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Global Fintech Fest (GFF) is the largest fintech conference, jointly organized by the National Payments Corporation of India (NPCI), the Payments Council of India (PCI), and the Fintech Convergence Council (FCC). With GFF, the aim is to provide a singular platform for fintech leaders to foster collaborations and develop a blueprint for the future of the industry. Over the past three years, GFF has demonstrated its pivotal role by showcasing a 360-degree view of the fintech ecosystem and its ability to drive sustainable global progress by virtue of its transformative potential. Being an event of global stature, GFF is a platform where policymakers, regulators, industry leaders, academics, and all major Fintech ecosystem stakeholders converge once a year to exchange ideas, share insights, and drive innovation.

BCG is the official thought leadership partner for GFF 2024.

## **Foreword**



Kris Gopalakrishnan Chairman, Axilor Ventures, Co-founder, Infosys, and Chairman, Advisory Board, GFF 2024

The current global macroeconomic scenario presents unique challenges as well as opportunities. The world is inarguably more unsettled than at any point in recent history. Socio-political tensions, fluctuating interest rates, inflation, and tapering growth are creating a complex, once-in-a generation challenge. At the same time, critical and emerging technologies are growing exponentially enabling us to shape a better future.

Against this backdrop, Global Fintech Fest (GFF) 2024 aims to gather the brightest minds and passionate hearts in Mumbai from August 28 to 30. GFF 2024 is more than a conference; it is a convergence of visionaries, leaders, and innovators across the globe. This year's theme,

#### "Blueprint for the Next Decade of Finance" Responsible Al | Inclusive | Resilient

highlights our shared responsibility to shape a financial future that is responsible, inclusive, and resilient. Artificial intelligence is at an inflection point. Harnessing AI responsibly and blending it with human insight can create the next-gen

Financial InfraTech to drive ethical, innovative solutions for complex, real-world challenges. We envisage the next decade to be more equitable, inclusive and "resilient by design", to be able to recover quickly from future black swans. An agile and innovative financial ecosystem is the need of the hour to maintain stability in geopolitically volatile environments. Collaboration among traditional financial institutions, Fintechs, regulators, and policymakers will play a crucial role.

GFF serves as a platform for thought leadership, knowledge sharing, and networking, bringing together stakeholders from various sectors to collaborate and innovate. GFF aims to address critical challenges and harness opportunities in the financial sector. This year's fest will feature paradigm defining sessions on responsible AI, green finance, capital access for Fintechs, central bank digital currencies, cross border payments, and many more. These discussions are designed to inspire and equip attendees with the insights needed to navigate the next decade. GFF 2024 will be a pivotal event in facilitating this transformation by bringing together over 80,000

delegates and more than 800 speakers from ~40 nations.

At the heart of this event is our annual flagship report, designed to lead thought leadership by uncovering the latest fintech trends across continents and industries. It provides bold recommendations on the "Six Bridges" to shape the future of global finance". This report, reflecting our shared vision, will be updated annually to align with the evolving priorities of our financial ecosystem and the nation at large. This presents a unique opportunity for India's financial sector to become the world's knowledge capital. In conclusion, we extend sincere gratitude to each contributor, partner, and visionary who has guided this journey, shaping our shared future. As we navigate the intersection of technology and finance, let's commit to advancing sustainability, innovation, and shared prosperity.



Reach high, for stars lie hidden in you. Dream deep, for every dream precedes the goal

Rabindranath Tagore

## **Foreword**



**Dilip Asbe** 

Managing Director & CEO of National Payments Corporation of India (NPCI)

As we step into 2024, the Global Fintech Fest (GFF) continues to evolve as a stimulus for driving innovation and inclusivity in the financial ecosystem. This year, GFF is poised to set the stage with the theme "Blueprint for the Next Decade of Finance," focusing on Responsible AI, Inclusiveness, and Resilience. GFF 2024 will gather thought leaders, innovators, and policymakers to redefine the financial landscape for the coming decade.

With the fintech sector growing at rapid pace, the Asia-Pacific (APAC) and North American (NAMR) regions are set to become the epicentre of fintech innovation, fuelled by regulatory foresight and technological advancements. In the APAC region, India stands out as a formidable player in the fintech landscape. The country has witnessed a rapid surge in fintech adoption driven by Digital Public Infrastructure like Aadhar, UPI, Bharat Bill Payments, ONDC etc., a supportive regulatory climate fostering digitization, a large underserved population offering opportunities for financial inclusion, increased access to capital through various funding channels, the adoption of technologies such as GenAl driving new business

models and enhanced customer experiences, and surge in mobile banking and digital payments.

UPI has revolutionized the payment landscape, solidifying India's position as a global leader in fintech innovation. Ever since its inception in 2016, UPI has amassed an impressive user base of over 400Mn active users as of today. In July 2024 alone, UPI facilitated ~14Bn transactions worth an astounding INR 20 lakh crores, showcasing its robust and ever-growing presence. This adoption rate within India demonstrates UPI's maturity and scalability, as evidenced by its expansion into seven countries, including Singapore and the UAE. The vision of the National Payments Corporation of India (NPCI) is to extend UPI's reach to 20 countries by 2028-29, creating a global standard for real-time payments. It will be fascinating to see how global economies adopt real-time payment systems like UPI and how much of the world will eventually run on NPCI rails. As we look into the future, our goal for the next few years is to further strengthen the fintech ecosystem in India, fostering innovation through regulatory support, and promoting financial literacy to ensure inclusive growth.

As we gather once again at the Global Fintech Fest 2024, we are reminded of the incredible strides we've made in redefining the world of finance. The past year has been a testament to our collective ingenuity, resilience, and unwavering commitment to driving the fintech revolution. We have navigated challenges, embraced innovations, and pushed the boundaries of what is possible. Our mission to reshape the Indian financial landscape is stronger than ever, and this report encapsulates the milestones we've achieved and the horizons we aim to conquer.

## Introduction



Yashraj Erande Global Leader - Fintech, India Leader - Financial Services, BCG erande.yashraj@bcg.com

We are thrilled to present this year's edition of the flagship report for Global Fintech Fest. This comprehensive report provides a detailed exploration of the current landscape, trends, and future projections of the global Fintech industry for the next decade. This year, our report is structured into three pivotal chapters, each offering a unique lens on the industry's trajectory and its transformative potential.

#### **Global Fintech Trends:**

Global trends shaping the Fintech landscape, offering a rigorous analysis of growth trajectories, capital allocation, and regional convergence.

#### Voice of Industry:

Priorities and perspectives of founders, CEOs, and CXOs within the Indian Fintech ecosystem, highlighting their focus on profitable and compliant growth, emerging technologies, and regulatory needs.

## **Building bridges for shaping the next decade** of Finance:

"Six Bridges", required between Fintechs, traditional financial institutions, regulators, and investors to drive innovation, efficiency, and sustainable practices for the next decade of finance.

The first chapter offers a rigorous analysis of growth trajectories, capital allocation, and regional convergence. The Fintech sector is poised to achieve \$1.5Tn in revenues by 2030, with significant contributions from the APAC and NAMR regions. We explore the stabilization of global Fintech funding and the convergence of investment patterns across developed and emerging markets. This chapter provides invaluable insights into the evolving dynamics and strategic imperatives for Fintech enterprises worldwide.

Our second chapter provides an authentic voice of the industry, capturing the insights of founders, senior leaders, regulators, and investors within the Indian Fintech ecosystem. Despite recent funding challenges, Indian Fintechs have demonstrated remarkable resilience and innovation, achieving significant revenue growth and setting ambitious goals for international expansion. This section highlights the industry's focus on profitable and compliant growth, leveraging emerging technologies such as Generative AI and API-based open architecture, and addressing the critical need for a robust regulatory framework.

The final chapter introduces the bridges crucial for shaping the next decade of finance, symbolizing the collaborative efforts required to

drive innovation and efficiency. It highlights the need for future-ready technology, emphasizing a \$1Bn investment to modernize India's financial infrastructure. The report stresses the importance of preparing fintech unicorns and soonicorns for liquidity events and IPOs by building strong equity narratives. The convergence between traditional financial institutions and fintechs is crucial, promoting partnerships to capture digital opportunities. Moreover, expanding India's financial infrastructure and payment systems globally is essential for driving growth and innovation. The report also emphasizes the importance of governance, risk management, and addressing the climate financing gap by integrating sustainable practices to ensure a resilient and inclusive financial future. Collaboration among policymakers, innovators, and capital providers is essential to building these bridges and driving the future of finance.

Through meticulous research, in-depth interviews, and our global client collaborations, we have crafted a report that not only charts the current state of the Fintech industry but also paves a forward-looking path for its evolution over the next decade. We eagerly anticipate your feedback and engagement as we collectively shape the future of finance in the coming decade.



## **Executive Summary**

Diamonds are made under pressure. There is no denying that the Fintech sector has gone through what we would call a traumatic year, especially on a global scale. The sector felt the heat of justified regulatory and market scrutiny. It lived through the freezing cold of funding winter. After being subjected to the intense heat and cold, we are seeing the emergence of a more mature and productive Fintech ecosystem globally. Unlike in the past, where burning equity to acquire customers was the approach, we find that today's successful Fintechs are focused on sustainable growth, high quality governance, and economically rewarding innovation.

There has been a fascinating side effect of the traumatic period for the industry. Incumbent financial institutions globally have either gone into hyper drive to integrate and partner with the best Fintechs or are incubating in-house Fintechs. Of course, the regulatory apparatus is also now better refined to facilitate an orderly development of the Fintech ecosystem. As a result, the next decade of finance is set to unlock immense value for the world.

Nonetheless, there are some very hard lessons learnt which need to remain on the radar of the industry. Governance and regulation must be taken extremely seriously. They cannot be an afterthought. Equity, and capital in general, must be managed with hawk eyes. Only the most efficient user of resources – namely, capital and talent – will survive. And innovation is key to being efficient. Without pushing the frontiers of efficiency, Fintechs do not have a right to exist. DPIs have a crucial role in turbo charging innovation and increasing market efficiency. However, it is extremely hard to scale DPIs. It requires the convergence of policy, economics, and technology.

We have spoken to founders and investors, surveyed industry participants, and analyzed extensive data to bring to you this year's flagship Global Fintech Fest report. Last year's flagship report talked about building a Fintech nation and the second wave of Fintechs. This year we talk about how Fintechs, incumbents, regulators, and investors can leverage the lessons of the second wave to successfully embrace the next decade of finance.

We talk about building 6 bridges to be ready for the next decade of finance.

We hope you enjoy reading it as much as we enjoyed writing it.

#### There are three chapters:

- •> Global Fintech Trends: Rigorous unpacking of global trends through numbers and narratives
- Noice of Industry: Temperature check of the priorities of founders, boards, regulators, and investors in the Indian Fintech landscape
- 6 Bridges to the Future of Finance: Critical bridges that Fintechs, traditional incumbents, regulators, and investors need to jointly create to approach the next decade of finance

# Global fintech trends: Growth trajectory, capital allocation and regional convergence

The global Fintech sector is on-track to achieving \$1.5Tn in revenues by 2030. This growth is predominantly driven by the Asia-Pacific (APAC), along with the North American (NAMR) region, generating three times higher revenues than the next set of regions by 2030.

The last 4 quarters have seen a stabilization in global Fintech funding (\$7-10Bn per quarter, after a period of exuberance in 2021-2022). Across Fintech segments, we see much greater convergence in terms of incremental capital allocation when we compare the developed and emerging markets. In the past, there was a distinct skew in capital allocation across different Fintech sectors between the different markets. For example, developed markets are increasing their share of investments in Digital Payments to catch up with the advancements seen in emerging markets. All geographies are driving a similar share of investments in Wealth Tech, indicating the growing focus on affluent customers across geographies. Analyzing the trends by specific geographies reveal the following trends:

In the realms of developed economies such as NAMR and Europe:

- •> Digital Payments sector is dominated by acquiring solutions, followed closely by B2B payments
- •> Europe and NAMR have 80% share of funding in InsurTech, driven by a mature property and casualty insurance market
- NAMR emerges as the leader in the WealthTech and Financial Infrastructure domains, claiming approximately 55% and 60% share of funding, respectively. Alternative assets are drawing investor attention; tokenization a key area of focus.

In emerging economies of APAC, Africa, and LATAM:

- •> Digital Payments sector is predominantly driven by retail payments as an alternative to traditional card payments
- •> Retail Neo Banks are capturing 70-80% funding, SME Neo Banks have large headroom for disruption
- •> The financial infrastructure sector, though nascent, is poised for growth, spurred by the innovations of BFSI SaaS Fintechs
- •> In the lending landscape, APAC, Africa, and LATAM continue to see a substantial share of investments going to unsecured lending, specifically catering to underserved segments

We are seeing a clear shift in capital allocation towards B2B and B2B2X(x¹)-focused Fintechs. Over the past four years, the share of funding for these segments has increased to 65%. This trend makes sense because B2B and B2B2X(x¹) Fintechs can drive efficiency higher for the overall financial services ecosystem by making their incumbent partners more efficient as well. The synergy value for both parties is higher.

There is a wall of maturities approaching Fintechs. 20-30% of venture capital and private equity funds sitting on the cap tables of Fintechs are approaching the end of their investment lifecycle. This is resulting in a greater interest in liquidity events in the foreseeable future. IPOs are naturally likely to be in favor as long as the public markets can absorb the supply. But interestingly, the industry participants we spoke to are expecting higher M&A activity as one of the credible paths to exit. M&A activity in the Fintech sector has surged 1.8 times over the past four years, with North America leading in the number of transactions. Share of other regions is rising, with India witnessing a notable increase in M&A activity within the APAC region.

## India's Fintech Revolution and Voice of Industry

Globally, India ranks third in terms of the number of Fintechs and Fintech unicorns. Indian Fintechs have demonstrated a remarkable trajectory in revenues, achieving a 50% growth rate in 2023. This growth trajectory is expected to continue, with Indian Fintech revenues projected to reach \$190Bn by 2030, contributing to 20%+ of all banking revenues. The foundation of the robust Fintech ecosystem in India was laid by the digital public infrastructure 1.0 (Aadhaar, UPI, etc). The next wave of growth will be powered by DPI 2.0 (e.g., ONDC, National Health Stack etc.) and DPI 3.0: Al-driven Digital Public Intelligence.

We interacted with Fintech founders from India and conducted a survey to understand how founders are navigating the twin challenges of exploration and exploitation to chart a path towards sustainable growth and profitability.

80%+ CXOs believe that higher scale is critical for profitability in India, but "Profitable and Compliant growth" is the new mantra, rather than unbridled growth. Indian Fintechs are demonstrating a path to profitability earlier than what was expected 2-3 years back. As the industry matures, a collaborative regulatory framework that supports innovation while safeguarding systemic risks will be crucial in shaping the future of finance. Creation of a Fintech SRO¹ will be a key step in this direction.

Founders are increasingly looking to leverage critical and emerging technologies - Generative AI and API-based open architecture are seen as key drivers of future growth, with applications ranging from customer service automation to fraud detection. Fintechs are increasingly exploring strategic international expansion. ~25% of Indian Fintechs have more than one-quarter of their revenues from international markets. Middle East and Southeast Asia East are top choices for international expansion for Indian CXOs.

## 6 Bridges for the next decade of finance

We are at an inflection point in the global financial journey. To navigate these transformative waters, we need to construct six bridges:

- 1) Bridge to Future Ready Technology: Globally, we are finding that some core components of the financial services infrastructure (the substrate layer) are quite fragile. This is evidenced by the increasing number of data breaches, server crashes, unplanned down times, etc. We need to build the future on strong foundations. Specifically for India, while it is a global leader in digitalization for sure, its underlying core also remains fragile, with significant downtimes across major institutions. We estimate that \$1Bn investments are required for the modernization of Indian financial services players in the next 5 years. Creating a World Class Tech Function will be critical to reap the benefits of the emerging technologies and driving tech resilience.
- 2) Bridge between Incumbents and Fintechs: The lines between traditional financial institutions and Fintechs are merging. Most successful incumbents have dedicated ecosystem partnership teams that scout for the right Fintechs to partner with.

