FinTech
SPECIAL

BANKING, FINANCIAL SERVICES AND INSURANCE (BFSI)

Chronicle

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THE INSTITUTE OF COST ACCOUNTANTS OF INDIA
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THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

Statutory Body under an Act of Parliament

www.icmai.in

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Behind every successful business decision, there is always a CMA

Vision Statement

"The Institute of Cost Accountants of India would be the preferred source of resources and professionals for the financial leadership of enterprises globally."

Mission Statement

"The CMA Professionals would ethically drive enterprises globally by creating value to stakeholders in the socio-economic context through competencies drawn from the integration of strategy, management and accounting."

About the Institute

The Institute of Cost Accountants of India is a statutory body set up under an Act of Parliament in the year 1959. The Institute as a part of its obligation, regulates the profession of Cost and Management Accountancy, enrols students for its courses, provides coaching facilities to the students, organises professional development programmes for the members and undertakes research programmes in the field of Cost and Management Accountancy. The Institute pursues the vision of cost competitiveness, cost management, efficient use of resources and structured approach to cost accounting as the key drivers of the profession. In today's world, the profession of conventional accounting and auditing has taken a back seat and cost and management accountants are increasingly contributing toward the management of scarce resources and apply strategic decisions. This has opened up further scope and tremendous opportunities for cost accountants in India and abroad.

After an amendment passed by Parliament of India, the Institute is now renamed as "The Institute of Cost Accountants of India" from "The Institute of Cost and Works Accountants of India". This step is aimed towards synergising with the global management accounting bodies, sharing the best practices which will be useful to large number of trans-national Indian companies operating from India and abroad to remain competitive. With the current emphasis on management of resources, the specialized knowledge of evaluating operating efficiency and strategic management the professionals are known as "Cost and Management Accountants (CMAs)". The Institute is the largest Cost & Management Accounting body in the world, having approximately 5,00,000 students and 1,00,000 members all over the globe. The Institution headquartered at Kolkata operates through four regional councils at Kolkata, Delhi, Mumbai and Chennai and 116 Chapters situated at important cities in the country as well as 11 Overseas Centres. It is under the administrative control of Ministry of Corporate Affairs, Government of India.

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MESSAGE FROM THE CHAIRMAN

CMA Chittaranjan Chattopadhyay

Chairman

Banking, Financial Services and Insurance Board

The Institute of Cost Accountants of India

Dear Esteemed Readers,

As we transition into the festive season, it's a time of reflection, gratitude, and anticipation for the future. The past year has brought with it remarkable changes in the BFSI sector, from rapid digitalization to the evolution of financial technologies, enhancing the way we serve our customers and drive innovation.

The festive season is a reminder of the values we hold dear—unity, resilience, and a shared vision of growth. These qualities have been the cornerstone of our industry's progress, especially during challenging times. I want to extend my heartfelt gratitude to our dedicated teams, valued clients, and partners for their continued support and collaboration, which have enabled us to achieve new milestones.

This is a very special time of the year as it gives people a break from the hustle and bustle of our everyday working schedules. It provides many of us with some time to enjoy the company of family and friends that is all too often missing for the rest of the year. I urge each and every one of you to reflect on these special moments and savour the relationships that we have tried so hard to cultivate over the years.

As Swami Vivekananda said, "It is practice first and knowledge afterwards." I am thrilled to lead the Banking Financial Services and Insurance (BFSI) Board of ICMAI in 2024-25, and I thank the Council for their trust in me.

India's economy is thriving, with the Sensex at an all-time high, a robust GDP forecast, and decreasing inflation. We anticipate a rate cut by the Reserve Bank of India post-October, boosting demand and propelling us toward a $5 trillion economy.

