

# Indian banks: Building resilient leadership

August 2023





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# Executive summary

Depending on one's world view, the current phase of global banking can be seen as either one of the most exciting phases or the most unnerving ones. Indian banks have so far held ground—having withstood the global macros and interest rate volatility, they are poised to deliver strong financial returns. However, it is becoming increasingly evident that strong financials alone cannot guarantee outperformance in shareholder returns—bankers have been tested across operational, reputational, competition, and technology risks, and outcomes have been far from ideal.

As banking institutions become increasingly interconnected, accessible, and purpose-driven, it is no longer sufficient to measure their performance through the narrow lens of financials and profitability. Banks may need to assess their performance more holistically to ensure continuous and enduring value creation (that is, financial, operational, customer, employee, environmental, and social) as any material slippage or weakness along these dimensions can devolve into significant P&L and value-creation risks. Essentially, banks may need to strengthen their defenses as well as engage with a broader gamut of stakeholders to build what we term in this report as “resilient leadership.”

## Global banking: Testing times ahead

Post the global financial crisis of 2008–09, banks focused on building capital reserves in the wake of heightened regulations (for example, Basel III norms).<sup>1</sup> Consequently, lending growth was slow through the following decade (growing at around 4 percent annually from 2009–19)<sup>2</sup> with global banking return on equity (ROE) staying below the cost of equity during the period. Both profitability and valuation of banks declined relative to peers at a time that saw increased participation of nonbanking, tech-forward players in financial services.

Global banking saw a mini-resurgence with ROEs at around 12 percent<sup>3</sup> in calendar year 2022 through better operating cost control, even as the COVID-19 pandemic accelerated digital banking usage and the rising rate environment. In the past six months, however, the banking sector has witnessed significant turmoil, precipitated by the pace and quantum of interest rate movements. As a result, many of the small and midsize banks in North America and long-standing institutions across America and Europe have faced material stress, with some having gone into liquidation. Given the muted economic growth outlook and continuing geopolitical situation, the growth of global banking and profitability levels will continue to be tested.

## Indian banks: Financially strong, with opportunities to drive holistic impact

Over the past five years, and more so through the recent global banking turmoil, Indian banks have remained remarkably strong and have outperformed their global peers on growth and profitability. A large portion of the banking system remains profitable, primarily driven by strong growth in the retail and MSME lending segments. Consolidation across public-sector banks (PSBs) has also yielded larger, healthier institutions. While financial returns have been strong, Indian banks are witnessing multifold challenges across their operating model that may limit their long-term value-creation potential. It is now imperative for banks to take a more holistic view of value creation. Toward this, we have devised a “holistic impact” scorecard for Indian banking that suggests several areas of improvement for banks to strengthen their positions and mitigate business-model risks (Exhibit 1).

<sup>1</sup> “Basel III: International regulatory framework for banks,” BIS, June 2023.

<sup>2</sup> All data and analysis in the report is based on McKinsey analysis, unless otherwise mentioned.

<sup>3</sup> *Global banking annual review*, McKinsey, December 1, 2022.

## Indian banks are financially strong and have the opportunity to drive holistic impact.



On **financial performance**, Indian banks led with a healthy credit growth of 10–11 percent over the past decade, with higher ROA than global peers, resulting in a valuation premium.<sup>4</sup> While having a conservative investment portfolio, granular deposit base and a diversified asset base, compared to peers, they have shown higher resilience to market risks and portfolio concentration. This was achieved through an increase in deployment toward retail credit and deeper geographies over the past few years.

**Health of the industry** has been driven by the consolidation of PSBs, reducing their number from 27 to 12 over the past five to six years. Consolidation, along with recapitalization, resulted in stronger and bigger banks, enabling

them to compete. This is evident in the slowing rate of year-on-year loss in market share of PSBs.<sup>5</sup> Moreover, specialized banking players and dynamic fintechs are innovating in areas like payments and microlending, prompting larger incumbent banks to innovate in customer acquisition and servicing.

**Customer experience** and centricity has improved materially but can be further improved via continual investments. While notable progress has been made via digital journeys and banking super apps, they are yet to satisfactorily create frictionless processes across onboarding, underwriting, and servicing touchpoints. This is reflected in the fact that branch-led acquisition and relationship management still dominate new

<sup>4</sup> Panorama; S&P Global; Dietz et al., *Global banking annual review*, McKinsey, December 1, 2022.

<sup>5</sup> Basudha Das, "PSBs' share in loan market declined by nearly 20% in 10 yrs, private banks' pie nearly doubled: RBI," *Business Today*, September 28, 2022.

business growth. India's emerging public digital infrastructure, however, is likely to have a multiplier effect on customer services and efficiency as open infrastructure solutions like AA, Open Credit Enable Network (OCEN), and Open Network Digital Commerce (ONDC) scale up (improving discoverability of MSMEs and providing a boost to digital commerce).

In terms of **societal and environmental responsibilities**, banks have played a critical role in driving financial inclusion, especially on counts of business correspondent coverage and microfinance. While there has been meaningful progress, there is still distance to cover on incremental penetration in these segments (formal credit gap remains escalated). On the environment front, while most banks have started committing to net zero on climate change, they are yet to lay down a comprehensive strategy and KPIs to track their performance. Both regulators and bankers may need to work toward creating viable institutions, supportive policies, and a framework for climate finance—where the need is both urgent and important. India currently requires INR 12 to 13 lakh crore annually to finance the transition economy, of which only one-fourth is being serviced.<sup>6</sup>

**Operational resilience** requires attention and prioritization. For instance, banking tech infrastructure, cybersecurity, data management, and talent management practices will need to adapt to deliver a very different scale and operating environment. While banks in India have undertaken significant investments across digital banking and journeys, concerns remain around data management practices and privacy, along with modernizing core tech platforms. Attracting and retaining talent has been another area of concern, with the sector seeing annualized attrition increasing to 30 to 40 percent at front-line levels and high attrition in specialized roles like analytics and product management.<sup>7</sup> While the competitive landscape is a key driver, there may be a need to relook at organizational culture, decision-making processes, and employee value proposition across layers of the organization.

## Outlook ahead: Multiple forces to challenge banking economics

While banking ROAs have been healthy, there are multiple trends that may exert downward pressure on banking profitability over the next few years. Left unmitigated, banks are likely to see considerable compression on margins.

**Net interest margins (NIMs):** With increasing penetration, new-to-credit (NTC) pools will get credit-tested (NTC mix across products has plateaued and is even diminishing), and yield expansion opportunities will be limited. Growth of deposits will continue to remain constrained as India undergoes a structural shift in household financial product allocation levels, as a result of which real interest rates may remain escalated.

**Fee income:** There has been a secular decline in fee income for the banking sector in India. The disintermediation of financial services, rising customer awareness, and regulatory push toward transparency of charges and schedules could also lead to a downward bias in fee incomes. Moreover, the growing significance and prevalence of partnerships has led to division of the fee income pools among banks, NBFCs, and fintechs.

**Operating expenses:** Intensifying competition and a shift in the profile of talent are expected to lead to higher per-unit personnel costs. This will need to be mitigated by technology-led transformation in sourcing, underwriting, operations, and support functions (which will reflect as increased productivity over a period of a few years). As a result, we may observe a large variance in operating expenses across banks depending on their strategies around talent, digital transformation, and technology capex.

<sup>6</sup> CRIF, financial year 2022, June 2023; Reserve Bank of India database, financial year 2022, June 2023.

<sup>7</sup> *Forty Fifth annual report 2021–22*, HDFC Bank, 2021; *Forty sixth annual report 2022–23*, HDFC Bank, 2022; *Sustainability report 2021–2022*, Axis Bank, 2022.

## Way forward: Building resilient leadership

To summarize the outlook for Indian banking, while the going has been good on financial metrics, material actions may need to be considered to ensure continued outperformance. At the same time, there are nonfinancial metrics that banks

may need to continuously improve to ensure consistent value creation.

Along the lines of our holistic impact dashboard, we propose nine priority actions across five broad parameters for Indian banks to consider:

Exhibit 2

### Building resilient leadership may require Indian banks to focus on holistic impact.

	<b>Financial performance</b>	<ul style="list-style-type: none"> <li><b>Win the next set of new money pools</b> <ul style="list-style-type: none"> <li>build capabilities for digital commerce and open architecture banking</li> <li>participate in corporate capex cycle</li> <li>create differentiated capabilities for the mass affluent</li> </ul> </li> <li><b>Build horizontal capabilities to optimize efficiency and experience</b> <ul style="list-style-type: none"> <li>develop full-stack AI (generative optimize or otherwise) with focus on adoption</li> <li>zero-ops capabilities to lower operational complexity</li> </ul> </li> </ul>
	<b>Industry health</b>	<ul style="list-style-type: none"> <li><b>Partnerships:</b> Leverage co-lending and fintech partnerships to drive accelerated outcomes</li> </ul>
	<b>Customer experience</b>	<ul style="list-style-type: none"> <li>Meaningfully connect to customers via <b>N=1 personalization</b></li> <li><b>Digital and analytics-led collections</b> shifting to an “assistance” mindset</li> </ul>
	<b>Societal and environmental impact</b>	<ul style="list-style-type: none"> <li>Drive <b>financial inclusion</b> in agri and NTC cohorts</li> <li>Finance India’s <b>green transition</b> with innovative business models</li> </ul>
	<b>Operational resilience</b>	<ul style="list-style-type: none"> <li><b>Build technology resilience to enable scale and digital businesses</b></li> <li>Revamp employee propositions to win the talent battle</li> </ul>

#### Financial performance

##### 1. Win the next set of new money pools

Build capabilities for digital commerce and open digital infrastructure: Account aggregator (AA) is a precursor into the future of consumer and merchant finance. Combined with OCEN and the ONDC protocols, end-to-end digital sourcing in conventionally challenging segments (NTC, microenterprises) may become a near-term possibility. Banks will have to think like digital-first players to capture this opportunity—with stand-up cross-functional products, risk and operations teams, and partnership management capabilities to develop an integration layer across platforms in a modular, scalable fashion.

Participate in financing a resurgent capex cycle: Driven by higher capex spending in both public and private sectors, corporate lending

is expected to grow at 8 to 10 percent over the next few years.<sup>8</sup> Incremental investments will largely be concentrated in select sectors that are supported by enabling policies and infrastructure (for example, agriculture and food processing, healthcare, logistics, and auto equipment to name a few). Moreover, with new opportunities in sectors like clean energy and defense, banks can think strategically around exposure mix at a granular level. They may need to factor the deal size complexities like term-versus-project finance and ratings profile, besides installing monitoring frameworks to assess ongoing risks. In these priority segments and clusters, banks can create strong knowledge and product propositions that build or reinforce product propositions (for example, cash management, API banking), as well as build underwriting capabilities in these priority segments. Simultaneously, corporate

<sup>8</sup> Reserve Bank of India (RBI) sector lending database.

banking processes will also need to be reviewed, leveraging analytical techniques and digital workflow platforms that can enhance insight generation across corporate clients and improve productivity.

Mid-affluent and mass affluent are still underserved from a wealth management perspective: Mass affluent and mid-affluent segments will be the largest contributors to wealth creation over the next decade.<sup>9</sup> Given the size of this segment, executing at scale will require banks to invest in digital capabilities, such as (i) virtual relationship managers, supported by the right analytical nudges, conversational prompts, coaching, product and investment experts, and technology infrastructure, and (ii) self-serve wealth platforms that are able to simplify and organize the portfolio allocation and enable investments seamlessly. Banks need not build all these capabilities organically—they can leverage the opportunity to collaborate with wealth techs.

## 2. Build horizontal capabilities to optimize efficiency and experience

### *Full-stack AI (generative or otherwise) capabilities with a focus on adoption:*

While banks have recognized the inherent value in incorporating AI and machine learning into their decisions, there are several challenges that have prevented banks from fully leveraging AI, namely, a fragmented data landscape, limited data governance practices, underinvested analytics talent, limited-use analytics platforms, and lack of automated pipelines into downstream consumption systems. Value from generative AI requires much more than the underlying foundational models. It requires leveraging a full business system approach supported by a culture of experimentation. To successfully scale generative AI, banks will need to look at (i) building cross-functional ownership (ii) providing rapid feedback cycles between business, product, and analytics, and (iii) creating explainable models (where generative AI can play a significant role). Most important, analytics strategy and investments can be co-owned between analytics, technology, and business teams.

**Zero-ops capabilities to lower operational complexity:** Back-end operations consist of multiple repeatable, rules-based tasks, which are both complex and data-intensive. While efforts have been made to plug in robotic process automation (RPA), etcetera, the approach has been largely piecemeal, leading to only partial realization of gains. While near-term optimization

is important, there can also be a simultaneous effort toward creating a “zero-ops” road map for the organization. This requires an end-to-end relook and interventions beyond the operations function (for example, front-end demand management and hygiene practices). A zero-ops transformation can enable a 30 to 50 percent improvement in efficiency, and internal and external net promoter score across the organization.

## Industry health

### 3. Leverage co-lending and digital partnerships to drive scale

The co-lending model is a one-of-a-kind framework that India has enabled to drive lending to the last mile and to segments where entities have limited expertise. While there has been traction in the past few quarters (INR 25,414 crore),<sup>10</sup> lack of common product norms, policy templates, and API protocols have restricted the growth of point-to-point integrations. There is a significant use case for banks (and intermediaries) to create an industry-wide unlock to drive accelerated outcomes on co-lending. Co-lending has seen increasing traction over the last couple of years since its launch and is expected to grow further as banks and NBFCs overcome the implementation challenges. Fintechs also present a large partnership opportunity, with their capabilities around digital lending, understanding of surrogate data points, and tech-forward operating model. Lastly, integrating with large-scale B2B and B2C consumer platforms also presents a considerable opportunity for banks to improve digital sourcing penetration and improve operating costs.

## Customer experience

### 4. Drive improved customer experience through N=1 personalization

While personalization is customary across most banks, the extent and maturity of personalization can significantly differ. Most Indian banks are using segment or rule-based engagement strategies that target similar cohorts of customers with similar messages. At the same time, past interaction feedback as well as most recent signals are often not accounted for, given the static approach to defining next-best action strategies. While personalization is a journey, the maturity of digital marketing and the analytics

landscape have made it possible to tailor engagement strategy and content at an N=1

<sup>9</sup> Anthony Shorrocks, James Davies, and Rodrigo Lluberas, Global wealth databook 2022, Credit Suisse, 2022; Global banking pools, McKinsey, 2023; *Global Wealth Pools*, McKinsey, 2023. India PFA(Liquid Onshore), HHs.

<sup>10</sup> Piyush Shukla, “Co-lending volumes may hit Rs 1 trillion in FY24,” *Financial Express*, April 18, 2023.

level. This can lead to 3 to 5 times improvement in conversion rates and retention rates. It is important to create a clear road map (digital capabilities, analytics infrastructure, organization structure) that takes the bank ultimately to a level of N=1 dynamic personalization.

#### **5. Use digital and analytics-led collections to improve customer experience**

Customers are increasingly digitally savvy and expect a uniform experience across their loan journey. It is thereby imperative for banks to focus on their loan servicing activities as well, shifting from a collections-oriented view to a customer-service mindset. This will entail a cultural shift, as well as building the necessary technology infrastructure and analytics model to tailor strategies to customer-specific behaviors (for example, self-care versus assisted journeys, preferred mode of outreach, offer strategies, etcetera). Successful implementation of this shift can unlock significant value—reducing collections costs by up to 15 percent and increasing engagement by up to five percent.

#### **Societal and environmental impact**

##### **6. Drive financial inclusion through a focus on rural and agri market**

Rural credit demand has grown as more than 10 percent over the past few years, signifying the large, latent potential in the segment.<sup>11</sup> While rural has been traditionally driven by public-sector entities and inclusion players (for example, MFIs, rural NBFCs), there is a clear opportunity to drive profitable, sizable growth in these segments. While rural can appear to be a fragmented opportunity, selection of the right markets based on a combination of crop types, specialty produce, allied activities, and investment credit can enable banks to go deep into profitable clusters and create a curated, go-to-market environment by leveraging value chains, business correspondents (BCs), self-help groups (SHGs), and other intermediaries. At the same time, given the emphasis on land record digitization geospatial advances in land zoning and penetration of credit bureaus due to MFIs, there is an opportunity to disrupt via straight-through lending to certain segments. This will require building the right

enablers and collaboration across multiple bank teams.

#### **7. Financing India's green transition and decarbonization**

A significant gap of around 70 to 75 percent exists between India's need for climate finance and its current supply. While draft regulations on climate finance are being discussed, there is an opportunity for banks to become first movers in key areas of the climate finance agenda. Similar to banks in other geographies, banks can begin to create viable partnerships/go-to-market models for frontier industries (for example, electric vehicle batteries and charging points), build up their green finance product suite, and create internal glide paths on financed emissions. Clear tangible targets can be set up across departments and lending portfolios, with stage gates to identify action triggers. Templates around climate risk pricing and identification can be tested for use, and banks could start preparing for climate stress-test impact on their portfolios. Finally, banks can start thinking about their sustainability organization in anticipation of the larger build-out of climate finance capabilities.

#### **Operational resilience**

##### **8. Invest in technology resilience to manage operational risks**

Technology resilience is a multidimensional discipline that requires purposeful design and active ongoing management. Three key areas need attention for Indian banks: (i) modernizing core systems and API management, keeping flexibility and scalability in mind; clear governance and ownership that is assigned across infrastructure, application, and event management, (ii) building a clear and robust cloud strategy that is able to deliver load management effectively, enabling data access in a secure manner to decision-makers, and (iii) heightened cybersecurity, information security, and data privacy norms. Another critical area for banks to focus on is data governance—there needs to be a clear data ownership and ongoing maintenance structure (with roles and responsibilities assigned) to enable maximum value extraction and risk mitigation arising from digital and analytics.

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<sup>11</sup> RBI data.

## 9. Revamping employee value propositions to build retention moats

Banking talent mix has evolved over the past few years, with increasing need for product management, technology, data analytics, and design skill sets. At the same time, attrition rates across these functions as well as front-line functions are at an all-time high, with some functions reporting 30 to 40 percent on an annualized basis.<sup>12</sup> While compensation has been an area highlighted by employees, it is only one of the many challenges that banks need to address.

Levels of empowerment and collaboration; structured approach to mentoring new, especially early tenure, colleagues and enablers like work environment, tooling, and recognition strategies are also key factors. Finally, both internal and external strategies must be driven off a revamped employee value proposition; levels of satisfaction and attrition across critical roles identified must be reviewed and discussed at CXO and board levels.

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<sup>12</sup> *Forty Fifth annual report 2021–22, HDFC Bank; Forty sixth annual report 2022–23, HDFC Bank; Sustainability report 2021–22, Axis Bank, 2022.*





# Section A

## Global banking: Testing times ahead

### Global banking performance has closely mirrored the global economy over the past two decades

The performance of the global banking industry has closely mirrored the general economy, indicating a high correlation between the two (Exhibit 3). The global economy experienced growth and expansion in the early 2000s, and the banking sector followed suit with strong profits and a rapid rise in lending growth. The global banking ROEs were at 15 to 16 percent

during the 2002–06 period, and global bank credit to the private nonfinancial sector grew at around 12 percent per annum during the same period, from around \$21 trillion in 2002 to around \$37 trillion as of year-end 2006.<sup>13</sup>

However, with the onset of the global financial crisis, numerous institutions experienced severe losses, and some even collapsed; the world growth rate plummeted and global banking profitability took a considerable hit, with ROEs dropping to 3.4 percent in calendar year 2008.

<sup>13</sup> Dietz et al., *Global banking annual review*; Bank for International Settlements (BIS) credit statistics.

Exhibit 3

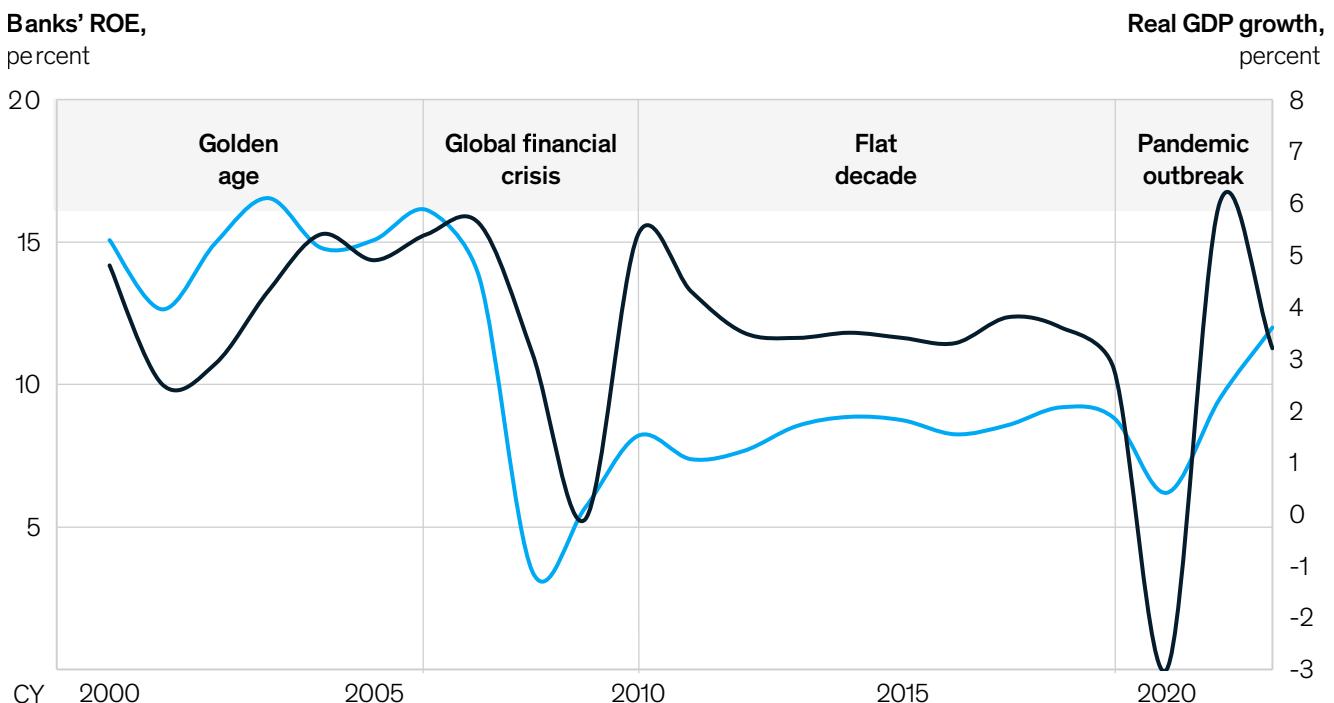
### Global macroeconomic and banking performance over the past two decades.

There has been a high correlation between global macroeconomic and banking performance of the last two decades.

#### Global macro and banking metrics

CY 2000–22

— Global GDP growth rate — Global banking ROE



In the decade following the global financial crisis (2009–19), lending growth slowed to around 4 percent per annum as banks focused on repairing balance sheets. The global economy slowly recovered with moderate growth, but the banking sector struggled to match the pre-crisis ROE levels, as banks were focused on building up their capital reserves. This was a response to the Basel III norms, which had raised the total common equity requirement to 7 percent (from 2.5 percent earlier) and introduced capital buffers and minimum global liquidity standards.<sup>14</sup>

The global pandemic outbreak in calendar years 2020 and 2021 disrupted the global economy, causing a sharp contraction in the world growth rate. However, banks largely withstood the pressures of the pandemic, and their core equity Tier 1 ratios rose marginally in 2020 (to 12.7 percent, from 12.4 percent)<sup>15</sup> due to economic recovery, which meant that banks' provisions

for nonperforming loans (NPLs) were lower than expected.

### Absolute levels of profitability of banks have secularly declined; mini-resurgence postpandemic

Following the global financial crisis, banks focused on building capital reserves and had to adjust to a new regulatory landscape with heightened risk management and financial security. The Basel III norms raised the minimum common equity requirement to 4.5 percent (from 2 percent) and introduced a capital conservation buffer of 2.5 percent.<sup>16</sup> In addition, the low interest rate climate that persisted in many nations decreased banks' net interest margins. As a result, banks' ROEs hovered at or below the cost of equity during the prepandemic decade (Exhibit 4).

However, the pandemic accelerated the usage of digital technology, with digitally active

<sup>14</sup> "Basel III," BIS.

<sup>15</sup> *Global banking annual review*.

<sup>16</sup> "Basel III."

Exhibit 4

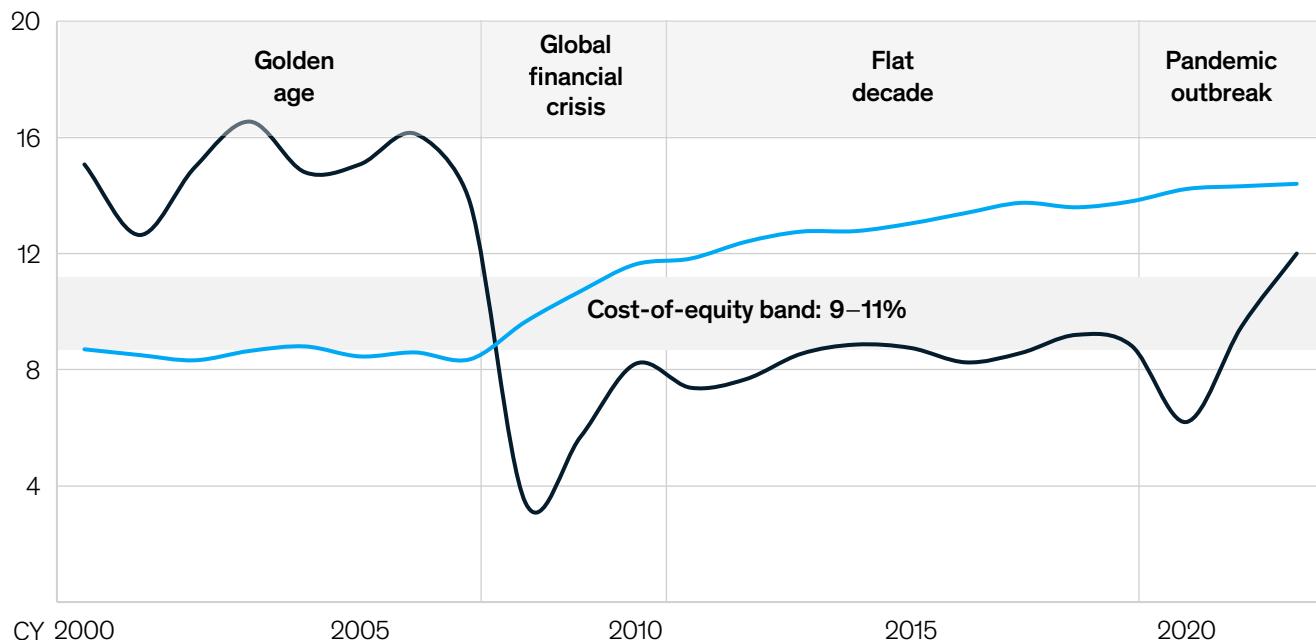
### ROE and Tier 1 capital ratios over the past two decades for global banks.

#### Global banking metrics

CY 2000–22

— Global banking ROE — Tier 1 capital

**Return on equity,**  
Tier 1 capital, percent



Source: S&P Global; McKinsey's Global Banking Annual Review; Panorama by McKinsey

banking customers worldwide rising from around 43 percent during 2015–19 to around 55 percent during 2020, as per Finalta and Statista. As a result, efforts like digital onboarding, mobile banking, digital payments, and digital lending were expedited, helping banks' bottom lines.

Banks also experimented with new operating models such as rethinking the physical branch network, the emergence of super apps for banking, etcetera. This digital engagement, combined with low mobility and hybrid work, meant that banks saved on operating costs linked to customer acquisition, rent, electricity, and conveyance, leading to improved profitability. Consequently, banks rebounded from the pandemic with strong income growth, better margins, and healthier capital ratios. Bank profitability reached a 14-year high in 2022, with around 12 percent return on equity.<sup>17</sup>

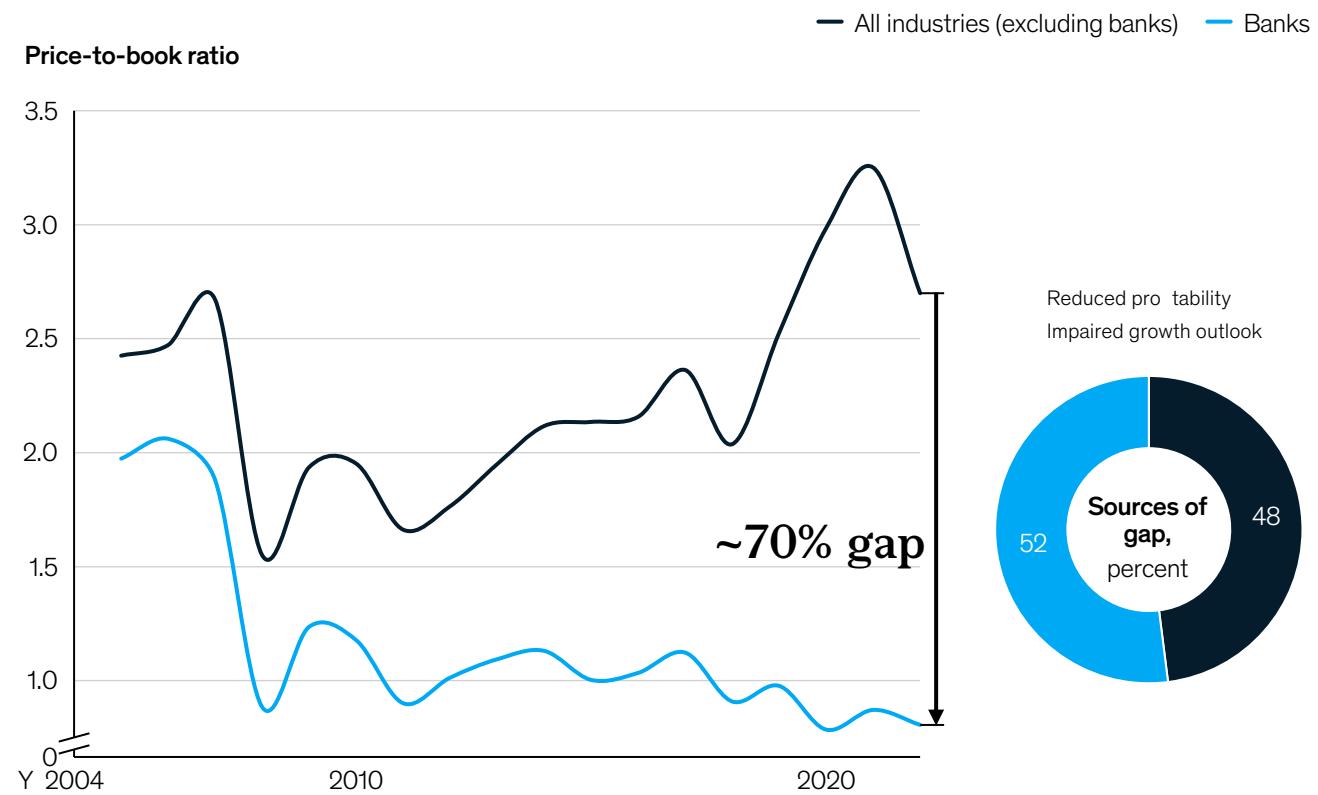
## Despite the resurgence, valuations continue to stay depressed due to low expectations of growth and profitability

In recent years, the gap between the valuation of global banks and the broader economy has widened significantly (Exhibit 5). About half of this gap is due to the lower profitability of banks compared to other industries, while the remaining half is due to the impaired growth outlook for the banking sector. This trend is reflected in the broader economy as well as the banks' price-to-book (P/B) ratio. In 2005, the P/B ratio of all industries (except banks) and banks was at 2.4 and 2, respectively, representing around a 17 percent valuation gap. However, in 2022, the gap had increased to 70 percent, with the P/B ratio for all industries (except banks) at 2.7 and the P/B ratio for banks at 0.8.