Partnerships are either for data or capabilities or customer sourcing. Similarly, progressive Fintechs are actively driving partnerships through standardized APIs and key account management practices for building deeper relationships. To avoid being disrupted and seize the growing digital opportunity, it is crucial for incumbents to develop robust digital capabilities. Thus, there is an ongoing trend of incumbents building "in-house Fintechs" by recruiting ex-founders to incubate teams. This convergence is driven by the need to capture the digital native opportunity, foster collaboration, and maintain healthy competition.

- 3) Bridge to Internationalization: Indian financial infrastructure and digital payment solutions are highly mature and scalable, capable of supporting the exponential digitization needs of global institutions. The global BFSI SaaS market is expected to exceed \$500Bn in the next decade, with North America accounting for around 60% of this market. Indian BFSI SaaS players have a significant opportunity to expand internationally and are expected to increase their market share in the BFSI SaaS market by 5x in 10 years, and drive \$45-55Bn in revenues. An intriguing extension of this is the significant opportunity for a large portion of the global market to operate on NPCI rails, thereby amplifying the reach and influence of Indian financial technologies worldwide.
- 4) Bridge to Capital Access: India's vibrant Fintech ecosystem with 20 unicorns and 17 soonicorns will soon be gearing up for large-scale liquidity events with 20-30% of PEVC investments approaching the end of their investment lifecycle. Building a powerful equity narrative, tailored to the type of potential investors, would be key for Fintech founders looking for IPO exit opportunities. Pro-moves for founders to build a best-in-class equity story includes alignment of strategic goals with megatrends, placing multiple bets towards a mega-goal, building high talent density, alignment of incentives (and downside risk) with investors, etc.
- 5) Bridge to Regulation, Compliance and Risk Management: Financial institutions need to combat 3 risks financial, non-financial, and strategic. Indian FIs needs to significantly ramp up their cyber-defense (India's cybersecurity spends as % of revenue is one-ninth of global spends). Cyber issues, further combined with geopolitics, pose an even bigger threat to the financial institutions, for instance, attacks that can paralyze a country's payment systems. Non-compliance also leads to significant value destruction for FIs (we have seen up to 50% value impact within 14 days!). The enforcement actions by the regulator have also increased by 1.5x in the last year; compliance by design is a key imperative for the Indian financial ecosystem. Evolution of regtechs have the potential to aid in the regulatory compliance of Indian FIs.
- 6) Bridge to Brighter and Greener Future: Large headroom for India to improve the quality of fundamental research in critical and emerging technologies such as AI. Currently, India lags major economies in quality fundamental research, with the gap widening since 2020. To boost fundamental research in critical and emerging technologies, a 4-pronged approach is necessary preferential incentive policies to attract private R&D investments, integrating the corporate ecosystem with academia, commercialization of university research, and attracting and retaining world-class researchers. Financial institutions have a dual responsibility to decarbonize their portfolios and manage climate risks. There is a \$100-150Bn gap in climate financing in India. A significant part of this challenge involves the elusive search for concessional funds, essential for closing the financing gap and supporting sustainable development.

Policymakers, innovators, and capital providers must collaborate to construct these critical bridges that will drive progress and ensure a resilient, inclusive, and sustainable financial future.



01

**Global Fintech Trends** 

Pg 16-23



02

**Voice of Industry** 

Pg 24-33



03

**Six Bridges for the Next Decade of Finance** 

Pg 34-92



04

**Appendix: Segment-wise Global Trends** 

Pg 93-99





## **SUMMARY**

- Global Fintech revenues on track to reach \$1.5Tn by 2030
- APAC set to become the epicenter of Fintech innovation with \$600Bn revenue, along with NAMR at \$520Bn revenue by 2030, generating 3X revenue of next best region
- •> Global Fintech funding has stabilized in the range of \$7-10Bn in the last 4 quarters (down from an exuberant \$20-30Bn quarterly Fintech funding in 2021-22); accounting for 12-16% of global equity funding across sectors
- Mix of funding across sectors has remained stable over the years
  - Financial infrastructure's share of investments has seen a resurgence in 2024
  - Insurtech continues to lose share of investments due to limited use cases demonstrating path to profitability
- Negional capital allocation trends reveal convergence of segmental capital allocation between developed and emerging markets
  - Developed world increasing share of investments in payments to catch up with emerging markets
  - All markets increasing share of investments in WealthTech, indicating a surge in mass-affluent population across geographies
- •> Significant shift in investment mix towards B2B and B2B2X focused Fintechs. With their share in funding increasing to 65%, it reflects a growing preference for business models with steadier income streams and clearer paths to profitability.
- M&A activity in the Fintech sector has surged 1.8 times over the past four years, indicating expectations of path to profitability due to economies of scale
  - North America leads in the number of M&A transactions holding ~40% share
  - Share of other regions is also on a rise, with India witnessing a notable increase in M&A activity within the APAC region



■ 2023 and 2030 Global Fintech revenue by geographies (\$Bn)



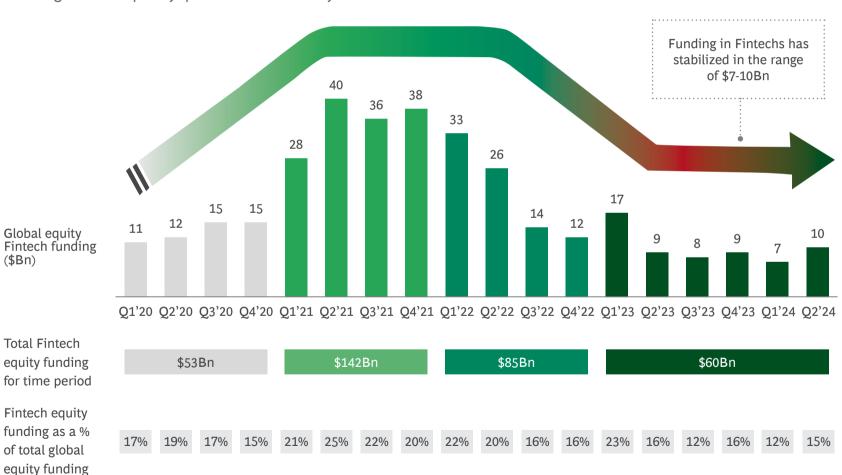


By 2030, APAC on track to become the center of gravity for Fintechs globally, along with NAMR, with 3X higher revenues than the next best region; Latin America and Africa to grow at 25%+, from a smaller base

# Global Fintech funding stabilizes at \$7-10Bn; driving 12-16% of global equity funding

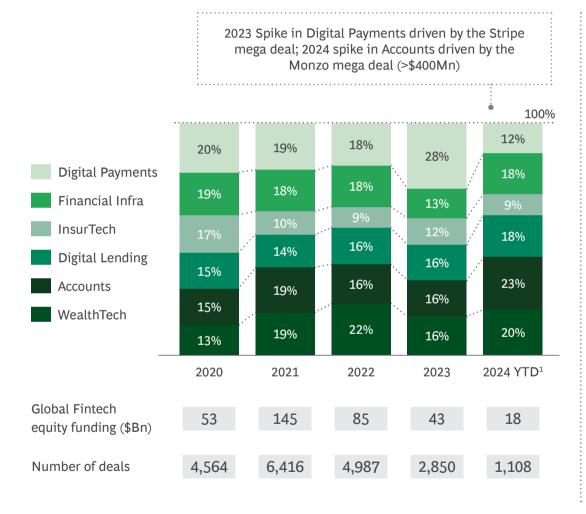
■ Global Fintech equity funding flow (\$Bn)

Funding amount split by quarters of calendar years



## Mix of funding across sectors has remained stable

Annual global Fintech equity funding flow (\$Bn)





Financial Infra's share of investments has seen a resurgence in 2024 with funding distributed across core platforms, regtech, CRM; sectors demonstrating path to profitability, globally

Accounts/Neo-Banking (Retail and SME Neobanks, PFM, etc.), continue to hold share of investments (2024 spike due to the Monzo mega deal) despite regulatory challenges in select geographies.

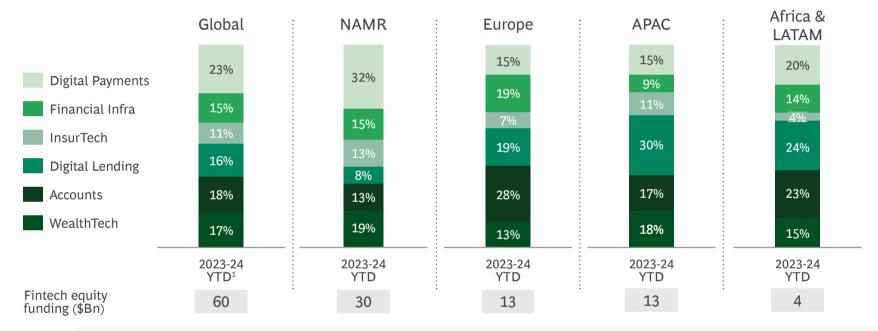
Significant headroom for disruption continues; traditional BFSI increasingly augmenting digital capabilities

Insurtech continues to lose share of investments due to limited use cases demonstrating path to profitability (except for B2B2X e.g., claims solutions for insurers)

# Regional capital allocation trends reveal the converging needs of a two-speed world

NAMR re-investing in payments to catch up with emerging markets, all markets investing in WealthTech, indicating growing affluence across geographies

Cumulative Fintech equity funding flow (\$Bn)



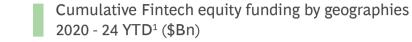


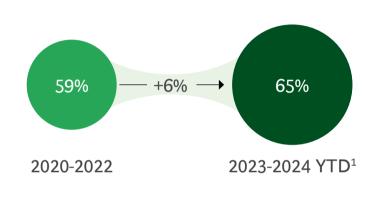
An analysis of regional capital allocation shows that the needs of developed and emerging markets are converging. Digital Lending is crucial for inclusion, with increased investor focus in developing regions like APAC, Africa, and LATAM. NAMR is driving a large share of investments towards innovation in Digital Payments, to bridge the gap with emerging economies. Interestingly, all geographies are driving similar share of investments in Wealth Tech, indicating growing affluence across geographies. Europe and NAMR lead in Financial Infrastructure investments to meet the growing demands of the financial sector; APAC needs to ramp up share of investments in Financial Infra

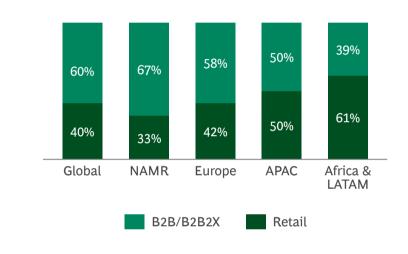
# Extended funding winter has led to investments shifting further away to B2B2X<sup>2</sup>

B2B2X segment with steadier income streams and clearer path to profitability

Annual global Fintech equity funding for B2B/B2B2X (\$Bn)









B2B2X<sup>2</sup> focused Fintechs have been steadily receiving an increased share of funding as sector demonstrates recurring revenue and path to profitability

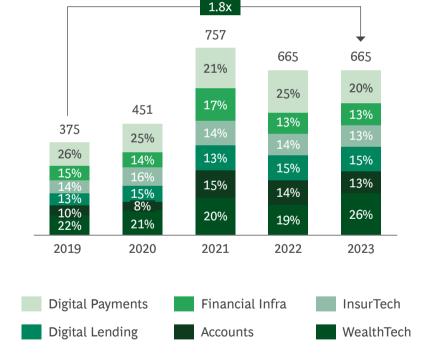


Large headroom for the B2B2X segment in developing economies of APAC, Africa, and LATAM; share of funding for B2B2X focused Fintechs likely to increase with increasing formalization of economy

# M&A activity has surged 1.8X in the last four years, with expectations of path to profitability due to consolidation

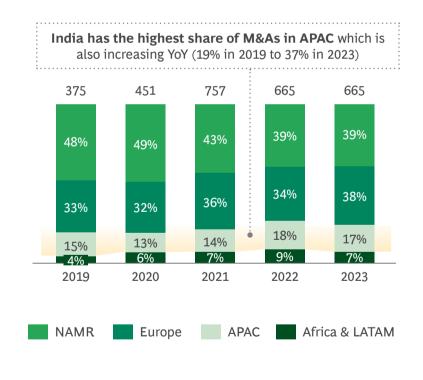
Fintech consolidation continues; expectations of path to profitability due to economies of scale

Global Fintech mergers & acquisitions by segment (#)



NAMR leads in M&A transactions, however, share of other regions is rising

Global Fintech mergers & acquisitions by region (#)





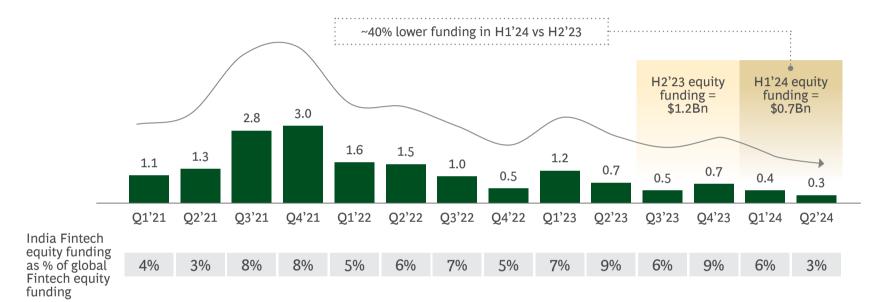
## **SUMMARY**

- •> Indian Fintech funding experienced a dip, falling to \$0.3-0.7Bn in the past 4 quarters with ~40% lower funding in H1'24 vs H2'23; only 2 segments of increased funding observed namely, asset-based lending and retail banking and PFM
- •> Founders' new mantra: Innovation with "Profitable and compliant growth" key priority for Fintech founders in the next decade; clearer regulations and fraud control crucial to unlock the next wave of growth
- >> >80% respondents already profitable or believe that they'll become profitable in the next 24 months (vs. 20-30% in 2022)
- •> More than 60% fintech founders see Generative AI and API-based open architecture as key drivers of future growth with applications ranging from customer service automation, marketing, and customer engagement to fraud detection
- •> Fintechs are increasingly exploring strategic international expansion; the Middle East and Southeast Asia are top choices for Indian CXOs
- •> 70-90% digital payment fintech CXOs bullish on credit products, cross-border payments, and P2M payments for revenue expansion and profitability
- •> Digital Lending CXOs most bullish on supply chain financing, personal unsecured loans and cards / BNPL; 94% CXOs perceive a 20-50% annual AUM growth as sustainable

# Indian Fintech funding has settled in the range of \$0.3-0.7Bn in the past 4 quarters

Indian Fintech equity funding flow (\$Bn)

Funding amount split by quarters of calendar years

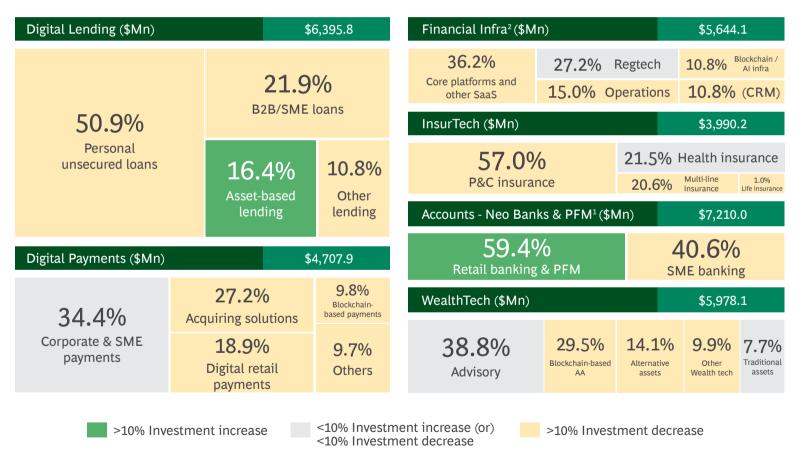




Equity funding in Indian Fintechs has moderated over the past 4 quarters. Companies demonstrating strong fundamentals, path to profitability, and thematic focus (e.g., SME, "Bharat", "Green") are likely to attract more interest. Funding will continue to remain selective and prudent in the short-medium term. Founders should also explore alternate sources of capital like Private Capital and Venture Debt.