The BFSI sector is at an inflection point, with:

- Digital transformation revolutionizing banking, insurance, and financial services
- Fintech innovations disrupting traditional business models
- Growing demand for skilled professionals in risk management, compliance, and data analytics

- Increasing focus on sustainability, ESG, and net-zero emissions
- Expanding opportunities in rural and semi-urban areas through financial inclusion initiatives

Our key initiatives include:

- MoU with GIFT-IFSCA, fostering closer ties with regulators and industry
- Launching the Advance Certificate in Fintech Course
- Publishing the Handbook on Net Zero Emissions Audit for Financing by Banks
- Revising our course syllabus for excellence
- Hosting a Mumbai Conclave with WIRC and ICMAI
- Positioning CMAs as brand ambassadors in BFSI, driving employment and growth
- Collaborating with industry leaders to develop case studies and best practices
- Showcasing BFSI success stories and thought leadership through webinars and publications
- Enhancing networking opportunities for members through regional events and conferences

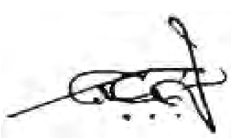
Looking ahead, we envision a future where:

- BFSI professionals play a vital role in shaping India's economic growth story
- Technology and innovation drive efficiency, inclusion, and sustainability
- Our members are equipped with the skills and knowledge to thrive in a rapidly changing landscape

We are committed to accomplishing our goals and uplifting the profession. I invite all members to leverage these opportunities and contribute to our shared success.

Wishing you and your loved ones a festive season filled with joy, prosperity, and continued success.

With warm regards,



CMA Chittaranjan Chattopadhyay

FROM THE DESK OF THE DEPARTMENT

With rainfall across the nation in full throttle and instances of floods observed at various places including Gujarat, Andhra Pradesh and other parts of North East the country is in the midst of above normal rainfall for the year. It augurs well for the country as rainfall above the last year has enabled sustenance of agriculture and we ardently hope for a better GDP forecast in the coming quarters. The Fed rate is now expected to be lowered in the coming days with such cuts being imminent the RBI would now try to lower the bank rate to encourage the credit offtake. The retail inflation is at present at a moderate level which has enabled the purchasing power of the consumers to enhance thereby creating a good positive demand for the white goods and consumption in general for the upcoming festive season. The GDP forecast is expected to be 7. 2 percent and with the international rating agencies enhancing the credit rating of the country has enabled business confidence to an all-time high. The Sensex has shot way past 81000 and with such growth in the capital markets and in the budget imposition of higher tax in the long term and short term capital gains has little impact or no impact in the frenzy of the public to the craze of investment in the current bull run in the capital markets.

We have observed that with financial stability report issued by the Reserve Bank of India the Governor has indicated four key areas where banks and financial institutions can pay more focus namely potential structural liquidity, issues arising out of banks recourse to short term non retail deposits, excessive leverage through retail loans for consumption purposes and close monitoring of end use of home equity loans or top up housing loans and risks arising out of IT outage and the need for business continuity plans during such situation.

Digital growth has enhanced and with the technology marriage with affordability has enabled the households exploring the uncertain returns of mutual funds and stock markets and thereby shirking from traditional financial instruments of fixed deposits and small savings fund instruments.

With RBI stringently imposing restrictions on peer to peer lending and ensuring new rules for Fintech and online aggregators the flow of income has now moved ahead in new pastures of uncertain but higher returns.

The mutual fund industry has seen a huge gain through more domestic investors flocking to the market and the industry is now in the transition phase where it is seen that risk takers are more than the risk averse investors. The SIP flow in Mutual Funds is the highest now and a colossal amount of Rs. 23000 crore for the 2^{nd} consecutive month is observed in August, 2024.

With growth of digital revolution comes a challenge of misuse of digital platforms and exposure to fallout of cyber frauds and scams. One of such innovative schemes launched by the RBI is to the reduce the clearing cycle of cheque payments by introducing continuous clearing with “on-realisation-settlement” in Cheque Truncation System which could speed up the cheque payments and benefit the public in general. The regulator is continuously being an enabler for the general public to embrace the digital world with proper checks and balances.

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Instruments of Monetary Policy in India

Shri Govind Gurnani
Former AGM,
Reserve Bank of India

Monetary policy is the policy by which the central bank of the country regulates the money supply in a manner that balances inflation and promotes economic growth. Reserve Bank of India reviews the monetary policy at bi-monthly intervals.

The Reserve Bank of India (RBI) employs various monetary policy instruments to curb the inflation and attain economic growth. The main instruments of monetary policy are as follows:

1. Liquidity Adjustment Facility
   - Repo Facility
   - Fixed Reverse Repo
   - Variable Rate Repo
   - Variable Rate Reverse Repo
2. Minimum Reserve Requirements
   - Cash Reserve Ratio
   - Statutory Liquidity Ratio
3. Open Market Operations
4. Marginal Standing Facility
5. Standing Deposit Facility
6. Standing Liquidity Facility
7. Bank Rate

1. Liquidity Adjustment Facility (LAF)

Under the LAF, the Reserve Bank provides the liquidity to the banks or absorb the liquidity from the banks on repurchase agreements.