<sup>17</sup> Global banking annual review, McKinsey, December 1, 2022.

Exhibit 5

### Globally, bank valuations continue to stay depressed relative to other parts of the economy, with a divergence in their P/B ratio movements.



Source: McKinsey's Global Banking Annual Review 2022, McKinsey Panorama, S&P Global

## The policy and the macro conditions of the past two years are creating systemic uncertainties

Central banks worldwide have hiked interest rates in response to higher-than-expected inflation, resulting from the economic recovery and monetary and fiscal stimulus during the pandemic (Exhibit 6). According to IMF data, global inflation increased from 3.2 percent in 2020 to 8.8 percent in 2022.<sup>18</sup> In the United States, inflation rose from 1.2 percent in 2020 to 8.1 percent in 2022, while the European Union saw inflation increase from 0.7 percent in 2020 to 9.2 percent in 2022. In response, central banks raised policy rates sharply, with the US Federal Reserve increasing its policy rates from 0 percent to 5 percent,<sup>19</sup> while the European Central Bank

raised its policy deposit rates from -0.5 percent to 3 percent.<sup>20</sup> This has resulted in high treasury losses for major banks, with the top five banks in the United States holding more than \$200 billion of unrealized losses due to the rise in treasury and mortgage-backed securities' yields.<sup>21</sup>

Banks with a higher share of securities in their asset composition and lower G-sec proportions have been significantly impacted by both realized and unrealized losses, with some banks under stress or going through liquidation. This is primarily due to the sharp rise in treasury yields, with the ten-year yields rising 5 times from around 0.7 percent in September 2020 to around 3.5 percent in April 2023, and the five-year yields rising 12 times from around 0.3 percent to around 3.6 percent during the same period.

<sup>18</sup> World economic outlook database, IMF, April 2023.

<sup>19</sup> Effective federal funds rate, Federal Reserve Bank of New York, June 2023.

<sup>20</sup> Key European Central Bank interest rates, European Central Bank, June 2023.

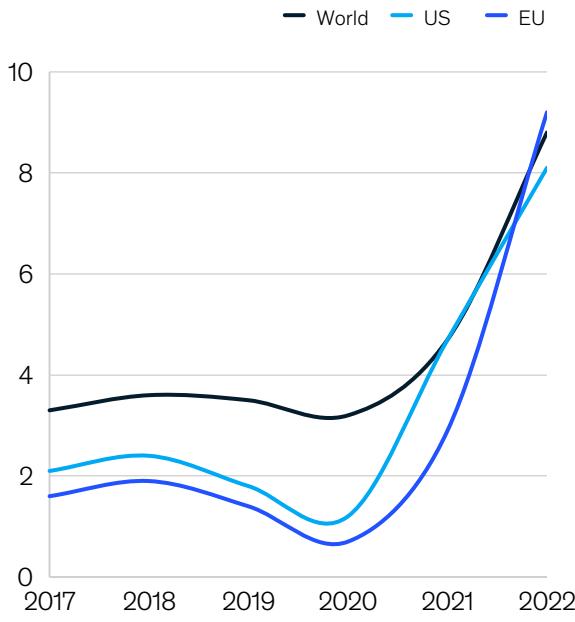
<sup>21</sup> Stephen Gandel, "Bank of America nurses \$100bn paper loss after big bet in bond market," *Financial Times*, June 29, 2023.

### Exhibit 6

#### Central banks have hiked interest rates to counter higher inflation.

**Inflation surged from around 2 percent to around 9 percent across the United States and EU** as a result of the economic recovery and monetary and fiscal stimulus during the pandemic

**Annual inflation rate, percent**



Source: IMF, US Federal Reserve, ECB, SNB, Company Data

In response, central banks have **hiked interest rates by +475 bps and +375 bps in US Fed and ECB** respectively to counter the effect of higher inflation

**Central bank interest rate movement, Jan '22–May '23**

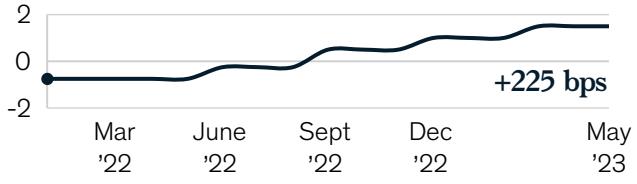
**US Federal Reserve (US Fed)**



**European Central Bank (ECB)**



**Swiss National Bank (SNB)**



## As a result, excess capitalization levels are under pressure and business model choices are being tested

Following the effects of the current interest rate risk-related global banking turmoil, the loss-absorbing capital of global banks, measured using tangible common equity, has eroded significantly, with around 40 percent of the top US banks having a tangible common equity base of less than 7 percent. Regional banks and banks with a

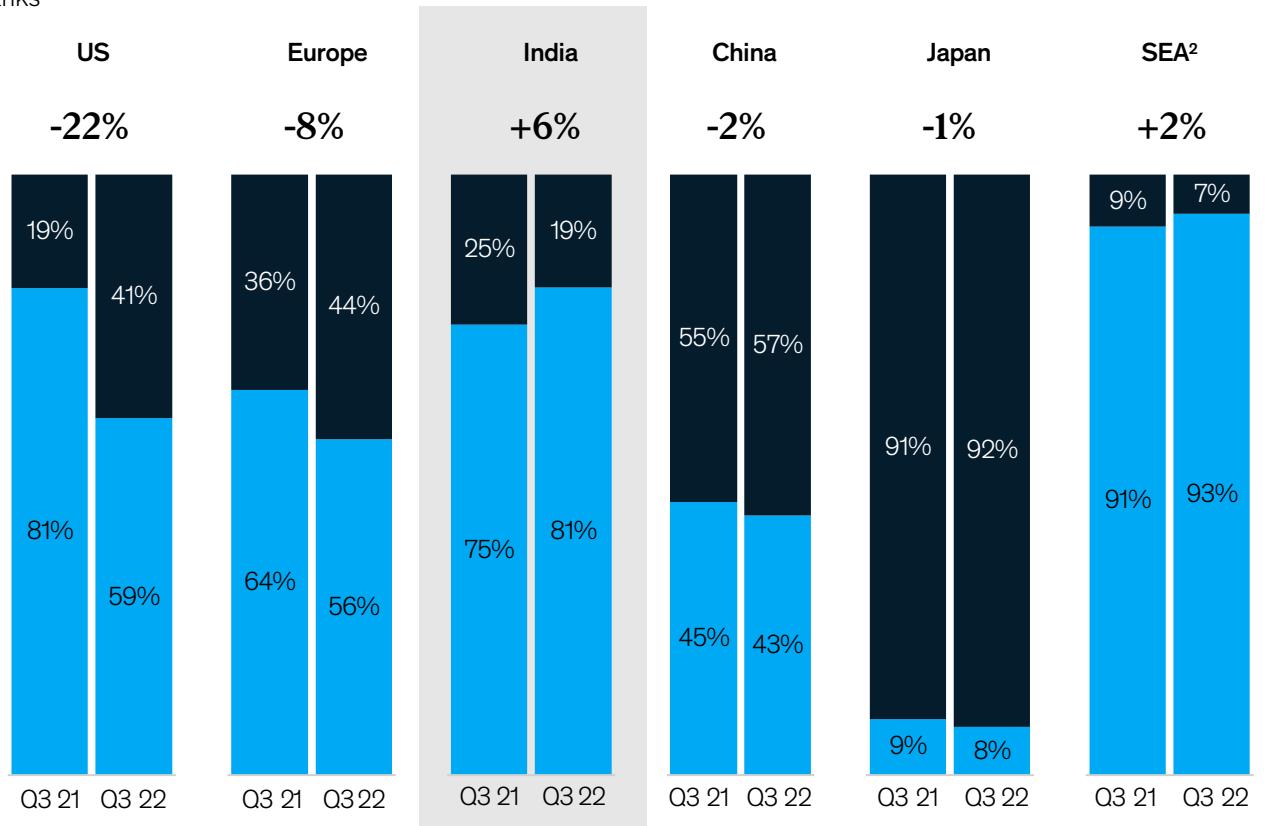
concentrated portfolio have suffered more, with those in the United States further hit by a deposit flight toward larger banks and money market funds for higher yields. The deposits of the US commercial banks fell by around 4 percent to around \$17.2 trillion as of April 2023, from around \$17.8 trillion, as of December 2022.<sup>22</sup> On the other hand, banks in India and Southeast Asia have shown resilience, with most banks maintaining their capital base (Exhibit 7).

<sup>22</sup> US Federal Reserve Bank economic data.

Exhibit 7

## Most Southeast Asian banks and Indian banks have shown resilience in comparison to global peers.

Distribution of banks based on tangible common equity (TCE) ratio,<sup>1</sup> share of # of banks



<sup>1</sup> Tangible common equity divided by tangible assets; based on a sample of ~500 leading banks globally.

<sup>2</sup> Southeast Asia: including Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam.

Source: SNL; McKinsey analysis



## Section B

# Indian banks: Financially strong; opportunity to drive holistic impact

### Taking a wider lens on impact is becoming increasingly critical for the banking industry, not just financial performance

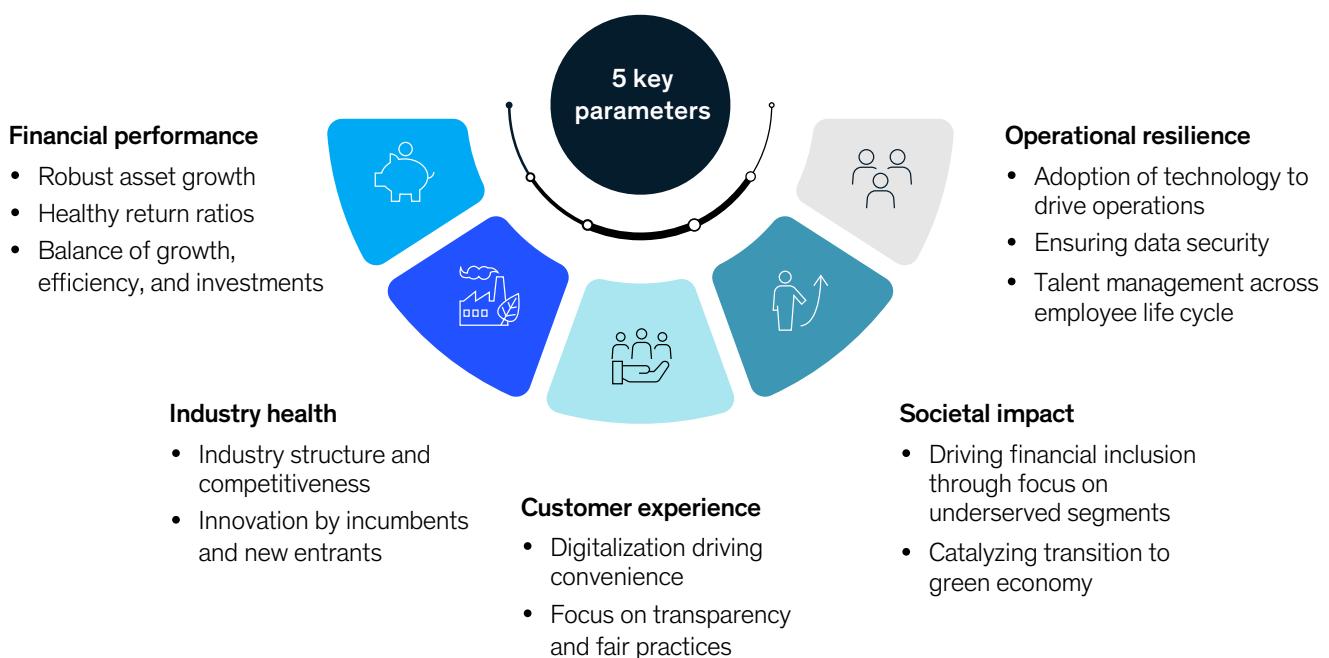
While financial performance (that is, growth and profitability) has long been the primary driver of value creation, banks have been impacted by shifts in their broader stakeholder ecosystem (for example, financed clients, deposit customers, employees, regulators, technology partners). Taking a broader view on impact has become highly relevant for continued success and outperformance. Depending on industry, almost

15 to 30 percent of pricing premium is ascribed to companies that have a more sustainable operating model, while more than 80 percent of the young workforce today strongly affiliate their employers to a sense of purpose. Operational resilience has become critical—the market value lost due to operational risk events is on average 12 times larger than the actual losses suffered. As a result, we have formulated a “holistic assessment scorecard” for the banking industry—taking a decade-long view of progress of banks along multiple impact parameters (Exhibit 8).

Exhibit 8

### Holistic impact scorecard for banks.

#### Driving holistic impact across five key parameters



**Financial performance: Strong**

Riding on the overall outperformance of the Indian economy, the Indian banking sector has also outperformed its global peers with robust growth and significantly improved asset quality across PVBs, PSBs, and other banks. Banks have also managed the recent interest rate shocks well, driven by granularity in their deposit base and ability to re-price assets rapidly.

**Industry health: Strong**

With the cleanup of bad loans and initiatives for consolidation and recapitalization, PSBs are in a much stronger position and poised for record profitability. New, specialized players have also entered the financial services space, requiring banks to innovate to retain their dominance. Banks have been largely successful in doing so, and the prevalent digitization initiatives and innovative operating models are crucial for continued outperformance.

**Customer experience: Moderate, continuous improvement needed**

Facing competition from fintechs and big tech players, banks have become much more customer-centric, with digital loan journeys and banking super app plays fundamentally changing how banks interact with their customers. The rise of neobanks has also led to banks reimagining their operating model, with some banks partnering with these new entrants to widen their reach and others ramping up their digital offerings in response. However, the progress has neither been uniform nor comprehensive. Considerable pain points continue to exist across customer's journey e.g., onboarding, underwriting, and servicing touch points across banks.

**Societal and environmental impact:*****Progress made, will need further attention***

Banks have played a critical role in driving financial inclusion, especially with their expansion to the rural, MSME, and MFI segments. Their MFI portfolio alone (with around 4.7 crore loan accounts for bank MFI loans and around 80 lakh credit-funded SHGs) has grown at around

22 percent per annum over the past three years.<sup>23</sup>

Nonetheless, India remains underpenetrated from a credit and branch coverage perspective, and banks would need to focus on increasing their last-mile customer outreach through digitization and partnerships to aid the drive for financial inclusion.

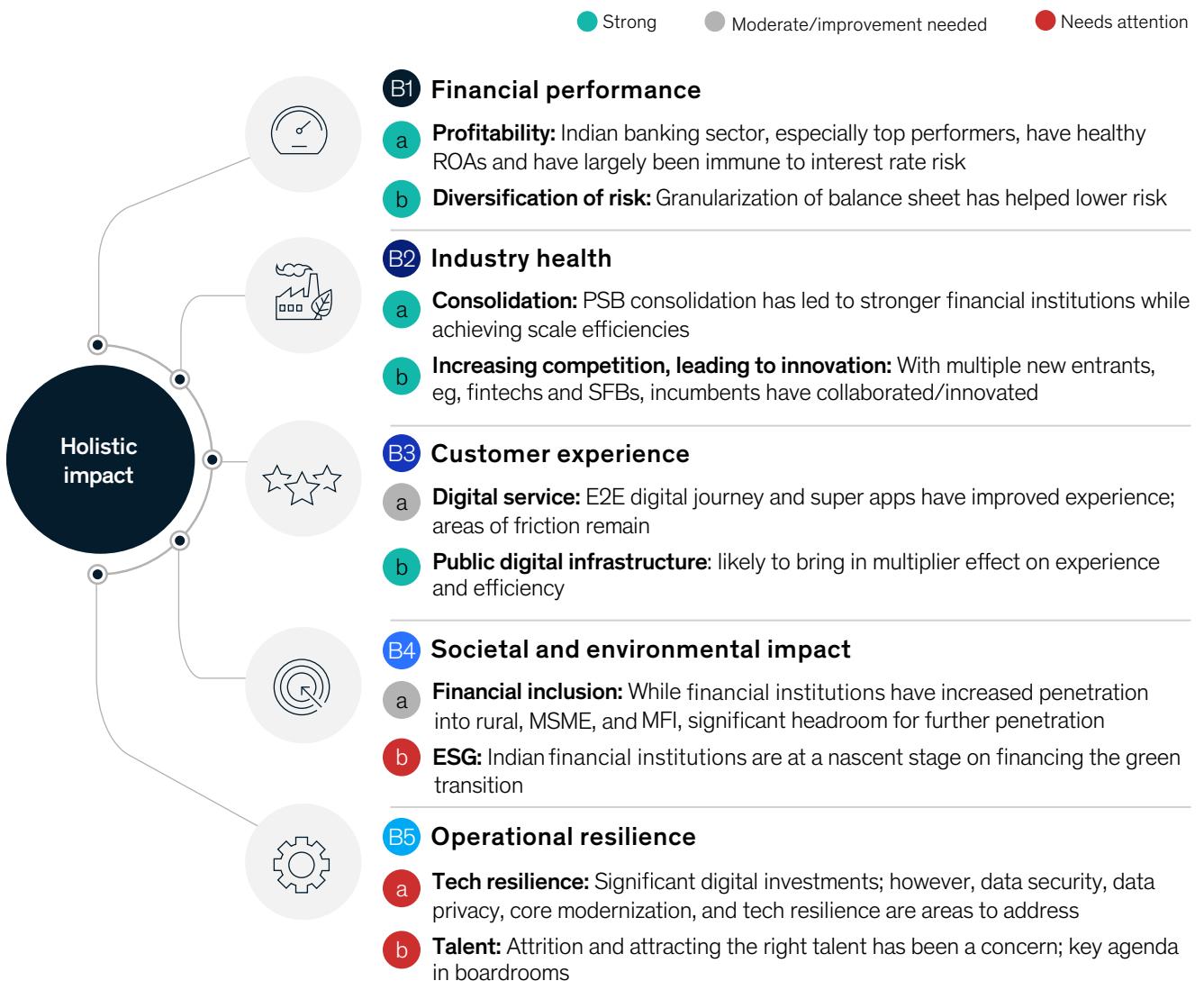
On the environmental and sustainability front, most banks have started committing to net zero on climate change, but they have yet to lay down a comprehensive strategy and KPIs to track their performance. While financing the transition economy may likely require INR 12 to 13 lakh crore of investments over the next 25 years, India is currently servicing only a quarter of the demand. Banks, supported by regulatory actions and enabling stakeholders, could play a more central role in green financing. While government agencies may need to create carbon markets and set up "green banks" to accelerate funding to the sector, regulatory bodies could incentivize banks to drive participation and standardize disclosure norms to increase transparency. As these enablers are put in place, financial institutions can set their own financed emission targets and reduction strategies and build the necessary capabilities to address the opportunity through tailored products, climate-specific risk management frameworks, and dedicated climate finance teams.

**Operational resilience: Needs attention**

Technology infrastructure is an area that has been underinvested, with both global and Indian banks facing significant financial repercussions for mismanaging risks related to infrastructure, cybersecurity, data privacy, and workforce management. Most banks continue to operate on their legacy core tech system without a clear cloud strategy, and the new data privacy bill would have financial implications for noncompliance. Hence a holistic approach to maintaining data privacy is needed.

<sup>23</sup> Microfinance Institutions Network (MFIN), National Bank for Agriculture and Rural Development (NARBARD), Reserve Bank of India (RBI).

## Exhibit 9

**Indian banks are financially strong and have the opportunity to drive holistic impact.****B1 a**

Financial performance:  
Profitability

**B1. (a) Profitability: Indian banks have experienced healthy growth, attractive economics and have been more resilient than global peers**

**India has had a high credit growth multiplier historically with respect to GDP and benefited from a robust economic performance vis-à-vis other countries**

Over the past two decades, the Indian economy has shown remarkable growth, outperforming many advanced and emerging economies. The pandemic had a strong impact on the Indian economy in 2020; however, it quickly recovered in the aftermath, with real GDP growth of around 9.1 percent in 2021 and around 6.8 percent in 2022, as per IMF.<sup>24</sup> Further, there is a strong correlation

between economic growth and credit growth in India, which is more pronounced than in other economies. From 2000 to 2020, India's credit multiplier was 1.9 times, substantially higher than the world average of 1.2 times. Different segments have contributed to this growth at varied points in time—the first half of the early 2000s was dominated by corporate lending, while retail lending outperformed in the second half of the 2010s.<sup>25</sup>

<sup>24</sup> "Real GDP growth, annual percent change," IMF, 2023.

<sup>25</sup> McKinsey analysis.

B1 a

Financial performance:  
Profitability

**Indian banks' profitability has exceeded prepandemic levels, while NIM and opex have remained range bound and improved credit costs have contributed to healthy margins**

The Indian banking sector's profitability has remained attractive, driven by resilient NIMs and declining credit costs. NIMs have remained high due to increased penetration of retail lending and a significant proportion of floating rate loans driving faster transmission of rate changes. NPA

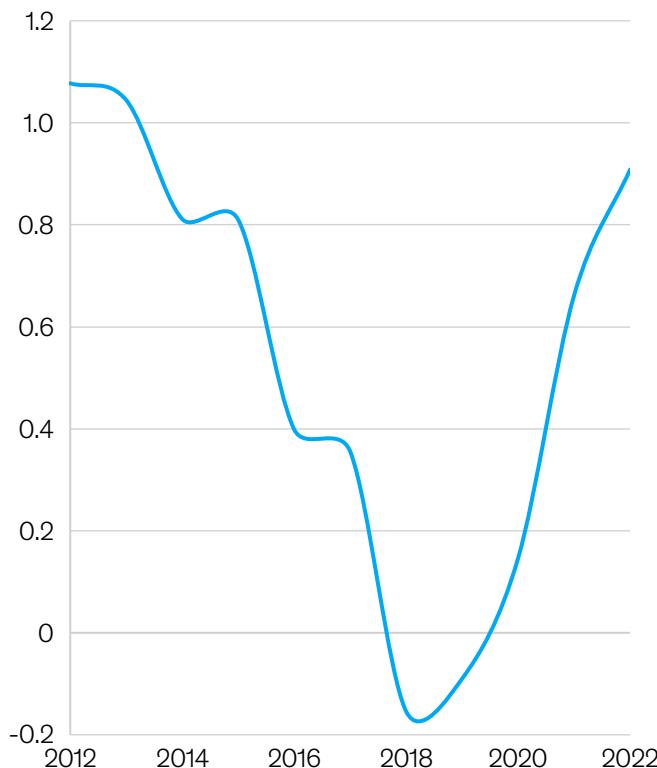
levels have declined, driven by actions in the wake of the AQR and the Insolvency and Bankruptcy Code. Operating costs have remained range bound, with operational efficiencies largely offsetting absolute cost increase (Exhibit 10).

Indian banks have been shielded in the face of interest rate risk affecting global banks due to a diversified deposit and asset base and tighter regulations.

Exhibit 10

**The Indian banking sector has performed well over the last decade.**

**Indian banks ROA, % movement from FY'12 to FY'22**



**Key factors affecting ROA, FY'12-22 trend in India**

**NII**



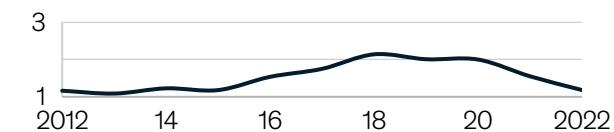
**Other income**



**Opex**



**Risk costs**



Note: All factors are as percentage of weighted average assets during the FY as stated by RBI, weights being the proportion of total assets of the bank as a percentage to total assets of all banks.

Source: RBI

B1 a

Financial performance:  
Profitability

Indian banks have remained largely immune from the recent interest rate risk that has impacted banks in Europe and the United States due to a combination of factors (Exhibit 11).

Indian banks have a granular deposit base, with around 60 to 70 percent of deposits from retail customers.<sup>26</sup> In addition, Indian banks have lower investment book proportions of around 30 percent compared to affected banks like SVB (where investments formed around 85 percent of the financial assets),<sup>27</sup> reducing their exposure to interest rate risks. Finally, the RBI has implemented conservative regulations on banks' investment portfolios, making Indian banks less

vulnerable to interest rate risks affecting banks globally.

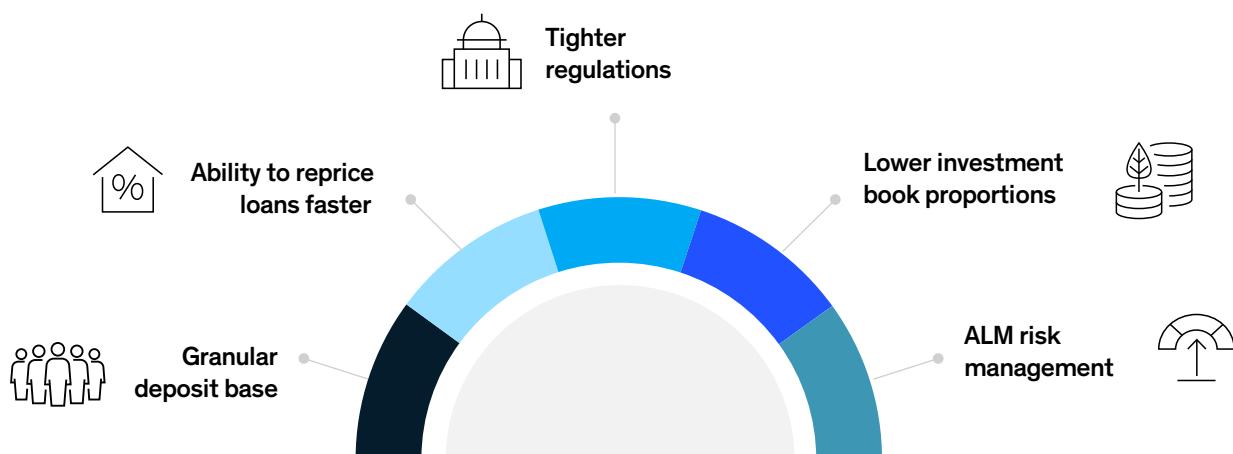
As a result, Indian banks have a valuation premium relative to global peers, and capital markets have disproportionately rewarded breakout performers.

In the past decade, Indian banks, especially the leading ones, have made significant progress in growth, managing credit costs and improving deposits experience, operational efficiencies, and digital investments. India's leading banks stand out, not just in the country but also globally, for their consistent outperformance.

<sup>26</sup> RBI.<sup>27</sup> SVB annual report.

Exhibit 11

## Indian banks are unlikely to register major effects from the interest rate risk affecting global banks.



- Indian banks have a granular deposit base **with 60–70 percent of deposits from retail customers** vs around 55 percent for US banks
- Indian banks have a **higher percentage floating rate loan book** (70–75 percent) and hence they have been able to reprice their asset book faster
- RBI has **conservative regulations on banks' investment portfolios** with a cap on HTM investments, restrictions on securities under HTM portfolios, and requirement to create IFR;<sup>1</sup> regulations that are absent for US and EU banks

- The maximum impact of losses on the HTM portfolio for leading banks would be in the range of 5–15 percent of their net worth, subject to deposit redemptions exceeding maturing assets, borrowings, and the banks' AFS/HFT investment books and yields remaining elevated in the near future
- Most Indian banks are well positioned to handle ALM risk, and major banks with their granular nature of deposit base and continued deposit inflows are unlikely to witness a bank run

<sup>1</sup>Investment fluctuation reserve.  
Source: RBI; Bank data; McKinsey analysis

B1 a

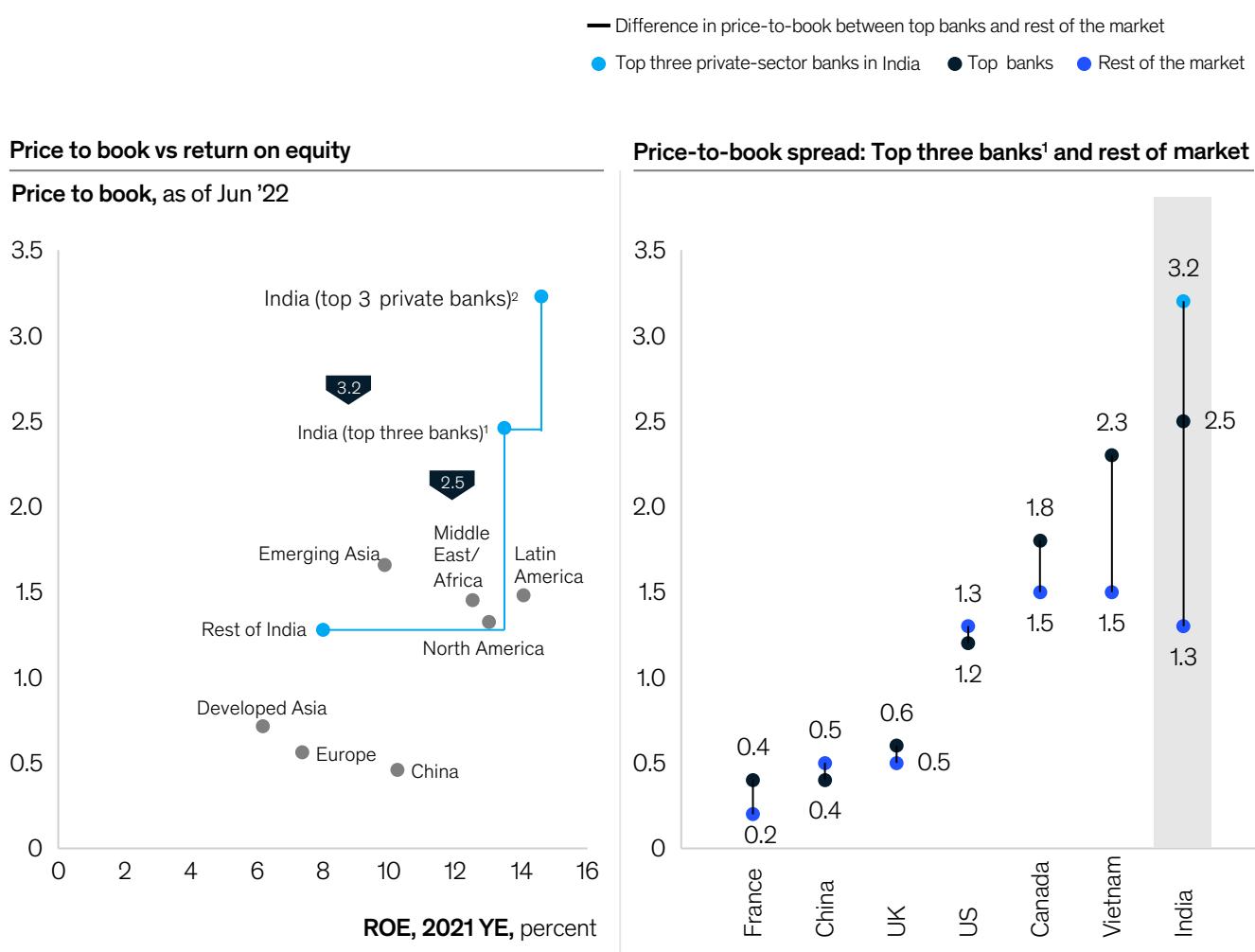
Financial performance:  
Profitability

Top banks' choices—such as early pivot to serving retail customers; building up a strong deposit franchise; using advanced analytics capabilities; and establishing digital platforms for retail, small business, and corporate customers—have helped them outperform and create a strategic lead over their peers. In addition, the growth expectations for the Indian banking sector are high as well,

given a relatively underpenetrated credit market and the rising formalization of various components in the Indian economy. This is reflected in Indian banks' valuations relative to global banks, with higher price-to-book (P/B) multiples compared to global peers (Exhibit 12).

