order to evaluate performance. They can also be aggregated from the account level to any desired level within an organisation.

The various components of risk-adjusted profitability measures and their significance are as follows –

Net interest income (NII)

NII is the difference between interest income and interest expense of the assets and liabilities of the bank. In order to compute profitability for performance measurement, banks use funds transfer pricing (FTP) as a tool to centralise the measurement and management of interest rate risk and measure multi-dimensional profitability independent of interest rate risks. Over the last couple of decades, banks have been fighting a battle to protect FTP from becoming a black box. Business units did not have a clue as to how the rates being charged or credited to them were arrived at. Also, mostly it is the treasury department in a bank that manages the role of publishing FTP rates. The offset generated in treasury as a result of the FTP process is also distributed to all business units as this number is not understood properly.





Way forward

In order to adopt a transparent and unbiased FTP mechanism for profitability management, banks need to implement the following principles –

- Set up a separate unit (such as a central funding unit) that does not have any conflict of interest with any business unit and is appropriately empowered. It will be responsible for managing interest rate risk in the banking book through the FTP process
- Calculate FTP at account/deal level based on its characteristics
- Decide whether FTP yield curves will be linked to market/own retail/wholesale deposit costs
- Decide on frequency of changes to FTP yield curves
- Distinct measurement of different components of FTP such as basis risk, liquidity risk, incentive/disincentive spreads in FTP
- Incorporate the latest behavioural aspects of non-maturity accounts, delinquency of loans, embedded options, prepayment and premature withdrawal.

frontier for business units offering discounts for business booked in other business units.



Way forward

In order to adopt accurate profitability management at the most granular level, banks need to adopt the following principles –

- Booking of fee income at an account level and tagging the source channel alongside
- Allocation of aggregated fee income not mapped to account at the granular level
- Ascertain sharing of fee income for the service provided among business units
- Amortisation of fee income and fee expense at account level as per IFRS 9 guidelines.

Operating expenses

A major challenge for banks in today's competitive environment is to rationalize and minimize the cost of its services and products. Still, at most banks, the purpose of the cost is not tracked till the end. A majority of the costs recorded at the head office and branch levels are booked with no clear identification of the actual owners (i.e. business unit/product). This leads to inaccurate cost allocations and impacts the overall profitability of a business unit, branch or product and, at times, burdening businesses with costs that they cannot relate to and, hence, cannot do anything about. Similarly, the approach to allocate costs is often based on a 'one-size-fits-all' approach with no correlation to decisions that will be taken basis the outcome, e.g. whole cost allocation to arrive at customer profitability.



Fee income

Non-interest income or fee income is in the form of various charges, fees and commissions levied by banks to its customers based on the services and channels availed of by them. The fee-based products such as bancassurance, prepaid cards etc. act as contributors in increasing the overall revenue from the existing customers and is also a medium to onboard new customers in the bank. The fee income and charges can be one-time or recurring in nature. As per the latest IFRS 9 guidelines, certain types of fee income and expenses need to be amortised over the tenure of the loan.

Due to operational and technical constraints, banks face various challenges related to fee income booking. Banks are not able to recognise accurately fee at the account level.

Fee income booking at an aggregate level or fee booking for multiple products in a single customer account leads to an incorrect picture of customer/product profitability. Also, fee income sharing between business units is generally not practiced. This leads to an unknown efficient



Way forward

The cost booking and allocation methodology should be such that it helps bank managements to see through the inefficiencies and help make rational decisions/formulate strategic plans/take corrective decisions to optimise costs. Banks could adopt the following principles related to cost booking and allocation mechanisms based on their organisational structure –

- Divide the entire bank into cost codes/cost centres
- Book costs based on cost codes across head office and branches for various departments
- Segregate operating expenses into direct and indirect costs
- Booking of costs directly attributable to business units into their respective cost codes
- Time and motion studies to determine 'closest to accurate and implementable' basis of cost allocation
- Allocate indirect costs and general overheads to business units and products based on different proportions/drivers
- Appropriate cost presentations to analyse the source of different costs (direct/allocated) to enable informed decisions
- Differentiated methods of allocation of costs.

approach. Credit losses will be computed based on each account characteristics and it incorporates point in time probabilities of default over the life of the loan. These ECL models are data intensive and need a large amount of historical data of past defaults for accurate modelling. The IFRS 9 guidelines require each account to be classified into three different stages (1,2 and 3) on every reporting date based on the significance of increase in credit risk since initial recognition. For stage 1 accounts, 12 months' ECL is computed whereas for stage 2 and 3 accounts, lifetime ECL is computed.