# India funding by segments | While overall funding pressure continued, 2 pockets witnessed an increase in funding

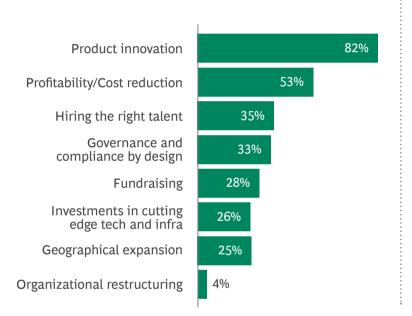
India Fintech equity funding flow: Jul '23 - Jun '24 v/s Jul '22 - Jun '23 (\$Mn) Size of segment boxes proportional to the funding amount from Jul '23 - Jun '24 (% indicates share of sub-segment in the overall segment)



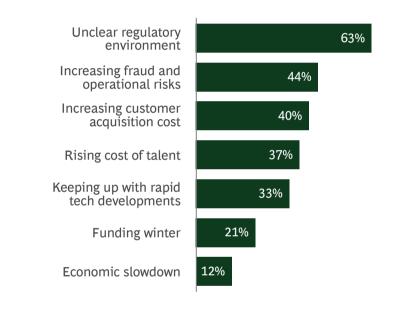
<sup>1.</sup> Neo Banks and Personal Finance Management (PFM): Includes financial comparison websites, digital banks, financial educational websites and financial planning solutions 2. Financial Infra: Includes core platform technologies, CRM and operations solutions, data aggregation and Regtech Source: BCG Fintech Control Tower; BCG Analysis

# Profitable and compliant growth is the new mantra; clearer regulations and fraud control critical to unlock next wave of growth

Strategic focus areas for the next 2-3 years<sup>1</sup> (% of respondents selecting below in top 3)



Top challenges for the next 2-3 years<sup>2</sup> (% of respondents selecting below in top 3)





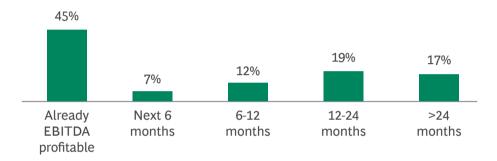
Fintech companies remain dedicated to growth and are driving investments in cutting-edge technology and infrastructure, especially GenAI. But "prudent and profitable" is the new mantra, rather than unbridled growth.

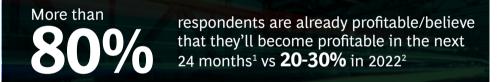
Founder (Indian Fintech)

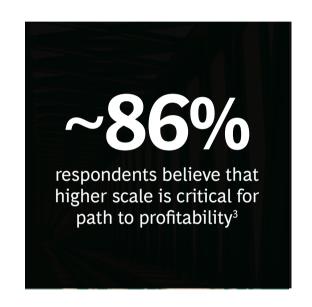
# Fintech path to profitability | Indian Fintechs have embarked on path to profitability ahead of expectations

#### Path to profitability<sup>1</sup>

(% of respondents on when they expect to be EBITDA profitable)









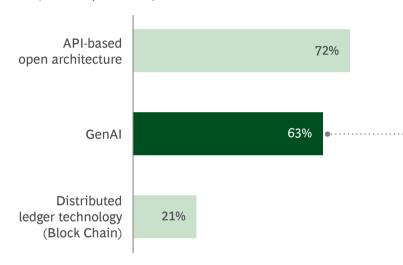
Tech and innovation and employee benefits are the key levers driving profitability. We had the ambition of turning profitable early and achieved positive PBTs last month.

Founder (Digital Lending Fintech)

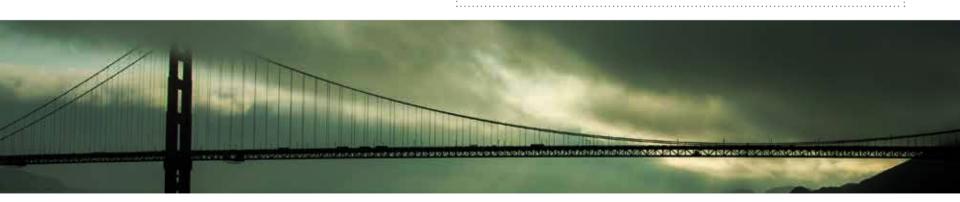
## CXOs are increasingly leveraging GenAI and API-based open architecture

Key technologies being leveraged by CXOs for organizational success

(% of respondents)1





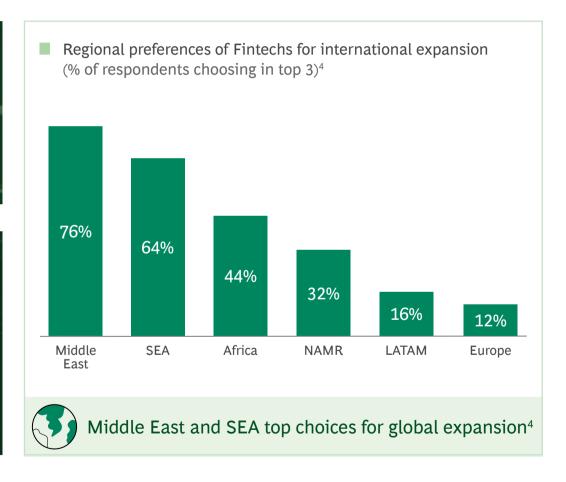


# Fintechs target international expansion, the Middle East and SEA emerge as top choices

23% of Indian Fintechs have more than one-quarter revenues from international markets<sup>2</sup>

670/01

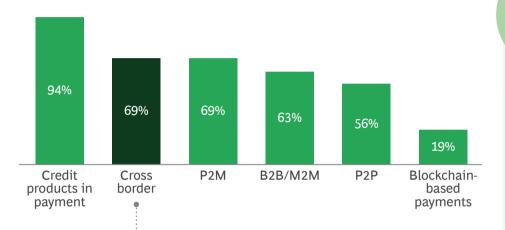
of those not present in international markets, one in two expressed a desire to expand globally in the short-medium term<sup>3</sup>



1. Are you present in international markets? N=13 3. Do you have plans to expand internationally? N=28 4. What are your preferred geographies for international expansion? N=25 Source: The Global Fintech Union Survey 2024 by BCG and GFF

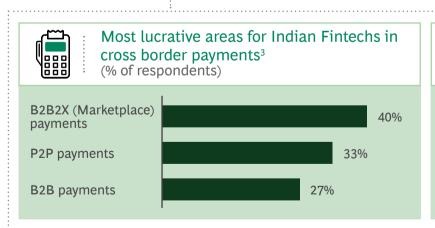
# Digital Payments | CXOs focused on credit products and cross border payments, with plans to leverage UPI for global revenue expansion

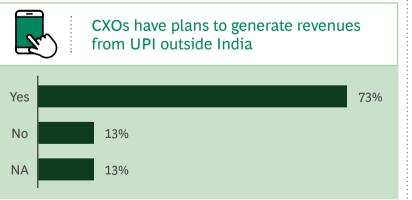
CXOs are bullish on credit products, cross-border, and P2M payments¹
 (% of respondents)



Vivek Mandhata
India Leader – Payments,
Managing Director &
Partner, BCG

Payment Fintechs have harnessed India's digital payment infrastructure, crafting a robust payment ecosystem. In the current MDR regime, lending as a cross-sell, credit via UPI, and the cross-border payments emerge as viable pathways to profitability. Furthermore, a significant opportunity lies in the global expansion of these offerings, leveraging the interoperable framework established by NPCI, thus positioning themselves as key players in the international financial landscape.



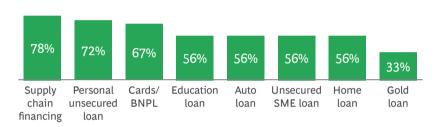


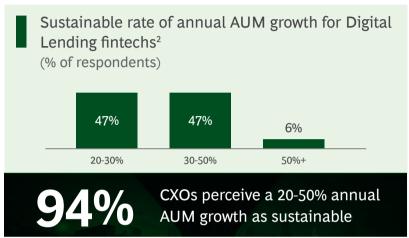
1. Which sub-sector within Digital Payments are you most bullish on in your geography in the current environment N=16 2. Rank the options below in order of priority to drive Digital Payments towards profitability N=15 3. Which of the following are the most lucrative areas for Indian Fintechs in cross border payments? N=15 4. Considering UPI's international expansion, do you intend to generate revenue from it outside India over the next 2-3 years? N=15

Source: The Global Fintech Union Survey 2024 by BCG and GFF

# Digital Lending | CXOs believe 20-50% annual AUM growth sustainable; but need to ramp up investments in collections and risk-based pricing

CXOs are bullish on supply chain financing, personal unsecured loans, and cards/BNPL<sup>1</sup> (% of respondents)

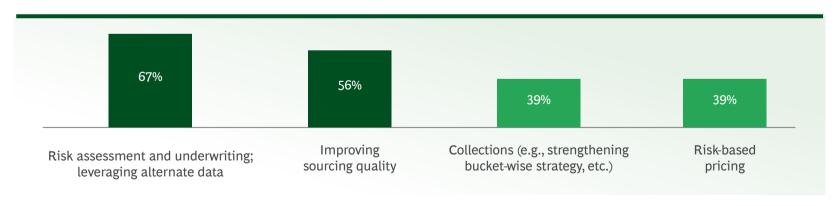






### Key strategic investment areas for CXOs<sup>3</sup>

(% of respondents)



<sup>1.</sup> Which sub-sector within Digital Lending are you most bullish on in your geography in the current environment N=18 2. What do you think is a sustainable rate of annual AUM growth for digital lending fintechs for next 2-3 years? N=17 3. Which of the following capabilities are you investing in? N=18 Source: The Global Fintech Union Survey 2024 by BCG and GFF



## SUMMARY

- India is on the journey to becoming a "Fintech Nation"
  - #3 in terms of number of Fintechs and number of unicorns
  - Indian Fintechs on track to achieving \$190Bn in revenue by 2030 and have demonstrated remarkable growth of >50% in 2023
  - Share of Indian banking Fintechs in banking revenues on track to increase to 20%+ by 2030 (vs. 13% globally)

#### 6 bridges to shape the next decade of Finance:

#### Bridge to future ready tech in FI

- While digitalization (front-end) in Indian FIs is a global poster child, the underlying core remains fragile with lower IT spends at ~5% vs. ~7% globally
- Holistic approach encompassing core modernization, leveraging GenAI, cloud adoption, and building world-class tech functions crucial

#### Bridge between incumbents <> Fintechs

- Lines between incumbents and Fintechs blurring with incumbents building "Captive Fintechs" and Fintechs focusing on governance and compliance; collaboration and healthy competition to continue to capture the large digital native opportunity

#### Bridge to internationalization

- India's financial infra solutions (including SaaS) are highly mature and scalable to support the exponential digitization needs of the world
- Opportunity for Indian BFSI SaaS firms to reach ~\$45-55Bn revenue in 10 years

#### Bridge to capital access

India's vibrant Fintech ecosystem will soon be gearing up for large-scale liquidity events; building a powerful equity narrative, tailored to different types of potential investors would be key for Fintech founders

#### •> Bridge to regulation, compliance and risk management

- Indian FIs need to significantly ramp up their cyber-defense (India's cybersecurity spends as % of revenue is one-ninth of global spends)
- Increase in enforcement actions by the regulator by 1.5x last year; compliance by design is a key imperative for the Indian financial ecosystem
- Indian regulatory framework perceived to maintain a balance between innovation and safeguarding risks; opportunity to improve clarity on regulations

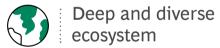
#### •> Bridge to brighter and greener future

- Large headroom for India to improve quality fundamental research in critical and emerging technologies like AI
- DPI 1.0 laid the foundations of a strong Fintech ecosystem; DPI 2.0 and Digital Public Intelligence (AI powered) will power the
  next wave of growth
- \$100-150Bn gap in climate finance in India; blended finance to be critical to meet gap

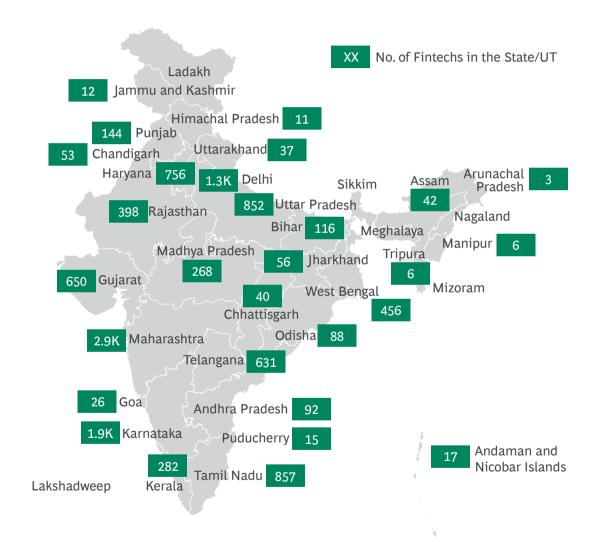
## India – A Fintech Lighthouse







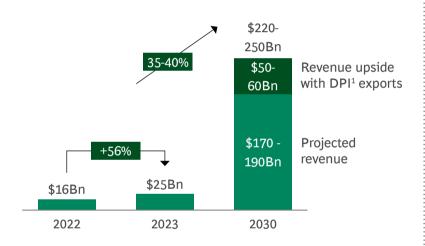




## Indian Fintechs have demonstrated remarkable 1.5X growth in 2023 (vs 13% global); on track to achieve \$190Bn in revenues by 2030

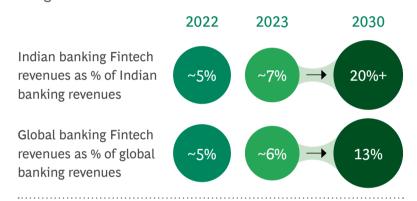
Indian Fintechs on track to achieve ~\$190Bn in revenues by 2030, 2023 growth higher than projected

India Fintech revenues projection for 2030



Share of Indian banking Fintechs in banking revenues on track to increase to 20%+ by 2030

Share of banking Fintech revenues in total banking revenues





Indian banking Fintechs to contribute 25%+ of Indian banking valuations



Indian Fintechs demonstrated a 1.5X growth in 2023 while global Fintech revenues grew 13%, a testament to the strong fundamentals of the Indian ecosystem. Indian Fintechs are on track to contribute to 20% of all banking revenues by 2023 and 25% of banking valuations. The growth is enabled by our strong digital public infrastructure, regulatory support, and increasing digital adoption among both consumers and SMEs.