Exhibit 12

### Indian banks have higher P/B multiples compared to global banks.



<sup>1</sup> Top three banks by market capitalization. Specifically in India, State Bank of India, HDFC Bank, and ICICI Bank are included.

<sup>2</sup> Top three private banks in India by market capitalization: HDFC Bank, ICICI Bank, and Kotak Mahindra Bank.

Source: S&P Global; McKinsey's Global Banking Annual Review; Panorama by McKinsey

B1 b

## B1. (b) Diversification of risk: Granularization of the balance sheet has helped lower risk

Financial performance:  
Diversification of risk

### Indian banks also have a more granular and diversified deposit base relative to global banks

About 82 percent of the total liabilities for Indian banks are funded through deposits.<sup>28</sup> On the other hand, debt contributed to a higher funding mix for banks in the EU and the United States (around 20 to 30 percent of the total liabilities). India's banking sector also leads other global banking sectors in retail share of total deposits, with

approximately 70 percent coming from individuals and households (Exhibit 13). As per RBI data, households are the major contributors to Indian banks' deposits, accounting for around 60 to 70 percent of total deposits, followed by corporates (around 22 percent) and the government sector (around 9 percent), with the rest coming from entities around the world, including NRI deposits.

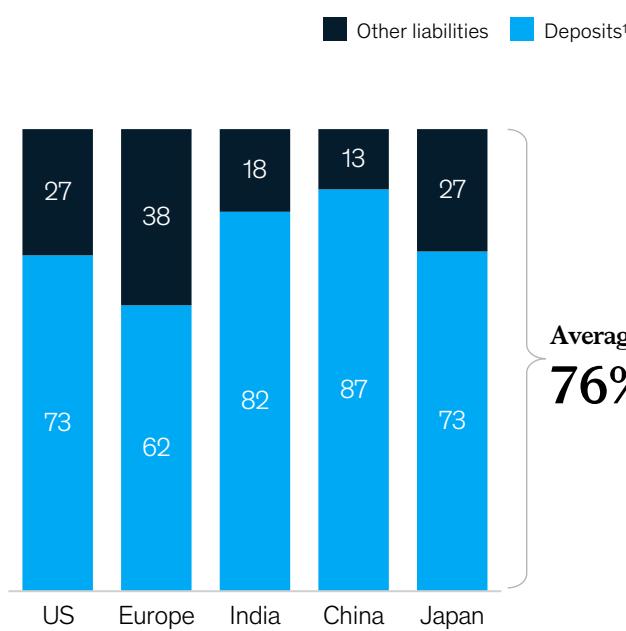
<sup>28</sup> RBI.

Exhibit 13

### Indian banks have a granular and diversified liabilities base, relative to global banks.

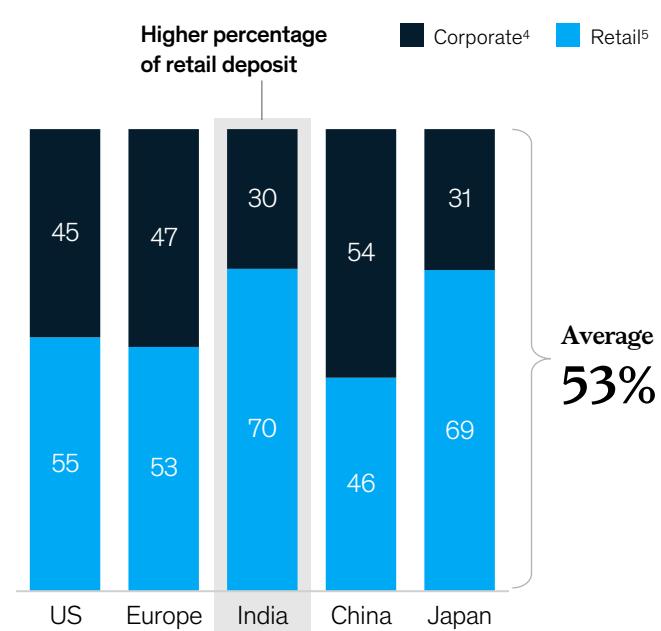
#### Share of deposits<sup>1</sup> in total liabilities

2022E<sup>2</sup>, percent



#### Share of retail deposits in total deposits

2022E<sup>3</sup>, percent



<sup>1</sup> Deposits from customers and banks.

<sup>2</sup> Estimates based on approximately 600 leading banks across the listed markets; taking Q3 2022 data if Q4 2022 data is not yet available for the bank.

<sup>3</sup> Based on partial-year estimates from GBP.

<sup>4</sup> Including deposits from non-FI businesses and financial institutions.

<sup>5</sup> Including both resident and nonresident deposits.

Source: SNL; Global banking pools, McKinsey.

B1 b

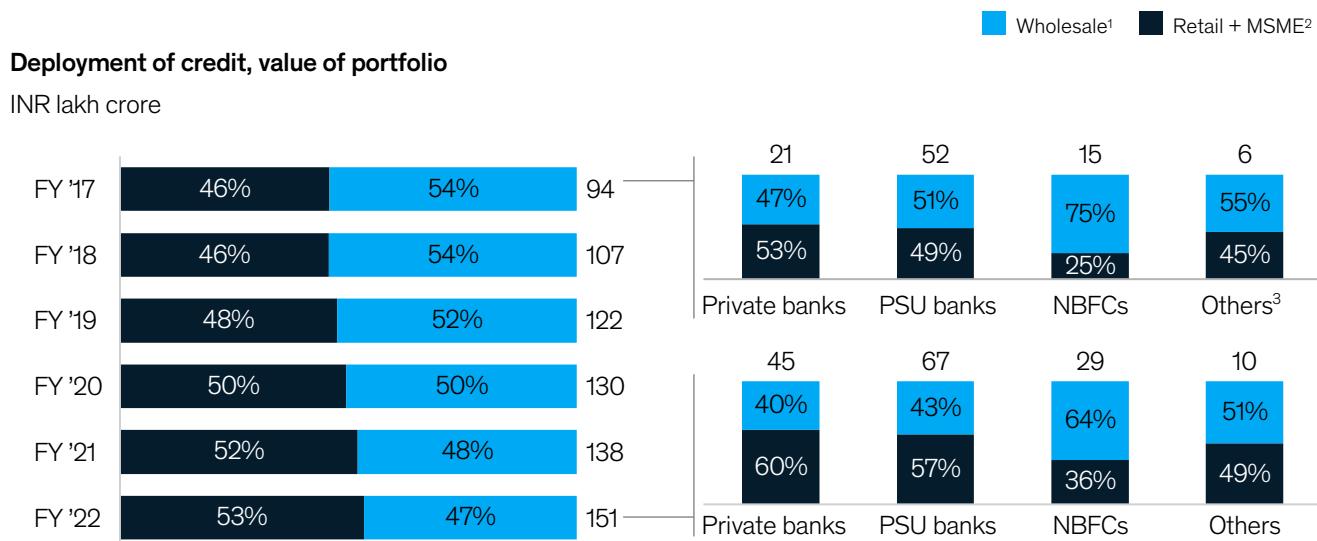
Financial performance:  
Diversification of risk

**The asset composition of Indian banks is becoming more focused on retail as they have diversified and de-risked their asset books**  
The fastest growth in retail loans was observed for private-sector banks, which grew their retail books at a CAGR of 21 percent over the past five years (Exhibit 14). Within retail loans, high growth of 15 to 20 percent annually was observed

across housing, vehicle loans and credit cards, as per RBI datasets. At the same time, bank credit deployment to the industry segment was almost flat, growing at 1 to 2 percent per annum over the last five years, with a decline in credit deployment towards the Basic Metals & Metal Products, Manufacture of Cement & Cement Products, and Gems & Jewellery industry sub-segments.

Exhibit 14

### Increasing retail focus for Indian banks and NBFCs in their asset books.



<sup>1</sup> Inclusive of loans to industry, services, and other sectors (net of MSME advances reported by RBI).

<sup>2</sup> Inclusive of loans to retail, personal, agriculture and allied activities, and MSME segments.

<sup>3</sup> Includes financial institutions like RRBs, Payment Banks, SFBs, and foreign banks.

Source: RBI

B2 a

Industry health:  
Consolidation

### B2. (a) PSB consolidation has led to stronger financial institutions while achieving scale

Over the past couple of years, PSBs have staged a strong resurgence, posting aggregate operating profits in fiscal years 2021 and 2022 after five years of losses from fiscal years 2016–20. Return ratios have also significantly improved, with ROA and ROE growing to 0.5 percent and 8.8 percent, respectively, for PSBs in fiscal year 2022.<sup>29</sup> Two factors have played a vital role in this transformation:

**Consolidation of PSBs to drive higher efficiency**  
Over 2017–2022, mergers have reduced PSBs from 27 to 12, in line with the government's stated intent to create four to five at-scale banks with similar quality and strength as the State Bank of

India (Exhibit 15). The mergers created seven large PSBs, with total assets exceeding INR 6.5 lakh crore, and five smaller-scale PSBs.

These moves have led to significant efficiencies, driven by the rationalization of branch networks, deployment of staff to more productive roles, and geographical diversification, thereby leading to improved returns on assets (Exhibit 16).

#### Improved funding position due to continued ability to attract CASA deposits

Despite the challenges of the past few years, PSBs have continued to enjoy trust and credibility, mainly due to their sovereign backing.

<sup>29</sup> RBI data on scheduled commercial banks.



## Industry health Consolidation

This has enabled them to hold a leadership position in deposits, holding around 60 percent of INR 170 lakh crore of deposits as of fiscal year 2022 (a slight decline from their 63 percent share in fiscal year 2019).<sup>30</sup> While CASA (current account

and saving account) ratios have further potential to improve, PSBs have been able to attract a healthy amount of deposits over the pandemic period, thus enabling a low cost of funds.

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<sup>30</sup> RBI Database on India Economy.

## Exhibit 15

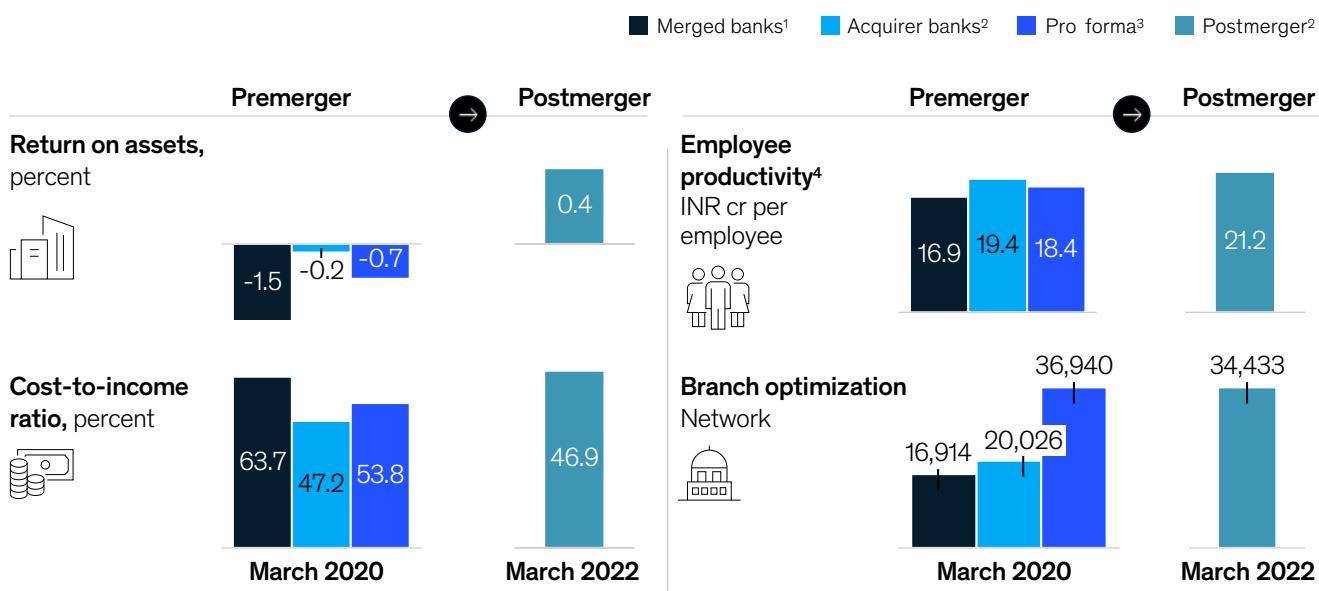
**Mergers have led to a reduction of PSBs from 27 to 12 over 2017–22.**

Number of PSBs	2017	2018	2019	2020	2021	2022	
Amalgamations/mergers	Merger of <b>five SBI Associate Banks</b> and <b>Bharatiya Mahila Bank</b> into <b>State Bank of India</b>	<b>IDBI Bank</b> recategorized as “private sector” after stake sale to LIC of India	<b>Dena Bank</b> and <b>Vijaya Bank</b> merged into <b>Bank of Baroda</b>	<b>Corporation Bank, Andhra Bank</b> merged into <b>Union Bank of India</b>	<b>United Bank of India, Oriental Bank of Commerce</b> merged with <b>Punjab National Bank</b>	<b>Allahabad Bank</b> merged into <b>Indian Bank</b>	<b>Syndicate Bank</b> merged into <b>Canara Bank</b>
	27	21	20	18	12	12	

Source: Press releases

## Exhibit 16

**Merged banks have shown strong improvement across productivity and profitability parameters.**



<sup>1</sup> Includes data for banks that were merged effective April 1, 2020 [Allahabad Bank, Andhra Bank, Corporation Bank, Oriental Bank of Commerce, Syndicate Bank, United Bank of India].

<sup>2</sup> Includes data for banks that remained after April 1, 2020 [Canara Bank, Indian Bank, Punjab National Bank, Union Bank of India].

<sup>3</sup> Weighted average of data as of April 1, 2020.

<sup>4</sup> Computed as total deposits + advances divided by number of employees. Numbers indicate INR crore of business per employee.

B2 b

Industry health:  
Increasing competition,  
leading to innovation

## B2. (b) Increasing competition, leading to innovation: With multiple new entrants like fintechs and SFBs, incumbents have remained nimble and agile

### The banking sector has seen several new entrants over the past decade

The banking sector in India has witnessed a significant transformation in recent years, with the issuance of banking licenses to erstwhile NBFCs and MFIs, and increased involvement of fintechs and big techs in the financial services sector. As a result, banks have focused on improving customer experience and expanding financial inclusion and outreach efforts to maintain their leadership position in the broader financial services sector.

### Fintech on the rise

India has produced a record number of fintech start-ups over the past decade, and they have received significant interest from investors, raising more than \$22 billion<sup>31</sup> over the past five years. These players have challenged traditional operating models of banks, bringing a customer-centric and transparency-focused approach to banking. With the disintermediation of financial services, banks increasingly face competition

from consumer behemoths, prominent e-commerce players, and big tech players.

In this evolving environment, banks have also collaborated effectively with fintechs as follows:

- partnering to drive scale in emerging niches such as small-ticket personal loans, cash flow-based financing and buy-now-pay-later offers, among others; or
- integrating with infrastructure enablers that can help build critical capabilities such as alternate credit scoring, KYC/AML checks, digital loans, and collections journeys, etcetera.

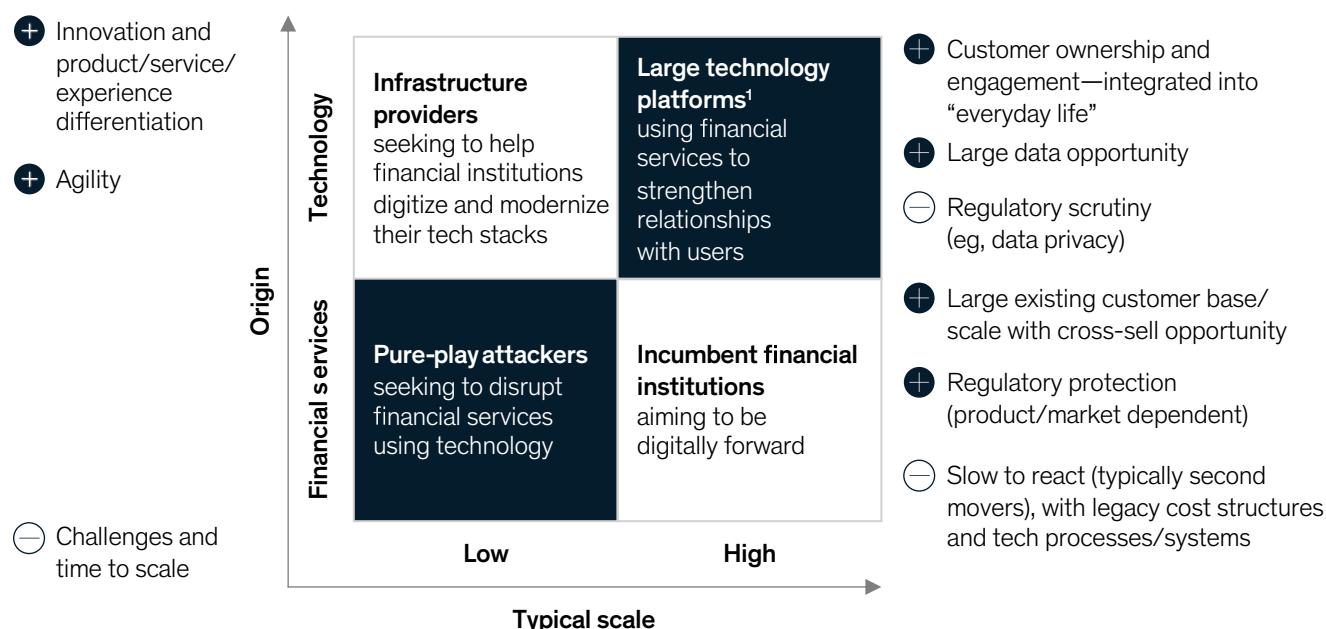
It is equally critical that banks be aware of challengers that can disrupt traditional banking models and continue to develop products and services that can help protect banking value pools.

<sup>31</sup> State of Indian fintech report, Inc42.

Exhibit 17

### The broader fintech space is evolving into four archetypes of players.

#### Non-exhaustive



<sup>1</sup> Large tech platforms foraying into financial services are sometimes also referred to as “techfins”.

B2 b

Industry health:  
Increasing competition,  
leading to innovation

### Despite increasing competition, banks have retained a stronghold across retail assets

While NBFCs and fintech players have aggressively entered the market over the past decade, banks have largely been able to maintain their market shares (Exhibit 18). To maintain their leadership in the retail market, banks have relied on innovation in customer acquisition and

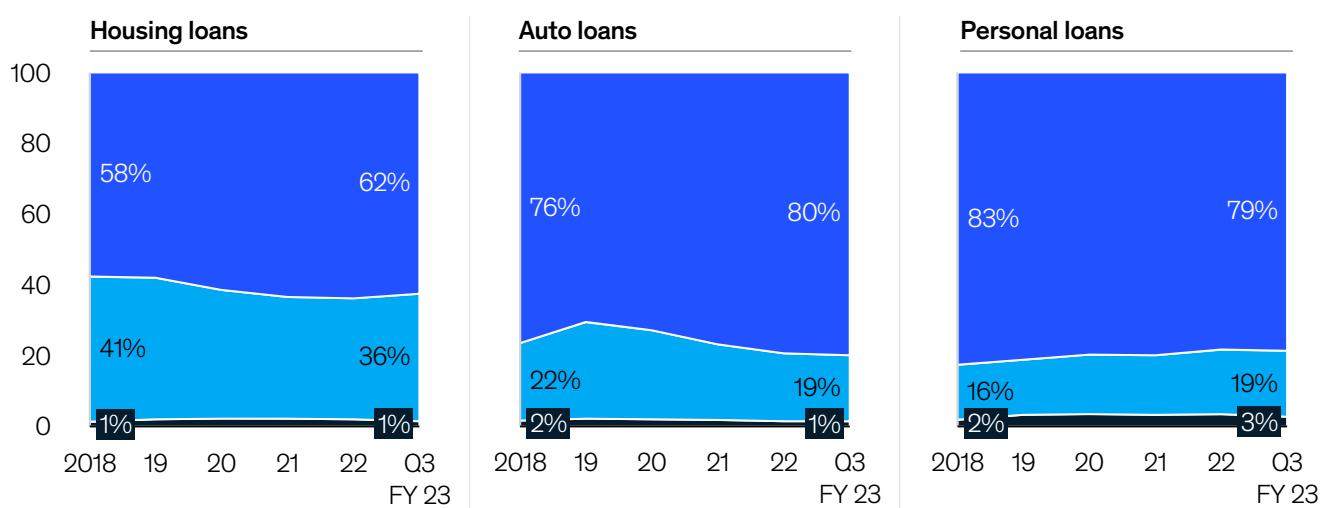
servicing, focusing on digital loan journeys to reduce friction and improve turnaround times. Using big data and AI and machine learning technologies has also helped banks target customers better and drive higher conversions through personalization at scale. Focusing on the innovation agenda is critical for banks to maintain their lead over emerging competitors.

Exhibit 18

### Banks have largely been able to maintain their share across retail assets, driven by innovation in the face of competition.

Market share by player type, percent

■ Banks ■ NBFCs ■ Fintechs + others



Note: Figures may not sum to 100%, because of rounding.  
Source: Experian

B3 a

Customer experience:  
Digital service

### B3. (a) Digital service: End-to-end digital journeys and super apps have ensured customer experience as the focal point for all FIs

#### End-to-end (E2E) digital journeys have improved customer experience through four levers

E2E digital journeys have significantly improved customer experience in the financial sector; it is estimated that 40 to 60 percent of retail asset loans are being sourced digitally by leading banks, with a higher proportion of digital PL sourcing (80 to 90 percent).<sup>32</sup>

Toward this, four levers have been deployed:

- redesigned credit processes to increase effectiveness and speed of credit journeys
- restructured governance and roles in the credit journey to improve turnaround time

- enhanced credit decision-making logic and process through holistic customer data procurement from sources like AA, third-party partnerships, etcetera
- innovations in IT architecture and workflow systems, leading to greater automation and data integration with reduced manual data inputs and manual validations

At the same time, there remains ample scope for incumbents to improve their digital journeys further to compete at scale with fintechs and other financial institutions.

<sup>32</sup> Annual reports and investor presentations of top banks.

B3 a

Customer experience:  
Digital service

### Indian banks are also partnering with digital lenders and emerging neobanks to serve customers and improve reach digitally

In recent years, Indian banks have been experimenting with new ways to increase their reach and mobilize savings from a wider audience. Banks are partnering with digital lenders to offer instant MSME and personal or retail loans to customers, and at the same time, they are also partnering with emerging neobanks (for example, Jupiter, Fi, Niyo, and Open). These partnerships have enabled banks to offer more diverse and innovative services while also leveraging the technological capabilities of the neobanks and digital lenders.

#### Over the past five years, major Indian banks have launched their banking super apps to provide integrated financial services solutions to customers on one platform

Banks and nonbanks worldwide are looking at leveraging the reach and adoption of digital

technologies to emerge as platform-based companies providing personalized offerings. They are also cross-selling to customers, from the core product and service into a broad range of related products and services. Industry verticals have blurred, especially in Asian economies, and have seen the emergence of super apps such as SBI's YONO, bob World, ICICI's InstaBIZ, etcetera.

Most banks in India have created or are in the process of building their super app play, even as success at the bankwide level is yet to be seen. While there has been notable progress on the servicing and lending features available for customers, significant capability-building efforts are required in product management, campaign analytics, branding, personalization, etcetera, where banks currently lag consumer-focused technology players.

B3 b

Customer experience:  
Public digital  
infrastructure

### B3. (b) Customer ease is the driving force behind India's seamless digital infrastructure, powered by open banking and interoperability

#### India's public and fast-developing digital infrastructure is accelerating the growth of financial services vis-à-vis other countries in the APAC region

India's fast-developing digital infrastructure is driving the growth of financial services and making them more accessible to customers (Exhibit 19). Centralized identity systems like Aadhaar, with over 1.37 crore enrolled,<sup>33</sup> have allowed the government to provide seamless access to financial services. India has also made significant progress in digital know your customer (KYC) and interoperable digital payments through unified payments interface (UPI), with 40 percent of the population using it for money transfers. In contrast, China and Singapore have closed digital payment systems. India's open banking enablers, such as Account Aggregator, Open Credit Enablement Network, and India Stack are facilitating the seamless sharing of financial data, which in turn is enabling the growth of innovative financial products and services.

#### India's adoption of India Stack components like UPI has democratized digital payments, while AA and OCEN are gaining traction

Indian banks have widely adopted various components of the India Stack, a set of digital infrastructure components developed to enable easy and secure access to services for Indian

citizens (Exhibit 20). The foundational components of India's open financial services ecosystem have been laid down with significant public-and private-sector investments, including more than 90 percent of Aadhaar enrollments,<sup>34</sup> the ubiquitous use of digital payments (including IMPS, APB, AEPS, and UPI) by active banking customers, and creation of assets around identity management (eKYC and eSign) and open banking (AA and OCEN).

In the future, as adoption increases, a few use cases can potentially disrupt banking volumes and revenue pools:

- Digital-first lending for small-ticket size personal and MSME loans based on AA and OCEN can create a paperless journey from application to disbursement.
- ONDC can facilitate disintermediation in the e-commerce journey leading to rising digital penetration for SMEs and more digital transactions, which in turn will help banks expand their MSME portfolios.
- The AA ecosystem has the potential to enable financial inclusion at the next level, based on credit underwriting on easily accessible alternative data, including utility bills, taxation, insurance, investments, etcetera.

<sup>33</sup> Aadhaar dashboard.

<sup>34</sup> Aadhar enrollments database.

B3 b

Customer experience:  
Public digital  
infrastructure

Exhibit 19

## India's radical innovation across digital public infrastructure is encouraging broad-based adoption and has democratized growth.

<b>Applications by government</b>	Financial services	UPI apps like BHIM	GeM and GST Sahay			
	Agriculture	eNAM	Kisan Rath	Kisan Suvidha		
	Health	Co-WIN	eSanjeevani	Aarogya Setu		
	B2B/B2C/B2G	GeM				
	Logistics/infra	Logistics planning and performance monitoring tool (LPPT)	e-Way Bill	FASTag		
	Education/skilling	DIKSHA/Swayam	National Digital Library (NDL)	National Career Service (NCS)/eSkill India		
<b>Standards/framework/protocols</b>	Open Credit Enablement Network (OCEN)	Agri Stack Unique ID for farmers Unified Farmer Service Interface	Health information exchange and consent manager (ABDM) ABHA number, HFR, HPR, PHR Unified Health Interface	Unified Logistics Interface Platform (ULIP) ICEGATE (Indian customs electronic data exchange gateway)		
	Account aggregators			National Digital Education Architecture (NDEAR)		
	Goods and Services Tax (GST)			Decentralized skilling and education protocol (DSEP)		
<b>Digital products and services (eg, ONDC)</b>						
<b>Open utilities</b>	DEPA	Unified Payments Interface	DigiLocker	eSign	Aadhaar-enabled payments	Bhashini
<b>Identification layer</b>	Aadhaar-led individual identification	Udyog Aadhaar	Parivahan	Know your customer (CKYC, e-KYC)	TIN	GSTIN
<b>Connectivity layer</b>	<b>Mobile network (4G/5G), smartphone penetration, Wi-Fi (Bharat Net, PM-WANI)</b>					

Source: Industry expert conversations

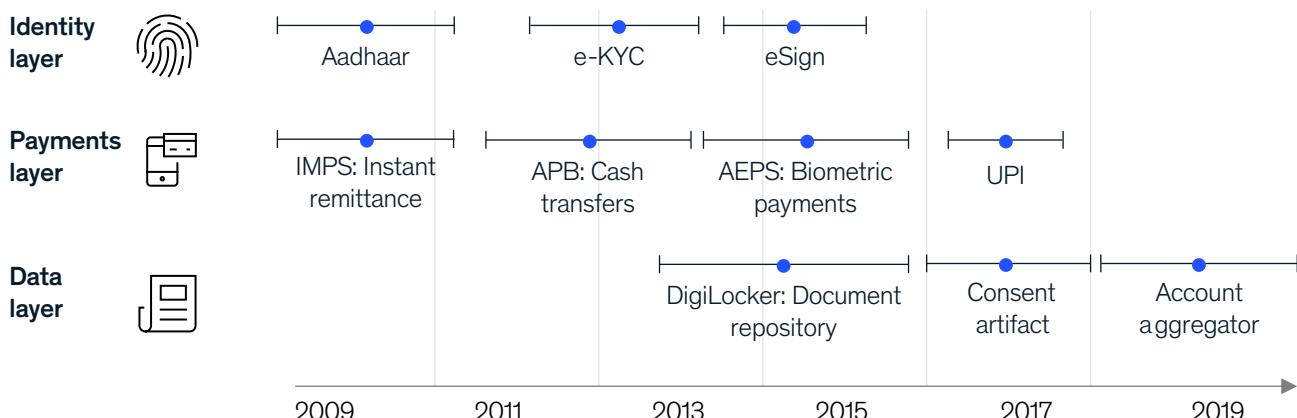
B3 b

Customer experience:  
Public digital  
infrastructure

Exhibit 20

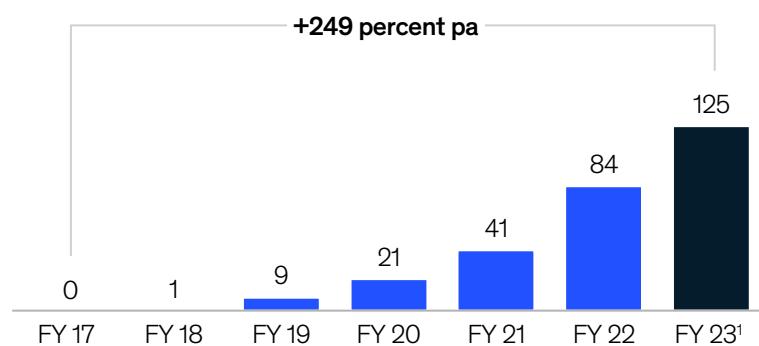
## Journey of India tech stack components.

### Timeline of India tech stack



### Transaction value through UPI

INR lakh crore

<sup>1</sup>Till February 2023.

Source: India Stack; NPCI; Sahamati

### Account Aggregator framework

Around 26 FIPs and 78 FIUs are live on AA, with around 4.6 million bank accounts enabled and around 5.4 million consent requests successfully fulfilled.

### OCEN

Currently, two LSPs are active on OCEN—GeM Sahay and SIDBI GST Sahay. GeM Sahay is live with eight lenders with 3.24 lakh MSMEs registered on its platform, and loan disbursals of around 15 crores.

**API-based transaction banking has been a successful operating model for Indian banks due to the speed and flexibility offered**

API-based transaction banking has been a successful operating model shift; API banking has delivered speed, customized solutioning, and flexibility to corporations, e-commerce players, fintechs, and MSMEs. Banks have been able to engineer and deploy various tranches of APIs that

allow customers to perform a wide spectrum of banking tasks seamlessly and securely, including account management, payments, fund transfers, collections, etcetera. Leading banks have enabled 100 to 150 APIs on their developer portals with clear documentation, easy to integrate processes, and RM enablement to pitch customized solutions to their clients.