Way forward

In order to adopt the ECL approach, banks need to apply the following principles –

- Model historical data with parameters such as default data, recovery data, days past due, collaterals, customer segment, product and credit rating for credit risk modelling
- Build risk models for probability of default (PD) and loss given default (LGD) computation based on a pool mapped to each account
- Generate account-level cash flows for exposure at default computation
- For undrawn credit lines, use credit conversion factor (CCF) to arrive at exposure at default
- Compute ECL at a customer account level.

Expected credit loss (ECL)

Banks need to have strong risk-management policies and credit-appraisal processes in place prior to loan disbursement to keep a check on the creditworthiness of customers and avoid lending to those with a higher risk of default. Majority of banks still use regulatory provisions rather than ECL for risk adjustment while preparing their profitability reports. These provisions are sometimes inadequate to cover all the losses. Also, these regulatory provisions are computed quarterly and the same number is used in the intervening months till the next quarter end, which leads to overstated revenue in an increasing NPA situation and understated revenue in a decreasing NPA scenario.

The ECL approach, however, will require banks to consider multiple probability weighted scenarios and macroeconomic factors in order to apply a forward-looking



Capital

As discussed, capital is a scarce resource and it is important banks use it prudently. Risk-adjusted profitability measures account for the associated risk of an exposure by allocating higher capital for riskier credit. While computing risk-adjusted profitability measures, a decision on use of regulatory or economic capital is to be made. Economic capital is the amount of risk capital from the bank's perspective to maximise shareholder return, while regulatory capital aims to set minimum capital requirements against all risks according to regulatory guidance.

Clearly, economic capital is more sensitive to the risks of the bank as compared to regulatory capital and, hence, the former allows for corrective action to be taken earlier. Economic capital has diversification benefits, captures hidden risks and provides more for concentration risk.

As economic capital models are difficult to build and require complex data availability, banks are still wary of using economic capital at bank wide for decision-making. The use of economic capital has still been limited to large corporate deals and business unit performance at most.



Way forward

Banks need to focus on the following –

- Availability of data elements and enough history to build bank-specific risk models for economic capital computation
- Development of regulatory capital allocation rules basis economic capital
- Building clear consensus on use of economic capital vis-à-vis regulatory capital in KPIs for different types of decisions
- Development of differential thresholds for KPIs that use economic capital or regulatory capital.

To summarize, there are different types of challenges that plague the profitability management process in bank-

- Lack of transparency in the performance management process decreases its acceptability as a guiding tool
- Lack of granularity till customer/account level fails to show the complete picture of profitability
- Bias or favouritism in the performance management process causes a loss of trust among stakeholders

- Lack of accuracy in computation of metrics and scorecards does not build confidence to take decisions
- Lack of context specific KPIs leads to unexpected outcomes with high variance between expected and actual outcome.

Critical success factors for implementation of risk-adjusted profitability management

Change management: The senior management team at banks needs to adopt the change-management approach outlined below to get acceptance from its stakeholders on the proposed transition to risk-adjusted profitability measures as criteria for performance evaluation.

- 1. Define and agree on the vision and case for change with stakeholders**
- 2. Align department leaders and gain buy-in from them to champion the change**
- 3. Communicate its core principles of transparency and accuracy**
- 4. Convey its benefits to different stakeholders, KPIs to be used for measurement of performance**
- 5. Take feedback from stakeholders, analyse it and incorporate, if relevant.**

Computational capabilities: Banks need to have advanced analytical software and technical infrastructure for computation of risk-adjusted profitability measures at granular levels. An analytical tool can help build more accurate, reliable and informative models for complex computation of various components such as capital and credit losses.

Process design: Banks need to have a well-defined process to avoid operational constraints and achieve consistent profitability management based on risk-adjusted measures across the organisation. The process should define each of the principles listed in sections above and each decision should be supported by a clear rationale.

Focus on data: Banks should have detailed and quality data for computation of complex risk-adjusted measures at granular levels. An integrated risk and finance data mart is necessary to avoid legacy issues related to data inconsistencies and reconciliation for consistent and accurate reporting. Banks should maintain historical data, such as information related to past defaults etc., which is needed for risk modelling for ECL and economic capital.