## 6 bridges to shape the next decade of Finance

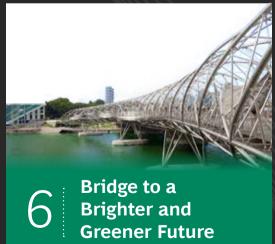










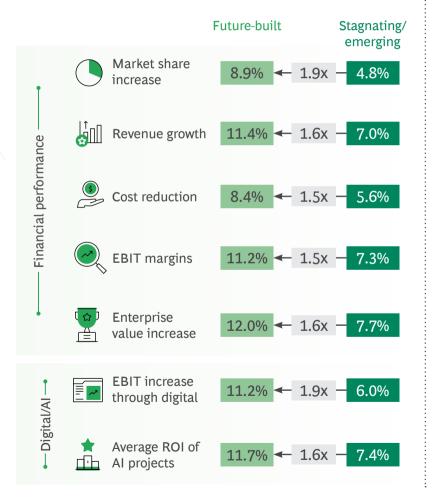






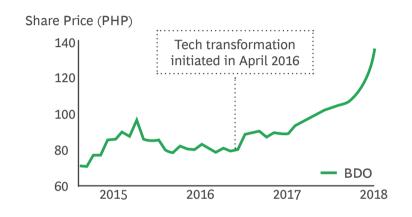
## Tech enabled "Future-built" financial institutions unlock disproportionate value

Future built companies outperform peers across key financial metrics



#### Case Study

Tech transformations drive business benefits including TSR¹; BDO's share price rose +72% within 2 years

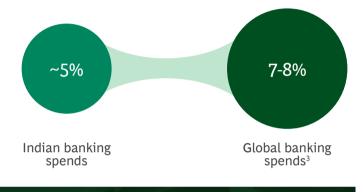


Key results			
<b>72</b> %	Increase in share price over 20 months		
<b>15-25</b> %	Reduction in development cost; freeing up digital capability budget		
2x-4x	Acceleration in delivery and speed-to-market enabled by frequent release cadence		
2x-3x	Customer satisfaction through differentiated experience		

## While digitalization (front-end) in Indian financial services is a global poster child, the underlying core remains fragile

IT spends of Indian financial institutions lower than global peers

IT costs<sup>1</sup> by Net Revenue<sup>2</sup> FY'23(%)



Only 30% of IT spends on 'Change the bank' (vs. 40% globally)

RBI bars a leading private bank from certain banking activities mentioning that the bank is deficient in operational resilience and IT systems

RBI asks a leading private bank to strengthen IT systems before expanding further; it also temporarily stopped the bank from launches of its digital business generating activities

RBI imposed a penalty on a leading private sector bank for contravention of RBI provisions, including provisions related to cybersecurity

RBI observed that there is a significant need to improve IT systems amidst frequent outages in the mobile banking app at a leading public sector bank



Digital transformation in Indian banks is not just about technology, but a complete change in mindset and culture. The biggest challenge is the integration of legacy systems with new-age technologies.

Former Chairman (Large PSB)



Imperative for the Indian FI ecosystem to establish actionable guardrails (e.g., % of tech spends, % of "Change the bank" spends) to meet requirements of the future

### 5 broad themes to augment tech in financial services



### **Legacy** modernization

- Core transformation
- Digital platforms and super apps
- IT architecture blueprint and optimization



### Data and GenAl

- Data platform architecture
- GenAl platform architecture
- Use case implementation: GenAI, personalization, etc.



### World class tech function

- Talent build
- Platform operating model and org design
- Ways of working: agile, IT/Biz governance and demand management



#### Cloud

- Cloud strategy and roadmap
- Cloud architecture review
- Cloud operating model (Including Fin Ops)



### Tech resilience

- Tech infra availability management
- Tech availability, stability
- Resilience

## Core banking transformation can solve 5 key challenges faced by Indian FIs

~\$1Bn spends required for Indian banking core modernization in the next 5 years



#### **Scalability**

- Ability to handle peak time read/ write volumes without failures due to the presence of autoscaling features
- Micro services architecture allows for better resource management and scalability



#### **Flexibility**

- Inbuilt flexibility for modern application needs such as support for event-driven architecture
- Enhanced flexibility to configure and roll-out new products quickly



#### **Agility**

Quicker timeto-market (e.g., by 60-70%) with frequent product release cycles (from 3-6 months to 2-4 weeks)



#### Resilience

- High availability built in the systems to avoid downtime, especially important with increasing real time transactions and advanced tech
- Distributed
   architecture
   enables workloads
   to be spread across
   multiple servers or
   nodes; can handle
   failures without
   affecting the
   entire system



#### **Performance**

 Advanced load balancing techniques prevents any single server from becoming a bottleneck



~\$1Bn

required for the core modernization of Indian banks in the next 5-10 years

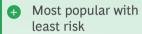
### Multiple approaches to manage legacy core

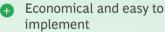
#### Hollowing/ leaning the core



Architectural solve to hollow the core

- Re-factor
- Develop APIs and microservices
- Move business logic out





Impact constrained by the extent of de-coupling possible



**Approach** 

Pros and cons

Successful

examples

the core' approach to scale notification service by introducing a layer of notification microservices which interacted with the existing core. It facilitated

A British bank used 'Hollow personalized notifications at scale and enhanced system monitoring

#### Replace/upgrade the core

Tech in FI

Big bang replacement



- Big bang cutover to new core
- Freezes new features while cutting over

- Reduces future cost and complexity significantly
- Typically slow and expensive
- Highly risky with very few successes in the industry

Few/no successful examples in the industry

Migration challenger



- Stand up a new core in parallel to legacy
- Migrate in a modular way over time

- Easier to implement with limited risk
- Reduced cost and complexity in end state
- Allows for experimentation

system of records

Longer time for full scale transformation

A US bank partnered with Finacle for a wave-based modernization to introduce a new-age core banking system through 4 waves. A new lending product was launched on the new system seven months later, leveraging the existing

Standalone challenger





- Clean stack-focused on new customers, new products
- Not focused on serving existing customers
- Easier to implement with limited risk
- Allows for experimentation
- Creates fragmentation and duplication
- No benefits to existing businesses

A leading Indian Fintech company adopted a 'Build the core' approach to replace a COTS1 system, leveraging the public cloud to create a flexible, monetizable platform enabling it to launch new features and innovative products quickly









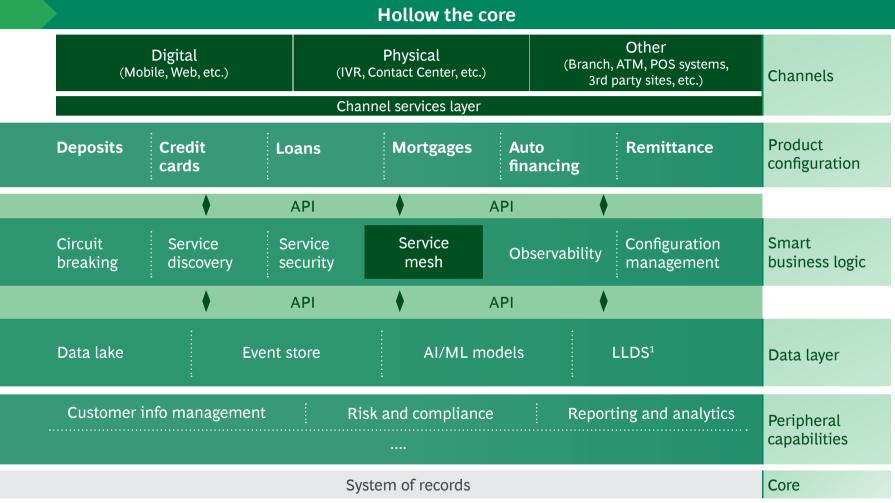


### Modularization of IT architecture through APIs ...

#### **Monolithic architecture**

Channels	Digital (Mobile, Web, etc.)		Physical (IVR, Contact Center, etc.)		Other (Branch, ATM, POS systems, 3rd party sites, etc.)		
	Channel services layer						
Product configuration	Deposits	Credit cards	Loans	Mortgages	Auto financing	Remittance	
Core banking capabilities	Account management	Account management	Account management	Account management	Account management	Account management	
	Postings	Postings	Postings	Postings	Postings	Postings	
	Fees and rewards	Fees and rewards	Fees and rewards	Fees and rewards	Fees and rewards	Fees and rewards	
	Settlement and end of day	Settlement and end of day	Settlement and end of day	Settlement and end of day	Settlement and end of day	Settlement and end of day	
Supporting capabilities	General ledger	Customer ii manageme		•	•	Reporting and analytics	

### ... and hollowing out the core is the most popular and low-risk approach





- •> Existing core system remains as a system of record
- Enables financial institutions to offer value-added and next-generation services to customers while retaining the existing, time-tested core systems

Elements of the core banking platform

1. Low Latency Data Store Source: BCG Analysis

### Blueprint for core banking transformation



#### **Functional capabilities**

- •> Multi-product core as center of new platform, providing product-agnostic (and product-specific) functionalities informed by multi-product customer journeys
- •> APIs and microservices enabling product teams to access core functionalities (e.g., account opening, closing, restricting; posting credit/debit transactions to accounts; processing standard interest, fees, rewards; settlement and end-of-day services)
- •> Functional capabilities designed with domain driven design concepts with clear bounded contexts and responsibilities (e.g., accounts, postings, fees and rewards, end-of-day)

#### Platform enabling capabilities

- •> Clear platform architecture design, including demarcation of in-house vs. partner-built components; core integrations with partners in company (e.g., finance, risk, compliance)
- •> Data integration capabilities for partners across the bank, which could include data lake integration and/or migration to new databases (e.g., multi-region database)
- •> End-to-end, automated, continuous testing (e.g., CI/CD pipelines, shift-left approach), including partner testing with cross-bank teams
- •> High-performing environments that are easy to provision and streamline SDLC (e.g., for development, testing, integration, and production)

#### Team and talent

- Best-in-class talent through recruitment and upskilling; roles include product owners, cloud developers, reliability engineers, etc.
- New ways of working (e.g., agile teams working in sprints, agile coaching for team leaders, joint embedded teams with tech partner)

Source: BCG Analysis

## The AI convergence: "Predictive AI" and "Generative AI" to unlock exponential gains

Predictive AI and GenAI will complement each other

#### **Predictive AI**

Predictive algorithms that, among other things, can assign probabilities, categorize outcomes, and support decisions



Risk models



Recommendation engine

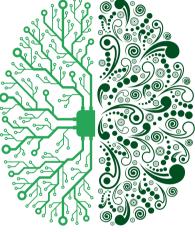


Fraud detection



• • •

### Left brain Right brain



Predictive Al Generative Al

#### **Generative Al**

Generative algorithms that, among other things, can create text or images in human-like quality in response to prompts

Text processing (summarization, generation, etc.)



Multi modal content generation

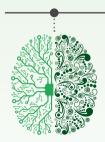


Natural language interaction, instruction





Personalization reimagined: @Scale and Segment-of-1



#### Communication

- Digital channels
- "Human-like" channels



#### **Decision engine**

- Customer segmentation
- Offer decisioning
- Personalization



#### **Content generation**

- Human touch
- Multi modal content
   images tout voice
  - images, text, voice

## Both traditional and Generative AI use-cases span a broad range of opportunities across the banking value chain

				•				
Traditional Al	Customer retention  Cross-sell and acquisition  Pricing and fee optimisation  Omni-channel engagement	CLV modeling Personalized onboarding	Analytical banking offerings	Intelligent payment routing  Smart payment repairs  Differentiated collections  Branch network optimization		Call transcript analysis and insights mining	Early warning credit risk monitoring  Collateral risk assessment  Automated credit decisioning	RWA optimization  HR - AI powered talent acquisition  Optimal allocation of resources
Both		Intelligent document processing and digitization			3 Support and proactive needs identification for RM/client interactions		Transaction monitoring	HR – talent retention – employee sentiment analysis
Generative AI	Hyper- personalization of content  Client acquisition chatbots for engagement  Sales training for simulating client conversations	Streamlined onboarding (incl. KYC)  Initial fact find for a new client	Identification of emerging product trends to support product teams  Help users discover products tailored to needs  2 Code generation and review	Document prepopulation	Investment reports and research synthesis  Synthesized, tailored reports for customer distribution-based on individual interests	4 Customer service/contact center support interface and chatbot  Automated document classification  Policy / contract monitoring and synthesis  Agent coaching and performance	5 Knowledge database for legal teams SAR pre- population Ongoing customer due diligence Compliance monitoring and documentation creation  1 Document synthesis for lending reviews Enhanced underwriting	7 Knowledge management and analysis  Memo writing  IT - synthetic data generation and use for test cases  Finance – drafting of reports and planning
	Marketing and sales	Prospecting & onboarding	Product development	Ops process	Financial advice	Customer support	Risk and compliance	Supporting corporate functions
								Llan anna

Customer intimacy

2. Operational excellence

3. Controlling credit risks

4. Containing compliance and operational risks

5. Building workforce and culture

6. Steering and controlling

7. Analytics-based products and services



## GenAI can unlock bottom-line impact for Indian banks and NBFCs across 7 priority use cases

Use cases	Summary	Potential opex impact
Document synthesis for lending reviews and checks	AI-powered document completion and financial product monitoring-based on customer data to improve efficiency and reduce fraud	~50 bps
Supportive programming, developing, and documentation	Smart code generation and completion to help developers code faster and reduce errors using models trained on best-in-class codebases	~35 bps
Support RMs / FAs with memos, analytics, performance monitoring	Relationship summary and automated reach-outs to help RMs and FAs minimize time spent on data entry while maximizing personalized interactions	~20 bps Potential for additional ~20 bps revenue uplift
Customer service support interface and chatbot	Chatbots and knowledge interface to support call center and in-branch agents, reducing call handling and training requirements	~20 bps
Knowledge database for legal teams	Support legal teams through interface that creates drafts and analyzes documents based on previous work and best practices	~10 bps
Hyper-personalization through creative content generation	AI-generated personalized and targeted content at scale to drive more efficient marketing campaigns	~10 bps
Knowledge management and analysis	Natural language queries to rapidly find answers and synthesize insights, accelerating decision-making and improving performance	~10 bps

## Deep dive: CollectTech - GenAI applications can strengthen the E2E collection process by tapping into unstructured data sources

#### Pre-Settlement Late Bucket X Bucket 1 delinquency buckets & recovery Data sources Early warning signals Audio Treatment DM CC calls strategy Voice bot recorded calls Power up models using past conversation data Field agent meeting recordings Content summarization Real time pivot of strategy basis live info on call (unstructured to Unstructured text structured) Price AA data PTP strength estimation Process and knowledge documents Knowledge search Reports on economic trends Industry reports at Accurate disposition tracking micro geo level Pictures/ videos Near real-time monitoring to detect toxic score Personalized GenerAltor (WA, email, SMS, content Photos and videos video message) generator of assets Persona-based scripts for agents External data Knowledge **Agent Training Content Generation** through APIs generation Conversational Customer facing voicebot Asset price data interface (e.g., scrape websites like Carwale) Data analytics Dashboards for customer cuts and visualization

## Globally, banks and new digital attackers are capitalizing on the benefits of cloud across the entire stack

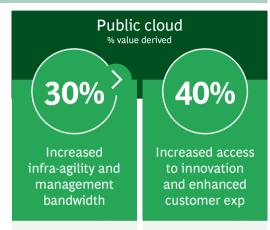
#### 70% of value from public cloud



Lower DC costs across facility, network, firewall

High automation leading to lower FTE costs

Cost reduction due to usage-based pricing



Increased agility due to minimal up-front investment

Higher service levels from increased automation

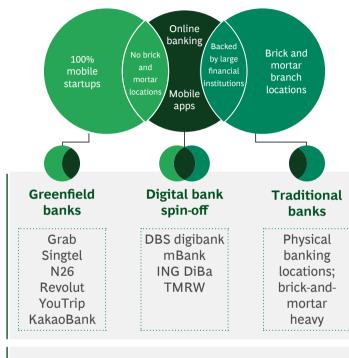
Faster time-tomarket for new products, features and services