B4 a

Societal and environmental impact:  
Financial inclusion

#### B4. (a) Financial inclusion: While FIs have increasingly penetrated into rural, MSME, and MFI segments, there is still significant headroom for penetration

##### There has been an increased push for financial inclusion through the rollout of differentiated banking licenses and the introduction of BCs

There has been a significant regulatory push for financial inclusion in India in recent years through the rollout of differentiated banking licenses, such as small finance banks (SFBs), and payment banks (PBs), and the introduction of business correspondents (BCs). RBI granted SFB and PB licenses to banks to increase financial inclusion by providing savings vehicles and credit to small business units, marginal farmers, and other unorganized sectors. The BC model has shown some success, with mobilized savings increasing from around INR 30,000 crore in fiscal year 2017 to around INR 1.07 lakh crore in fiscal year 2022, growing at a healthy 30 percent CAGR.<sup>35</sup>

##### Credit flow to segments like MSME, MFI, and rural has increased; however, NTC proportions are still below prepandemic levels

Lending growth is increasingly coming from deeper geographies as banks improve their focus on Tier 2 towns and below, with 86 percent of the

customers for personal loans (up from around 80 percent in fiscal year 2018) and 76 percent of the customers for home loans coming from these segments for fiscal year 2023 (till Q3).

Microfinance loans (including SHG and JLG loans) have grown at

20 to 25 percent per annum from around INR 1.5 lakh crore in fiscal year 2019 to around INR 2.7 lakh crore in fiscal year 2022, while rural and MSME loans also saw a healthy growth of 10 to 12 percent over the same period (Exhibit 21). However, the proportion of NTC customers has declined across retail products with NTC cohorts forming around 13 percent and around 10 percent, respectively, of the total customer sourcing for home loans and personal loans (based on data from Experian India).

##### There is still ground to cover—India remains a credit underpenetrated market with around 50 percent of the eligible population not covered by formal lenders

India remains a credit underpenetrated market, where despite the potential retail lendable

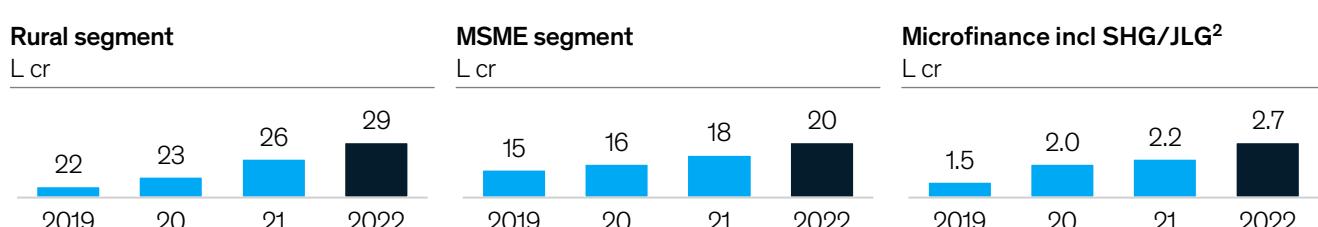
<sup>35</sup> RBI data.

Exhibit 21

#### Increased growth has been seen in retail loans in Tier 2 and below cities with a rise in bank credit toward underserved sectors such as MSME and MFI.



#### Rising bank credit flow to underserved sectors



<sup>1</sup> Based on sample of around 6 lakh customers each for HL and PL.

<sup>2</sup> SHG, self help group; JLG, joint liability group.

Source: Experian India; MFIN; NABARD; RBI

B4 a

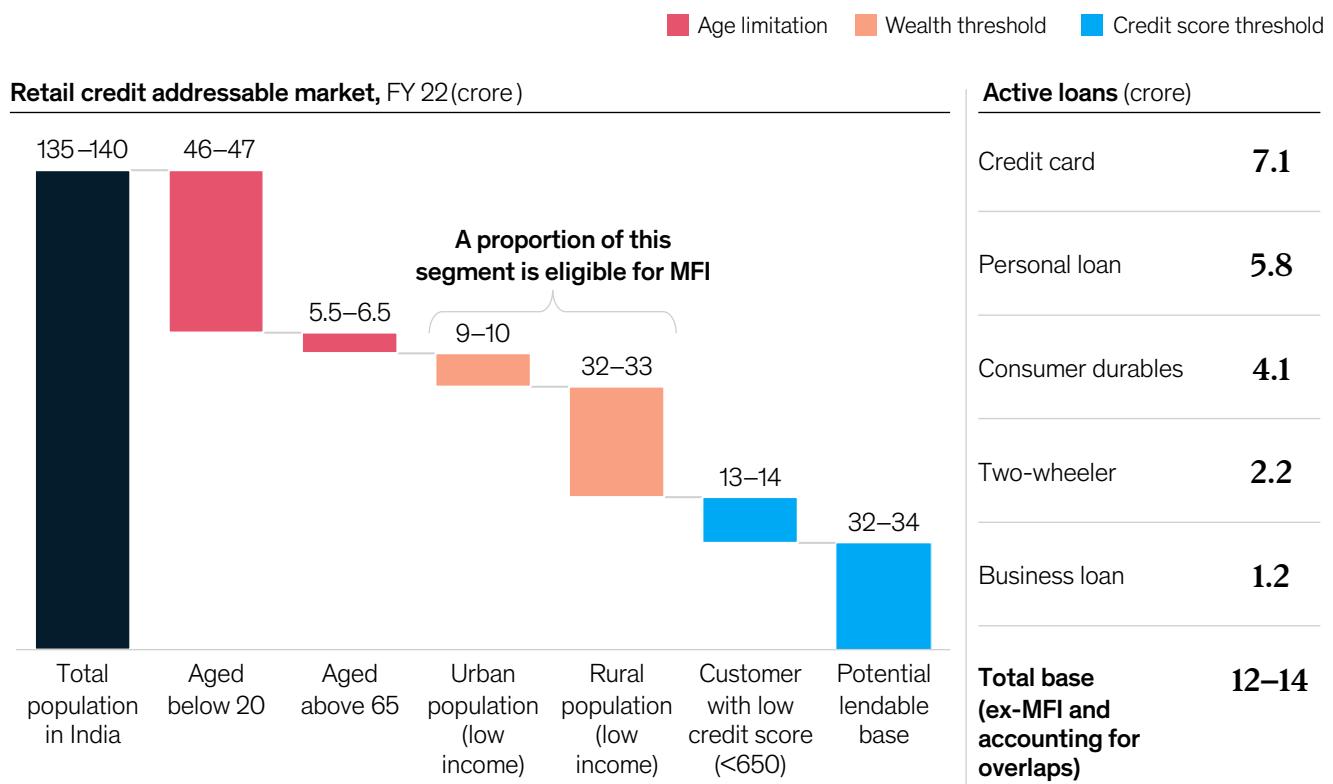
Societal and environmental impact:  
Financial inclusion

base being around 32 to 34 crore people based on factors like age, income, and wealth, the formal lenders, which include banks as well as

nonbanking financial companies, have extended active loans to only 12 to 14 crore retail customers (Exhibit 22).

Exhibit 22

### India remains a credit-underpenetrated market.



<sup>1</sup> Assumed average number of cards per customer to be 1.8 (based on expert input).  
Source: National Commission, July 2020; Periodic Labor Force Survey FY 21; UN Population Prospects

B4 a

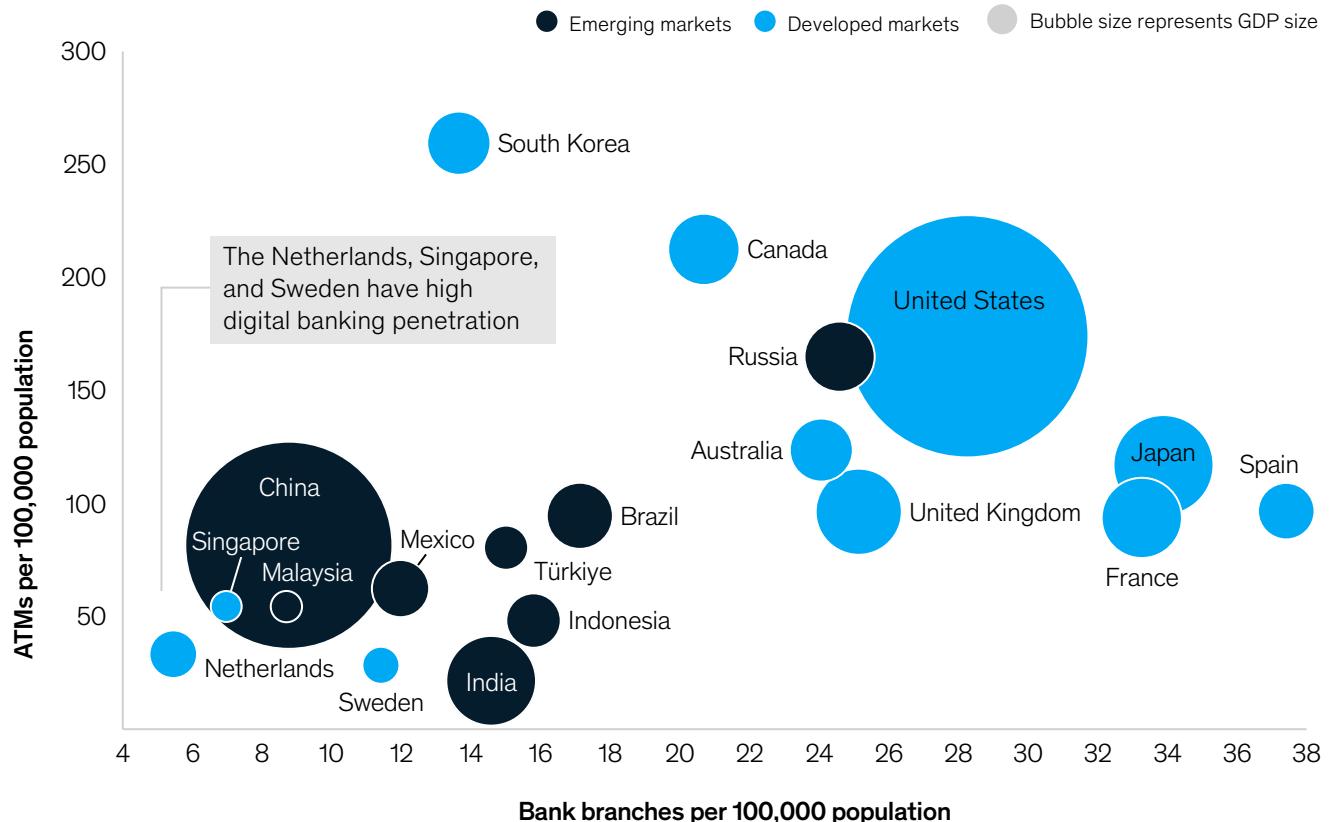
Societal and environmental impact:  
Financial inclusion

At the same time, India also has an underpenetrated bank branch and ATM network, relative to other emerging and developed economies. According to the World Bank database, India has around 15 commercial bank

branches and about 22 ATMs per 100,000 adults, which is significantly lower than other developing and developed countries, as well as the global average (Exhibit 23).

Exhibit 23

### India's ATM and branch network is significantly underpenetrated.



Source: IMF; World Bank

B4 b

Societal and environmental impact:  
ESG

### B4. (b) ESG: Indian FIs have recently embarked on the journey toward green financing

#### The need for climate finance

Based on the current trajectory, the world is likely to see a temperature increase of around 2.8°C, vis-à-vis a target of 1.5°C. Moving to a net-zero path, which will help limit global warming to 1.5°C by 2050, will require substantial investments, estimated to exceed an annual average of \$9.2 trillion over 2021–2050.<sup>36</sup> This indicates an

additional annual investment of \$3.5 trillion over current spending levels. In recognition of this need, globally, banks managing around \$71 trillion of assets have committed to the net-zero initiative, with EMEA and Americas-based banks leading the way (Exhibit 24).

<sup>36</sup> *The net-zero transition: What it would cost, what it could bring*, McKinsey Global Institute, January 2022.

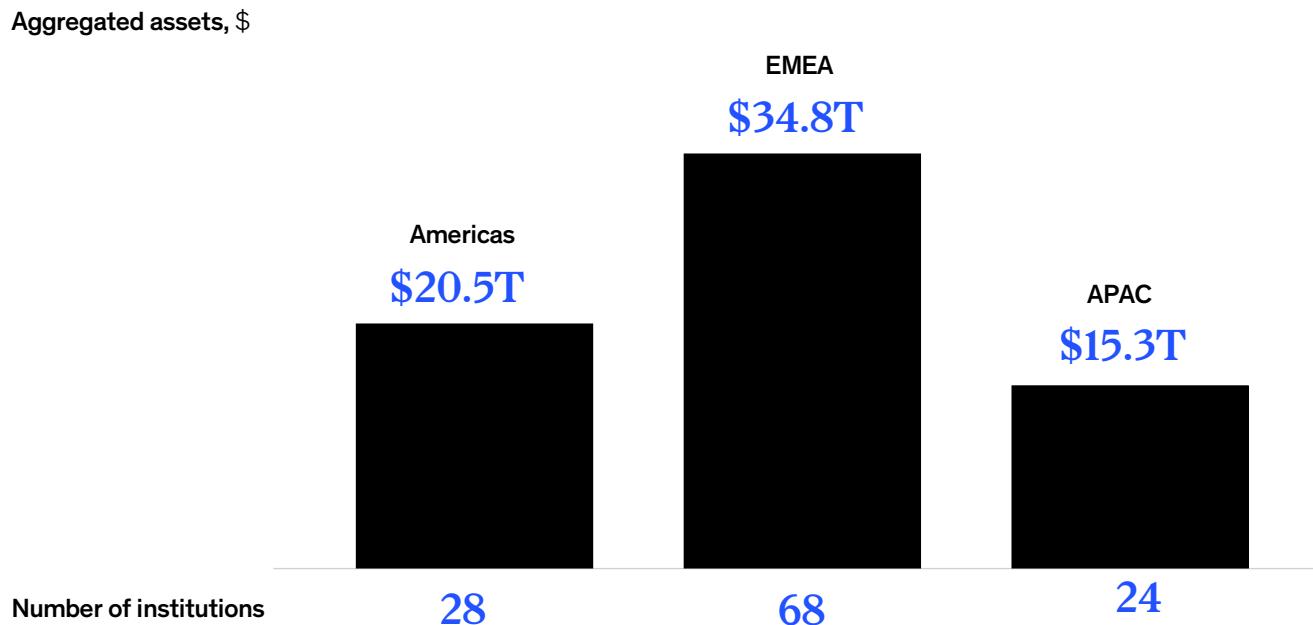
B4 b

Societal and  
environmental impact:  
ESG

Exhibit 24

**Globally, banks with about \$71 trillion in assets have already committed to net-zero targets.**

**Global view on net-zero commitments from banks, as of November 2022**



Note: Includes signatories from the Net-Zero Banking Alliance (NZBA).  
Source: NZBA



## Societal and environmental impact: ESG

## Green finance flows in India are far short of required investments

As per current estimates, for India to reach net zero by 2050, an average annual investment of INR 12 to 13 lakh crore would likely be required over the next 25 years. However, current flows only cover about one-fourth of the requirement (Exhibit 25).

Across sectors, the investment required varies depending on subthemes, with the transportation sector requiring around 40 percent of the investment toward decarbonizing mobility and developing charging infrastructure, followed by the power sector that requires around 35 percent to increase the share of renewables in India's power mix.

## Indian financial institutions

have a long way to go

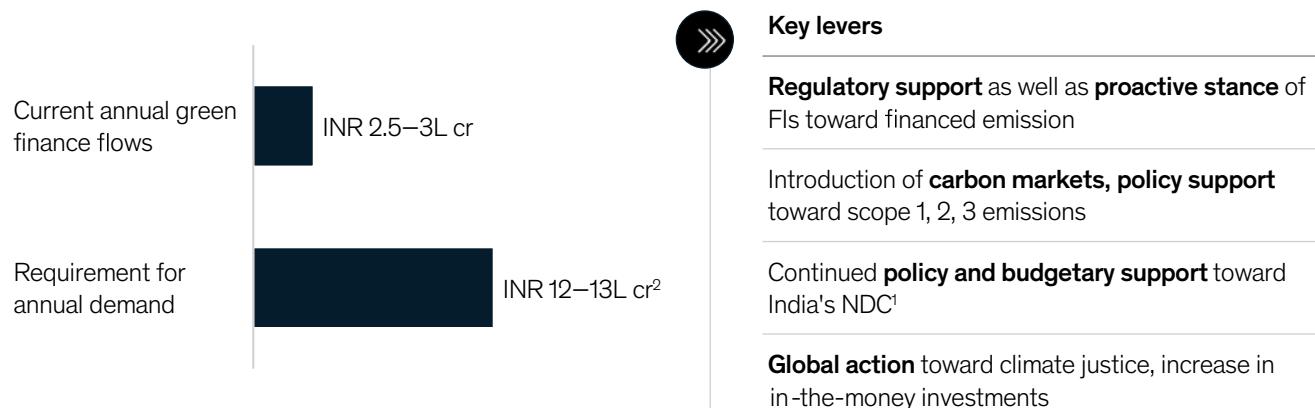
The transition to green finance would require concerted action from key stakeholders across government agencies, regulatory bodies, and financial institutions (Exhibit 26).

Banks in India are currently at a nascent stage in their journey to build a green finance business. While most banks include a sustainability report as part of their annual reporting, standards of disclosure vastly differ. Similarly, most banks are yet to chart a road map to their net-zero goals and are yet to set a glide path for their financed emissions.

## Exhibit 25

Scale-up funding may be required across all sources to meet the annual demand.

## Preliminary



<sup>1</sup>Nationally determined contributions.

<sup>2</sup> Annual demand to keep increasing from 2020 to 2050; average annual demand of 12 to 13L cr in first decade; about 35L cr on average for next 25 years.  
Source: Climate Policy Initiative

Source: Climate Policy Initiative

## Exhibit 26

A well-coordinated set of interventions would likely be required across all stakeholders to accelerate transition financing.

	<b>New strategic initiatives</b>	<ul style="list-style-type: none"><li>• <b>Launch carbon markets</b> to get ideas into the money faster</li><li>• <b>Setting up green banks</b> to accelerate and enable financing of hard-to-abate use cases</li></ul>
	<b>Incentivization and creating transparency</b>	<ul style="list-style-type: none"><li>• <b>Incentivize banks</b> to support the transition</li><li>• <b>Upgrade disclosure norms</b> to increase transparency on emissions and linked strategies</li></ul>
	<b>Other key initiatives</b>	<ul style="list-style-type: none"><li>• <b>Set targets for financed emission</b>, own emission (scope 1, 2, 3); define and execute plans to achieve it</li><li>• <b>Capture new business opportunities</b> and build new propositions (eg, green products)</li><li>• <b>Strengthen the climate risk management</b>, including frameworks, policies, etc</li><li>• <b>Build internal capabilities</b> and teams to drive climate finance agenda</li></ul>

B5 a

Operational resilience:  
Tech resilience

## B5. (a) Tech resilience: While digital investments have been meaningful, data security, data privacy, core modernization and tech resilience are key focus areas going forward

### Globally, BFSI sector was the second-biggest target of cyberattacks, with India- and United States-based institutions being the focus of attackers

The banking sector is one of the most affected by cybercrimes, as the organizations involved manage and hold a vast amount of sensitive data and financial information of customers. In addition, with the sector witnessing rapid digitization in the form of digital payments, digital banking, and use of open APIs, the scope for data breach and other cyberattacks such as ransomware attacks, phishing, and social engineering have not increased exponentially.

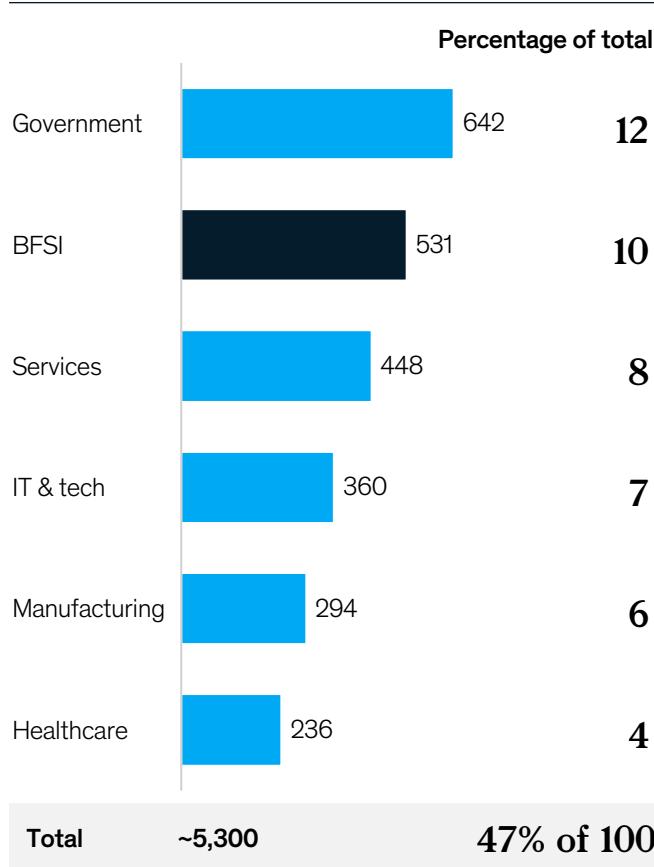
Globally, BFSI sector was the second-biggest target of cyberattacks, with India- and United States-based institutions being the focus of attackers (Exhibit 27).

Absence of skilled security talent, weak credentials of employees and contractual workers, limited allocation of funds, and lagging infrastructure for security remain as major concerns for banks.

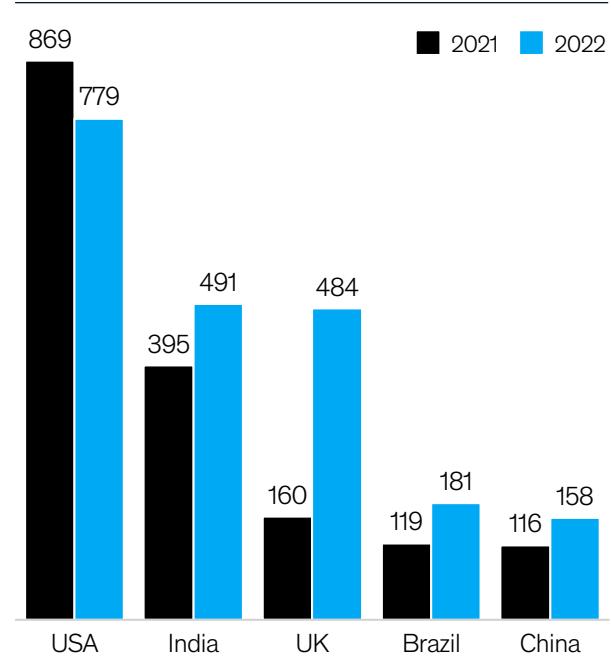
Exhibit 27

### Increase in cyberattack incidents reported, with India- and United States-based institutions being the focus of attackers.

**Cyberattack incidents reported**  
# of cyberattacks reported by sector



**Top five most targeted countries**  
# of cyberattacks reported by country



50%  
Data breaches as a percentage of the total cybercrime reported cases faced by BFSI sector

**\$6M**  
Average cost of a data breach for financial services industry

Source: CloudSEK global threat landscape report 2021–2022; IBM Security; Ponemon Institute



**While Indian banks have improved their front-end digital services, there is significant scope for improvement of data security and privacy, and to invest in tech resilience**

Indian banks have made good strides in improving their front-end digital services, making banking more accessible and convenient for their customers. However, data privacy, security, and tech resilience remain key challenges (Exhibit 28).

- The revised draft of the Digital Data Protection Bill by the government aims to protect individual's privacy, places significant rights and responsibilities on banks, and proposes significant penalties for breaching the regulations. Banks will need to rapidly assess and execute on their readiness across systems.
- Data security challenges are expected to increase over time; banks will need to continuously upgrade their capabilities and invest to mitigate significant incidences.

— Finally, in terms of tech resilience, banks have seen mixed success with limited adoption of emerging technologies like AI and machine learning, cloud computing, de-risking the vendor landscape, etcetera. Complexities on integrating a modern front end with legacy systems remains a continuous improvement area.

While transaction security measures have been implemented, very few banks have incorporated next-generation solutions such as behavioral analytics, contextual heuristics, audio data exfiltration, etcetera. To advance in data security and privacy, and to optimally manage cybersecurity within a given budget, organizations should identify where their high-risk information sits, as well as how it moves across the estate, and uncover their greatest risk areas. The organization can then strategically prioritize the application of advanced data loss protection controls to achieve the greatest impact.

Exhibit 28

**Tech resilience in India's banks remains a challenge.**

				
	<b>Tech infrastructure</b>	<b>Data privacy</b>	<b>Data security</b>	<b>Tech resilience</b>
<b>Current situation</b>	Introduction of digital banking has made banking more accessible and convenient for customers	Indian banks lack the necessary infrastructure and policies to adequately protect customer data and prevent data breaches	Banks are less prepared for data breaches and lack the necessary resources and expertise to prevent, detect, and respond to such incidents effectively	Tech resilience of banks has seen mixed success with limited adoption of emerging technologies like AI/ML, cloud computing, and blockchain
<b>Challenges</b>	Back end of most banks still runs on legacy system and attracting and retaining tech talent remains a challenge	Lack of awareness among bank employees regarding data privacy policy/ laws and their implications	BFSI sector is one of the biggest targets of cybersecurity attacks, with increasing attacks on Indian institutions	High cost of technology adoption and integration with legacy systems and shortage of skilled tech talent
<b>Interventions required</b>	Significant investments are required by banks in upgrading their CBS and LOS, along with building their tech teams' modern skill sets	Robust data-protection infrastructure, policies, and procedures to manage customer data securely, along with preparation to comply with the proposed Digital Data Protection Bill	Banks need to build a truly robust cybersecurity function that delivers a wide set of services to the enterprise utilizing three key enablers to deliver security service at a desired level	Increase investments in emerging technologies like generative AI, personalization at scale, etc, and develop strategies to integrate them seamlessly with legacy systems

B5 a

Operational resilience:  
Tech resilience

**Indian banks would need investments in core technology modernization, which are crucial for meeting the growing requirements of scalability, flexibility, and speed**

Investments in core technology are an important determinant for Indian banks to meet the increasing demands of scalability, flexibility, and speed (Exhibit 29).

These investments can help banks improve service resilience, accelerate time to market, and provide timely and role-appropriate access for various use cases, including regulatory compliance and exploratory analytics.

Additionally, Indian banks would need to increase their investments in best-in-class cloud, data management, and API technologies.

Exhibit 29

**Investments are required in core tech, critical to deliver increasing demands for scalability, flexibility, and speed.**

<b>Cloud</b>	<b>Challenges</b>	<ul style="list-style-type: none"> <li>Core/legacy systems can't scale sufficiently</li> <li>Significant time, effort, and team sizes required to maintain infrastructure</li> <li>Considerable time required to provision environments for development/testing</li> </ul>
<b>Cloud</b>		<ul style="list-style-type: none"> <li>Higher scalability, resilience of services, platforms through virtualization of infra</li> <li>Reduces IT overhead, enables automation of several infrastructure management tasks and allows dev teams to 'self-serve'</li> <li>Enables faster time to market—dramatically reduces time by providing managed services</li> </ul>
<b>Data</b>	<b>Challenges</b>	<ul style="list-style-type: none"> <li>High error rates, poor refresh rates, lack of single source of truth</li> <li>Hard to access in a timely manner for various use cases</li> <li>Data trapped in silos across multiple units and hard to integrate externally</li> </ul>
<b>How best-in-class data management can help</b>		<ul style="list-style-type: none"> <li>Ensures high degree of accuracy and single source of truth in a cost-effective manner</li> <li>Enables 'timely' and 'role-appropriate' access for various use cases (regulatory, BI at scale, AA-ML analytics, exploratory)</li> <li>Enables a 360-degree view across the organization to enable generation of deeper insights by decision-making algorithms</li> </ul>
<b>API</b>	<b>Challenges</b>	<ul style="list-style-type: none"> <li>Longer time to market, limited reusability of code, software across internal teams</li> <li>Hard to partner/collaborate with external partners</li> <li>Suboptimal user experience—hard to stitch data, services across multiple functional silos</li> </ul>
<b>How APIs can help</b>		<ul style="list-style-type: none"> <li>Promote reusability and accelerates development, by enabling access to granular services</li> <li>Reduce complexity and enables faster collaboration with external partners—long time to integrate</li> <li>Enhance customer experience by enabling timely access to data, services, across different teams; faster time to market due to limited coordination, cross-team testing</li> </ul>

B5 b

Operational resilience:  
Talent

## B5. (b) Talent: Attrition and attracting the right talent has been a key priority

### Wage costs have been rising due to increasing employee count for PVBs and higher per-employee costs for PSBs

Banking and finance, along with IT services, are the major sectors driving employment growth in India, accounting for 93 percent<sup>37</sup> of new jobs in 2021–22. In all, banks employed around 1.6 million people as of March 2022.<sup>38</sup>

Over 2017–22, a sharp rise has been registered in wage costs across both PSBs and PVBs, with wage cost to income ratio increasing by 460 bps for PSBs, and 160 bps for PVBs (Exhibit 30). While the primary driver for PVBs has been the expansion in employee strength, the rise in wage costs for PSBs despite a fall in PSB headcount, post-consolidation is driven by an annual increase of around 10 percent in per-employee cost over 2017–22 (attributed to compensation restructuring at PSBs, including a 15 percent pay hike, increase in contribution

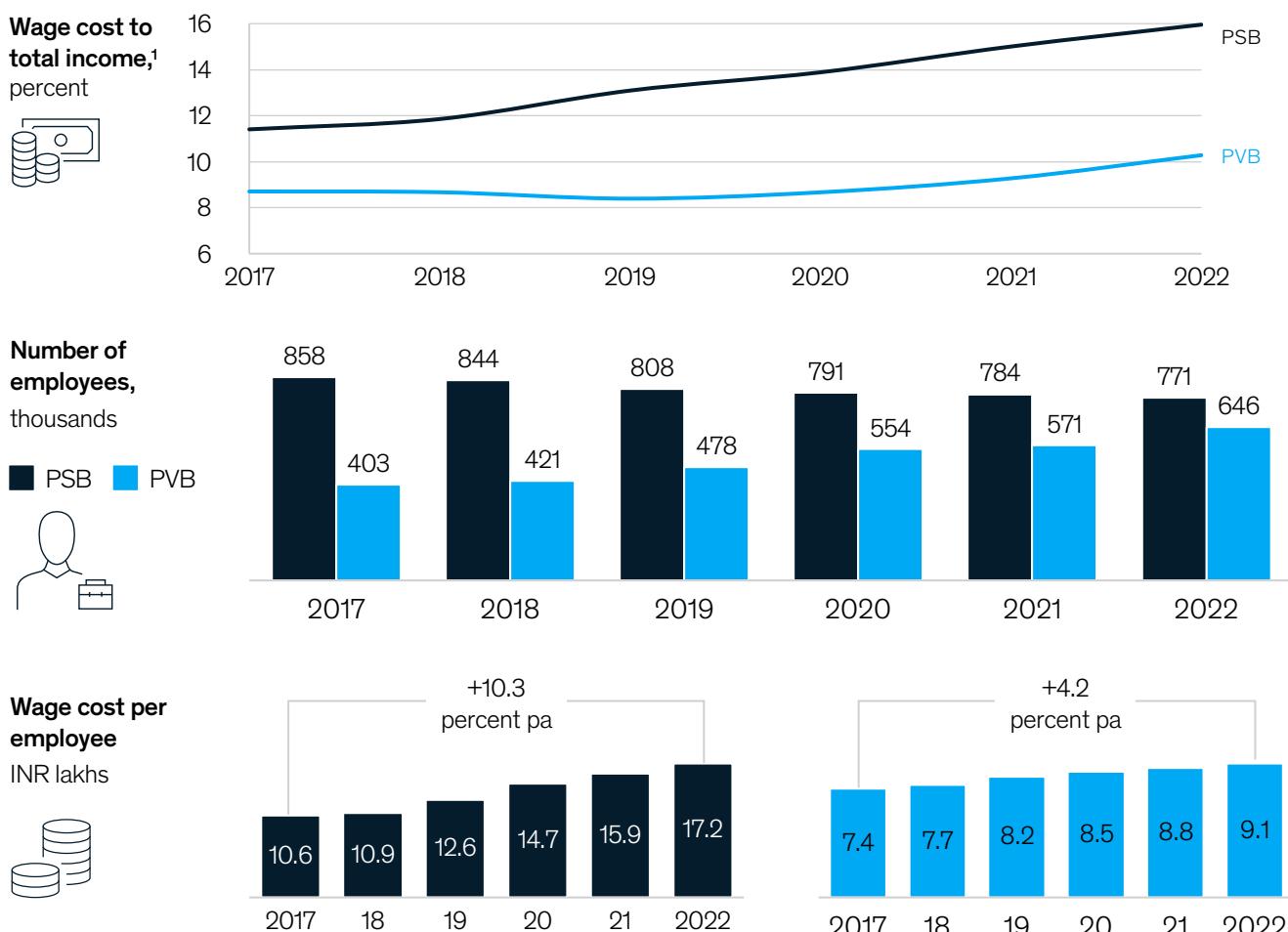
<sup>37</sup> Bank of Baroda economic research.