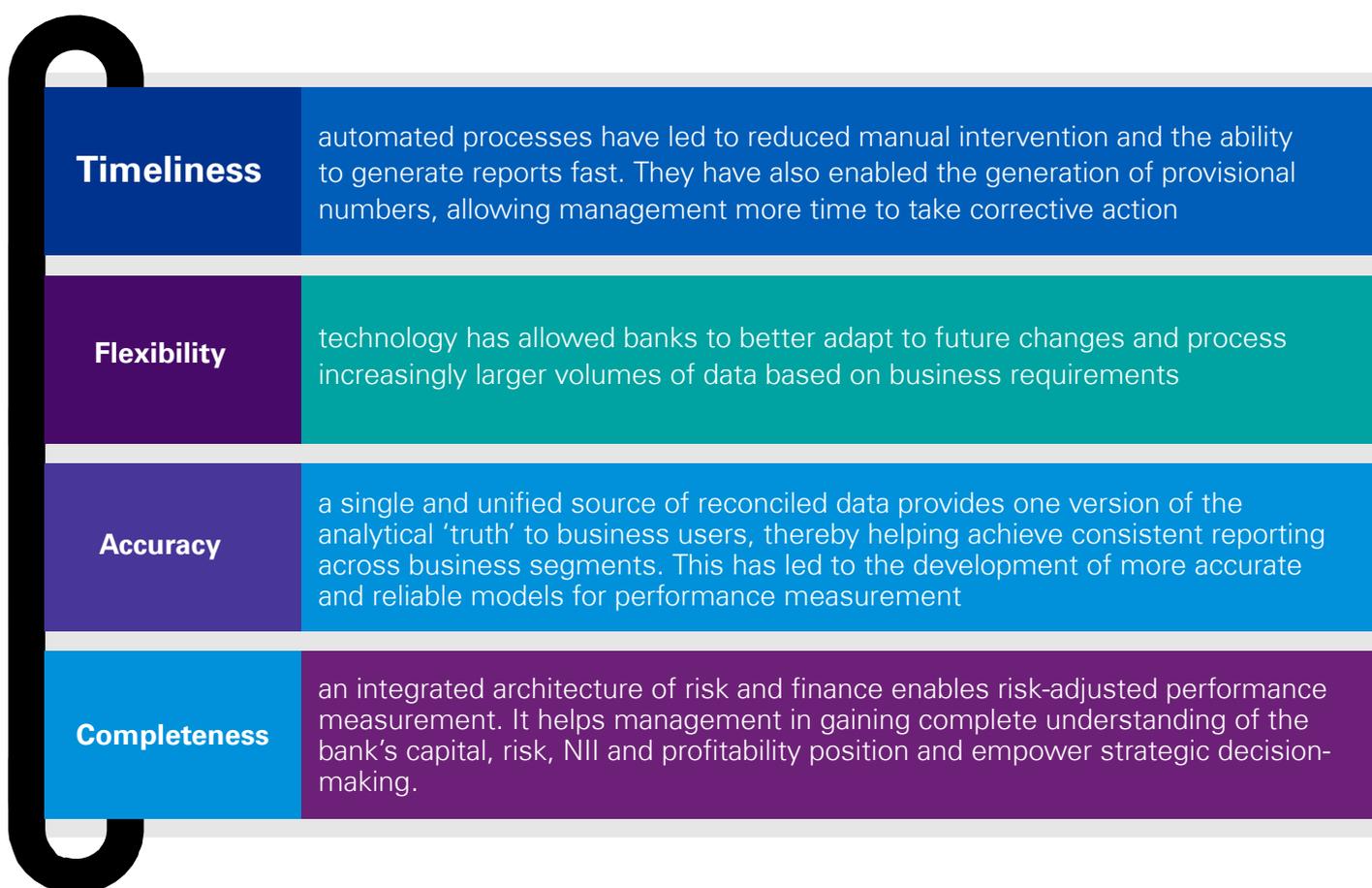
Role of technology in risk-adjusted profitability management

Traditionally, decision-making at banks has been driven by metrics and scorecards computed in siloed applications and collected manually using spreadsheets. The siloed infrastructure between risk and finance has impacted the effectiveness of decision-making around risk versus return and capital management. Data discrepancies therein require significant effort for reconciliation between risk and finance data marts, aggregation and their accumulation at different levels causing further difficulties in cross reporting and computing risk-adjusted profitability

measures for a business unit or portfolio or customer. The existing legacy data quality issues have also contributed in increasing the complexity in computation and reporting.

Banks would benefit from leveraging technology to drive performance and increase customer focus as it helps break down traditional silos between risk management and financial performance management. Banks need connected analytical applications with a unified platform cutting across finance and risk to create a comprehensive business intelligence framework for risk-adjusted performance management.

A focus on an integrated framework of risk and finance, along with the use of advanced technology, will ultimately lead to four desirable potential benefits.



Conclusion

Risk-adjusted profitability management has become more of a necessity for banks than a luxury. Risk-adjusted profitability management is increasingly gaining recognition and acceptance within the banking industry. As banks overcome technological challenges and realise the importance of scarce capital, they are adopting risk-adjusted performance measures as a basis for decision-making in performance measurement,

pricing and evaluation of transactions. This process requires consensus building, continuous learning, several iterations and detailed analytics. Through effective implementation of principles as mentioned above in the profitability management process, banks can ensure optimal utilisation of resources to achieve their desired goals.

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