- **Repo Facility:** Under Repo, the Reserve Bank provides short term liquidity (1 to 3 days) to banks against the collateral of government and other approved securities under the LAF.
- **Fixed Reverse Repo:** Under this, the banks park their funds with the RBI for overnight against the collateral of eligible government securities under the LAF.
- **Variable Rate Repo:** Variable rate repo (VRR) is a liquidity injection tool of the RBI. As the system deficit leads to muted demand and contraction of economic activities, the RBI conducts VRR auctions as and when need arises. When weighted average call money rate trends above the repo rate in the interbank money market, it gives signal to the RBI of System Liquidity Deficit. RBI conducts VRR auctions (tenor : Overnight to 13 days usually) for injection of short term liquidity against collaterals. At VRR auction, the cut off rate of interest generally remains at one basis point above the prevalent policy repo rate. For injection of durable liquidity, the RBI conducts VRR auctions for a tenor beyond 14 days very rarely.
- **Variable Rate Reverse Repo:** Variable rate reverse repo (VRRR) is a liquidity absorption tool of the RBI. When the weighted average call rate in the interbank market trends below or near the repo rate, it gives a signal to the RBI about excess liquidity in banking system. In order to ensure that excess liquidity is not fueling inflation, the RBI conducts VRRR auctions (tenor : overnight to 29 days) at frequent intervals for absorption of the liquidity. At VRRR auction, the cut off rate of interest generally remains at one basis point below the prevalent policy repo rate.

2. Minimum Reserve Requirements

Under the minimum reserve requirements, the banks are required to maintain cash reserve ratio (CRR) and statutory reserve ratio (SLR) on daily basis to safeguard the interests of depositors as mandated by the RBI from time to time.

- **Cash Reserve Ratio:** It refers to the cash which banks have to maintain with the RBI as a percentage of total of its Net Demand and Time Liabilities (NDTL). An increase in CRR makes it mandatory for banks to hold large portion of their deposits with the RBI. Therefore, it reduces their funds available for credit and they lend less which affect their profitability and reduces the money supply in economy. ***Reserve Bank of India does not pay any interest on the CRR balances maintained by banks***. Every scheduled bank, small finance bank and payments bank is required to maintain minimum CRR of not less than ninety per cent of the required CRR on all days during the reporting fortnight, in such a manner that the average of CRR maintained daily shall not be less than the CRR prescribed by the Reserve bank.
- **Statutory Liquidity Ratio:** Apart from CRR, the banks are required to maintain a portion of their total of NDTL in liquid assets in India in the form of gold, cash and approved securities with them. The increase/ decrease in SLR by the RBI affects the availability of money for credit with banks.

3. Open Market Operations

Open market operations refer to the process of buying and selling of government securities, bonds or Treasury Bills by the Reserve bank to regulate the money supply in the economy. If the Reserve bank wants to inject the liquidity, it purchases these bonds from the banks. Similarly when the Reserve Bank wants to absorb the liquidity, the Reserve bank sells these bonds to the banks.

4. Marginal Standing Facility

Marginal standing facility (MSF) is a facility under which scheduled commercial banks can borrow additional amount of overnight money from the Reserve Bank against their excess SLR securities and also by dipping into their SLR portfolio up to a specified limit at a penal rate of interest in the event of inter-bank liquidity completely dries up. This provides a safety valve against unanticipated liquidity shocks to the banking system. It is a collateralised facility for emergencies, through which banks obtain liquidity support from the RBI.

The eligible banks can also continue to access overnight funds under this facility against their excess SLR holdings.

5. Standing Deposit Facility (SDF)

Under this, the banks can park their excess funds with the RBI for overnight without collaterals. SDF helps the RBI manage the total amount of money circulating in the economy and, thus, keeps a check and controls inflation. Funds kept under SDF are eligible for reckoning SLR but not for cash reserve ratio.