<sup>38</sup> RBI data.

Exhibit 30

**Both public- and private-sector banks have seen a sharp rise in wage costs to income over the past four to five years.**

**PSB wage costs driven by increase in per-employee costs, despite fall in headcount**



<sup>1</sup> Total income = net interest income plus other incomes.

Source: RBI

B5 b

Operational resilience:  
Talent

to family pension, and the introduction of performance-linked incentives, announced in 2020).

### **Banks are seeing high attrition, especially among front-line employees**

Postpandemic, banks have seen a sharp increase in attrition, especially among sales staff and other front-line employees. While annualized attrition has increased to more than 40 percent at front-line levels, churn at senior levels has been relatively lower (except key roles like analytics, technology). The following are key drivers of higher attrition:

- War for talent among banks, as well as other fast-growing financial institutions including fintechs and NBFCs, driving higher compensation and incentive structures.
- Technology-oriented specializations such as product management, cloud services, and data analytics are seeing high demand from new economy players, neobanks, and fintech players.
- At the same time, softer aspects such as work culture, collaboration, levels of ownership, mentorship, and appreciations have played a material role in explaining variation in attrition rate across players.

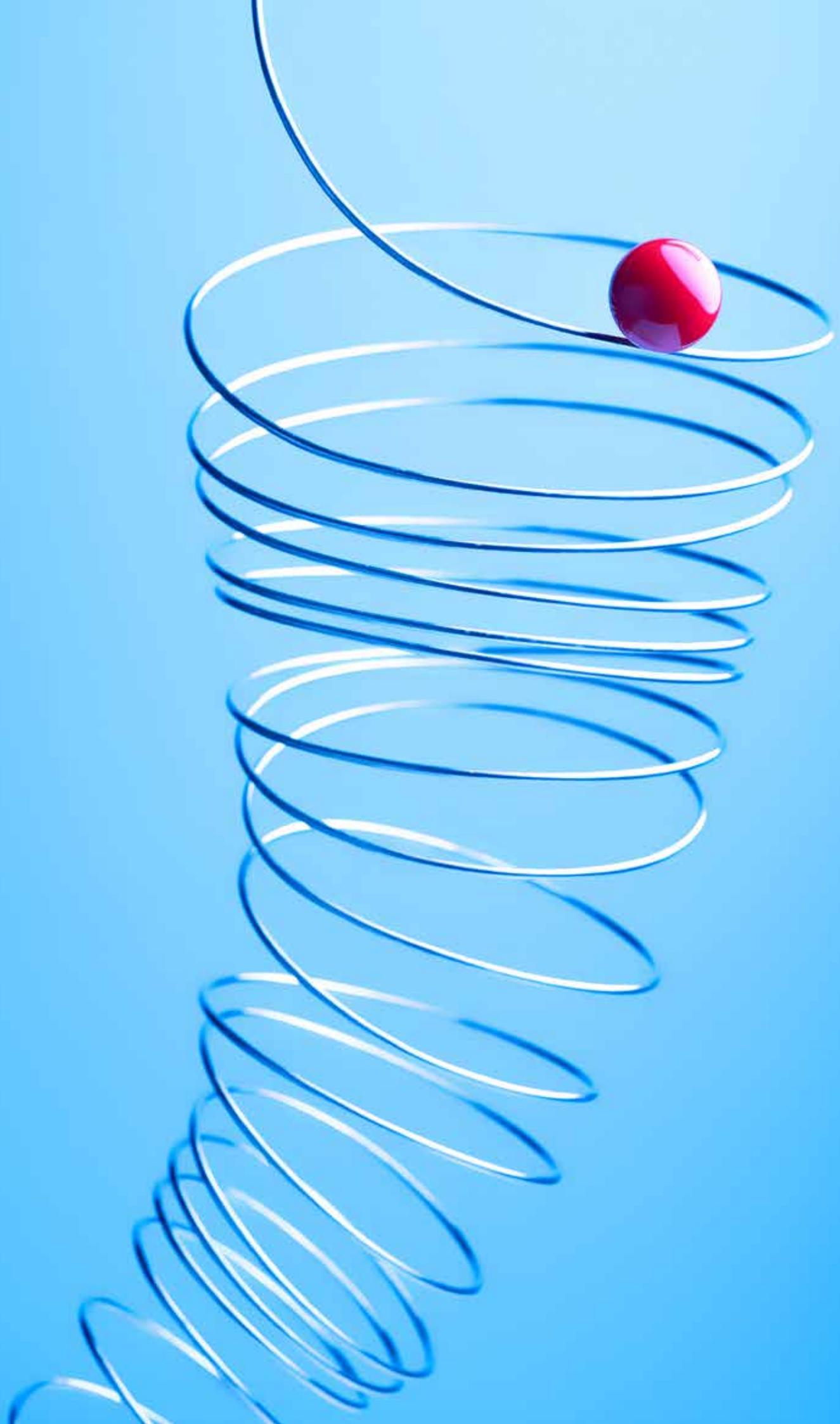
### **Employee value proposition is key to attraction and retention strategy**

The banking industry's evolving skill requirements over the past decade have necessitated competencies in digital technologies, automation, AI, and softer skills like problem-solving, emotional intelligence, adaptability, and resilience.

To remain competitive, banks have made key changes to their recruitment and retention strategies, including offering flexible, remote, or hybrid working options; emphasizing diversity and inclusivity in their workforce; investing in learning and development programs for emerging technologies; and fostering nonlinear growth paths and a culture of innovation.

All the key elements of the employee value propositions for banks across key roles will need a holistic review to ensure better retention outcomes.





# Section C

## Outlook ahead: Multiple forces to challenge banking economics

While there has been strong momentum, the banking sector faces certain headwinds and structural trends that will exert pressure on margins, requiring banks to make changes to their operating models. Over the past five years, retail assets have outpaced corporate credit growth, and the proportion of NTC lending has been

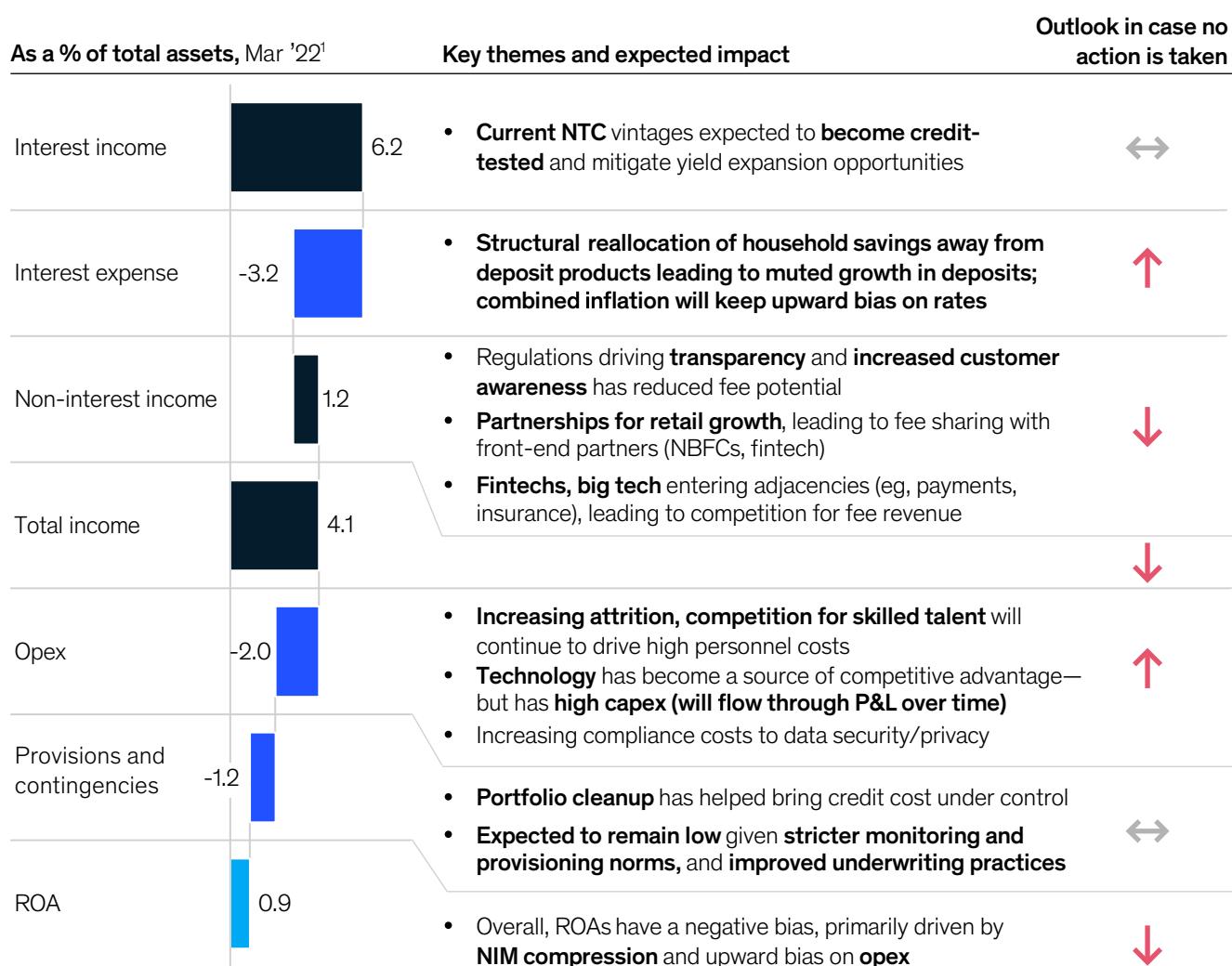
healthy, allowing banks to sustain NIMs. However, as these cohorts get increasingly credit-tested, continued yield expansion will be challenging.

Similarly, the potential for growing fee income is also limited, as greater transparency and competition have increased customer awareness,

Exhibit 31

**Banking ROAs are likely to be under pressure if current trends continue to play out.**

Impact on ROA: Positive Negative Neutral/limited



<sup>1</sup> RBI data on ratios for scheduled commercial banks (as of March 31, 2022).

and partnership models have led to increased fee-sharing arrangements. Further, the recent interest rate hikes by the RBI and the slowdown in deposit growth have created a cost-of-funds pressure on banks—a trend that will likely play out in the medium term. Total income (net of interest expense) will thus likely remain under pressure over the next four to five years, and there will be a strong emphasis on cost and risk management to create room for maintaining profitability.

On the expenses side, personnel costs at a per-employee level are expected to rise, especially for technology and analytics-focused roles that are in demand, and the supply of talent is limited. This could be mitigated by improved productivity and digital gains, thus reducing the need for incremental manpower across frontline and back-end processing roles. The impact on overall personnel costs will therefore be mixed across institutions.

Increasing investments in digital transformations and core system modernization are also likely to create cost pressures in the near-to-medium term, while the resultant productivity impact will play out over a longer horizon. In parallel, compliance and cybersecurity considerations will become

increasingly complex, costs related to which are expected to increase and will need to be offset.

On the other hand, credit costs have been largely brought down over the past two to three years following a significant cleanup of bad loans (especially in public-sector banks). Continued efforts to monitor and manage delinquencies are vital to maintaining these lower credit costs.

Reducing total income and rising operating costs will likely increase pressure on ROAs, and banks may find it challenging to maintain the outperformance of the past four to five years. This section looks at the factors affecting ROAs in further detail.

### Current NTC vintages are expected to become credit-tested, limiting the scope for yield expansion

Over the past few years, a rising proportion of NTC customers have been absorbed in the formal credit ecosystem as banks increased their focus on retail loans. For instance, NTC customers accounted for around 13 percent of personal loans, 21 percent of auto loans, and 19 percent of the credit card amounts sanctioned by banks in the first quarter of fiscal year 2018 (Exhibit 32).

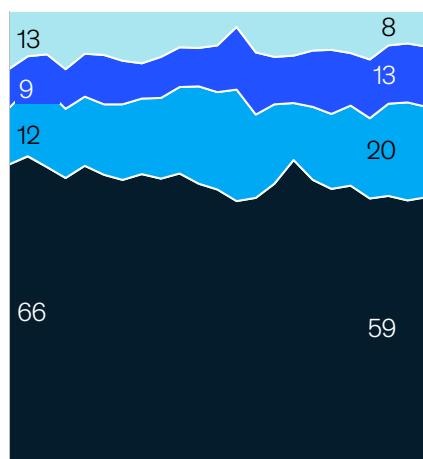
Exhibit 32

### Sourcing of NTC customers has reduced across retail assets over the past few quarters as existing cohorts have become credit-tested.

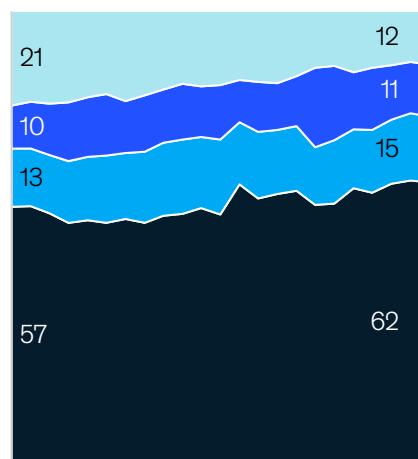
#### Sanctioned sourcing by borrower profile,<sup>1</sup> percent

■ NTC ■ Subprime ■ Prime ■ Above prime

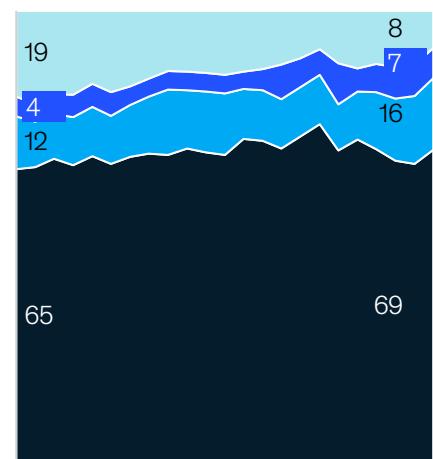
Personal loans



Auto loans



Credit cards



<sup>1</sup> NTC = new to credit; sub-prime = credit score of 300 to 680; prime = credit score of 680 to 740; above prime = credit score of 740 to 900.  
Source: Experian India

However, as Indian banks continue to credit-test the existing NTC cohorts, the potential for yield expansion opportunities may be limited. This is reflected in the recent decline in the share of NTC customer sourcing for retail assets, as per the third quarter of fiscal year 2023 data. NTC sourcing declined to around 8 percent for personal loans, 12 percent for auto loans, and 8 percent for credit card sanctions. This is substantiated by the fact that risk appetite has not materially changed, as seen in the mix of sub-

prime loans, which have marginally increased from 9 percent to 13 percent for personal loans in the past five years, with the same trend reflecting for auto loans and credit cards as well.

While yields will remain range bound, absolute interest income is likely to grow at healthy levels due to the corporate lending revival from capex-related demand, with corporate credit expected to grow at around 10 to 14 percent over the next three years.<sup>39</sup>

<sup>39</sup> McKinsey analysis.

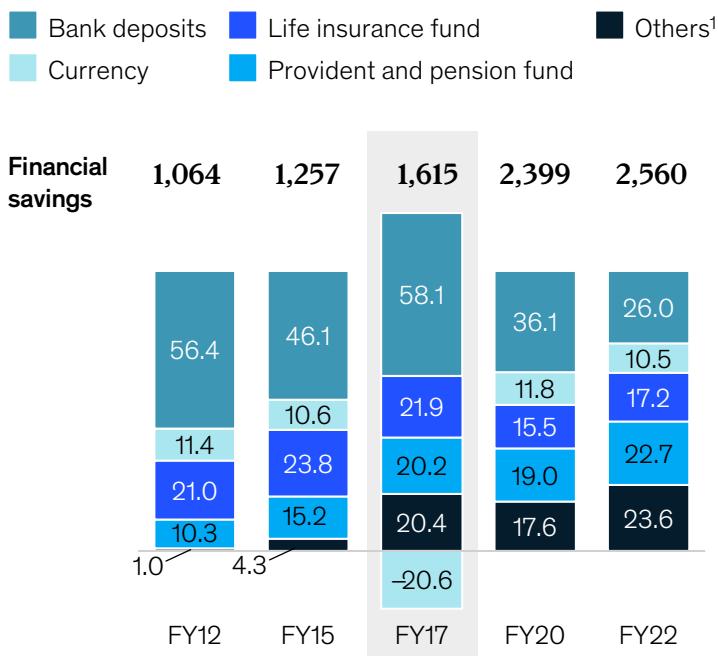
Exhibit 33

### Rising cost of funds (COF) due to slower deposit growth and yield hikes.

Term deposits growth has slowed down over the years as HHs have shifted to nonbank deposit investments

#### Incremental household gross financial savings, FY12–22

INR '000 cr, percent

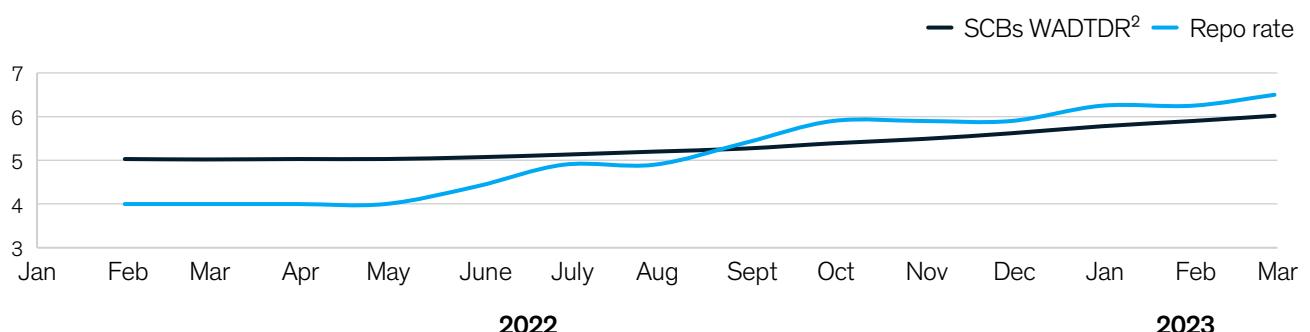


#### Bank deposits growth (CAGR), FY12–22

Percent

	TD	CASA	Overall
FY12–15	14	12	<b>14</b>
FY15–17	5	18	<b>10</b>
FY17–20	8	9	<b>9</b>
FY20–22	8	15	<b>11</b>
Overall	<b>9</b>	<b>13</b>	<b>11</b>

With rising repo rates, banks have raised yields on term deposits, which will lead to rising cost of funds



<sup>1</sup> Shares and debentures, claims on government, nonbank deposit, and trade debt.

<sup>2</sup> WADTDR, weighted average domestic term deposit rates.

Source: Company annual reports; RBI; SEC filings.

## Slow growth in deposits and rising interest rates keeping pressure on cost of funds

Over the past decade, there has been a significant financialization of savings away from physical holdings such as gold and real estate, from 67 percent in fiscal year 2012 to 47 percent in fiscal year 2021.<sup>40</sup> However, over the past few years, the mix of financial assets has materially moved from deposits to investment-related products (across equity, mutual funds, and market-linked insurance products). As a result, deposit growth has come under pressure—with term deposits growing at 9 percent over the past decade—and is expected to remain muted over the next few years.

At the same time, to combat the effect of higher inflation, RBI has increased the repo rate by 250 bps, from 4 percent in January 2022 to 6.5 percent by end of February 2023. Banks have responded by increasing interest rates on term deposits, leading to escalated cost of funds. A combination of structural reallocation of financial savings and the macro-interest environment would keep real interest rates high.

## Fee income will be impacted by increased competition, regulatory changes, and growth partnerships

The fee income for Indian banks, including processing fees, commissions, and other charges, has declined from around 0.63 percent in fiscal year 2012 to about 0.55 percent in fiscal year 2022.<sup>41</sup> This decline can be attributed to several factors:

- Rising competitive intensity in the financial sector has led to an increase in fee waivers, to incentivize price-sensitive customers.
- Regulatory changes and disclosures have also increased pressure on banks to rationalize their fees and charges. With the implementation of various regulations and guidelines like the trail income guidelines and master directions on credit and debit cards in 2022, banks must provide more transparency to customers and reduce their fees and charges.
- Growth partnerships with fintechs, wealth techs, and other players have led to sharing of income streams. As more banks enter the market for such partnership agreements, banks may need to lower their share of fees

and charges to remain competitive, which can further shrink their margins.

- Big techs firms have made meaningful plays in financial services by partnering with established financial institutions. They are focusing on cross-sell of financial products to their user base (that overlaps with bank customers). By using transactional data and big data about their consumers, big techs are also expanding into lending verticals like MSME loans, BNPL services, and personal loans.

## Personnel expenses and technology-related costs to rise; will need to be offset by productivity and digitization gains

As banks continue revamping their legacy systems, digitizing customer journeys, and integrating advanced analytics, talent costs and capex levels are expected to increase over the near term. Leading banks already spend 7 to 10 percent of their total expenses on technology, and this is likely to remain escalated in the near term as the transition to technology-driven operations are undertaken. Further, attrition across roles will remain higher than steady state for the near term, necessitating continuous recruitment and training costs. Costs to comply with data security and privacy norms will also lead to incremental investments.

There is a need to offset these costs across a combination of dimensions, that is, reimagining the organization structure, especially from a technology-business interaction model, to deploy AI and machine learning to mitigate operational expenses across newer use cases (e.g., KYC/AML), to rethink the branch and digital investment ratio, and to efficiently transmit digital investments into productivity gains.

## Credit costs have trended downward and are expected to remain range bound

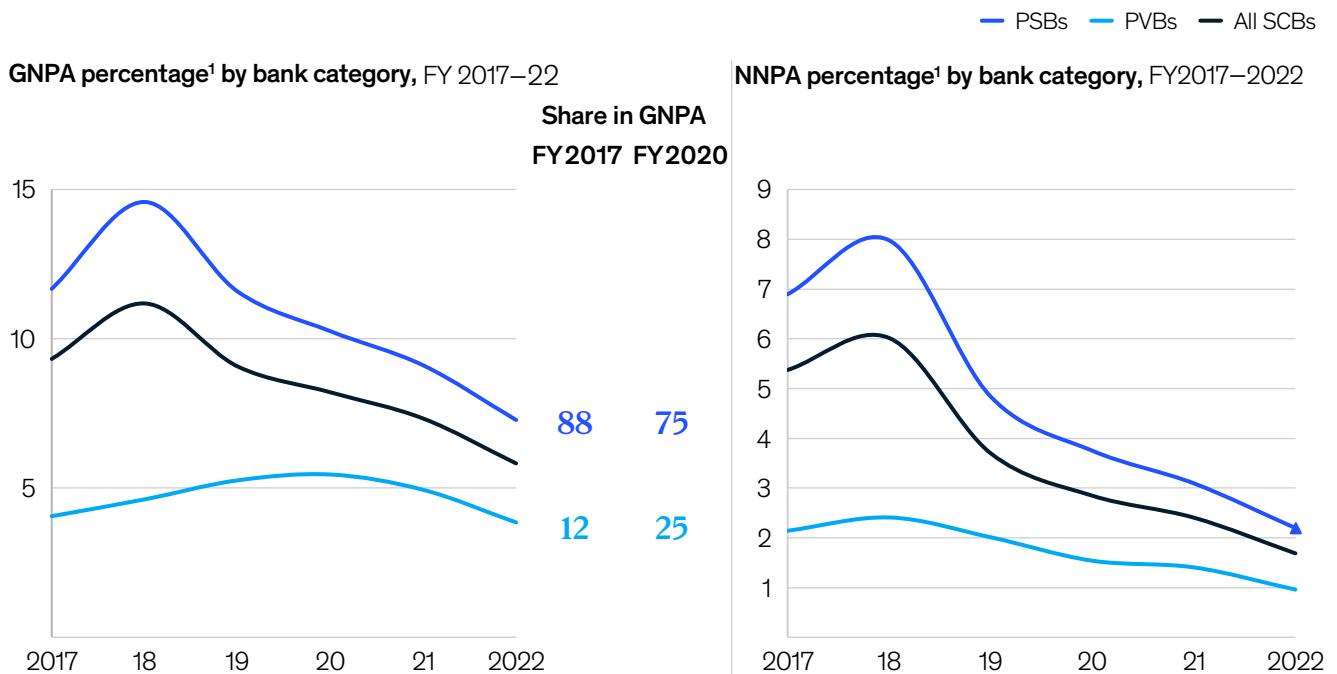
Overall credit costs have been significantly reduced over the past five years, driven by concerted action from PSBs to clean up their books and write off bad loans, coupled with recoveries and resolution through the Insolvency and Bankruptcy Code (Exhibit 34).

<sup>40</sup> Reserve Bank of India (RBI).

<sup>41</sup> McKinsey analysis.

Exhibit 34

## Nonperforming assets have steadily declined since FY2018 peaks.



<sup>1</sup> GNPA percentage is calculated as gross non-performing assets divided by gross advances; NNPA percentage is calculated as net nonperforming assets divided by net advances.

Further, loan delinquency and collections management has been tightened by banks, driven by stricter provisioning norms and improved fintech landscape. As per RBI's Financial Stability Report, issued in December 2022, gross nonperforming assets (GNPA) is projected to fall to 4.9 percent by September 2023, down from 5.8 percent in March 2022. As banks increasingly incorporate advanced analytics into their credit scoring and monitoring mechanisms, we will likely see better underwriting practices, further reducing the occurrence of nonperforming assets. Newer product innovations—such as transaction-based financing or using alternate data sources such as satellite-imagery-based farmland data; payments scoring based on e-commerce spending behavior, etcetera—are expected to improve underwriting for customers with thin

credit history, thereby mitigating some of the credit risks inherent to these segments.

### Returns are likely to remain under pressure over the medium term

With limited avenues to grow net interest income or increase fee income, total income (as a percentage of assets) is unlikely to expand significantly beyond current levels. While credit costs are expected to remain under control, banks will be under pressure regarding the operating costs, especially with the war for talent driving personnel costs higher. Technology has been a critical differentiator between laggards and leaders in the industry, and there will be investments to minimize or increase competitive distance. Against this backdrop, the next section explores critical levers for banks to maintain their leadership and outperform.



## Section D

# A way forward: Building resilient leadership

Against the backdrop of an uncertain global environment, while Indian macros and banking have held strong, it is becoming increasingly evident that the number of constraints and threats banks will have to manage in the future will continue to become more complex and inter-dependent. It is also clear that financial

performance alone is not going to be sufficient to generate consistent outperformance in terms of value creation. Therefore, extending the principles of holistic impact—we have suggested nine key actions that Indian banks could consider to build resilience and drive performance (Exhibit 35).

Exhibit 35

### Building resilient leadership would require Indian banks to focus on holistic impact.

	<b>Financial performance</b>	<b>1</b> Win the <b>next set of new money pools</b> <ul style="list-style-type: none"><li>• Build capabilities for digital commerce and open architecture banking</li><li>• Participate in corporate capex cycle</li><li>• Create differentiated capabilities for the mass affluent</li></ul> <b>2</b> <b>Horizontal capabilities to optimize efficiency and experience</b> <ul style="list-style-type: none"><li>• Develop full-stack AI (generative or otherwise) with focus on adoption</li><li>• Zero-ops capabilities to lower operational complexity</li></ul>
	<b>Industry health</b>	<b>3</b> <b>Partnerships:</b> Leveraging co-lending and fintech partnerships to drive accelerated ou
	<b>Customer experience</b>	<b>4</b> Meaningful connect to customers via <b>N=1</b> personalization <b>5</b> <b>Digital and analytics-led collections</b> shifting to an “assistance” mindset
	<b>Societal and environmental impact</b>	<b>6</b> Driving <b>financial inclusion</b> in agri and NTC cohorts <b>7</b> Financing India’s <b>green transition</b> with innovative business models
	<b>Operational resilience</b>	<b>8</b> <b>Build technology resilience to enable scale and digital businesses</b> <b>9</b> Revamp employee propositions to win the talent battle

#### D1. Winning the next set of new money flows

We see three areas or segments that could drive a significant proportion of net-new money flows that banks may think about strategically:

- Providing financial services across the fast-growing digital commerce value chain, which is expected to reach INR 14–15 lakh crore of gross

merchandising value (GMV) in fiscal year 2026.<sup>42</sup> growing at 30 to 35 percent annually by building new capabilities such as open architecture lending (through Open Network for Digital Commerce, Open Credit Enablement Network, and Account Aggregator integrations), product innovations, and partnerships.

<sup>42</sup> *The way ahead: Open network for digital commerce*, ONDC, January 2022.

- Corporate credit (along with government infrastructure spend) is expected to see a revival and grow more than 10 percent over the next few years, reaching about INR 65 lakh crore of the portfolio for banks by fiscal year 2027.<sup>43</sup> However, choice of segments and sectors will be critical and banks can think about preemptively building their capabilities and propositions along these areas.
- Lastly, while a lot has been done to bank the affluent and high-networth segments, mass affluence remains an opportunity that is up for disruption from a wealth management perspective. While banks have built virtual relationship management (VRM) capabilities, there is still significant potential to create a more holistic proposition tying in products, analytics, relationship management, and digital engagement.

D1 a

Tapping into fast-growing digital and SME opportunity

## **Large and growing digital commerce opportunity, further boosted by the introduction of ONDC**

Digital commerce is a fast-growing segment within the SME lending space, with the GMV for digital commerce in the retail sector in India expected to grow to INR 15 lakh crore by 2026, growing at a CAGR of around 30 to 35 percent (Exhibit 36).<sup>44</sup> There is a significant potential for incremental digital commerce flows; about 20 to 25 percent of India's internet-using population consists of digital commerce transactors while just 5 to 6 percent of the 90 million MSMEs are active on a digital sales platform.

Multiple initiatives and factors are accelerating the adoption of digital commerce and facilitation of digital lending to these entities (both consumer finance and micro-enterprise lending). First, there has been continuous improvement in the data landscape—that is, improvement in the commercial bureau penetration among micro-SMEs, availability of GST records, and emergence of alternate data providers that give both incremental information as well as efficiency gains (for example, bank statement digitization, digital validation, etcetera).