Detect and prevent fraud in new and innovative ways Integrate 3<sup>rd</sup> party data sets

Access new customers through partners and new channels

Improve credit decisions through embedded AI/ML

Deliver omnichannel experience to improve onboarding and service



Banking tech stackhosting model Cloud us. on-premise

Banking models



Cloud pureplay; (almost) entire bank hosted on a cloud platform with adherence to financial regulations



Preference for public cloud; typically characterized by existing legacy applications hosted on premise



Majority
on-premise;
commencing
migrating
consumer
engagement
systems to the
Cloud

Source: BCG Analysis





## Regulations on cloud and data privacy supportive in India, but responsibility remains with Regulated Entity (RE)

### Outsourcing permitted, but with appropriate safeguards



#### **Outsourcing regulations**

Banks don't require prior approval from the RBI to outsource cloud-related financial services for both Indian and foreign service providers



#### **Corporate governance**

Banks outsourcing any financial activities should have a comprehensive outsourcing policy approved by the board



#### Risk management

Banks can shift non-critical and critical business applications to cloud-based platform basis extensive risk assessment Data transfer permitted, but privacy remains the responsibility of the bank

#### **Data transfer**



Can transfer personal data within or outside India, given no restriction by the central government

Additional checks<sup>1</sup> defined by the Data Privacy Bill, Aug'23

#### Restricted to India



Rules on sensitive data transfer are limited in jurisdiction to Indian bodies<sup>2</sup>, and do not apply to bodies abroad

#### **Data privacy**



Banks are responsible for the actions of their cloud service providers including confidentiality and recovery of customer information



#### **Key implications**

Supportive regulatory environment for banks to outsource cloud services

Risk assessment guidelines should be defined by the RBI; currently open ended

Banks to recalibrate their cloud stance basis the data privacy bill

### While FIs are increasingly adopting cloud in India, 6 challenges persist



**Regulatory compliance:** Absence of concrete standardized protocols and guidelines for the effective adoption of public cloud solutions



**Security and data privacy concerns:** Apprehensions on the ability of cloud service providers to meet the stringent security and compliance requirements of the data involved



**Resource availability:** Lack of cloud literacy; no existing experience on skill requirements to cope up with the transition to cloud



**Change management:** Lack of majority stakeholders' buy-in on migration to public cloud; resistance to new technology adoption



**Legacy system integration:** Major FIs operate on legacy systems, which increases the complexity of managing multiple interfacing requirements



**Lack of internal strategy:** Maturity of cloud implementation is at a nascent stage; no clear roadmap for tackling potential discrepancies; unclear estimation of migration efforts

### Four key enablers to help FIs drive their cloud blueprints to reality



- Drafting of bank specific cloud adoption policies and guidelines
- Clarity on regulations for compliance and security standards
- Risk assessment to identify and mitigate potential challenges



Ramp-up people and organization readiness

- Setup of cloud strategy team for prioritization of migration of applications
- Support function integration to bring expertise from finance, procurement, etc.
- Skill empowerment through training and upskilling of IT workforce
- Embed culture change agenda through exhaustive plan to drive digital mindset



Accelerate the transition of data to cloud

- Current infrastructure assessment to identify applications for migration
- Data migration plan to ensure minimal disruption and maintain data integrity
- Data security protocols on encryption, access control, and monitoring mechanism
- Stringent testing to detect and address any potential migration issues



Invest in building resilient infrastructure

- Cloud provider selection basis bank expectations and right partnership ecosystem
- Formulation of an active exit plan in case of unavoidable circumstances
- Ongoing monitoring to assess cost, system security, and performance
- Prioritize use-cases for implementation, (e.g., personalization, customer service, fraud prevention)

### Imperative to control transition cost to cloud

Comprehensive framework to control cloud costs

#### **Allocation**

Detailed overview of used cloud components

Tagging strategy

Chargeback

#### **Optimization**

Usage of resources

Rates

Usage of cloud native components

#### **Transparency**

Budgets and tracking

Dashboards and reporting

Taxonomy

#### **Forecasting**

**Budget forecasting** 

TCO calculation

Cost benchmarking

#### Culture

#### Collaboration

Cost accountability

Business value decisioning

Centralized finOps

Transparent reporting

#### Governance

Operating model

Upskilling and training

**Playbooks** 

Organizational design

#### Optimize cloud costs by 20-25%

### Optimize tech architecture

- Built/bought cloud native applications
- Leveraged micro-services, containers, etc., to reap 100% cloud benefits
- Optimized network costs

#### Talent build

- Onboarded cloud experienced team for planning and usage optimization
- Setup finOps (finance + devOps) team

### Proper planning and purchase strategy

- Right sizing basis expected utilization
- Reserve instances for baseline usage
- Rationalization of core infra

### Structured monitoring and governance

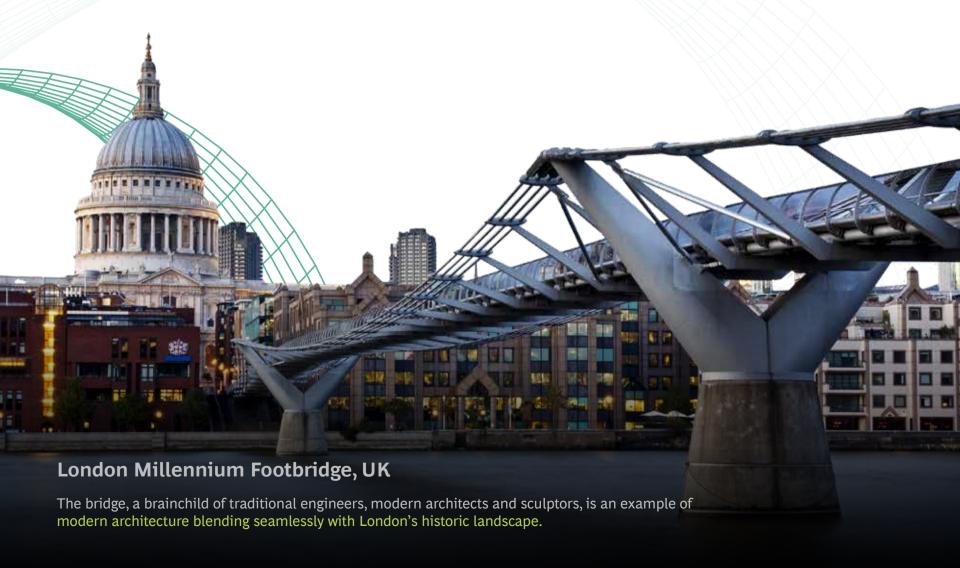
- Rationalization of licenses
- Snoozing of non-production servers
- Ramp-down of capacity while not required; leverage auto-scaling



**20-25%** reduction in cloud costs

Source: BCG Analysis

# 2 Bridge between Incumbents<>Fintechs



## Traditional institution <> Fintech lines are blurring to capture the digital India opportunity at scale

## Fintechs with incumbent's functional capabilities and trust



- Responsible growth
- Regulatory compliance
- Strong governance
- Path to profitability
- Functional capabilities (e.g., collections)

Fintechs are hiring for leadership roles (from legal firms and ex-officials of the RBI) to strengthen legal and compliance teams

#### **Fintechs within incumbent**

- Digital assets
- Open architecture
- E2E digital customer journeys





•> ....







As Fintech and Traditional BFSI collaboration matures, the line between them continues to blur. Fintechs are augmenting core capabilities (e.g., lending players strengthening collections), enhancing governance, and prioritizing profitable growth. Meanwhile, incumbents are increasingly building tech-first capabilities, particularly in customer-facing areas (e.g., D2C journeys), and amplifying the use of analytics and GenAI across the value chain

Source: BCG Analysis

## Incumbents are building digital-first capabilities to acquire or defend primary customer relationships and create moats

Non exhaustive



#### **Leading wealth manager**

- Leading wealth
   management firm built
   the first digital led end-to end wealth management
   platform in India to cater
   to the underserved
   \$1-5Mn segment
- First to India ability to create a portfolio digitally with automated support
- Modular, scalable tech stack with capabilities at par with latest Fintechs



#### Leading private bank

- A leading private sector bank launched a mobile banking super app with hyper personalization as a key feature to increase customer onboardings by 10Mn in 3 years
- The app was launched in response to changing customer behavior in preference of digital offerings (95% incremental onboarding for credit cards, deposits, and personal loans is digital)



#### **Leading NBFC**

- D2C Digital Lending offering with both cross-sell and open market capabilities
- Fraud control suite and system circuit breakers built in-house; capabilities transferred horizontally across business units
- Super-app architecture; future-ready for ecosystem play

## Fintechs and traditional institutions continue to collaborate; however, need to harmonize ways of working to unlock full potential





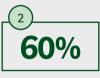


Growth projections, track record of other partnerships and founder profile biggest reasons for partnerships

Top reasons for traditional institutions to partner with fintechs (% of traditional institution CXOs selecting below in top 3 reasons)<sup>3</sup>



Robust growth projections



Founder profile



Track record of other partnerships

Tech maturity, regulatory nuances, and ways of working bottlenecks for traditional institutions while partnering

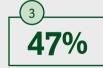
Key challenges in Fintech-traditional institution partnerships (% of traditional institution and Fintech CXOs selecting below in top 3 challenges)<sup>4</sup>



Tech maturity



Ways of working



Regulatory challenges

<sup>1.</sup> How many Fintechs are you in partnerships with across product segments? N=10 2. Do you believe partnering with Fintechs has given/will give access to population to which you were not catering to? N=10 3. What do you look for in Fintechs when you partner with them? N=10 4. What is/will be the biggest challenge for you while partnering with Traditional banks / Fintechs? N=43 Note: Traditional Institutions include Banks, NBFCs, Asset Management and Insurance companies Source: The Global Fintech Union Survey 2024 by BCG and GFF

## RBIH a key enabler in boosting Fintechs' readiness for banking partnerships and fostering collaboration with incumbents

4 key initiatives by RBIH to augment Fintech capabilities



Masterclasses on bank partnerships: Fintechs connect with mentors from banks who guide them through banking ecosystem, regulatory and operational expectations.



Mentorship on Bank Readiness: Fintechs learn about bank-compatible products and APIs, onboarding and approval processes facilitating smooth integration.



Market Access via Bank-Fintech Demo Days: Platform for fintechs to pitch solutions to numerous banks and NBFCs, accelerating partnerships and POCs.



Mixers and Roundtables: Monthly networking events for fintechs to network and pitch their products to potential banks and partners.



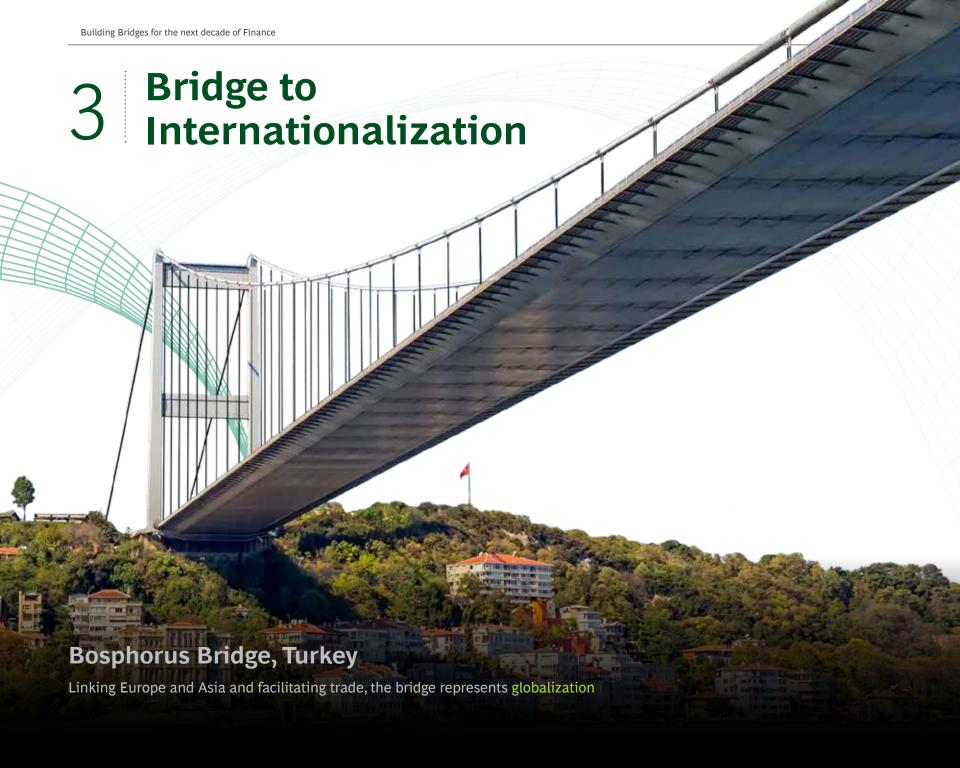
Rajesh Bansal CEO, Reserve Bank Innovation Hub

Fostering a robust partnership between fintechs and banks is essential for driving financial innovation. While banks have shown a strong interest in collaborating with fintechs, it has typically taken ~18 months to establish these partnerships due to various internal and external challenges.

To overcome these hurdles, creating streamlined linkages is crucial. At RBIH, we play a pivotal role in developing the capabilities that banks expect fintechs to have for sustainable partnerships. Our recent 'Bank-Fintech Demo Day' was a significant step forward achieving the following:

- 6X reduction in TAT (from 12 to 18 months to 2-3 months) for confirmation of POCs
- 16 POCs in pipeline within 2 months of Demo Day
- 50% of participating Fintechs received at least 1 POC within 2 months

This success marks the beginning of a deeper collaboration journey in the financial sector.



## Financial Infra with maximum opportunity for internationalization of Indian Fintechs, followed by Digital Payments





- •> Interoperability with local banks and networks a challenge; but UPI interoperability creating new opportunities
- •> Cross-border payments with positive unit economics; lucrative if executed effectively
- Multiple tailwinds including fast growth in global e-commerce, rise of freelancers, etc.
- •> Large cross-border payment pools (e.g., overseas education payments ripe for disruption)





- •> High complexity in integrating with local banking tech stacks, identity stacks, bureau, etc.
- •> Difficult to get regulatory approvals; local players preferred for lending licenses
- Opportunity exists for B2B solution providers (e.g, CollectTech)



WealthTech



- •> Emerging market WealthTech solutions in early stages; mature markets with advanced solutions
- •> Customer trust and brand recognition critical; stiff competition from local players



InsurTech



- •> High complexity in integrating with local legacy insurance systems
- Limited path to profitability for InsurTech globally for B2C segment
- •> Difficult to get regulatory approvals; local players preferred for InsurTech licenses
- Opportunity for B2B players (e.g., Insurance SaaS platforms, GenAI and data in claims and customer service, etc.)