6. Standing Liquidity Facility (SLF)

Under the SLF, the Reserve Bank lends funds to the scheduled commercial banks under Export Credit Refinance facility and Primary Dealers (Collateralised Liquidity Support) at the Repo rate. Simply put, RBI lends funds to banks who have extended rupee loans to exporters for pre and post shipment under the scheme of export credit refinance facility.

7. Bank Rate

Bank rate is the standard rate at which the Reserve Bank is ready to buy or rediscount bills of exchange or other commercial papers. This rate has been aligned to the MSF rate and, therefore, changes automatically as and when the MSF rate changes alongside policy repo rate changes.

Fraud Risk Management in Banks : New Guidelines

Shri C M Khurana
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Former CGM - Credit IIFCL

Background

The economic survey brought out by the government on 22nd july 2024 highlights the soundness and resilience of India's banking sector with robust credit growth and deposit growth also gaining momentum. As per RBI 'Report on Trend and Progress of Banking in India', during 2022-23, the combined balance sheets of commercial banks expanded in double digits. Lower slippages helped improvement in asset quality, with gross NPA to total advances ratio reaching the lowest in last 10 years. Higher lending rates helped to improve the profitability of banks and shored up their capital positions. An important aspect of the long term sustainable growth of banks is the need for proper and efficient handling of the cases of frauds.The said report also discusses the position with regard to Frauds in the banking sector, covering a vide range of areas of operations in banking interalia including, segments like advances, card/internet related transactions, cash, cheques, deposits, clearing accounts etc.

Frauds lead to reputational, operational and business risks for banks and impact customers' trust in the banking system.The total number of frauds reported in 2022- 23 was 13576 as against 9053 in 2021-22 (source - Report on trend and progress of banking in India 2022-23). Recognising the need for a comprehensive and stronger framework for prevention, early detection, and timely reporting, investigation and monitoring etc of incidents of frauds, the RBI has now come out with detailed revised guidenes by way of "Master Directions on Fraud Risk Management in commercial Banks" in terms of its communication dated 15th july 2024. These directions shall supersede the earlier directions on the subject relating to Classification and Reporting of Frauds by commercial banks, dated 1st July 2016. Here we discuss the broad features of the new framework, now mandated by RBI and the role of banks in ensuring the necessary meticulous compliance.

Governance Structure for Fraud Risk Management

The governance structure entails the need for Board approved policy on fraud risk management, clearly delineating the roles and responsibilities at different levels in the organisation, with an emphasis on ensuring compliance with the "Principle of Natural Justice."A special committee of the board for monitoring and follow up of cases of frauds is required to be set up , to oversee the effectiveness of fraud risk management in the bank. This will broadly cover prevention, early detection, investigation,staff accountability, monitoring, recovery, analysis and reporting of frauds etc and other related aspects under the board approved policy.

Categories of Frauds

For the purpose of reporting of frauds to RBI through the 'Fraud Monitoring Returns' (FMR) using online portal, the fraud cases have been classified under eleven categories. These interalia include

(a) Misappropriation of funds and criminal breach of trust

(b) cheating by concealment of facts with the intention to deceive any person and cheating by impersonation

(c) manipulation of books of accounts or through fictious accounts and conversion of property

(d) Forgery with the intention to commit fraud by making any false documents/ electronic records

(e) willful falcification, destruction, alteration mutilations of any book, electronic record ,paper writing, valuable security or accounts with intent to defraud

(f) Fraudulent electronic banking/digital payment related transactions committed on banks

(g) Fraudulent transactions involving foreign exchange

(h) cash shortages on account of frauds

(i) Fraudulent credit facilities extended for illegal gratification

(j) Fraudulent encashment through forged instruments

(k) Other type of fraudulent activity not covered under any of the above.

A wide range of activities is thus covered to categorise the frauds and bank need to be vigilant in their operations to prevent such activities. The diversion of funds, over invoicing,over valuation of stocks, layering and use of mule accounts can be considered as some illustrative cases.