Lending based on the AA framework (supported by OCEN) is expected to reduce the turnaround times and friction in loan processing and sanctioning (6 million accounts have already been enabled on AA, with around 200 FIPs on the framework).<sup>45</sup> AA integrations can potentially improve the bank loan monitoring process through digital access to up-to-date account and transaction data on the suppliers financed through modern digital systems.

Moreover, ONDC is expected to further facilitate inclusion and thus formal credit deployment toward the underserved. Estimates expect an

incremental contribution of INR 3 to 4 lakh crore in additional GMV over the next few years.<sup>46</sup> As a result, an integrated digital commerce strategy is an important area to get right for banks.

## **Banks would need to think like digital incumbents to enable them to successfully capture and unlock financial flows on commerce platforms**

The discovery, engagement with, and purchase of a financial product can follow multiple pathways and time periods across customers and therefore it is critical to engage throughout the life cycle of a digital consumer.

- Digital customer cohorts must be segmented in a very different way compared to traditional offline cohorts. There must be a clear “engagement ladder” to provide the right nudge at the right time to the participants.
- Customized product propositions (for example, small-ticket line of credit, merchant finance) can be delivered end to end digitally.
- Flow-based underwriting, leveraging platform data, becomes critical to building compelling journeys with acceptable approval rates and fulfillment processes; credit teams must adopt a POC approach to test and learn (to create income estimation cohorts and dynamic limit assignment strategies).
- Rewiring the technology architecture and capabilities to seamlessly link the bank's system to the platforms. The project teams delivering the interfaces must keep the architecture modular and flexible to adapt and accommodate to changing protocols and standards.
- Specific capabilities to drive partnerships with platform players and their participants

<sup>43</sup> McKinsey analysis.

<sup>44</sup> *The way ahead*, ONDC, 2022.

<sup>45</sup> Ecosystem dashboard, Sahamati, 2023.

<sup>46</sup> *The way ahead*, ONDC, 2022.

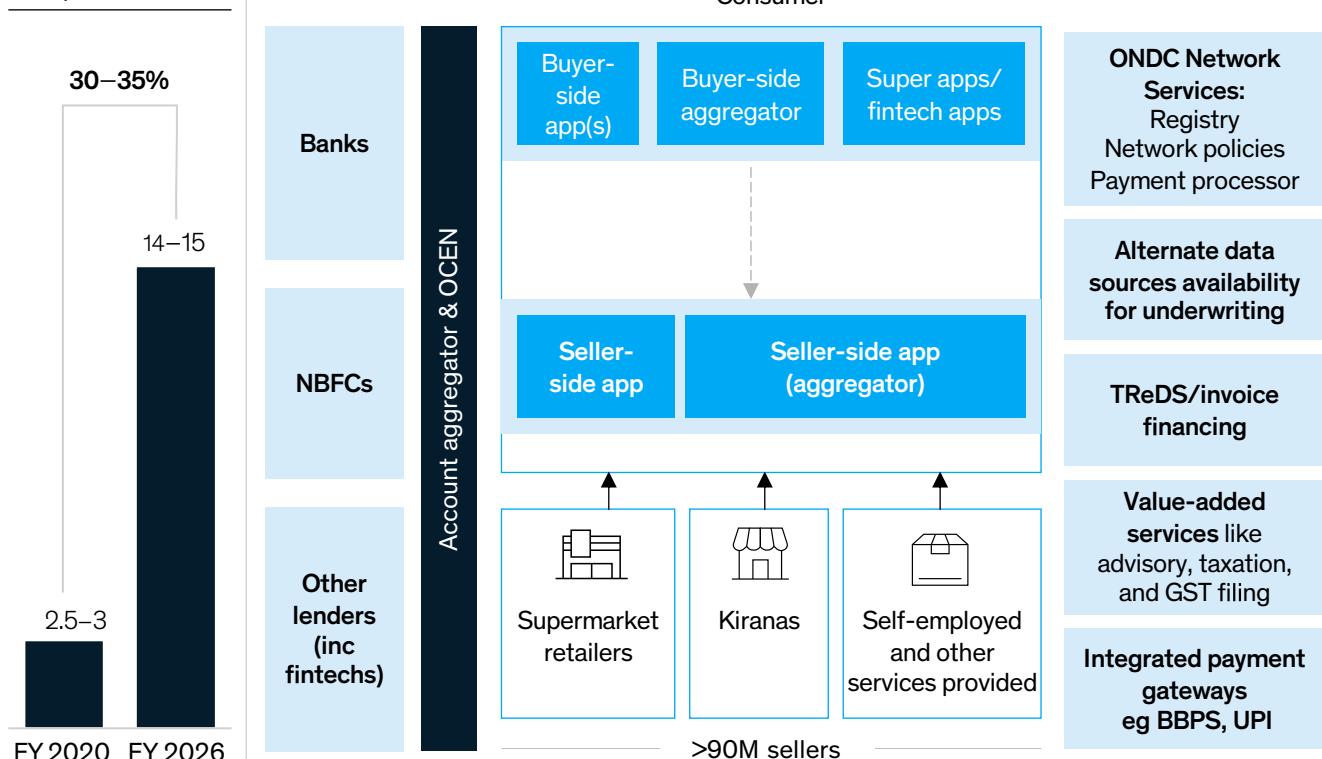
D1 a

Tapping into fast-growing digital and SME opportunity

Exhibit 36

**ONDC can unlock key areas of growth in financial services for digital commerce players with the implementation of targeted use cases.**

**Growth of digital commerce GMV in India, INR lakh cr**



Source: ONDC

become important; creating joint execution and marketing teams has had higher success in integration and business traction compared with siloed coordination efforts.

— Thinking through the suite of value-added features the bank can host or build (such as content or taxation services) to improve journeys and time spent on the platform can enable incremental traffic, data collections, and payment flows.

### D1. (b) Facilitate revival in corporate credit cycle by tapping into capex-related demand

Horizontal capabilities

India is on the cusp of a new capex cycle, with rising government and public-sector capex expected to result in 8 to 10 percent growth in corporate lending over the next three years.

The government's infrastructure development focus has spurred governmental and public-sector capex, alongside the introduction of the Production-Linked Incentive (PLI) scheme, which is set to attract private investment in key sectors.

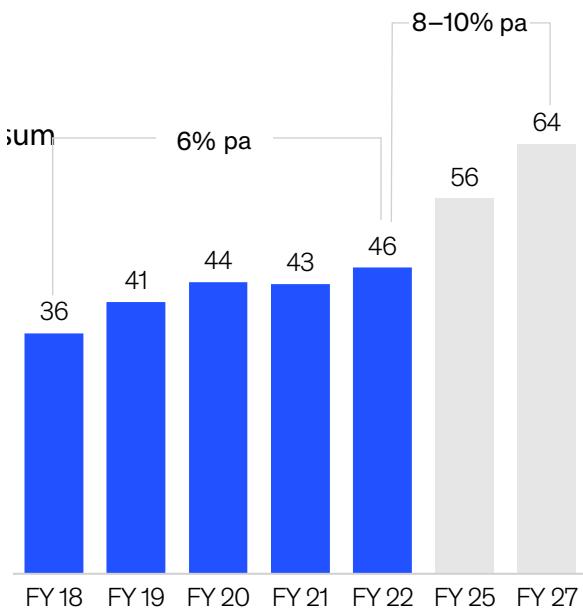
Indian corporates have made significant progress in improving balance sheets over the years. According to data from RBI, the leverage of Indian companies, as measured by their debt-to-equity ratio, has declined steadily from around 0.5 in fiscal year 2017 to 0.37 in fiscal year 2021. In addition to reducing leverage, operating profits of Indian companies have also improved in recent years, increasing from around 15 percent to around 17 percent.

Exhibit 37

## Eight to ten percent lending growth expected over the next three years driven by capex cycle revival ...

### Banks' wholesale loan growth (INR lakh crore)

Gross credit includes industry and services; excludes agri, personal loans, priority-sector MSME loans



Source: RBI Sectoral Credit Database

... driven by government focus on manufacturing and infrastructure, pent-up demand and rising prices.

### Early indication

- **Govt capital expenditure budget** has grown by 35% in FY 23 vs FY 22
- **GFCF as a percentage of GDP seeing upward trend:** Grew from 28% to 29% in Q1 FY 2023; expected to reach pre -COVID-19 levels in one year

### Key drivers

- **Govt focus on benefiting from geopolitical situation:** Aim to increase manufacturing share in GDP from 15% to 25% in ten years; PLI schemes being revised
- **Govt focus on rapid ramp-up of infrastructure:** 10+ mega projects initiated in 2021, eg, the Delhi-Mumbai expressway
- **Pent-up demand from COVID-19** expected to see revival over next one to two years
- **Inflation and rising material prices expected to raise operations and maintenance costs**, boosting working capital and capex needs

over the past five years, despite the COVID-19 pandemic.<sup>47</sup> In addition, the capacity utilization levels for the manufacturing companies are back to prepandemic levels (around 75 percent as of first half of fiscal year 2023, compared to around 60 percent in fiscal year 2021, as per RBI data), and sustained high levels would result in capacity expansion by the manufacturing sector, leading to a revival in corporate credit demand.

### Banks would need to gear up to serve the right segments with the right propositions requiring a refresh of their operating models

**i. Develop sector-specific value propositions across priority value chains:** Over ten industries have the potential to generate an additional \$320 billion in gross value added (GVA) over the next few decades (Exhibit 38). Not all sectors will remain attractive at the same

time—trends around decarbonization, disruptions in technology, and shifts in global supply chains may alter the risk/return profiles of many segments. It is therefore important that banks think about their sectoral mix strategically and build the right product and underwriting capabilities across priority sectors.

### ii. Digital enablement of relationship managers to improve their productivity and coverage:

There is a need to ensure relationship managers (RMs) get the full benefit of customer relationship management techniques and technology that banks have adopted in other parts of their business. Enabling RMs through a digital workbench can improve funnel outcomes and efficiency. Creating scientific account plans, estimating share of wallet, and building sound coverage models across RMs, product specialists, and leadership teams becomes critical for ensuring productivity.

<sup>47</sup> RBI.

D1 b

Horizontal capabilities

Exhibit 38

## Banks can develop sector-specific value propositions across priority sectors' basis credit requirement, risk potential, and feasibility of lending.

Potential gain in India's gross value added (GVA), \$ billion			
By value chain			
Total			317
Aerospace/ defense	Furniture, leather, and rubber	Apparel and textiles	
8	12	17	
Pharmaceuticals	Capital goods and machine tools	Metals and basic materials	
21			
Vehicles and vehicle components	22	27	30
Agriculture and food	Electronics and semiconductors		
	60	47	
Chemicals		73	

Sector-specific value propositions for priority sectors	
Illustrative for chemical sector	
Key challenges	Potential offerings to address value chain challenges
<b>Tier 1 suppliers</b>  International payments and non-availability of timely guarantees	<b>Manufacturers</b>  GST reconciliation
 Reconciliation of vendor payments due to lack of ERP integrations	 Subsidy receivables
 International payments and guarantees for imported raw material	 Money-saving FX solutions
 Working capital crunch	 Fund/non-fund-based lending (LC/BG) solutions
	 Tech-enabled SCF platform

Source: *India's turning point*, McKinsey Global Institute, August 2020; "A new growth formula for manufacturing in India," McKinsey, October 30, 2020; *Digital India: Technology to transform a connected nation*, McKinsey Global Institute, March 27, 2019

**iii. Credit process transformation to improve efficiency and risk identification:** Unlike retail lending, corporate lending journeys are less suited to a "factory-like" approach. However, many of the principles still apply—providing a smooth customer experience with a faster "time to yes" and creating a sharper, more insightful version of the credit note continue to remain priorities. At the same time, creating swim lanes across complexity and criticality levels (for example, renewal versus new, ticket size, and nature of the deal) can also bring in notable efficiencies in the process, with credit and business teams focusing on "what's really important."

**iv. Leverage advanced analytics structurally across the value chain to improve pricing and RM productivity:** Advanced analytics have been used by corporate bank teams either for lead identification or monitoring, based on transaction data and early warning triggers. However, several use cases exist across the corporate banking value chain—such as wallet estimation, using lookalike modeling and next-product-to-buy suggestions—for RMs to make a targeted cross-sell transactions. For instance, a global bank unlocked significant value in select use cases such as constructing client archetypes, client sizing, and performance management, which resulted in the identification

of 15 to 20 percent front-line efficiencies and around 10 percent revenue upside from cross-sell and up-sell activities. It is critical to translate these insights to the RMs and clear governance (ensuring proper pitch and capture of feedback) to drive beneficial outcomes. Pricing is also emerging

as a valuable corporate-banking analytics use case; insights on the “optimal deal strike price,” coupled with tight governance of the front line, can deliver significant upside on the yield income of the division.

D1 c

Leverage combination of relationship and technology

### D1. (c) Leverage a combination of relationship management and technology to deepen mass affluent and upper-mass market wallet share

#### Affluent and emerging-mass affluent segments are expected to drive the growth in wealth management AUMs with rising wealth and improving penetration levels

Wealth management services in India have been primarily limited to high-net-worth individuals (HNIs) and the upper end of the affluent segments, who have been provided with dedicated RMs and differentiated private branch access, with wealth management penetration for these segments at 40 to 50 percent. However, with the rising middle-class population in India, the next set of growth is likely to come from mid-affluent and emerging affluent segments, whose financial wealth is likely to grow 13 to 15 percent annually by fiscal year 2027. The wealth management penetration

is expected to be around 33 percent around 23 percent respectively (Exhibit 39).

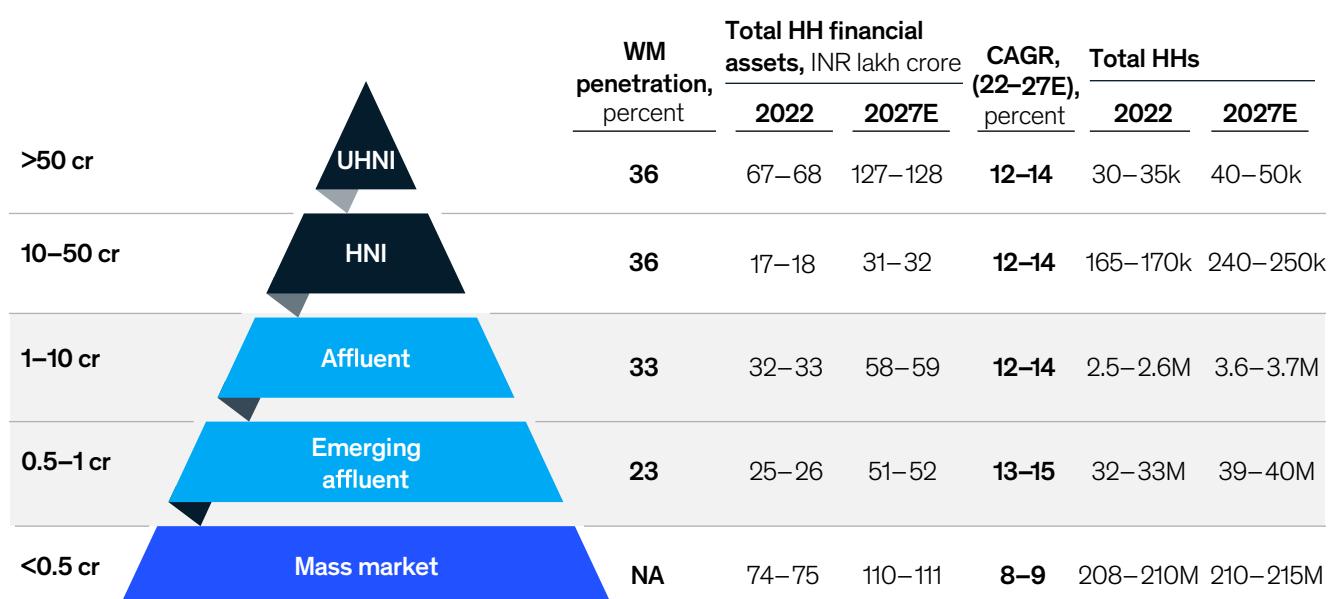
#### Banks would require operating shifts across their distribution channels, capabilities, and partnership models to tap the emerging affluent customers

With increasing digital penetration and the availability of higher amounts of data on consumers' income, expenses, and wealth, there is now an opportunity for Indian banks to democratize wealth management for the fast-growing mass-affluent segment by leveraging the virtual RM channel, supplemented by digital self-serve channels and partnerships (Exhibit 40).

Exhibit 39

**The affluent segment is expected to drive growth in wealth management services faster than others due to rising penetration.**

Segmentation based on financial wealth, INR



Source: "Global banking pools," McKinsey 2023; India PFA (Liquid onshore), HHs.

D1 c

Leverage combination of relationship and technology

Exhibit 40

## Operating shifts required to tap the emerging affluent and mass market customers.

	Channel—introduce VRMs	<ul style="list-style-type: none"> <li>Introduce the virtual RM channel for customized offerings to the affluent and mass-affluent customers</li> <li>Hire investment and product specialists to support VRMs</li> <li>Revamp organization structure with a distributed model to capture regional nuances and customize the experience</li> </ul>
	Capabilities—develop digital wealth offerings	<ul style="list-style-type: none"> <li>Develop digital tools for wealth management offerings (eg, risk profiler, asset-allocation model, portfolio analytics tools, taxation tools)</li> <li>Drive analytics for customer engagement</li> <li>Develop self-serve channels through website, mobile application, social media, etc, to reduce dependence on RMs/branch</li> </ul>
	Partnerships—collaborate to improve customer experience	<ul style="list-style-type: none"> <li>Partner with modern wealth techs to co-develop personal finance management and robo-advisory services</li> <li>Provide value-added services like estate planning, succession planning, and wills creation through partnerships with law firms</li> </ul>

### **Virtual RMs for affluent and emerging affluent customers can deliver on both efficiency and experience measures**

Using virtual RMs, banks can build meaningful customer relationships and increase relationship value through cross-selling. Most corporate salary customers have adapted to mobile and netbanking and do not prefer to visit branches unless required—while many of them admit that they would prefer to have a relationship manager who is a phone call away and who could enable digital transactions for them. Many banks have scaled up or are in the process of setting up the virtual relationship manager (VRM) channels. There are some best practices to incorporate:

- Equal emphasis to be given to relationship management and technology—not an “either/or”; the tech platform must enable first-time connectivity, easy conversational access, and ability to fulfill transactions over the phone (co-browsing or OTP-based fulfillment for non-complex processes); at the same time, RM training focusing on conversational fluency and empathy are key to ensure that customer engagement is beyond transactional in nature.
- VRMs’ processes can be backed with strong SOPs, but build in flexibility to deliver “offline-like” comfort (deviation-based waivers, taking nonstandard banking requests, and coordinating with physical channels to fulfill demand).

— VRM assignment could capture regional nuances and customize experiences based on the previous interactions (that is, the calling scripts and systems must reflect past interaction history, most frequent requests, any important milestones coming up, and the right next-best actions and services).

- Time spent with customer may not always provide the right interventions—quality of time spent with customer can be continuously monitored and measured.
- Virtual relationship management provides an ideal test bed for conversational AI and generative AI—continuously experiment to deliver the right leverage to the VRMs and at the same time ensure predictive customer service is delivered.

### **Strong self-serve digital wealth management features can provide valuable engagement and insights; may need to build everything on your own**

By leveraging robo-advisory and personal financial management tools along with virtual RMs, banks can provide affordable and accessible investment solutions that cater to the specific needs of individual customers. Consider the following eight critical elements to deliver a fully digitized wealth advisory experience for customers:

D1 c

Leverage combination of relationship and technology

- **Detailed risk profiler** that can categorize customers based on their investment appetite and goals.
- **Goal-based investing tools** where investment goals are defined, such as buying a house or saving for retirement.
- **Asset allocation models** that specify the right asset mix for each possible combination of risk profile and goal.
- **Curated selection of specific financial products**, such as mutual funds, equities, and gold, to be included in the model portfolios via a research team.
- **Portfolio analytics tools** that enable automation logic for each model portfolio and

customer and tracking tools for relationship managers.

- **Auto-rebalancing tools** based on market movement, goals or life-stage changes, or life events.
- **Taxation tools**, including tax loss harvesting features and auto-computation of taxation on capital gains for customers.
- **Customer education** programs and dissemination of information via online and offline channels.

Banks may not need to build the entire stack of capabilities on their own. Multiple opportunities exist to leverage the wealth tech and personal finance management ecosystem to deliver an enhanced experience to the segment.

## D2. Horizontal capabilities to optimize productivity and operational efficiency

AI (generative or otherwise) is at the cusp of creating a new revolution in banking; multiple use cases are being experimented upon and scaled up for production. Further, a reimagining of operations driven by “zero-ops” can help reduce human

intervention in several areas, especially with repeatable, rules-based processes such as KYC, AML, routine customer service requests, and even some credit decisioning activities.

D2 a

Developing full-stack AI

### D2. (a) Developing full-stack AI (generative or otherwise) capabilities

#### While banks recognize the potential benefits of integrating AI, critical enablers are yet to be put in place

Many banks have begun their journey toward integrating AI into their operating models across marketing and sales activities, as well as fraud and risk management practices. However, despite investing significantly in AI-driven transformations, banks have met with limited success in diffusing AI through their operations due to the lack of a clear AI strategy. Some key challenges are as follows:

- **Fragmented data landscape:** Within the legacy systems of most banks, customer data has been fragmented at a product level, with limited cross-utilization by other teams. Further, data quality has also been low, as customer engagement was largely driven manually and was dependent on traditional sources such as credit bureaus.
- **Undervalued role of analytics talent:** Analytics applications have typically been narrow, focused on specific use cases, primarily due to fragmented data availability. Hence, analytics talent has also developed

in silos, and is not well integrated with business or operations teams, limiting their effectiveness. Banks often rely on third-party providers for critical functionalities instead of developing in-house talent to create differentiation and competitive advantages.

- **Lack of enabling infrastructure:** While core technology systems perform well on stability, they often lack the capacity and flexibility needed to support variable computing requirements, data processing needs, and real-time analysis required by closed-loop AI applications. Most banks also lack a robust set of tools and standardized processes to build, test, deploy, and monitor models in a repeatable, at-scale manner. Finally, the last-mile pipeline to downstream systems (for example, CRM, LOS) remains broken or manual—diluting the analytics experience for the front line.
- **Limited focus on end-user adoption and interpretability:** Business and operations teams in banks today often have a limited understanding of data and analytics applications, and they tend to define goals



unilaterally, which may not be consistently aligned with the organization's overall analytics strategy. Further, decisions and output from analytics applications are not always clear to end users, exacerbating adoption issues.

### **Generative AI has been around for a while but only gained traction in the banking sector in 2023**

While generative AI has been present for a considerable duration with numerous advancements occurring since 2017, several companies across various industries have begun integrating generative AI with the aim of attaining a prominent market position. The banking sector has witnessed significant acceleration in the utilization and development of generative AI in 2023. Within the banking industry, organizations are adopting generative AI across diverse horizons; some entities employ generative AI to enhance targeted productivity (for example, South State Correspondent), while others are undergoing substantial business transformations (for example, Bloomberg).

Contrary to popular belief, the realm of generative AI extends far beyond the scope of ChatGPT alone. A plethora of specialized tools exists, catering to different contexts such as voice, video, images, and code, thereby causing disruptions across various business models and occupational domains. For instance, tools such as StyleGAN enable the creation of high-resolution images, while models such as Jukedeck and MuseNet possess the ability to generate original music.

### **Extracting value from generative AI will require multiple pieces to come together**

Value from generative AI requires much more than the underlying foundational models. The pre- and post-model capabilities can drive multiples of impact through query engineering, data engineering, teaching, and change management. This requires leveraging a full business system approach supported by a culture of experimentation. To successfully scale generative AI, banks will need to look at all dimensions including strategy, talent, operating model, and so forth. Those who act quickly would create competitive distance from their peers with capabilities that can't be obtained "off the shelf."

**To effectively leverage the potential of AI and ML, banks would need to create a comprehensive and robust AI strategy (including an infrastructure and adoption charter)**

An integrated AI strategy would involve three key elements:

- Define a clear use-case road map that can best leverage AI and ML capabilities
- Enable large-scale feature engineering with data engineering, governance, and tooling
- Define KPIs for success, and drive adoption through interpretable AI

### **Define potential use cases to be developed**

The advancements in AI and analytics have presented banks with a wide range of use cases across customer experience improvement and process optimization, with a potential impact of \$1 trillion globally (Exhibit 41).<sup>48</sup> Functionally, the highest value drivers include marketing and sales (61 percent) and risk (36 percent), followed by other administrative functions such as finance and HR.

### **Four types of use cases are gaining momentum in the banking sector**

Generative AI is uniquely able to handle insight extraction by rapidly searching through large texts to extract relevant answers, content generation by swiftly developing complex documents and messages tailored to specific context, and user interaction through "out of box" humanlike conversational ability. This has led to four priority use cases of generative AI in the banking sector (Exhibit 41).

- **RM or VRM co-pilot:** Banks can move away from the current, highly RM-dependent model to generative AI-based virtual advisors who summarize unstructured customer demand and behavior at scale, understand the customers' needs and provide insightful suggestions, and compare product terms and recommend the best fit. This would help uplift the leads-to-sales conversion rate and drive up-selling and cross-selling ratios through continuous customer engagement.
- **Coding:** Banks could enhance their tech delivery capability by interpreting, translating, and generating code with generative AI as co-pilot, which can increase developer

<sup>48</sup> Ibid.

Exhibit 41

## We see four domains where generative AI can transform the banking industry.

Prioritized use case	Future state: What could this look like?
 RM/VRM co-pilot	Empower your front line with generative AI-based “professional advisors” for better sales performance, by building customer relationships through more effective conversations and product recommendations
 Coding	Enhance your tech delivery capability by interpreting, translating, and generating code with gen AI as co-pilot
 Operations	Introduce more effective and efficient working process in underwriting, claim management, fraud detection, risk analytics, and legal documents and disclosure drafts and reviews
 Customer engagement	Engage customers with personalized content, which increases productivity and reduces risk from content moderation failures

Source: “AI-bank of the future: Can banks meet the challenge?,” McKinsey, September 19, 2020

productivity when properly integrated into workflows. In an internal McKinsey-run experiment, engineering productivity went up by 40 to 50 percent while maintaining the quality of code and engineering experience.

- **Operations:** Banks could use generative AI to introduce a more effective and efficient working processes in underwriting, claim management, fraud detection, risk analytics, and legal documents and disclosure drafts and reviews. For example, conversational AI tools could be used for customer onboarding, query resolution, and call-center personnel replacement.
- **Customer engagement:** Generative AI can be used to engage customers with personalized content, which increases productivity and reduces risk from content moderation failures. These tools can be used to auto-generate text content for each customer based on nuanced prompts, create personalized visuals and images based on customer profiles, and generate video content based on customer life stage and preferences.

### Integrated data management strategy and governance practices could ensure the full potential of AI is realized

**Integrated data management strategy:** A strong data foundation is a key element of an integrated AI architecture. Banks should ensure that the data management practices are in place or are taking place in parallel to the scale-up of AI teams and models. Further, the platforms should be accessible to multiple teams and augment internal data with externally sourced data to form a single source of truth.

**Enabled infrastructure setup:** Three layers built on the data platform can drive the AI engine (Exhibit 42):

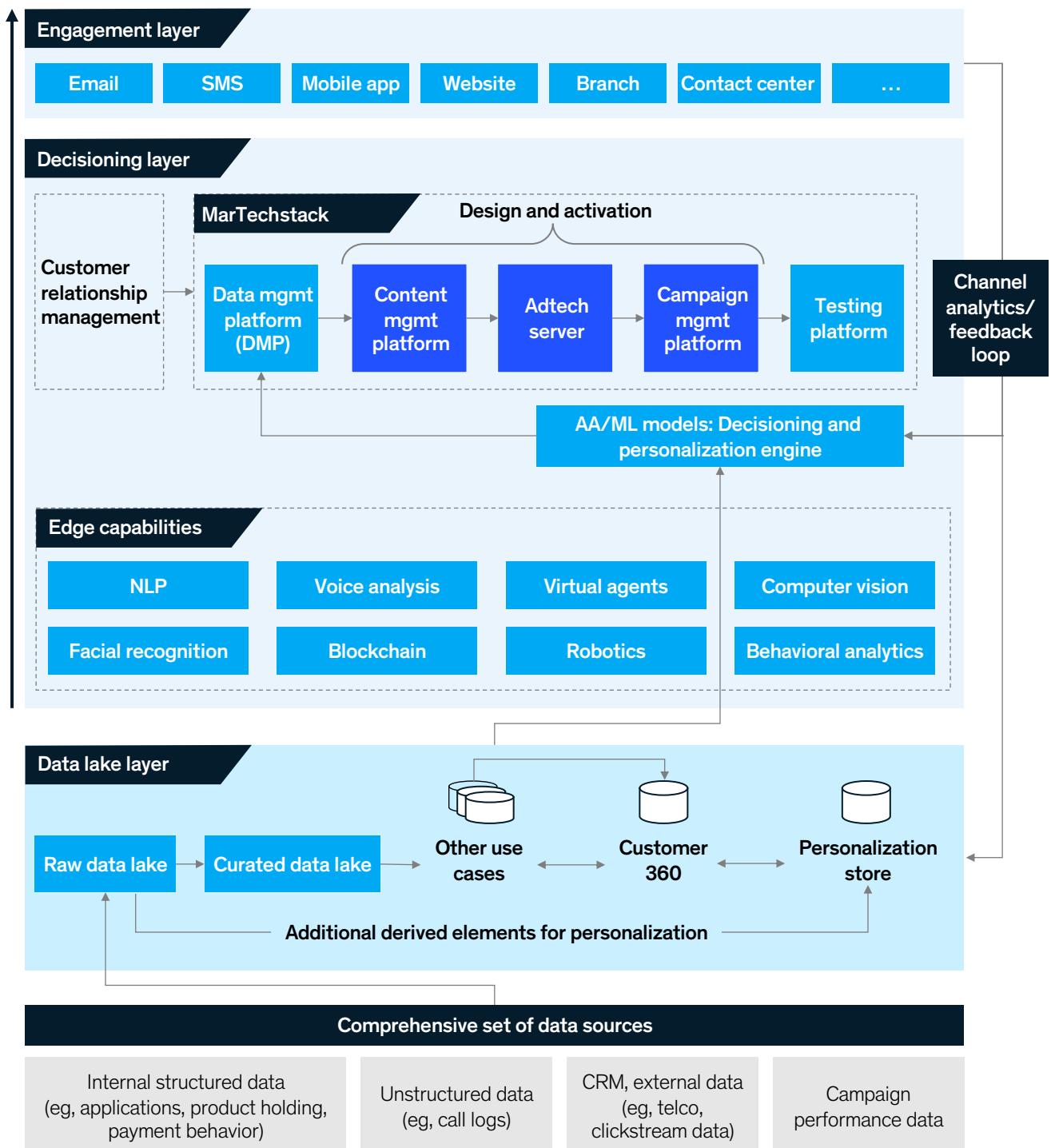
- **Data lake layer:** Forms the foundation of the AI model, utilizing comprehensive data sources to drive personalization and 360-degree understanding of customer behavior
- **Decisioning layer:** AI and ML engines drawing on data from the data lake layer as well as feedback loops from continuing customer interactions

D2 a

Developing  
full-stack AI

Exhibit 42

## Enabling AI/ML integration requires full-stack capabilities.



D2

a  
Developing full-stack AI

- **Engagement layer:** Omnichannel communications and marketing strategies designed to ensure that customers have a uniform experience across all channels of engagement (email, SMS, mobile apps, website, branch and contact center)

End-to-end integration of the three layers can help banks implement a data-driven approach across the organization, with real-time insights generated by automated back-end ML-ops models fed seamlessly into downstream applications (CRMs, marketing dashboards, etcetera), enabling front-end teams to better engage and convert customers.