Accounts/ Neo-Banking



- •> Building trust against long standing financial institutions is difficult
- Evolving regulations for Neobanks across geographies
- •> Difficult to get regulatory approvals; local players preferred for Neobanks licenses



Financial Infra (including B2B SaaS)



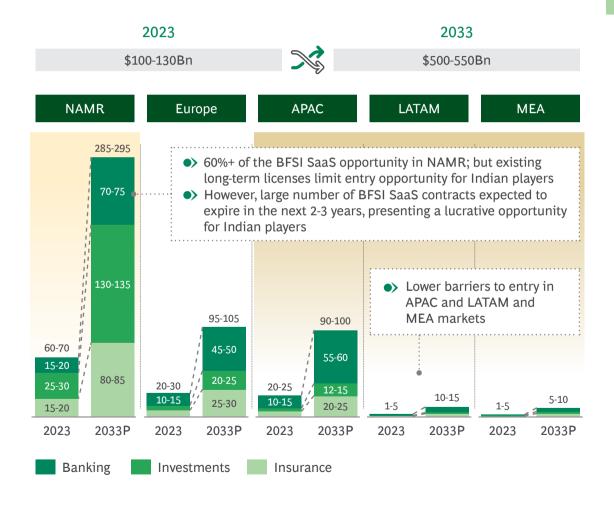
- India's Financial Infra solutions highly mature and scalable to support the exponential digitization needs of the world (e.g., real-time digital transactions in India more than US, China, and Europe combined)
- Easier to get regulatory approvals for infra solutions across all segments

Deep-dive



### Total addressable market for BFSI SaaS to reach \$500Bn+ by 2033

■ Total addressable markets across regions and verticals (in \$Bn)



Major factors contributing to growth

#### Sectoral drivers:

- Focus on e-banking
- Contactless payment methods and digital lending
- Increased tech enabled monitoring
- Regulatory & risk management, and security using AI
- GenAl driven customer support, regulatory reporting, etc.



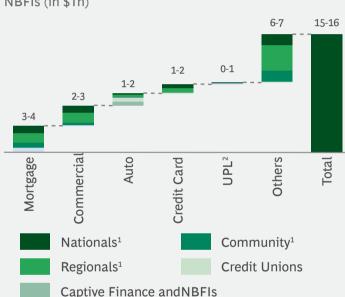
#### SaaS advantage:

- Fast speed to market enabled by modular re-usable components
- Enables BFSI players to focus on core capabilities
- Cloud native SaaS solutions enable rapid scale-up and high reliability
- Reduced total cost of ownership: SaaS proven to be fast and effortless, reducing TCO by 20-25%

### Large US opportunity for Indian Financial Infra players; differentiated approach needed for national and regional players

#### Large US opportunity across segments

Products by presence on balance sheet of depositories/ NBFIs (in \$Tn)



Differentiated GTM required across products and type of FI

#### Mortgage:

- ◆ High share of national players → opportunity for Indian Fintechs to build solutions that can cater to significant addressable market
- > Process and cost optimization top priority for regional FIs to counter higher CAC and TAT

#### **Commercial:**

- ◆ High share of national players → opportunity for Indian Fintechs to build solutions that can cater to significant addressable market
- •> Complete end-to-end automated journeys are currently not provided by any player in the segment

#### Auto:

◆> 80% sourcing through complex indirect ecosystem needing integration with network of dealers to build share of wallet

#### **Credit card:**

National players hold ~50% of the share → opportunity for Indian Fintechs to build solutions that can cater to significant addressable market



#### Personal:

•> Fintechs commanding major share, targeting near and low prime segments → limited opportunity for Indian Fintechs





Sreyssha George Managing Director & Partner, BCG

Though the US is the largest market for BFSI SaaS, the market characteristics vary a great deal by states, products, and banks. Differentiated opportunity exists across segments. National players have large IT budgets and onboarding one marquee client can drive large revenues, regional players are looking to leapfrog in digitization looking for cost-effective partners given limited budget and tech capabilities.



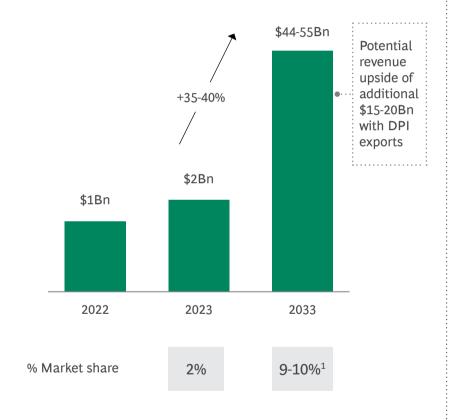
2. Unsecured personal loans: UPLs by NBFIs appear on balance sheet of banks who extend credit to them Source: S&P Capital IQ; investor reports; BCG Analysis



Opportunity for Indian Financial InfraTechs

## Indian BFSI focused SaaS Fintechs expected to generate \$45-55Bn in revenues in 2033

Revenue projection for Indian BFSI focused SaaS players





We see a massive opportunity for ourselves in the retail assets and business banking areas worldwide. With our recent funding, we aim to strengthen our product offerings and establish a strong footprint in the US market.

Founder (Leading B2B SaaS)



Africa represents a significant growth market

for us. Our focus will be on leveraging our advanced analytics and credit decisioning solutions to help financial institutions. We are committed to supporting financial inclusion and fostering economic growth in the region.

Founder (Leading B2B SaaS)



Southeast Asia and the Middle East are dynamic regions with immense potential for digital transformation in identity verification and fraud detection. We aim to bring our cutting-edge technology to these markets.

Founder (Leading B2B SaaS)

## Opportunity for Indian Fintechs to leverage 4 models for international expansion



#### Hero product

**Zeta** 

 Initiated with payment BaaS solutions, subsequently expanded to related products

**Mambu** 

 Started with lending BaaS solutions, now serves a diverse customer base

Partnership led

growth

Razorpay

**Paypal** 

Razorpay has a partnership with Paypal to enable MSMEs and freelancers to accept payments from over 200 markets across the world



Intellect started as a core banking solution provider with a large foreign bank. Currently has lending, treasury, brokerage, core banking, payments, wealth, etc., as a service



**Intellect** 

Citi

Models for international expansion

## Inorganic growth through acquisitions

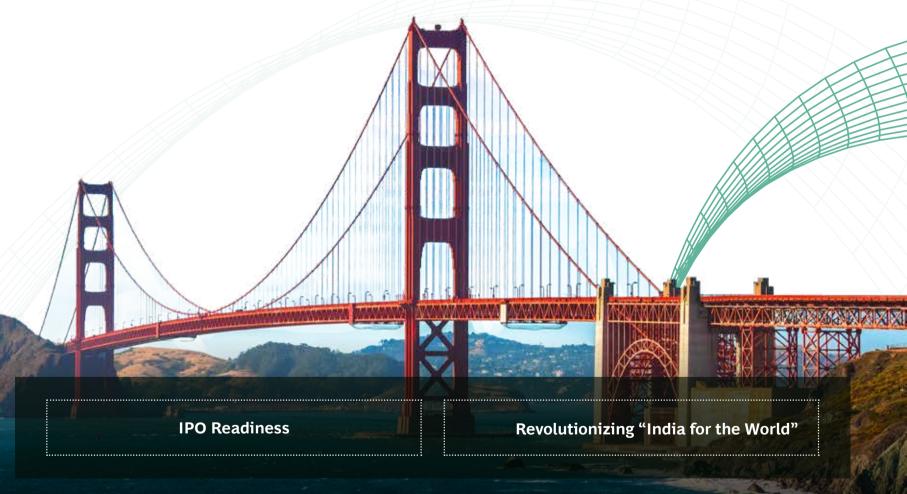
Pine labs acquired Fave in 2021, a southeast Asian Fintech allowing customers to pay merchants via a QR code to expand its presence in international markets



Pine labs

**Fave** 

## 4 Bridge to Capital Access



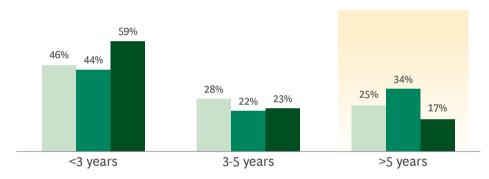
### Golden Gate Bridge, USA

The bridge which boosted San Francisco's economy during the Great Depression is a testament to the centrality of capital access for growth

## 20-30% of VC/PE investments in Fintechs approaching the end of their investment lifecycle; large-scale liquidity events expected

Significant share of Fintech investments are approaching the end of their investment lifecycle

Venture capital investment vintage (% investment value)

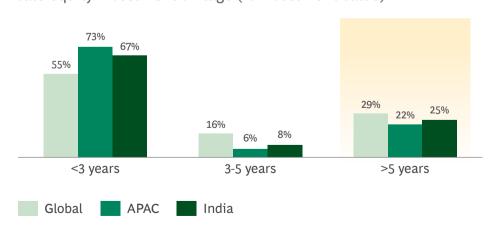


Large Fintech ecosystem gearing up for liquidity events



Start-ups in Fintechs with 20 unicorns (e.g., CRED, Razorpay, Groww, Yubi, Acko, etc.) and 17 Soonicorns (e.g., Mobikwik, Oxyzo, etc.)







Years is the average age of unicorn Fintechs in India and it takes ~3.5 years for unicorns to file for an IPO

## Preparing for a successful IPO journey and beyond involves focusing on 3 key stages

#### Journey to IPO

18-24 months pre

### Strategic planning and structural decisions

- > The Why? "Go" or "No go" decision
- The Where? Domestic or international
- The When? Market conditions and readiness
- The What? Investor study, peer reference

#### Equity story development

- Develop unique value proposition tailored to investor profile with a convincing investment rationale
- Prepare a sound business plan with a long-term vision
- Identify and mitigate risks

#### Financial planning

- > Plan use of IPO capital
- Define target valuation
- Define MOIC and TSR targets

#### **IPO** window

6-9 months pre

#### Stakeholder management

- Select merchant bankers
- Ensure key stakeholders benefits are covered
- > Plan analyst engagement in advance

#### Financial readiness

- Establish expected valuation
- Conduct necessary pre-IPO rounds
- Internal scorecard with key metrics

#### Risk management

- Corrective actions (organic and inorganic) to strengthen narrative
- Forecast first two quarters' performance
- Prepare for major risks
- Prepare IPO checklist

#### Market preparation

- Determine required participation
- Understand strengths and weaknesses
- Investor roadshows to generate interest and gauge share demand

### Journey beyond IPO 3-6 months pre

#### Market integration

- > Establish analyst coverage model
- Ensure that the right investors are in our stock

#### Performance tracking

- Establish TSR equation for 3 and 5 years
- Settle into 'guide-beat-rhythm' with markets

#### Ongoing risk management

Manage negative overhang

#### Operational monitoring

- Monitor IPO fund utilization
- Ensure on-track delivery of first quarter
- Maintain visibility into next four quarters



## Critical to tailor equity narrative basis company's investors base; adjust for risks to ensure strong upside potential of stock

Fintechs can draw inspiration from successful Indian narratives to drive premium



Leaders in long-term trends HUL in India consumption, Jio in data and digital



Leaders in consolidating industry lio, Tatas through acquisition



New player with strong parent Tata Power renewables unit



Repositioning towards higher multiple Bajaj Finserv as Fintech, Havells as consumer company



Leader in organizing a sector Udaan in retail

- Expert tips to design a great stock
  - 1 High multiples are inherently intertwined with grand, high-growth macro trends. Position your opportunity to resonate with a prominent macro trend.
  - As companies evolve, investors favor teams that place multiple bets on grand opportunities, creating optionality and reducing risk of a single point of failure
  - 3 Cultivate a rich talent density and a high-performance culture to amplify your chances of success
  - Lavishly invest, more than competition, in assets critical for forging unique IP and ensuring victory—such as data, algorithms, UX design, and strategic partnerships
  - Remain accessible to stakeholders—analysts, key media, regulators, etc. —and provide them with the apt level of disclosure for them to do their job properly
  - 6 Align your incentives with investor incentives (even downside) this symmetry ensures all parties share in both the rewards and the risks
  - Understand what to anticipate from investors—will they support you or exit at the first hint of risk? It depends on the role your investment plays in their portfolio

### GIFT City and IFSCA revolutionizing "India for the World"

■ GIFT-IFSCA well-positioned as a Global Fintech Hub



### **Favorable regulatory framework**

- •> Unified regulatory authority: No need for separate approvals from multiple regulators; focus on transparency and streamlined licensing
- Streamlined accounting standards: Permitted to adopt International Financial Reporting Standards (IFRS) in line with global parents
- •> Innovation sandbox: Innovation and inter-operable regulatory sandboxes for testing ideas and solutions
- •> Ease of doing business: Single window IT system for all regulatory approvals and clearances



### Tax advantages

- Ten-year tax holiday: No taxes on profits for ten years, along with relief from commodity, security, and dividend taxes
- Zero GST: No Goods and Services Tax on transactions within IFSC exchanges, nil customs duty for all goods imported into SEZ



### **Capital access**

- Access to global investors: Access to PE/VC funds and angel investors (e.g., 70+ FMEs have launched 60+ funds/schemes
  in GIFT already)
- •> Foreign currency transactions: Deemed offshore status; units in IFSC can freely transact in foreign currencies allowing ease of capital movement



#### **Talent Pool**

 Located near educational institutions like IIM Ahmedabad ,IIT Gandhinagar, Gujarat National Law University ensuring availability of skilled professionals

### Opportunity for GIFT-IFSCA to accelerate reverse flipping of Indian **Fintechs**

Indian start-ups reverse flipping to capture "India opportunity"; however, key challenges exist

Groww Razorpay	PhonePe	Pine Labs	Meesho
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#### Tax burden

- Nhen a foreign holding company merges into an Indian entity, it can trigger capital gains tax liabilities in India and abroad
- Startups that reverse flip may lose the ability to offset accumulated losses against future profits

### **Operational complexities**

- •> GIFT IFSC considered as "person resident outside India" preventing investments by India's AIFs and Mutual Funds
- •> Migrating employees to a new India-level ESOP plan can be complex

### Regulatory framework

 Setting holding companies in India poses several regulatory challenges such as, compliance and disclosure requirements, corporate governance standards, etc.

Key recommendations for IFSCA to accelerate reverse flipping





G Padmanabhan Former Executive Director, RBI

I believe GIFT-IFSCA is uniquely positioned to facilitate the reverse flipping of Indian startups. To address the challenges startups currently face in reverse flipping, we have provided a list of recommendations to enable offshoring at GIFT-IFSCA.

Some of the key recommendations include:

- Simplified incorporation processes for holding companies
- •> Ensure tax neutrality to avoid adverse tax consequences for offshore holding companies
- •> Exemptions on capital gains tax on transfer of shares
- •> Exemption of angel taxation provisions
- Carry forward losses or extend tax holiday period beyond 10 years

By amending the current statutes, GIFT-IFSCA can offer a favorable regulatory and tax environment, making it an attractive destination for Indian startups to return, grow, and help realize the vision of an 'Atma-Nirbhar Bharat.'

# 5 Bridge to Regulation, Compliance, and Risk Management



### Financial institutions need to combat a myriad of risks

### Non-financial risks

#### Data risk

- Data integrity risk
- Data gov. risk

#### Fraud risk

- Application fraud risk
- Credit fraud risk

#### Outsourcing Other operating and vendor risk

- External outsourcing risk Vendor risk
  - Legal risk Reporting risk
    - Model risk

risks

### Cybersecurity risk

Regulatory compliance risk

**Financial** crime risk

#### Financial risks

#### Credit risk

- Obligor risk
- Counter-party risk
- Securitization risk
- Concentration risk

#### Liquidity and funding risk

- Interest rate risk
- Market liquidity risk

risk

Market

risk

### Interest rate

Market liquidity risk

### Strategic risk

#### Business risk

- Forecasting risk
- Inorganic growth risk
- Investor relations risk





Abhinav Bansal APAC Leader - Risk in FI, Managing Director & Partner, BCG

The next decade of finance presents novel opportunities as well as risks. Many of these categories of risk are unprecedented. Financial institutions must keep pace with these developments, and risk management departments need to work cross-functionally to understand and mitigate exposures. Risk management changes that will help succeed in crisis include centralizing risk management activities, embedding risk management into overall strategy post management buy-in, and intensifying the usage of data and analytics.