Early Detection of Frauds

The RBI has emphasized the need for creating a framework for Early warning signals (EWS) and Red Flagging of Accounts (RFA) for ensuring early detection of frauds. In the previous guidelines dated dated 1st July 2016 (referred to above) an illustrative list of some early warning signals was provided, which should alert the bank officials about some wrong doings in the loan accounts which may turn out to be fraudulent. Based on their experience, client profile and business models each Bank needs to have its own list of EWS taking the illustrative list as a guidance point.The previous illustrative list contains a wide range of transactions, irregularities in loan accounts indicative weaknesses in operations, non compliance of terms of sanction etc. Appearence of any one or more of these signals entails the next step to Red Flag the account to take up deeper investigation from potential fraud angle and initiate suitable preventive measure to safeguard the interest of the bank. The signals point towards the possibility of any one of the activities/incidents as mentioned in the above list of 11 categories of frauds. The Risk Management Committee of the Board (RMCB) needs to review the status of red flagged accounts, includindg the EWS alerts/triggers, remedial actions initiated by the Bank etc at periodic intervals.

The broad indicators, which the EWS system can capture may be based on the transactional data of accounts, financial performance of borrowers, market-intelligence, conduct of the borrowers etc. Banks need to establish a dedicated data analytics and Market intelligence unit keeping in view their size, complexity, business mix, risk profile etc. System for monitoring other banking/non credit related transactions is also required. Overall highly effective mechanism needs to be evolved banks need to be vigilant in monitoring transactions/unusual activities specially in non - KYC compliant money mule accounts etc to prevent misue of banking channel. The EWS/RFA framework will be required to be integrated with Core Banking Solution (CBS) or other operational systems.

Role of Auditors

The RBI guidelines as above, further direct that in case of credit facility/loan account classified as 'red flagged', banks shall use an external audit (Auditors who are qualified to conduct audit under relevant stautes) or an internal audit as per their Board approved policy for further investigation. Banks will need to have a policy on engagement of external auditors covering aspects like due diligence, competency and track record of the auditors, among other things. To ensure transparency and fair play, the banks will need to incorporate in the loan agreement with the borrowers, clauses for conduct of such audit at the behest of lender(s) consequent upon red flagging of the account.The decision to classify any account as red flagged shall be at individual bank level and such bank (s) shall report the status of the account on Reserve Bank's CRILC platform immediately (not later the seven days from the date of classification as red-flagged account).

Specific Features

Once an account has been red flagged, the entire process of classification of account as fraud or removal of red flagged status shall ordinarily be completed within 180 days from the first reporting of the account as red flagged on CRILC platform.In case where Law Enforcement Agencies (LEAs) have suo moto initiated investigation involving a borrower account, banks shall immediately redflag the account and follow usual process for classification of account.

The RBI master directions have laid specific emphasis on the need to incorporate measures in the Bank's policy for ensuring compliance with 'Principles of Natural Justice' in a time bound manner, which at a minimum, shall include the following :-

(a) Issuance of a detailed Show Cause notice (SCN) to the Persons/Entities and its promoters/whole time and executive directors against whom allegations of fraud is being examined. The SCN shall provide complete details of transactions/actions/events on the basis of which declaration and reporting of a fraud is being contemplated under these directions.

(b) A reasonable time of not less than 21 days shall be provided to the persons/Entities on whom the SCN was served to respond to the said SCN.

(c) Banks shall have a well laid out system for issuance of SCN and examination of responses/submissions made by the Persons/Entities, prior to declaring such Persons/Entities as fraudulent.

(d) A ‘reasoned order’ shall be served on the Persons/ Entities conveying the decision of the bank regarding declaration/classification of the account as fraud or otherwise. Such order(s) must contain relevant facts/ circumstances relied upon,the submission made against the SCN and the reasons for classification as fraud or otherwise.

As per these directions, Banks are also required to initiate and complete the examination of staff accountability in all fraud cases in a time-bound manner in accordance with their internal policy.

Reporting of frauds

Banks are required to report the incidents of fraud to Law Enforcement Agencies (LEA), subject to applicable laws in a time bound manner as prescribed in the master directions as per the amount involved in the fraud. The reporting of incidents of frauds to RBI is also to be done as prescribed in these directions through the Fraud Monitoring Returns (FMR) in a time bound manner, using online portal as per categories of Frauds discussed above.

A Central Fraud Registry (CFR) is also maintained by RBI, which is which is a web-based searchable database. The information available on CFR is to be used by banks for credit risk and fraud risk management effectively.