**Drive adoption using a combination of relevant KPIs and interpretable AI models enabled by generative AI**

**AI deployment with well-defined KPIs:** Banks have seen increasing success by creating cross-functional teams to deploy analytical solutions (business, products, credit, marketing, analytics, operations, and technology). This helps align objectives and drive real business traction on the ground. Once use cases are tested and viability is established in these teams, their role is to develop the MVP into an at-scale solution. Adopting such a cross-functional lab and factory approach would require a combination of talent, rapid feedback on the ground back to the operating teams, and an ability to measure impact in short weekly cycles rather than months. If defined well, interlinking

KPIs for success can drive multiplicative benefits on the ground.

**Generative AI has the potential to create real-time interpretable decisioning models, leading to widespread adoption of well-built models**

Banks can potentially utilize generative AI to drive efficiencies in customer servicing and marketing activities and build in interpretability, whereby end users will have clarity around how decisions are made by the model. While foundational large language models (LLMs) are built over publicly available data, they will need to be tailored to the bank's needs. Therefore, banks would need to invest time and effort in two areas:

- Training foundational LLMs on the bank's proprietary data, design language, and tone of communication to ensure outputs are in line with internal policies and rules
- Developing the right workflows and products to leverage the AI output in a manner that is understandable by human users and repeatable at scale

However, banks should also be aware of the associated risks. Generative AIs are sometimes known to "hallucinate"—that is, confidently share inaccurate information, with no mechanism to flag this to the user or challenge the output. Similarly, some responses from user testing have indicated biases inherent in the foundational LLMs. Hence, banks should build appropriate guardrails before deploying generative AI at scale.

D2

b  
Zero-ops capabilities

## D2. (b) Zero-ops capabilities to drive lower operational complexity

**Banking operations functions are undergoing a silent but sure transformation**

Operations today form up to 15 to 20 percent of bank budgets and are labor intensive, necessitating the adoption of AI or ML, automation, and other technology tools to reduce complexity and drive efficiency. A redesigned ops function can lead to automation of around 75 to 80 percent of transactional operations and around 40 percent of strategic activities, thereby achieving a significant reduction in workforce, as well as a shift in skills toward personalized AI-enabled advice, problem solving, and product ownership.

Many traditional banks are still in the early stages of modernizing their operational processes, while leading banks and digital natives have made

strong progress. A successful ops transformation can potentially drive significant reduction in the cost to serve, as well as improve responsiveness to customer needs.

Banks may want to consider the following design principles as they build zero-ops capabilities:

**Zero-based design approach to journey building**

Banks can create a frequent cadence of "zero-based process review" to continuously redesign ops processes and identify journeys that can be eliminated, as well as evaluate the digitization potential of activities that remain. This process helps create a continuous product backlog of improvement that, rolled up at the bank level, becomes the "zero-ops transformation road



Zero-ops capabilities

map." While the process to run the zero-ops transformation is nuanced, three traditional principles lie at the heart of it:

- **Elimination** of unnecessary steps and minimizing handovers by reducing intermediaries
- **Migration** from physical documentation to digital data pulls and uploads, and changes in service channels from physical to digital platforms across video and voice
- **Automation** by prefilling text forms, providing real-time updates, and driving STP (straight-through processing) through decisioning engines

### **Leveraging conversational AI across use cases**

Adoption of self-care channels such as virtual assistants and IVR has traditionally been low, due to relatively poor customer experience. The advent of sophisticated generative AI applications has opened new possibilities for banks to improve their conversational bots. By leveraging NLP capabilities, banks can create bots that can understand and respond to customer queries in a more natural and engaging way (Exhibit 43). This also frees up collections and services staff to focus on more complex, value-added activities.

### **Drive smart operations using modern tech**

Banks can leverage OCR and RPA to run repeatable but time-consuming processes in a

more efficient manner, improving accuracy and processing time. Further, banks can also invest in edge capabilities such as facial recognition, speech analytics, and blockchain to drive critical functions such as KYC and AML checks. Behavioral analytics are another capability that can enable a more in-depth understanding of customer preferences, creating a personalized approach to customer service.

### **Real-time measurement and decisioning nerve centers**

As banks shift further toward zero-ops, it is critical to build centralized monitoring capabilities to ensure real-time availability and reliability of integral systems. Continuous tracking via automated dashboards will help banks minimize service downtime, as well as reduce the likelihood of breaches in key operating or risk-related KPIs.

### **Significant effort required to move to a zero-ops mindset, but gains are worthwhile**

A distinctive service-ops structure has clear benefits across cost-to-serve and productivity metrics—as well as maximizes the value of every customer interaction. Investing in an ops transformation will be critical to ensuring that banks can build a robust operating model that is more efficient, highly accurate, scalable, and resilient in the face of increasing competition and scrutiny.

D2 b

Zero-ops capabilities

Exhibit 43

## More than 300 conversational AI use cases detailed across six key themes.

Preliminary      Illustrative

					
Servicing and FAQs	Transactions	Onboarding and cross-sell	Collection	Advisory	Knowledge repository and MIS
<b>Use cases</b> ~225	<b>~60</b>	<b>20</b>	<b>7</b>	<b>25</b>	<b>25</b>
Customer-specific requests/inquiries across liability, lending products (eg, statement download, credit card block/un-block, EMI hold-back, rewards balance) <b>(~200 use cases)</b>	Assist customer in carrying out transactions across P2P, P2M EMI, eg, UPI, IMPS, utility bills <b>(~50 use cases)</b>	Assist ETB and NTB customer(s) with end-to-end onboarding journeys, eg, savings account, preapproved personal loans, SIP, etc <b>(15 use cases)</b>	Remind customers of payment of upcoming bills, EMI, premiums <b>(2 use cases)</b>	Provide step-by-step investment guidance based on a holistic assessment of customer profile, eg, risk profile-based portfolio management, goal-based investment	Automate key back-end banking operations, content, and MIS report generation, eg, business reports at circle, network, branch level <b>(15 use cases)</b>
Product and service-related general information (FAQs), eg, interest rate on loans, deposits, branch/ATM location <b>(~25 use cases)</b>	Assist customer in self-managing accounts, eg fund PPF, schedule payments, manage SI, etc <b>(~10 use cases)</b>	Hyper-personalized offers for a cross- or up-sell, eg, nudges for preapproved loans, next best product <b>(5 use cases)</b>	Make proactive outreach to defaulting customers for overdue payments, assist repayments, or record promises to pay <b>(5 use cases)</b>		Empower employees with key info on product features, policies, and regulations, eg, scheme details, changes in regulation <b>(~10 use cases)</b>

Conventional AI to be available **across banking channels—app and web for customer self-service, for branch and agent assist and third-party channels, eg, WhatsApp, social media**

Use cases to be built across various modes of **chat, voice, and video** based on propensity of usage and effectiveness

AI platform to form the foundation for advanced generative AI use cases such as coding assist, underwriting report generation that may be introduced in the future

D3

Partnerships:  
Leveraging  
co-lending  
and fintech

### D3. Partnerships: Leveraging co-lending and fintech partnerships to drive scale

#### Scaling up co-lending and fintech partnerships can help banks extend beyond traditional channels, deepen engagement, and reduce operating costs

Indian banks have a unique opportunity to shape a vibrant partnership ecosystem by combining complementary strengths and partnering with NBFCs, fintechs, and other ecosystem players to achieve scale and streamline their costs (Exhibit 44).

While banks have a good physical reach through their networks, a large base of customers and their trust, and a brand built over time, fintechs and NBFCs, on the other hand, have deep distribution in select pockets and technology stacks that are more modern compared to banking cores. There is a natural case to partner and collaborate—which is being enabled via multiple models.

i. **Co-lending:** This model, which is unique to India, was originally introduced by RBI in 2018 and later amended in 2020 to push the lending to unserved and underserved segments at an affordable cost.<sup>49</sup> Under this arrangement, RBI mandates NBFCs to retain a minimum of 20 percent exposure to the loan and allows the NBFC to be the customer-facing entity. A key factor that has given a fillip to co-lending is the rise in interest rates, which has led to a surge in cost of funds for NBFCs. This makes co-lending a viable way for NBFCs to offer competitive interest rates and partially mitigate increases in benchmark rates. More than 40 co-lending arrangements have been announced over the past few years, with the co-lending portfolio of PSBs pegged at INR 25,414 crore (as of the third quarter of FY 2023).<sup>50</sup>

<sup>49</sup> "Co-origination of loans by banks and NBFCs for lending to priority sector," RIB, September 21, 2018.

<sup>50</sup> Co-lending volumes, April 2023.

Exhibit 44

#### Banks could look at scaling up growth partnerships to improve reach and scale of operations.

	 Co-lending	 Partnerships with other FS entities	 Participation in customer ecosystems
<b>Objective</b>	<ul style="list-style-type: none"> <li>Partnership with NBFCs (with better reach) to <b>jointly provide loans to customers</b>, especially unserved or underserved segments at affordable rates</li> </ul>	<ul style="list-style-type: none"> <li>Partnering with other financial services entities like fintechs enables <b>banks to reach customers</b> without having to invest in their own distribution channels; other use cases include building tech infra, modern underwriting models, etc</li> </ul>	<ul style="list-style-type: none"> <li>Ecosystem partnerships allow banks to address critical customer pain points with tailored solutions</li> </ul>
<b>Pain points</b>	<ul style="list-style-type: none"> <li>Limited traction due to lack of uniform co-lending tech platforms and conflicting credit assessment methods</li> </ul>	<ul style="list-style-type: none"> <li>Data sharing, first loss default guarantee (FLDG) agreements for loan sourcing and credit remain a challenge</li> </ul>	<ul style="list-style-type: none"> <li>Many banks have experimented with an ecosystem strategy, but few have found the way to distinctive value creation</li> </ul>
<b>Structural solutions</b>	<ul style="list-style-type: none"> <li>Joint creation of underwriting and credit assessment methodologies</li> <li>Streamlining IT integration through creation of standardized loan templates</li> </ul>	<ul style="list-style-type: none"> <li>Rethink operating models to ensure smoother data transfer and creation of alternate risk-sharing agreements</li> </ul>	<ul style="list-style-type: none"> <li>Build capabilities around product management, campaign analytics, underwriting using platform data, etc</li> <li>Build adjacent, digital product/service offering to help capture new customers and maximize core business revenues</li> </ul>

D3

Partnerships:  
Leveraging  
co-lending  
and fintech

While co-lending is expected to grow by three to four times in FY 2024, execution remains a challenge due to complexities around tech integration, product-norms harmonization in respective loan management systems, and converging to a “common underwriting policy.” While continuous improvement and scale-up is expected, there is a need for industry participants to come together and create industry-wide protocols and enable creation of entities that could act as “integrators”—that is, provide the suite of APIs and microservices that could bridge the technology and product differences seamlessly across players.

### ii. Partnerships with other financial services

**players:** Fintechs have a strong presence in digital channels with their technology-driven understanding of customers. Therefore, partnerships with fintechs are becoming increasingly crucial for banks to innovate internally and for the customer. These partnerships help in increasing the customer base without having to incur large marketing spends and aid in entering niche segments where banks may not have a strong presence. Partnerships with fintech companies can ramp up banks’ adoption of digital capabilities without overhauling the legacy systems. These fintechs are helping banks to build modern underwriting models that use alternate data sources and APIs to cut down the loan approval turnaround time, and giveing behavioral insights for a better understanding of customer needs.

While there are many benefits to fintech partnerships, challenges remain around data security and ownership and the evolving regulatory stance on FLDG arrangements.<sup>51</sup> Banks will need to build robust data management platforms where fintechs can integrate while retaining control of customer data in line with data privacy norms. Banks can also strengthen the monitoring of partner-sourced portfolios.

### iii. Participation in broader consumer

**platforms:** Establishing ecosystem partnerships can help banks save on customer acquisition costs, obtain highly accurate customer information ranging from logistics to behavioral data, and enhance customer relationships and retention. For Indian banks, an ecosystem play would allow them to maintain competitive business positions and withstand challenges from digital rivals—particularly by preventing customers

from switching to competitors. To achieve this, they will need to build capabilities around product management, improve the ability to customize platform-specific campaigns and products and tweak the underwriting process to incorporate the platform’s data, etcetera. They must also consider strategies around product offerings, customer management, middle- and back-office issues, talent recruiting, technology, advanced analytics, and performance management.

### How to leverage the partnership model to grow at scale

Most banks understand the importance of having a clear strategic rationale and a robust governance model to oversee the partnership. It is also essential to establish teams responsible for setting up partnerships and adapting the technology infrastructure to support the efficient and speedy launch of the partnership.

— **Setting up dedicated teams focused on establishing partnerships:** These teams constantly scan the market for potential partners and assess their relevance to the institution’s growth strategy. They engage effectively with a broad range of nonbank partners—beginning with a review of differences in culture and technology—and gauge the flexibility required to align with the partners’ ways of working to enable faster, smoother, and more productive collaboration. Typically, an organization that is able to create joint product and marketing teams with the partner, with an upfront test-and-learn arrangement on credit policy, has seen more scale and success.

### — Making the technology infrastructure

**partner-friendly:** The success of these partnerships significantly relies on API contracts and identifying the functionalities that can be developed to meet the partner’s requirements. Another crucial step is building layers that decouple core system dependencies and enable faster integration with partner platforms. This includes creating sandbox environments to enable rapid experimentation, proof-of-concept trials, and modern data-sharing and storage options compatible with the partner’s data stack. The role of industry-wide intermediaries shaping the API product landscape could be beneficial for the collaboration ecosystem.

<sup>51</sup> FLDG =First loss default guarantee, a risk management mechanism whereby the fintech partner agrees to compensate the bank for certain percentage of default in a loan portfolio.

D4

Driving customer experience

## D4. Driving customer experience through personalization

### Despite their inherent strengths, banks have been relatively slow to adopt personalization

Over the past decade, digital-led businesses have been built on benchmark experiences enabled by personalization at scale and a deep understanding of customer needs and preferences. These players have spent years building customer data, driving engagement, and creating the technology backbone to deliver these experiences. Given this backdrop, banks have been relatively slow to adopt personalization, especially given their extant strengths, including the following:

- **Strong data foundation:** Access to deep internal data based on customer transactions, coupled with structured external data from credit bureaus.
- **Deep engagement:** Banks with strong relationship-management capabilities have deep insights around customer needs, financial goals, and spending behavior.
- **Trust-based relationships:** Based on long-term relationships and backed by regulations, customers consider banks to be trustworthy and willingly share financial data.

— **Mature data capabilities:** Banks already leverage significant amounts of data to drive lending decisions, and a large proportion of them have also created digital journeys for their asset and liability products, creating a model apt for personalization.

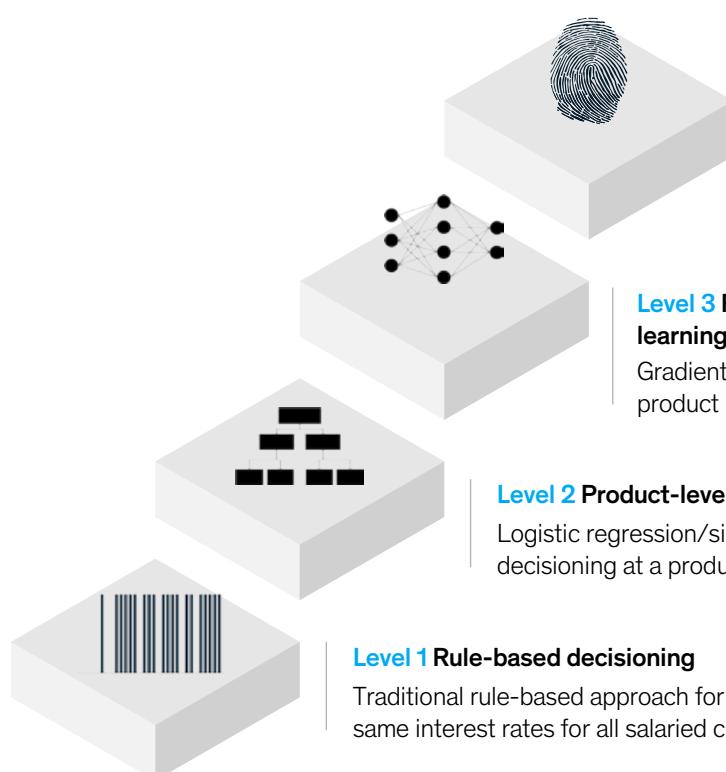
### Integrating personalization requires tools that enable customer-level decisioning

As banks evolve and integrate personalization across marketing, underwriting, and pricing, the end goal can be to achieve  $n=1$  personalization at the customer level (Exhibit 45).

A customer-level approach and a unified approach tailored to the specific customer rather than product-centric approaches operating in silos can drive dynamic decision-making (Exhibit 46). This can help banks retain high-quality customers and cross-sell relevant products while enabling them to appropriately price riskier customers and decide the level of exposure they are comfortable with. Banks that have begun implementation along these lines are seeing higher conversions on targeted cross-sell and an increase in ticket sizes.

Exhibit 45

### Financial institutions typically evolve across four levels of decisioning.



#### Level 4 Dynamic customer-level decisioning

Decisioning at customer level irrespective of product being purchased using complex array of underlying feature modules

#### Level 3 Product-level decisioning using complex machine learning techniques

Gradient boosting/deep learning-based decisioning at product level using thousands of parameters

#### Level 2 Product-level decision-making decision trees

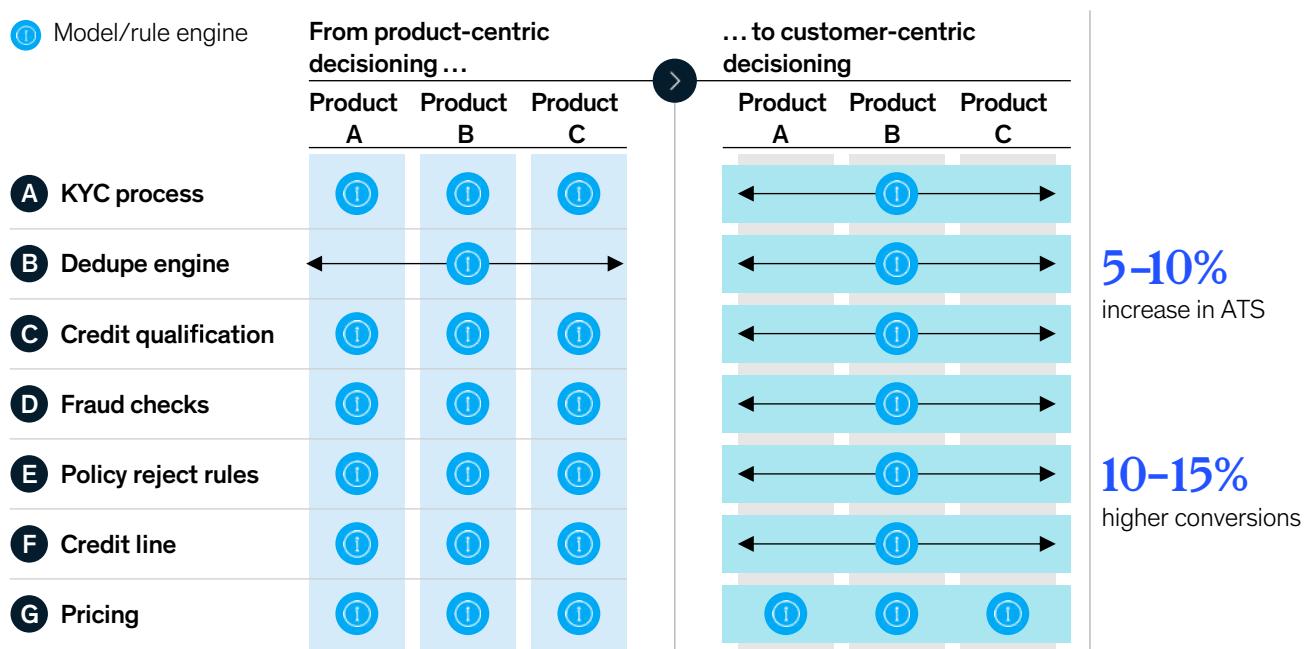
Logistic regression/single-decision tree-based approach for decisioning at a product level using few parameters

#### Level 1 Rule-based decisioning

Traditional rule-based approach for decisioning, eg, bureau score  $>750$ ; same interest rates for all salaried customers

Exhibit 46

**Moving toward level four would entail making most credit decisions at the customer level, rather than the product level.**



An emerging use case for personalization is pricing decisions, with the potential to drive higher conversions through risk-appropriate pricing rather than relying on rules of thumb or credit-score-based decisions. To develop this use case, six key capabilities need to be built (Exhibit 47).

**Key themes to consider while implementing personalization**

**i. Analytics framework cannot be limited to propensity models:** Driven by a product-centric approach, banks have designed their analytical models to drive cross-sell or up-sell based on product-propensity models, resulting in the same customer often being targeted with generic offers for multiple products. Personalization can add nuance to the question of "who to target" and can build higher conversion through the following capabilities:

- exhaustive analytical framework incorporating multiple elements—segmentation, triggers, channel, and timing optimization
- next-best-action framework to comprehensively personalize interactions

- continuous learning models taking customer fatigue and feedback into account

- close integration with A/B testing to learn from "look-alike" customers

**ii. Interpretable AI to effectively leverage front-line staff:** Bank employees regularly interact with clients and can augment data analytics to provide a truly personalized experience. However, AI models have usually been a black box, leading to employees disregarding or not engaging with the models' suggestions altogether. Recent advances in interpretable AI make it possible to program the model to generate a transcript and explain its rationale for suggestions, thereby driving higher employee engagement. Employees can also provide feedback for these AI-generated suggestions, allowing the model to be trained and improved on live customer feedback.

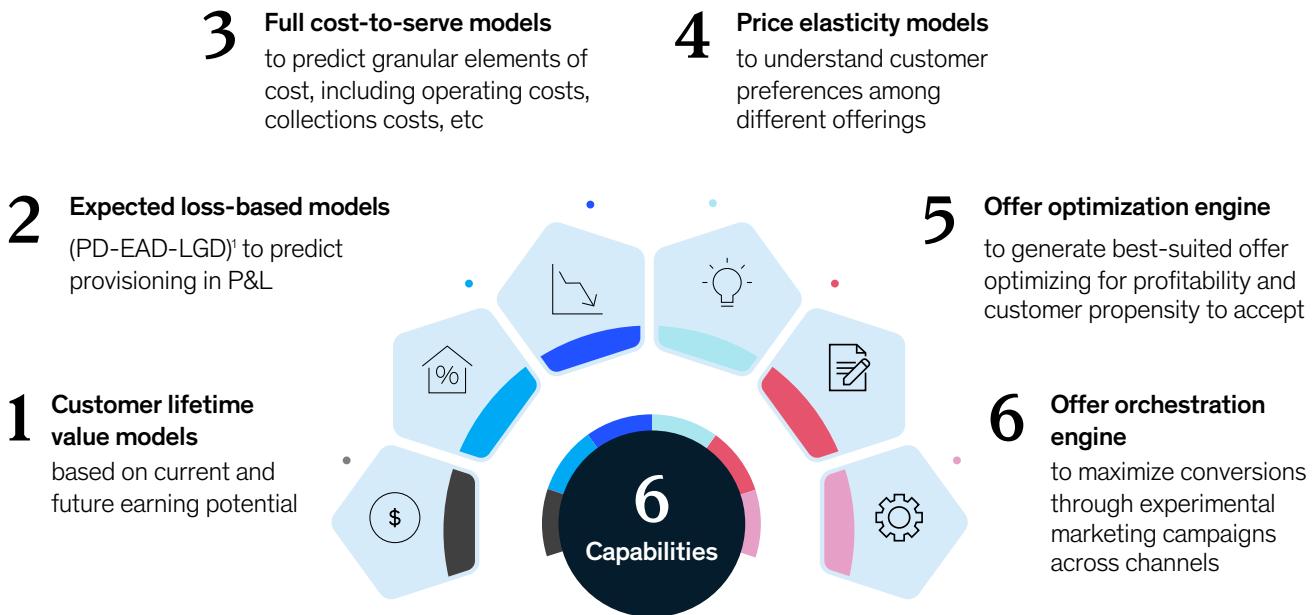
**iii. Build engagement:** Not every interaction is about a sale. Personalization efforts from banks tend to focus on near-term goals while also missing an engagement layer. AI can help

D4

Driving customer experience

Exhibit 47

## Six capabilities required to deliver n=1 personalized pricing decisions.



<sup>1</sup> PD, probability of default; EAD, exposure at default; LGD, loss given default

banks identify customers that require a longer horizon for decision-making and help staff nurture the relationship to ensure better conversion. Additionally, building an engagement layer will help banks go beyond sales-oriented interactions and move toward customer education and personalized financial advice.

**iv. Invest in industrialized capabilities:** Despite strong data capabilities, banks have significantly underinvested in the following areas:

- ability to handle external or unstructured data
- integrating ML ops to drive at-scale delivery and execution of ML models
- MarTech automation stack, leaving significant gaps in knowledge of customers
- limited specialization in the data and analytics organization roles—shortage of ML engineers and scrum masters

**v. Augment known data with structured experimentation:** While the personalization framework of most banks relies on information

already shared by customers, there can be significant gaps as not all customers are highly engaged with the bank. Further, customers may not convey their preferences directly, with banks having to discover them through interactions. Even after understanding the need, discovering the right channel, time, and content to communicate is critical. To drive better engagement, a structured experimentation approach can help, described as follows:

- Divide the customer base into homogenous behavior-based segments and identify cohort traits.
- Based on segments and traits, identify a prioritized list of dimensions to experiment (product, price, content, channel).
- Generate a list of campaign ideas for each dimension and iteratively test each segment.
- Based on outcomes, identify dominant tests (by segment) and scale up across look-alike customers.

D5

Digital- and  
analytics-led  
collections

## D5. Digital- and analytics-led collections to help shift to ‘assistance’ mindset

### There is a need for an evolved model for collections

Bank customers today are becoming increasingly digital, interacting with their bank across multiple channels and platforms. As banks reimagine their engagement with customers, a digitally-driven collections model can deliver significant value for the bank. Further, bank collections teams need to shift to a “customer-assistance” mindset to better engage with clients and ensure that the loan servicing experience is consistent with the deep personalization and engagement across other banking relationships. Banks that have implemented a digital customer service model have seen an increase up to five times in customer engagement, while reducing collections costs by 15 percent and nonperforming loans by 20 to 25 percent.

The digitization of collections is driven by several external factors. The rise in the repo rate has led to an increase in the overall cost of funds, resulting in substantial pressure on margins and return ratios. The competitive landscape has intensified with the emergence of neobanks and fintech players, compelling banks to build digital journeys for their customers. Additionally, regulators and market commentators have been closely monitoring banks’ efforts to prevent and mitigate nonperforming loans, especially after the recent

cleanup of bad loans in PSBs. The RBI has issued guidelines, including the Fair Practices Code, to address this issue, and has taken action against multiple institutions for using coercive collection practices in the past couple of years.<sup>52</sup>

### Key building blocks for a ‘customer-first’ service model

As banks begin to rebuild their service models, there are five key imperatives to consider (Exhibit 48).

#### i. Cultural shift to ‘true customer assistance’:

The first step would be a cultural shift away from a “recovery” mindset to a “true customer-assistance” model. There is a need to “think like a marketer,” with a focus on building a lasting relationship with the customer and co-creating a workable plan for resolution. Use of data-driven, smart-collection techniques could also help mitigate conduct risk and utilize light-touch interactions to achieve similar or better outcomes.

#### ii. Digital-first journeys and personalization:

With more than 10 percent of overall customers and more than 25 percent of millennials—stating that they are likely to engage with their bank primarily via digital means going forward, it is critical to create personalized, digital-first journeys for loan servicing. A digital-first service model will look drastically different from

<sup>52</sup> “Master Circular—Fair Practices Code,” RBI, July 1, 2015.

Exhibit 48

### Key imperatives for banks to maximize value creation in customer assistance.

				
<b>Culture shift to ‘true customer assistance’ vs just collections</b>	<b>Digital-first customer solutions for personalized engagement</b>	<b>Analytics-driven intelligence and decision making</b>	<b>Integrated, full-stack technology enablement</b>	<b>Agile execution at scale, embedding modern talent</b>
Strategic and cultural shift in the institution from traditional collections to customer assistance and smart debt resolution	Personalized treatment at scale with intuitive, seamless, end-to-end digital journeys  Hybrid human-machine customer engagement for standardization and seamless experience	From one-size-fits-all strategy to customer segmentation through advanced analytics and tailored treatment for each segment (across self-cure, self-serve, assisted)	From siloed systems and manual processes to fully integrated tech stack with front-line app and core systems delivering omnichannel experience for partners and customers	From siloed functions to customer-centric, cross-functional teams with complete integration between technical and business areas for rapid experimentation

D5

Digital- and analytics-led collections

current practices while improving outcomes at a significantly lower cost to serve.

**iii. Analytics-driven decision-making:** Banks would need to leverage their evolving analytics capabilities to drive decision-making and strategies across the collections journey. This would involve leveraging the right data sources and alternative indicators of delinquency such as historical spending patterns, past customer behavior, and typical responses. These insights can be fed into learning models, along with macro-level data such as economic conditions, business cycles, etcetera, to predict likely delinquencies and take proactive action.

An understanding of customer behavior is key to devising the right approach, with digital natives favoring self-care, while less digitally inclined customers being targeted with the right assisted channels and personnel to ensure favorable outcomes (Exhibit 49).

**iv. Integrated, full-stack tech enablement:** As per McKinsey estimates, around 20 percent of tasks across customer-assistance occupations can be automated using current technologies.<sup>53</sup> This automation can free up employees to focus on complex and higher-value interactions, facilitating a shift to a more customer-centric role.

A flexible, modern architecture can leverage omnichannel offerings (for example, mobile, email, WhatsApp, or tele-calling), backed by a digital platform that can facilitate self-serve and assisted interactions, and integrated with data partners and third-party service providers (for example, chatbots or fintech software-as-a-service players). The platform would also have access to historical payment behaviors and spend patterns, ensuring the collections strategy can be dynamic and tailored to customers' preferences. The aim is to build one-stop IT infrastructure that can assist the collections team from the time a loan is sourced through predelinquency and debt resolution.

**v. Execution at scale:** Executing a collections transformation would require banks to create a bespoke operating model and to onboard critical talent in data science, design, and content, combined with existing business teams. These cross-functional teams can be organized into a "collections tribe," facilitating rapid application development. These teams would be supported by other functions, such as call-center management, channel management, and legal, and overseen by a head of collections.

<sup>53</sup> "Global automation impact model," McKinsey Global Institute; McKinsey Global Institute analysis.

Exhibit 49

### Analytics-driven personalized approach can enable significant improvements in collection metrics.

#### Traditional, linear contact strategy



#### Dynamic, future-state contact strategy



## D6. Driving financial inclusion through targeted focus on rural segment

### Focus on rural credit and the gig economy to drive financial inclusion, which is a large opportunity growing at around 10 percent annually for the past five years

Indian banks have taken significant strides in promoting financial inclusion, with around 78 percent penetration of bank accounts.