Source: BCG Analysis

### Cyber threat is real, especially for FIs

It's not a question of if, but when a cyber incident will happen

RBI has increased the risk from cyber security incidents from medium to high



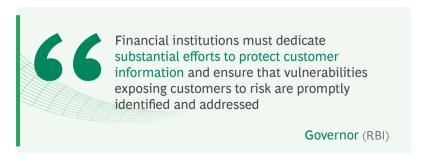
Indian banks spend significantly less on cyber security

Cyber security spend as % of revenue (2022) 0.9% Global banking

Spends

0.1%

Indian banking Spends



- Cyber incidents result in significant impact for organizations as well as entire countries
  - >2.5Mn customers were impacted by a data breach at a leading stock broking company leading to leakage of sensitive information like bank account number, names, email, Aadhaar, PAN, etc.
  - ~3.5Mn user accounts were compromised in one of the largest cyber attacks in India at a leading payment processor
  - >\$10Bn damages recorded across 64 countries in a global cyber attack originating from an accounting software
  - >\$80Mn embezzled from the National Bank of an Asian country by infiltrating the SWIFT network reflecting vulnerabilities in payment systems



Massive increase of cyber incidents due to "attack as a service"



Emerging tech adoption (e.g., accelerated digitization, cloud transformation, GenAI) amplifying exposure to new risks



Increasingly critical external threats (e.g., geopolitics, regulations), especially for financial institutions, allowing no room for missteps

#### 78

### Opportunity for FIs to realize business benefits while mitigating cyber risk



**Cyber posture** and strategy

Cybersecurity cost optimization

**Advanced** cyber risk quantification

Secure by design: GenAI, Cloud

**Zero-trust** security architecture

Cyber operations

Third-party and ecosystem cyber risk

**Crisis** management and resilience



Proactively manage cyber risk exposure

Optimize your budget

Invest in cyber capabilities to enable strategic growth

Be ready to act

20%

Reduction of cyber risk exposure at a leading global bank

30%

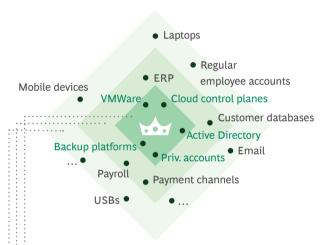
Reduction in fraud losses, at a leading European bank

20%

Reduction of average likelihood of successful attack

### Imperative for FIs to protect "inside out"

Protect inside out, not outside in



Tier 0: Core business critical assets

Compromise or disruption at this layer has the potential to cause organization wide outage or pervasive compromise of other systems, affecting business viability. E.g., Active Directory, Azure AD, VMWare, other key identity systems, etc.

- ···· Tier 1: Secondary business critical assets Disruptions at this layer impact one or more business processes and can cause significant loss of value
- ···· Tier 2: Supporting business assets Disruptions at this layer cause additional work for IT teams and lead to productivity loss; can also be stepping stones for more disruptive events

- Cyber security architecture needs to be optimized across 7 key layers for protecting the core
- Infrastructure security Ensuring IT infrastructure security
- Data center security (DCS) OS and platform patch management
- Network security Ensuring network access is controlled and managed and known attack types at network level are addressed
- WAF **DDOS** Network access control

Network DLP

IPS, APT NDR Proxy servers Network forensics

Firewall

- Identity and access management Managing user authentication and authorization
- Authentication PIM Single sign-on **IDAM**
- Data security Data protection (rest and in motion) with information management & malware protection
  - Encryption **Endpoint DLP** DRM Server antivirus
- **Endpoint security** Data, information, and malware protection on
  - end-user devices

**Endpoint antivirus** EDR / XDR

Vulnerability

- Mobile device management (MDM)
- Monitoring Anomaly detection and analysis through continuous monitoring
- assessment Threat intelligence (TI)
- Threat Simulation SOAR SIEM

- Application security Security related tools in the application laver
- Code Quality management Static and dynamic security testing

Note: OS - Operating system, DLP: Data loss prevention, WAF: Web application firewall, DDOS: Distributed denial-of-service, IPS: Intrusion prevention system, APT: Advanced persistent threat, NDR: Network detection and response, PIM: Privileged identity management, IDAM: Identity and access management, DRM: Digital rights management, EDR: Endpoint detection and response, XDR: Extended detection and response, SOAR: Security orchestration, automation, and response, SIEM: Security information and event management Source: BCG analysis

# Indian regulatory framework promotes innovation while protecting risks; opportunity for collaborative approach to improve clarity and consistency

% CXOs selecting below in top 3 enablers¹

**1** 64%

46%



42%

Safeguards systemic risks Future oriented and pro innovation

Offering a level playing field

66

The digital lending guidelines were a step in the right direction. It provided clarity to the ecosystem and ensured a level playing field

CXO, (Digital Lending Fintech)

% CXOs selecting below in top 3 painpoints<sup>2</sup>

1

46%

2

42%

3

41%

Needs more clarity Needs more consistency

Bureaucratic and time consuming

66

There is still some ambiguity in the regulatory framework. The landscape is rational in the long-term but unpredictable in the short-term

Founder, (Digital Lending Fintech)

■ 3 key asks for regulators from the ecosystem



### Foster more collaboration

Facilitate more dialogue among Fintechs, regulators, and other related industry participants. A Fintech SRO in India will be a key step in this direction.





### **Predictability**

Publish long-term roadmaps to ensure predictability and consistency as to where we are heading rather than the current black box way of working



Agile regulatory adaptation
Consistently monitor and adapt the regulations basis need since regulations may suddenly become outdated owing to advancements in technology or rapid changes in consumer behavior, or both

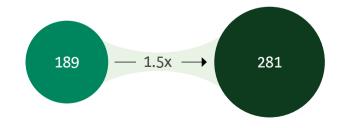
### Non-compliance leads to significant value destruction for FIs

Regulatory action has intensified over the last 2 years

Fine value (INR Cr)



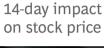
No. of instances



Regulatory action impacts stock price as well as disrupts business

1

RBI ordered one of India's payment banks to stop accepting deposits or top-ups after major irregularities in KYC





2

RBI directed to stop extending fresh gold loan at a leading Indian financial and investment services company due to LTV challenges



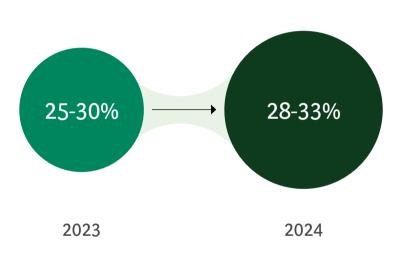
3

RBI barred a leading Indian investment banking firm from providing any form of financing against shares and debentures, including loans against IPO



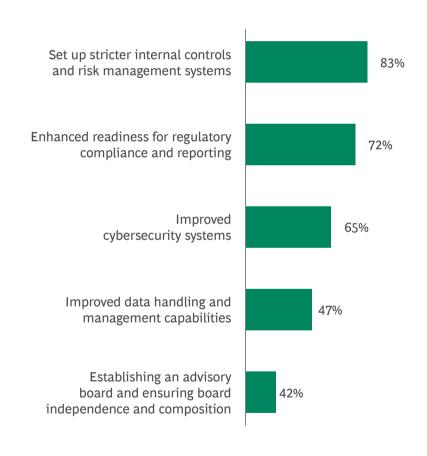
## While outlook for Fintech governance has slightly improved, conscious efforts required from Fintechs

% respondents who believe Fintechs are at par with incumbents in terms of governance<sup>1</sup>





% respondents who chose this step to improve governance standards over the last year<sup>2</sup>



<sup>1.</sup> Q: Fintechs are at par with incumbents in terms of governance mechanism? N=51, 2. Q: What has your business done to improve governance standards over the last year? N=60 Source: BCG Matrix SOFTU Survey 2023/24, BCG Analysis

# 6 Bridge to a Brighter and Greener Future

**Fundamental Research** 

**Digital Public Infrastructure** 

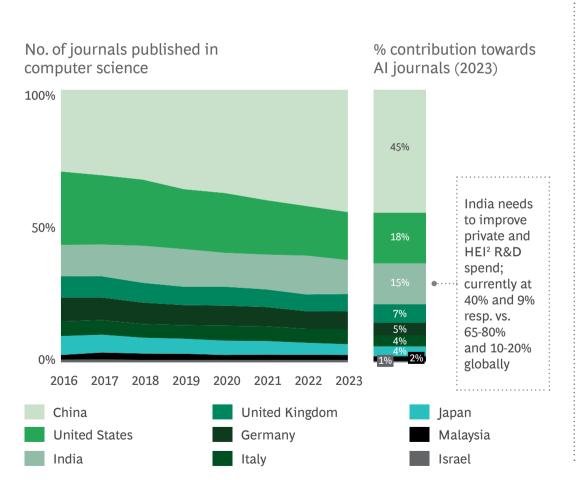
Sustainable Financing

Helix Bridge, Singapore

The Helix Bridge stands as an architectural marvel, showcasing a blend of innovation and sustainability, constructed from 100% recyclable duplex stainless steel and inspired by the intricate structure of DNA

# Large headroom for India in quality fundamental research in critical and emerging tech (e.g., AI)

India lags behind China and US in fundamental research in computer science, especially AI; gap has widened since 2020



Research quality low vs other major economies

Country	H-Index <sup>1</sup> (computer science)	H-index (AI)			
United States	1404	647			
United Kingdom	700	360			
China	678	403			
Germany	640	287			
Italy	453	219			
Japan	400	211			
Israel	393	186			
India	369	211			
Malaysia	240	134			
Opportunity to improve quality of research vs other major economies					

<sup>1.</sup> The H-index captures research output-based on the total number of publications and the total number of citations to those works, providing a focused snapshot of an individual's research performance.

2. Higher Educational Institutes

Source: SCImago, Department of Science and Technology India, BCG Analysis

# Key imperatives for the Indian ecosystem to boost fundamental research in critical and emerging technologies

### Roll out preferential incentive policies to attract private R&D investments

Lower corporate taxes, low-cost loans, and tax exemptions on innovative products

E.g., 15% corporate tax in China for High and New Technology Enterprises (HNTE) vs. 25% standard tax

E.g., Dutch Innovation Box offers 60-70% tax benefit on profit derived from innovation

### Drive integration of corporate ecosystem with academia to reduce knowledge asymmetry

Establish industry-led R&D centers on campuses to bridge the gap between academia and commercial researchers

E.g., State University of New York's College of Nanotechnology Science and Engineering has setup Albany Nanotech Complex with R&D centers of 10+ semiconductor firms like IBM, ASML etc. within college campus

### Enable the commercialization of university research

Spin off companies to commercialize innovations while providing them funding, mentorship, and facility support

E.g., Legend computers (Lenovo) was spun off from the Chinese Academy of Sciences

### Attract and retain world class researchers to build a robust R&D ecosystem

Launch talent attraction programs to attract and retain world's top R&D talent, through incentives such as best in class compensation packages, support services for researchers and families, etc.

E.g., China's Thousand Talent Program targets researchers with lucrative incentives such as 1Mn RMB one-time bonus; 1-3Mn RMB startup grant, subsidized housing and transport, job offers for spouses etc.

# DPI 1.0 laid the foundation for a strong Fintech ecosystem, DPI 2.0 and Digital Public Intelligence (DPI 3.0) to power the next wave of growth

### **Digital Public Intelligence (DPI 3.0)**

### Multiple AI powered DPI use cases emerging

Open Network for Digital Commerce 
Open Credit Enablement Network

Central Bank Digital Currency

Account Aggregator

National Health Stack

National Agri Stack

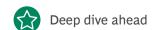
DPI 1.0 UPI

Aadhaar

Goods and Services Tax (GST)

DigiLocker

...and more





Assisted Language Learning piloted in 500 schools and used over 45,000 hours

Saral



450K teachers, 130K schools, 17Mn students (UP)

Hello UPI



6,500 calls since Sep 2023 launch

Kisan eMitra



>10 lakh users over mobile and web

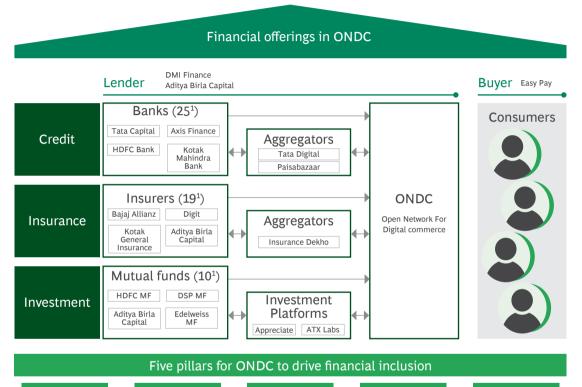


Developing AI models tailored to specific use cases is crucial, rather than creating generalized models. I believe that small, targeted AI models trained on relevant data can produce better results and have a more significant impact on people's lives. This approach aligns with the philosophy of digital public infrastructure, which aims to make technology accessible and beneficial to the common man.

Nandan Nilenkani (Co-Founder and Chairman of Infosys)

...and more

### ONDC driving a two-fold strategy: Democratization of commerce and financial inclusion in India



#### Access

Develop standardized APIs for manufacturerdistributor linkage

#### Affordability

Lower cost and size of finance products

#### Cost efficiency

Keep operational costs and toll prices low

### Commercial viability

Create a sustainable incentive model for distributors

### Policy and regulatory alignment

Advocate for policy changes and regulatory collaboration



Hrushikesh Mehta Senior VP, Financial Services, ONDC

The goal at ONDC is two-fold: Democratizing e-commerce and financial inclusion. ONDC continues to offer small sellers market access, provide buyers with greater choices, and reduce commissions to redistribute profit more equitably along the supply chain. In financial services, ONDC is offering the full suite of services: Credit, Insurance and Investments

We envisage an explosion of rich underwriting data to be available as network effects kick-in. We are collaborating with ecosystem partners to pilot use cases using alternate data to serve underserved segments through our network (e.g., Absolute, Stellapps)\*\*

### Unlocking full potential of the ONDC will require regulatory and policy support:

- Standardization of KYC norms across industries
- Implementation of real time credit reporting
- Incentive to onboard on sachet sizes
- Standardization of legal contracts, LSP and distributor agreements

ONDC can also drive value-added-services for the overall ecosystem e.g., single 3rd party audit for each LSP, accessible for all

# ONDC partners with tech-first players to drive use cases with alternate data, to provide financial access to underserved segments

Upaj, a digital agri value chain solution from Absolute uses proprietary data to underwrite farmers for agri and insurance solutions

Proprietary data used to guide the credit decisioning process



- Mandi prices pan India and near farm locations
- Market accessibility of Mandi locations
- Earning estimations on the district



- Yield estimation of a crop
- Satellite-based crop identifications
- Cropping pattern for location
- Ground water level



Farmer shares interest for loan on Upaj app



Comprehensive farm performance score generated to guide credit decision Stellapps is an end-to-end value chain company, enabling access to payments, credit, insurance, and savings for dairy farmers through their mooPay Fintech platform



#### **Customer acquisition**

Access to farmers via collaboration with dairies and lenders

#### **Credit underwriting**

Assessment using milk pouring data – quality, quantity and income-based analytics and unique statistical credit-risk scorecard "mooScore" (sample below)

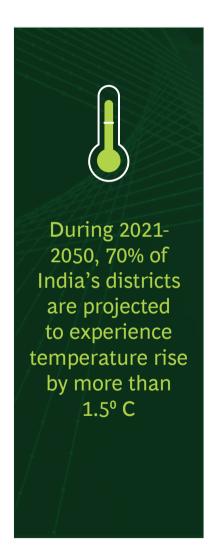
### Risk management

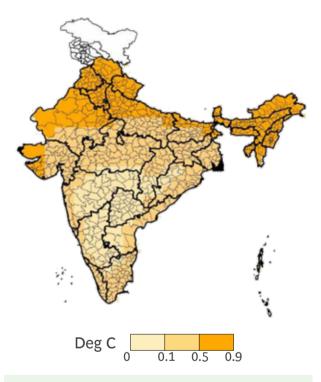
Ability to digitally monitor daily milk pouring and cattle productivity data for early risk detection capability

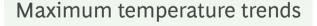
#### **Sample Model Output**

Min Score	Max Score	Bad Rate <sup>1</sup>
300	456	14.3%
456	505	6.15%
505	525	3.27%
525	532	3.39%
532	536	2.74%
536	544	2.39%
544	551	1.99%
551	633	1.21%
633	732	0.55%
732	900	0.15%

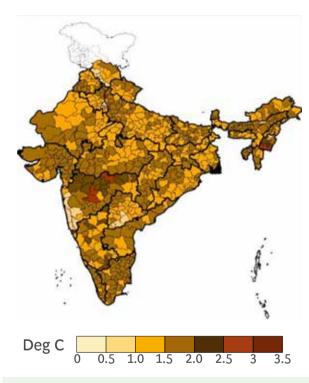
# Tackling climate change is a key priority for India both from financial impact and global political diplomacy







(1991-2019)



Maximum temperature trends

(2021-2050)

Note: 1. The graphs highlight maximum summer temperature trends under RCP 8.5 scenario 2. Changes in temperature were computed as a difference between projected 30-year period (2021–2050) and the historical 30-year period (1990–2019) in consensus with the World Meteorological Organization's approach. Source: CSTEP (2022) Climate atlas of India: District-level analysis of historical and projected climate change scenarios, BCG Analysis

# FIs have a 'double materiality' relation with climate; approach to decarbonize portfolio and manage risks to yield longer term rewards

## Banks' activities are dependent on climate

- Extreme weather events can increase the cost of capital, disrupt value chains, and create market volatility
- These lead to increased risk of portfolio delinquency, losses on corporate loans and increased cost of refinancing

E.g., Shut-down of thermal power plants due to water scarcity, leading to rising NPA for bank

## Banks' activities have an impact on climate

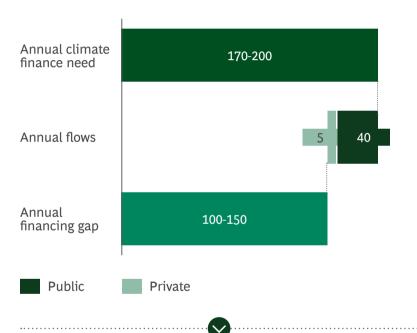
- Banks financing to emission intensive activities such as mining, oil production, etc.
- Portfolio emissions of global financial institutions over 700x larger than direct emissions: CDP analysis

E.g., Financing hard to abate industries without assessing emissions intensity of operations

# Significant gap in India's climate financing requirements; blended finance can be a key unlock

Significant capital shortfall anticipated in India's target to achieve NDC¹ commitments

Annual climate financing (\$Bn)





Need for private sector investments to step up green financing in India

- Blended finance would be critical to meet credit gap
  - Merges private and public capital, maximizing the impact of investments, thus mobilizing significant private investments
  - With structures like first loss capital, guarantees, and insurance, blended finance reduces the overall risk for private investors
  - Interest subsidies can lower the cost of capital encouraging in sustainable and highimpact projects



Vivek Adhia
Associate Director, BCG

India's sustainable future hinges on mobilizing and deploying capital at an unprecedented scale. Bridging climate finance gaps requires aligning financial flows with overall economic development, climate resilience, and low-carbon transitions. This will scale-up funding in underfunded green sectors. Financial institutions creating innovative instruments through blended finance, strategic lending tie-ups, and derisking measures like guarantees and carbon credit prefinancing, can significantly move the needle

### Transition finance - the next frontier in green financing

For reducing emissions in hard-to-abate sectors or sectors lacking suitable green alternatives

Hard to abate sectors facing unique challenges

Case study: Textile MSME cluster







 For most MSMEs in the textile sector, energy costs account for nearly 20-30% of opex

 Operating on thin margins, most MSMEs in India resort to low-cost fuel and energy solutions leading to rampant usage of coal fired boilers

 As a part of their Scope 3 supply chain decarbonization, most apparel brands globally have committed to eliminate fossil fuels from their supply chains









For an MSME to comply with such requirements, there are typical barriers like:

- Less ability to make upfront investments into a low carbon product
- Residual life of an existing coal fired boiler, not fully depreciated and therefore challenging from cost-economics angle
- Lack of availability of alternative solutions

To address these barriers, transition financing products come to the fore:

- Ability to further seek interest subventions or other incentives by plugging in carbon credits, biodiversity credits, etc.
- More targeted use of proceeds, enabling bankers and FI's to showcase clear impact

Examples of transition financing products in India

### **Leading South East Asian bank**

Loan provided to one of the largest Indian sugar and green energy producers to **expand biofuel business**, support sugarcane farmers, and **adopt sustainable and climate smart farming** 

### **Leading Indian Steel company**

A leading Indian steel company raised \$500Mn transition finance, via sustainability linked bonds, with a KPI hinged on reduced steel emission intensity by 23%

### **Leading Indian Cement company**

A leading Indian cement company raised \$400Mn transition finance, via **GHGlinked bonds**, with a KPI hinged on **reduced cement emissions intensity** 







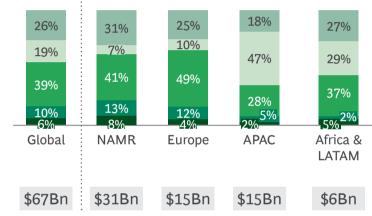
# Global Digital Payments | B2B and digital retail payments resurgent; acquiring solutions continue to dominate in NAMR / Europe

Global Digital Payments equity funding

By segments (\$Bn)

By geography (cumulative - 2020-24 YTD1 (\$Bn)





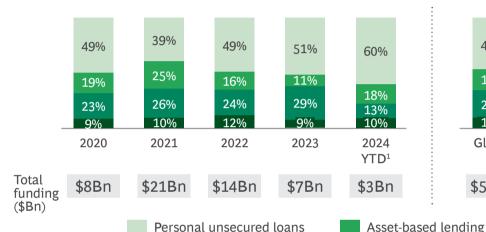
- B2B (corporate, SME & cross border) payments
- Digital retail payments
- Acquiring solutions (POS & PSP)<sup>2</sup>
- Blockchain-based payments
- Others (fraud, security and value-add services)

- B2B payments has seen a rise in share of funding, with increasing digitalization and formalization of SMEs (E.g., Ramp in USA, Bezahl.de in Germany)
- Digital retail payments have seen a resurgence in share of funding, especially in leading markets of APAC, Africa, and LATAM
- Funding in developed economies (NAMR and Europe) dominated by acquiring solutions followed by B2B payments; limited share of investments in digital retail payments as card usage and closed-loop wallets prevalent
- Funding in APAC/Africa currently dominated by digital retail payments, as an alternative to card payments

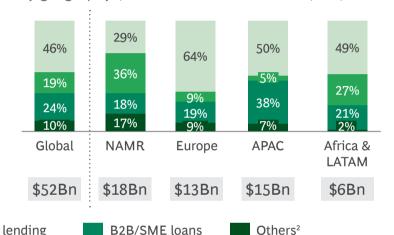
## Global Digital Lending | Personal unsecured loans continue to capture >50% of global equity funding

Global Digital Lending equity funding

By segments (\$Bn)



By geography (cumulative - 2020-24 YTD<sup>1</sup> (\$Bn)



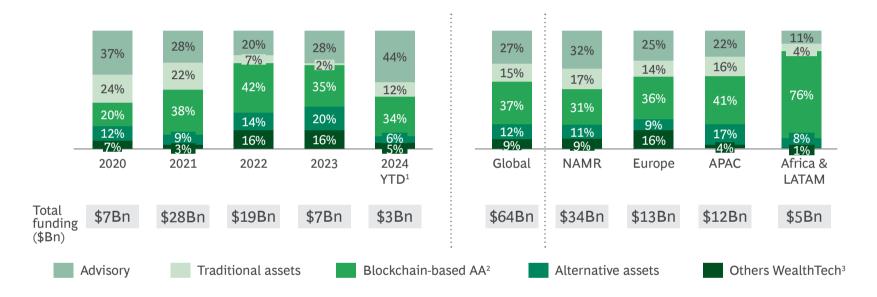
- Personal unsecured loans continue to drive more than half the share of investments in Digital Lending; driven by increased availability of alternate data, enabling catering to underserved segments (E.g., Avanse in India)
- Share of asset-based lending is gradually increasing due to increased usage of alternative data sources, digital customer interfaces, etc.
- As the asset-based lending matures in NAMR, the next wave of growth is likely to come from APAC, Africa, and LATAM
  - Asset-based lending gaining share of investments in Africa & LATAM driven by mortgage and vehicle financing
  - Despite initial promise (especially in Gold loans), assetbased lending has gained limited traction in APAC; tokenization can be a key unlock
- High share of investments in unsecured lending in Europe (driven by the surge of BNPL players) and APAC, Africa, and LATAM (catering to underserved segments)
- Investment-based crowdfunding rising in NAMR

# Global WealthTech | Advisory segment revitalized by GenAI; alternative assets (esp. blockchain-based) continue to attract investors

Global WealthTech equity funding

By segments (\$Bn)

By geography (cumulative - 2020-24 YTD<sup>2</sup> (\$Bn)



- Advisory gaining share of investments since 2023;
   GenAl likely to enable disruptive growth in this segment (especially for mass and mass-affluent segments) (E.g., AlphaSense in the USA, Vortexa in the UK)
- Blockchain-based AA maintain share of investments with increasing shift towards digital assets and tokenization use cases
- WealthTech funding dominated by NAMR with ~55% share, funding in emerging economies to grow with increasing affluence
- Blockchain-based WealthTech platforms driving investor attention, with tokenization use cases on the rise (E.g., BitGo and EigenLayer in the USA)

<sup>1.</sup> Includes funding deals till June 2024 2. Blockchain-Based Alternative Assets 3. Other WealthTech: Includes trade lifecycle management, collaboration and communication, clearing and settlement, risk and compliance, syndication and structuring and core trading tech Source: BCG Fintech Control Tower; BCG Analysis

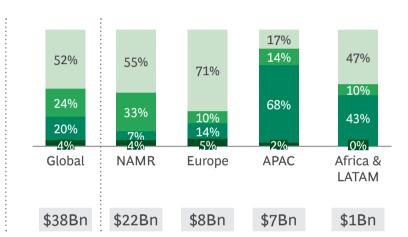
# Global InsurTech | P&C continues to drive >50% of InsurTech funding, dominated by NAMR and Europe

Global InsurTech equity funding

By segments (\$Bn)

By geography (cumulative - 2020-24 YTD<sup>3</sup> (\$Bn)





- P&C<sup>2</sup> insurance Health insurance
- Multi-line insurance
- Life insurance

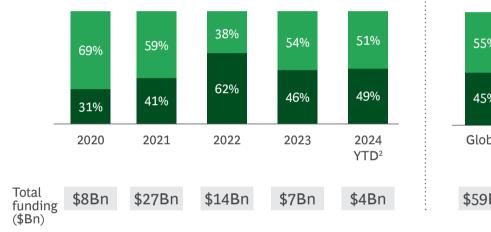
- •> P&C and health InsurTech, with shorter policy durations continue to drive largest share of funding (E.g., Tractable in the UK)
- Low share of investor interest in life InsurTech; mature market globally
- Funding in InsurTech dominated by developed economies of Europe and NAMR with ~80% share and high interest in P&C
- Funding skewed towards multi-line insurers in emerging economies (APAC, Africa and LATAM), owing to lower penetration across segments and lower maturity of P&C market

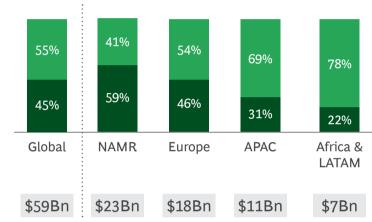
# Global Accounts<sup>1</sup> | SME Neo Banks lead in NAMR; retail Neo Banks thrive in APAC, Africa & LATAM

Global Accounts equity funding

By segments (\$Bn)

By geography (cumulative - 2020-24 YTD<sup>2</sup> (\$Bn)





- Retail banking & PF
- SME banking

- Retail NeoBanks' resurgent in share of funding; especially driven by emerging geographies of APAC, Africa, and LATAM
- SME Neo Banks continue to attract fair-share of funding;
   B2B model shows potential for generating a scalable, sticky client base to generate steady profits
- Retail Neo Banks with lower share of investments in NAMR as traditional banks amp up digitization; to fare better in emerging economies with headroom for financial inclusion
- SME Neo Banks with lower share of investments in APAC/ Africa/LATAM, offering opportunities for disruption

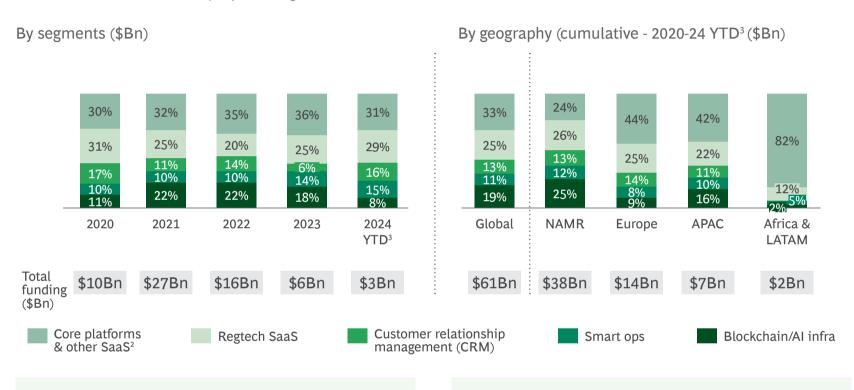
Source: BCG Fintech Control Tower; BCG Analysis

<sup>1.</sup> Includes financial comparison websites, digital banks, financial educational websites and financial planning/savings solutions

<sup>2.</sup> Includes funding deals till June 2024

### Global Financial Infra<sup>1</sup> Core platforms and SaaS lead investments; blockchain / AI infra on a decline

Global Financial Infra equity funding



- •> Core platforms remain steady in the mix of funding, likely to increase as BFSI SaaS Fintech platforms drive global digital maturity (E.g., Solaris in Germany, Perfios in India)
- Blockchain and AI Infra's share in investments declining gradually as investors wait to see evolution of sustainable business models
- Funding dominated by NAMR with >60% share due to increased investments in next-gen technologies
- Nascent space in emerging economies of APAC, LATAM & Africa with ~15% of funding; poised for breakout growth as BFSI SaaS Fintechs (esp. India) drive innovation (E.g., Idfy, Perfios, Lentra in India)

<sup>1.</sup> Financial Infra: Includes core platform technologies, CRM and operations solutions, data aggregation and regtech 2. Other SaaS: Includes supporting infra/SAAS for Digital Payments and Lending Infrastructure Fintechs 3. Includes funding deals till June 2024 Source: BCG Fintech Control Tower; BCG Analysis



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Note: All the names are in alphabetical order

### **Authors**



Yashraj Erande

Global Leader - Fintech, India Leader - Financial Services, BCG erande.yashraj@bcg.com



Neetu Chitkara

India Leader - Fintech, Managing Director and Partner, BCG chitkara.neetu@bcg.com



Vipin V

India Leader - Tech in FI, Managing Director and Partner, BCG vvipin@bcg.com



Tirtha Chatterjee

Co-Lead, GFF-BCG Thought Leadership, Principal, BCG chatterjee.tirtha@bcg.com



Advika Gupta

Consultant, BCG gupta.advika@bcg.com



Lakshay Verma

Senior Associate, BCG verma.lakshay@bcg.com

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