Nonetheless, banks have potential to drive further financial inclusion in access to formal credit by focusing on the NTC, rural, and agriculture segments, as around 45 percent of adults in India reported borrowing money in India, yet fewer than one in three of them did so from a financial institution.<sup>54</sup>

Rural credit is likely to emerge as a large opportunity for driving financial inclusion, as the rural segment contributed only around 24 percent to overall fiscal year 2022 bank credit, despite two-thirds of the population residing in rural areas and contributing around 46 percent of the national income.<sup>55</sup> The rural ecosystem has seen consistent growth over the past five years, led by personal loans and non-Kisan Credit Card (agri products (agri gold loans, investment credit loans, etcetera), which have seen high growth rates of 14 to 16 percent per annum (Exhibit 50).

Agricultural credit forms around 40 to 50 percent of the rural lending landscape, with a strong impetus provided to this segment via government initiatives.<sup>56</sup> The setup of the India agritech stack is expected to boost rural data points for banks and help create better risk management. The rise of agritech start-ups has also contributed to this trend with innovations around precision farming, improved market linkages, and so forth. There is added incentive for banks to improve credit deployment toward the agricultural segment as most Indian banks fall short of achieving their agri PSL targets, which results in an opportunity-cost loss of 3 to 4 percent of their PSL shortfall, which they eventually meet by investing in relatively low-yield Rural Infrastructure Development Fund and Priority Sector Lending Certificates.

The next set of NTC customers for banks are likely to emerge from the gig economy and the rural economy. The gig workforce is expected to expand to 2.35 crore workers by 2029 to 2030<sup>57</sup> (from around 0.8 crore as of fiscal year 2021), and

banks can consider creating tailored, cash-flow-based products to target this segment.

### Banks would need to focus on enablers like rising digitization and increasing last-mile reach to capture the emerging rural and mass-market opportunity

In the past few years, rural banking has emerged as an engine of growth for both public- and private-sector banks. To further grow in the market, banks would need to focus on the following enablers (Exhibit 51):

- creation of customized rural loan products and diversification of rural portfolios
- improvement of rural outreach through the introduction of newer channels of sourcing
- digitization of loan processes by leveraging digital land records, satellite imagery, etcetera
- Tech enabled banking via digital public infrastructure for account and transaction services, given its broad reach

#### i. Create customized products for the rural economy and diversify the rural portfolio:

Banks can take a wider ecosystem lens, targeting the entire agricultural value chain of logistics providers, cold-storage facility providers, aggregators, agricultural corporates, and agrarian retailers and exporters. Hence, banks would need to create tailored products for value-chain financing, loans related to farm upgradation, purchase of precision agri tools, etcetera.

Financing commercial and cash-crop clusters like spices, fruits, and other crops, which are capital-intensive, presents an emerging opportunity for banks. To fund these farmers, banks could consider partnering with agricultural nodal agencies, agri-universities, FPOs, and other corporate entities working in these clusters to create customized products targeted at farmers and cooperative agencies.

Banks can also provide debt financing to already-funded agricultural start-ups under their rural portfolios (as allowed in RBI's PSL guidelines). Partnerships with accelerators like the government's recently announced Agriculture Accelerator Fund, as well as agri-focused venture capital funds, can help banks identify promising

<sup>54</sup> Global finindex database 2021, World Bank, July 2023.

<sup>55</sup> Reserve Bank of India; NITI Aayog.

<sup>56</sup> Reserve Bank of India

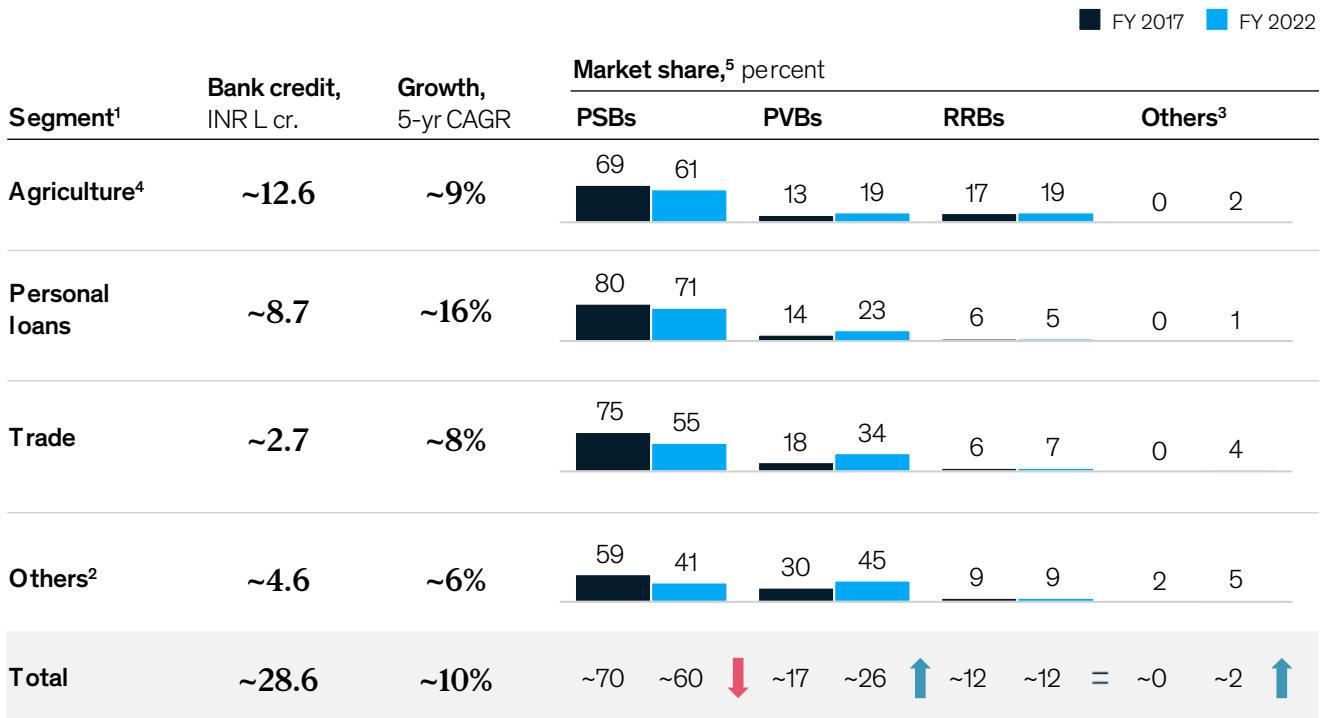
<sup>57</sup> India's booming gig and platform economy, NITI Aayog, June 27, 2022.

D6

Driving financial inclusion

Exhibit 50

## Rural credit has been growing at ~10% over the past five years.



<sup>1</sup> Includes loans and advances deployed in the rural and semi-urban regions of the country.

<sup>2</sup> Includes industry, transport, services, finance, and other sectors.

<sup>3</sup> Includes SFBs, most of which received banking licenses post FY 2017.

<sup>4</sup> Includes ~9–9.5 L Cr. of KCC loans, which have grown at a CAGR of around 7.5%, while non-KCC agri loans have grown at a CAGR of around 14% over the last five FYs.

<sup>5</sup> Figures do not sum to 100% because of rounding.

Source: RBI

start-ups and emerging SMEs in the food and agro-processing space.

**ii. Improve reach and connect with last-mile customers by introducing new channels:** Banks would need to update their strategy for reaching out to rural customers by employing specialized personnel with knowledge of the rural and agricultural ecosystem, who can serve as RMs for farmers in need of larger-ticket size loans. It would also be crucial for banks to improve the commission structure for BCs and broaden the range of services they can offer, including support for loan sourcing and application, loan tracking, and early collections and recovery efforts. This would revamp the BC network's economic viability. Financial institutions can consider extending their existing village outreach by working with common service centres, Bank Sakhis, and BC Sakhis, as well as by forming alliances with businesses,

agritech companies, and other participants in the agricultural ecosystem.

**iii. Reduce operational and credit costs by digitizing the rural loan cycle and using alternate data to improve underwriting:** The rise in public and private digital procurement platforms, such as National Agriculture Market (eNAM), and improved digital infrastructure, such as digital land records, satellite imagery, etcetera, has increased the data points available to banks for financing and underwriting rural customers. Banks can also utilize the datasets available with agritech players to automate loan processes and reduce credit costs. Further, improving collections machinery by automating predelinquency triggers, SMS- and IVR-based repayment reminders, and digital repayment mechanis is key to ensuring low credit costs in areas with limited physical reach.

D6

Driving financial inclusion

**iv. Leverage tech-enabled banking via digital public infrastructure for account and transaction services:** Banks can consider incorporating digital channels to reach their rural audience, with features such as personalized

offers, payments via UPI, and instant renewal or top-up of secured loans via Aadhaar or KYC-based consent. However, it will be critical to keep data privacy and security norms in mind while using this channel.

Exhibit 51

**Banks would need to focus on the following enablers to capture the emerging rural and mass-market opportunity.**

	<b>Creating customized rural products</b>	<b>Diversifying rural credit portfolio through loans for:</b> <ul style="list-style-type: none"> <li>farm upgradation activities such as ponds and produce storage facility, precision agriculture instrument purchase, etc</li> <li>cluster financing of profitable commercial and cash-crop credits</li> <li>lending to agri start-ups and food-processing units</li> </ul>
	<b>Digitizing loan process</b>	<b>Streamline operational and credit costs by digitizing various steps in rural loan life cycle:</b> <ul style="list-style-type: none"> <li>sourcing through tie-ups with agri ecosystem players</li> <li>designing STP loan journeys by leveraging digital land records, satellite imagery, etc</li> <li>underwriting through data pulls from digital portals like eNAM, and leveraging alternate datasets on weather, soil health, etc</li> </ul>
	<b>Improving rural outreach</b>	<b>Reaching last-mile customers through:</b> <ul style="list-style-type: none"> <li>hiring specialized agri workforce by sourcing high-ticket rural leads in priority clusters</li> <li>revamping current BC network through review of commission structure, onboarding of NRLM trained Bank Sakhis, and engaging with CSCs and VLEs<sup>1</sup></li> <li>engaging in new partnerships with agritech for sourcing rural customers</li> </ul>
	<b>Using tech-enabled banking via digital public infrastructure</b>	<b>Using tech-enabled banking for:</b> <ul style="list-style-type: none"> <li>personalized marketing with close to n = 1 level of customization</li> <li>instant renewal of loans and top-up of secured loans</li> </ul>

<sup>1</sup> CSC, common service centers; VLE, village level entrepreneur

D7

Financing the green transition

## D7. Financing the green transition is a key global and national priority

**There are significant challenges related to the transition to a green economy, which has led to a demand-supply gap**

While the Indian economy has a requirement of INR 12 to 13 lakh crore annually over the next decade, current funding is meeting only 20 to 30 percent of the need, signalling the high potential for early-mover Indian banks. Most banks are at a nascent stage in their journey toward building a green business, as critical regulatory and market enablers have yet to be implemented. Also, while many green technologies are competing for capital, the economic case for them is not always clear (Exhibit 52).

**Blueprint for Indian banks to build their green finance business**

Four key modules can help banks build a green finance business (Exhibit 53).

**i. Setting the overall ambition and emission strategy:** As banks move to a net-zero path, it is critical to ask the right strategic questions to drive the strategy (Exhibit 54).

**ii. Building and capturing business opportunities:** Product and pricing interventions by Indian banks are relatively nascent, with limited use of ESG factors to drive credit and pricing decisions. There is a growing focus on

D7

Financing the green transition

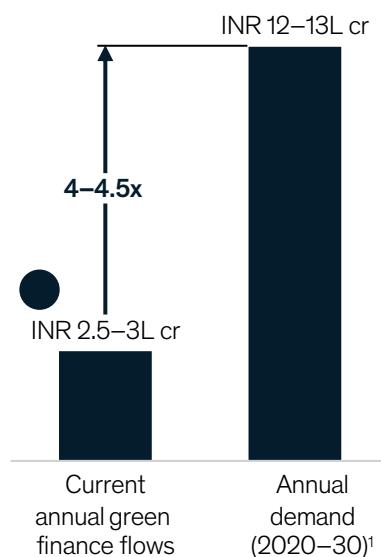
Exhibit 52

## There are multiple challenges in financing the transition to a green economy.

Huge demand and supply gap...



... driven by key structural challenges



**Capital formation challenges for positive investment cases**, due to financial and structural constraints (eg, payment delays by power distributors, PPA renegotiations, etc)



**Uneconomic business cases for many use cases** such as CCUS, hydrogen-based green steel (until 2045), and green hydrogen as a grey hydrogen replacement (until 2030)



**Most banks are yet to chart a road map to their net-zero goals:** As per RBI survey,<sup>2</sup> 47% of Indian banks have yet to build an ESG strategy

Currently, **banks have limited capabilities** to underwrite and appropriately price climate risk and have **limited internal** expertise to identify new green business opportunities



**Lack of banking regulations and incentives** to drive sustainable finance in a scalable manner



Mismatch in green project's long-term funding requirements against short-term investment horizon for most investor groups

<sup>1</sup> Annual demand to keep increasing from 2020 to 2050; average annual demand of 12-13Lcr in first decade; ~35L cr on average for next 25 years.

<sup>2</sup> CRIF, RBI database for FY 2022.

Exhibit 53

## Four steps could help define a sustainable finance agenda for financial institutions.

**Set the overall ambition and emission strategy**

- Set targets for **financed emission, own emission** (scope 1, 2, 3); define and execute plans to achieve it

**Build and capture business opportunities**

- Define **new business opportunities** and build new propositions to capture the opportunity (eg, green products)

**Strengthen resilience and climate risk management**

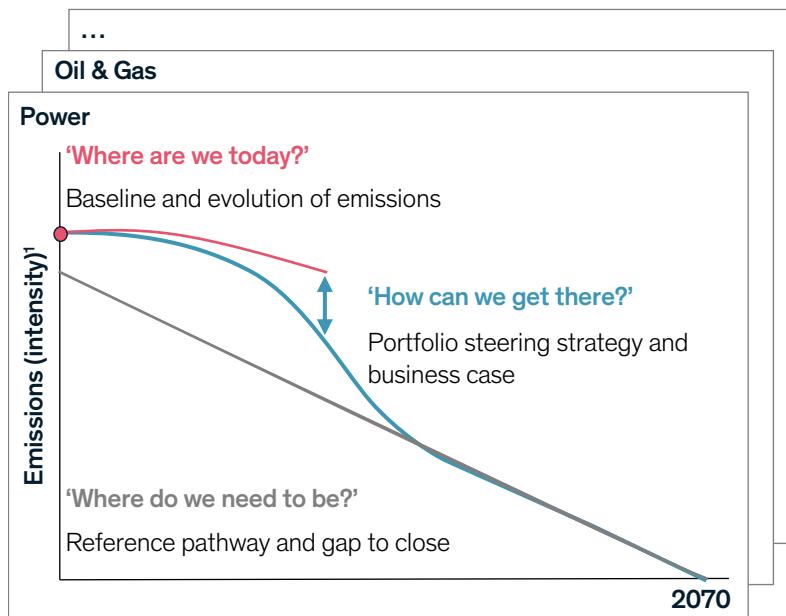
- Strengthen the bank's **climate risk management**, including appetite statements, frameworks/policies, and tools/processes
- Conduct climate **scenario analysis** and stress testing to inform climate risk management and identify opportunities

**Ensure capabilities for execution**

- Build internal ESG capabilities across business and risk
- Target state and execution plan for **capability, culture, and initiatives**
- Leverage partnerships to drive value
- Data, reporting:** Track impact of climate-related opportunities and commitments (ensure commercial considerations)

Exhibit 54

## Strategic questions to define glidepath to net zero.



### Strategic questions (examples)

- How are emissions from clients measured** (eg, which part of the value chain, scope of emissions, gases, metrics)?
- A How are these emissions attributed to the bank** (eg, using drawn or undrawn amount)?
- How will these emissions evolve** (eg, assuming stated policy, assuming client plans, assuming acceleration)?
- B Which emission pathway should be tracked** (eg, based on temperature ambition, market practice, confidence in assumptions)?
- C What levers** can decarbonize the portfolio?
- What will be the impact of these levers** on emissions and on financials?

<sup>1</sup> Two types of targets exist: Absolute reduction targets (reduction of CO<sub>2</sub> financed) or emission-intensity reduction targets.

lending to the renewables sector, as well as a fast-growing portfolio of electric vehicle (EV) loans at preferential rates. Some banks and financial institutions including HDFC, IndusInd Bank, Federal Bank, and Union Bank have also offered “green deposits” at higher-than-market rates.<sup>58</sup>

**iii. Strengthening resilience and climate risk management practices:** Results from RBI’s survey have clearly indicated limited focus from Indian banks so far on climate risk. While some banks have begun to include climate in their overall risk management framework, there is a long way to go. There are ten important areas banks can consider to drive their risk management strategy (Exhibit 55).<sup>59</sup>

**iv. Ensuring execution capabilities are in place:** As sustainability takes center stage for clients, it is imperative for banks to reorient product strategy

as well, by developing in-house capabilities across business and risk elements. Some Indian banks are beginning to set up dedicated sustainability-focused teams, tasked with developing tailored strategies for sectors served by the bank, as well as developing internal assets covering the gamut of green technologies. These players also offer bespoke advisory and research services to further help clients drive their climate strategy.

A key lever to build green finance capabilities is via partnerships, across both financial and nonfinancial players. Financial players offer an existing product portfolio that can be proposed by the partnering bank, either as a distribution partner, or through a strategic partnership or acquisition. On the other hand, nonfinancial players can boost a bank’s research and advisory capabilities, as well as help track its ESG goals and impact.

<sup>58</sup> “HDFC limited green and sustainable deposit,” HDFC Securities, July 2023; “IndusInd Bank launches Green Fixed Deposit,” IndusInd Bank, December 28, 2021; other financial institutions’ websites.

<sup>59</sup> *Discussion paper on climate risk and sustainable finance, Reserve Bank of India, July 27, 2022.*

D7

Financing the green transition

Exhibit 55

## Climate considerations can be integrated into all core risk management processes.

Target state: Integration of climate risk into all risk management processes				
RBI Discussion paper summary (Aug 2022)	Risk ID and assessment	RAF <sup>1</sup> /credit strategy	Origination	Monitoring
<b>Setting up board-level committees</b> to guide climate-related strategy, climate risk monitoring and disclosures, etc	 <b>A. Risk identification</b> Develop a heatmap view across portfolios and operations	 <b>D. Risk appetite framework</b> Formulation of overall climate risk strategy and embedding into RAF	 <b>F. Risk rating</b> Embedding of climate risk assessment in PD/LGD <sup>3</sup> assessment	 <b>I. Rating review</b> Update of counterparty-level climate risk assessment as part of rating review
<b>Inclusion of climate-related risks in the board-approved risk appetite framework</b> , risk management strategy, and business plan	 <b>B. Scenario analysis and stress testing</b> Run dedicated climate risk stress test	 <b>E. Credit policies</b> Cascading of climate considerations into credit policies, risk mitigation strategies, and sector limits	 <b>G. Credit approval</b> Use of counterparty- and facility-level considerations on climate risks in credit decisions	 <b>J. Reporting</b> Inclusion of climate risk exposures and management approach in internal reporting
<b>Usage of stress testing and scenario analysis</b> to identify emerging risks across different time horizons	 <b>C. Capital calculation</b> Use of adjusted PDs <sup>2</sup> for calculation of internal capital		 <b>H. Pricing</b> Adjusted reference price to account for higher financial vulnerability from climate risks	

D8

Invest in technology resilience

## D8. Invest in technology resilience to ensure data security and management of operational risks

### To succeed in a rapidly changing landscape, banks would need scalable, resilient, and secure technology

The banking sector is at a pivotal moment where technological advancements and changing consumer preferences are driving a new wave of innovation. Built for stability, banks' core technology systems have performed well, particularly in supporting traditional payments and lending operations.

However, banks would need to resolve several weaknesses inherent to legacy systems before they can deploy technologies at scale. Hence, to succeed in this rapidly changing landscape, banks would need core technology that is scalable, resilient, and secured, which requires changes in three key areas (Exhibit 56).

#### i. Modernize API architecture and core technology:

**Within the bank:** APIs enhance flexibility in technology architecture by reducing silos and promoting reusability of technology assets. Outside the bank, APIs accelerate the ability to partner externally, unlock new business opportunities, and enhance overall customer experience. This necessitates a strong, scalable, and standardized methodology to develop and host integrations and APIs. It is therefore important to identify areas of application and establish a centralized governance system to oversee the development and maintenance.

In addition, banks would need to transition from their traditional, complex, and tightly interconnected core systems to lightweight and highly customizable core product processors and workflows with the right architecture in place. They would need to shift to a centrally available architecture based on enterprise capability, as patchwork solutions on the legacy core would no longer work for them. With a lightweight processor platform, an organization will be able to launch a new product concept in two to three months, as opposed to legacy technology which would take six months or more.

#### ii. Clear cloud strategy and data management:

Banks would need to modernize their tech infrastructure through the adoption of public cloud, to complement the traditional infrastructure in situations where workloads require resiliency, scale, and use of hosted or managed offerings. By using public cloud, banks can increase their operational speed through automation and templates while reducing operational risks. However, it is essential for banks to establish a strong foundation in infrastructure management, including observability, resiliency, high availability, and a robust configuration strategy. With a well-optimized, scalable, and load-balanced stack, banks can provide rapid response times, usually less than one second, while also being able to cater to changes in transaction volume.

The bank's data management can ensure data liquidity (capacity to access, process, and utilize

Exhibit 56

### Banks would need to build a tech-resilience strategy on three pillars.



#### API and core modernization

- Leverage modern cloud-native tools to enable a scalable API platform that supports integrations across ecosystem
- Maintain automation-first and fast-release posture, and consider a modern core for high-velocity areas
- Strengthen core technology backbone to enable speed, flexibility, and scalability across the enterprise stack



#### Cloud strategy and data management

- Implement infrastructure across on-premises and cloud environments aimed at increasing platform resiliency
- Upgrade data management and underlying architecture to support machine-learning use cases
- Define the enterprise cloud strategy, and establish end-to-end visibility across the stack



#### Cybersecurity and data privacy

- Implement robust cybersecurity in hybrid infrastructure; secure data and applications with zero-trust design principles
- Identify the right perimeter design for the cloud and ensure data security on the cloud
- Ensure customer data privacy by field-level encryption for PII data, tokenization of data, and differential privacy

D8

Invest in technology resilience

the data) that serves as the foundation of all insights and decisions. The data value chain begins with the smooth acquisition of data from internal systems and external platforms and segregating incoming data for immediate analysis and future analysis. The analytical insights generated by these models are also deployed through MarTech tools to craft the intelligent offers and smart experiences that set an AI bank apart from traditional incumbents. Underpinning these actions, appropriate technical documentation and cataloging of assets can be undertaken to ensure proper governance and access control.

**iii. Cybersecurity and data privacy:** Banks would need to build a truly robust cybersecurity function by implementing a comprehensive security framework that delivers a wide set of services to the enterprise (Exhibit 57).

The security system can have governance, risk, and a compliance programs that establish policies, procedures, and guidelines to ensure that security objectives are aligned with business goals. Banks can also invest in threat and vulnerability management solutions to identify and remediate security vulnerabilities and minimize the attack surface through penetrations testing, threat modeling, and vulnerability scanning.

Additionally, banks could establish an advanced Security Operations Center (SOC) to continuously monitor the network for suspicious activity and respond to security incidents in a timely manner. It is also important to prioritize business resilience by developing a disaster recovery plan and conducting regular business continuity tests to ensure that the bank can quickly recover from a cyberattack and resume operations.

Banks in India would need to adapt their business strategy in line with the upcoming Data Protection Bill, which would introduce stringent regulations, including stricter data transfer requirements and significant fines in case of lapses. Banks could move forward by mapping the data types according to the severity of risk, which can help identify the right data security and privacy techniques. Field-level encryption and tokenization could be employed for highly sensitive personal data such as identity documents, financial documents, and so forth. In addition, data-level encryption and data salting can be employed for confidential and regulated client data and nonsensitive personal data like past transactions. Banks can also take steps to ensure that transmission of information outside of the bank is conducted via an encrypted channel, and they can limit access to nonpersonal client

Exhibit 57

**Banks would need to build a truly robust cybersecurity function that delivers a wide set of services to the enterprise, utilizing three key enablers to deliver security service at a desired level.**



**A Organization structure/talent**

- Make sure organization is ready to attract/keep/use **cybersecurity talent**

**B Governance, compliance, standards, and delivery processes**

- Ensure that a set of **standard operating procedures**, checklists, and controls is in place

**C Technology stack**

- Utilize **state-of-the-art technology** to build digital product, ensure **maximum level of automation**

data information (without licensed access) to bank colleagues.

### **The way forward for leaders as they embark on their tech-transformation journey**

Banks undertaking digital transformation efforts can consider the following key insights from the experience of financial institutions that have successfully carried out such transformations.

#### **i. Consider the factory model to build at scale:**

Leverage a factory approach in fast-evolving and critical areas of the transformation to enable repeatable execution and development of capabilities within technology teams and promote standardization to speed up execution.

#### **ii. Consider insourcing differentiating capabilities:**

**Build certain differentiating capabilities in-house with robust engineering support, starting with APIs, infrastructure, or the data and analytics platform.**

#### **iii. Maintain rigorous documentation on integrations:**

**The development of engagement systems and comprehensive changes in core technology would require significant adjustments to integrations, and substandard documentation of the specifications for these integrations often slows the broader initiative to transform the bank.**

#### **iv. Identify an anchor stack but experiment with others:**

**Emphasize the importance of standardization for engineering-centric development at scale, and build on a single stack to support faster change. At the same time, continue experimenting with other stacks for smaller builds to adopt alternative or newer approaches.**

#### **v. Maintain an automation-first and fast-release posture:**

**Adopt an automation-first and frequent-deployments posture on fast-evolving applications and stacks. While initial hiccups are not uncommon, release rails could be hardened over time to speed up time to market. Well-defined**

release management and deployments are key to execution velocity. Standardizing through DevSec Ops typically unlocks productivity gains of as much as 20 to 30 percent.

#### **vi. Adopt a value-centric approach to building data platforms:**

**Take advantage of the fact that data and analytics platforms evolve over time, and do not allow teams to be overwhelmed by the rapid shift of tooling and available technology. Organizations that budget the anticipated return of change efforts are able to prioritize use cases that are functionally simple, fit the road map for building the platform in iterations, and realize economic value along the way.**

#### **vii. Set up a lab and factory (cross-functional) for analytics:**

**Establish a lab to experiment with tools and platforms for efficient development in test-and-learn cycles. Also, build a central factory for producing and deploying analytics use cases at scale on an individual stack.**

#### **viii. Establish end-to-end visibility across the technology and infrastructure stack:**

**Recognizing that at-scale digital transformations impose limitations on volume and scale, implement robust automated tools to observe stack performance and to diagnose and resolve issues.**

Banks can build a cohesive technology strategy that aligns closely with the business strategy and clearly defines the key decisions regarding the elements, skills, and personnel that the bank will retain in-house versus those it will procure through partnerships or vendor relationships. Overall, they would need to put in place a strong demand-management framework, as banks' IT teams are usually overburdened with requests and struggle with prioritization—in addition to embedding tech translators in the business units that are skilled in product management and understand the tech requirements.

D9

Focus on talent management

## D9. Focus on talent management to build a compelling value proposition

### Banks would need to fundamentally shift the way they find, attract, and develop talent

With rapid evolution in consumer needs, banks have digitized their front ends and established next-generation technologies in the middle and back offices to help save costs and provide better services. With these trends expected to stay, talent with digital, automation, and analytical capabilities is therefore in high demand. However, banks are competing against not only other banks but all firms seeking a sustainable talent advantage. Hiring is only one side of the talent coin: banks will not succeed unless they also develop their current employees through reskilling and upskilling programs. Additionally, front-line attrition has also been at its highest levels on an annualized basis, with banks experiencing significant productivity losses due to early tenure attrition. Banks will need to reevaluate their approach to human capital, bringing the human resources function to the forefront to attract high-potential talent, drive employee productivity, and reduce attrition.

#### Practices to reimagine talent management

Outlined next are key steps banks can take toward reimagining talent management:

##### i. Define a road map for skilling requirements and gap analysis from current state:

While banks have traditionally been strong in areas such as relationship management, operations, and administration, gaps exist in data science, robotics, AI, and customer-experience skill sets. Banks can create a calibrated plan to upskill internal employees (typically data reporting roles, business intelligence unit personnel) into modern roles and build an external hiring pipeline to close these gaps to maintain their outperformance.

##### ii. Drive focus on talent at the board level, especially on the skilling gap, critical hire outcomes, and attrition:

With only 5 percent of corporate directors believing that they are efficient at developing talent, there is a clear need to recognize the HR function as a strategic priority, rather than a transactional role. CHROs can drive proactive initiatives such as succession planning, identification of critical talent pools, and mitigation of talent risks.

##### iii. Create tailored development plans for talent for critical roles:

With the traditional focus on hierarchy, a large proportion of critical talent goes

unrecognized. Banks could identify these critical roles using data and match them with the best available talent to drive results.

##### iv. Adapt to cross-functional ways of working with dynamic and flexible role definitions:

A flexible structure will enable a shift away from hierarchical role definitions, giving talent the ability to develop dynamically with changing priorities and opportunities. This has been proven to have multiple benefits, including 40 percent shorter time to market, more than 50 percent increase in customer satisfaction, and 20 percent higher employee engagement.

##### v. Use data to revamp decision-making and collaboration:

The level of empowerment, collaboration, and decision-making efficiency are key drivers of employee satisfaction and productivity levels. Creation of transparency on delays in decision-making, simplifying decision matrices and delegation authority, and creating cross-functional ownership can deliver superior outcomes.

##### vi. Prioritize purpose, diversity, and inclusion:

Companies in the top quartile for gender diversity have demonstrated better financial outcomes by around 10 percent compared to the bottom quartile. Other benefits include improved employee satisfaction, brand building, and relatively less-biased hiring decisions. Banks could set measurable diversity goals and revamp their recruitment process to minimize unconscious biases in decision-making.

##### vii. Clear mentorship and sponsorship pathways, especially for early tenure, front-line employees:

One of the top three drivers of employee attrition at early levels is linked to the absence of clear mentors or sponsors of the employees within the organization (superiors or tenured employees in the same band, in addition to an HR sponsor). A clear 100-day plan can be created for new hires to ensure deeper integration with the culture and purpose of the firm.

Finally, a bottom-up understanding of the drivers of employee success can enable banks to revamp critical employee value propositions and communicate appropriately both internally and to the external market.





# Acknowledgments

**Ranganathan Badrinarayanan** is a consultant in McKinsey's Mumbai office, where **Peeyush Dalmia** and **Renny Thomas** are senior partners, **Siddhartha Gupta** is a partner, and **Madhur Maheswari** is an associate partner. **Ashwaryaa Bhatia**, **Piyushi Jain**, **Siddharth Jogidasani**, and **Satviek Goel** are associates in the firm.

The authors wish to thank Akriti Agarwal, Akshat Agarwal, Suparna Biswas, Anurag Chaddha, Dipak Daga, Faridun Dotiwala, Nagaraj GN, Malcolm Gomes, Nilesh Gupta, Rajat Gupta, Adriana Hernandez, Sudhakar Kakulavarapu, Alok Kshirsagar, Sarath Kumar, Akash Lal, Saravanan Mani, Milan Mitra, Anamika Mukharji, Fatema Nulwala, Karthi Purushotham, Rakshit Sawhney, Aditya Sharma, Raksha Shetty, and Shwaitang Singhand for their contributions to this report.

The authors also wish to thank the many business leaders and industry experts who spared their valuable time to discuss what they see as the potential and the challenges in establishing a strong banking system in the next few years.



August 2023

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