Conclusion

The revised master directions issued by RBI on Fraud Risk Management are more comprehensive in nature with greater responsibility cast upon the banks to have a robust mechanism of prevention, early detection, monitoring, reporting and recovery of Frauds.The underlying need to be vigilant by keeping our eyes and ears open for detecting unscrupulous transactions and misappropriation have been well emphasized with need for establishment of a strong framework. However transparency, fairplay and compliance with the principle of natural justice are also to be ensured simultaneously while handling the Fraud Risk Management in banks. An effective, robust and efficient framework is therefore required to be set up by each mank for meticulous compliance of these directions of the regulator.

Is FinTech Eating the Bank's Business?

Shri Y Sathyanarayana Prasad,
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Coastal Local Area Bank Ltd.

Fintech represents a fusion of the terms "Financial" and "Technology." This domain encompasses all "Technological Advancements" aimed at Automating and enhancing the provision and utilization of Financial Services and Products. It entails the application of Algorithms and Specialized Software to manage Financial Procedures and Operations by Consumers, Entrepreneurs, and Enterprises.

Initially, it emerged as a Technology designed for utilization by Financial Institutions and Banks within their back-end frameworks; however, the Current Emphasis in the Fintech Sector is predominantly on Consumer-centric Services, Primarily Encompassing Mobile Payments, Alternative Financing, Online Banking, Stock Trading, Insurance, Big Data Analytics, and Comprehensive Financial Management.

A Traditional Bank fundamentally functions as a Financial Institution Authorized to accept Deposits from and Extend Loans to Individuals, Businesses, and other Entities. In addition, Banks provide various other Financial Services such as Foreign Currency Exchange, Wealth Management, and Safe Deposit Facilities.

There Exists a variety of Banking Institutions, including Investment Banks, Retail Banks, and Corporate Banks, which are Overseen and Regulated by the Central Banking Authority or the National Government.

Difference between FinTechs and Banks:

Focus: The Primary objective of FinTech is to optimize the customer experience while enhancing the Convenience, Functionality, Personalization, and Accessibility of Financial Services. Conversely, Banks typically prioritize Security and the Management of Financial Risks.

Structures: The organizational framework of Fintech Enterprises generally features fewer barriers, thereby fostering an environment conducive to innovation. In contrast, Banks operate under relatively rigid structures, where the constraints and prolonged approval processes hinder their capacity to innovate effectively and implement changes at a sufficiently rapid pace. Furthermore, Fintech Companies often exhibit flatter organizational hierarchies, facilitating Swifter Innovation, Testing, Revision, and Systemic Modifications.

Technology: Fintech Enterprises exhibit a substantial dependence on Digital Technology, whereas Traditional Banks maintain a Comparatively Lower reliance on such Technological Advancements. Fintech Companies are unencumbered by Legacy System Challenges and Leverage Contemporary Technologies, including Artificial Intelligence, Machine Learning, Big Data, Cloud Computing, and Chatbots, to enhance Customer Experiences.

Customer Profile: Banks Primarily focus on serving Clientele with solid Credit Histories and established Credit Ratings. While FinTech Companies do cater to these Customers, they also engage with Individuals Possessing Lower Credit Ratings who are deemed unbankable. Approximately **1.7 Billion Individuals Globally** lack access to a Bank Account. Fintech has the potential to assist these individuals by providing access to Financial Services without necessitating a Bank Account, thereby positioning Fintech as a Formidable Force Advocating for Financial Inclusion.

Collateral: Traditional Banking Institutions impose Stringent Collateral requirements. In contrast, FinTech Companies typically adopt more Lenient and Flexible Collateral Stipulations.

Regulation: Conventional Banking Institutions are subject to oversight and Regulation by both the Central Banking Authority and the National Government. In contrast, FinTech Enterprises are not extensively regulated by the Central Bank and possess the Capacity for a Degree of Self-regulation.

Workforce: Traditional Banking Establishments require substantial Physical Infrastructure and a Significantly Large workforce to effectively Cater to their Clientele. Conversely, FinTech Startups necessitate less Physical Space, and by Leveraging Contemporary Technological Advancements, they can accomplish Tasks more Swiftly and Efficiently than their Traditional Counterparts, all while Operating with a markedly Smaller Team.

Customer Experience: Conventional Banks typically provide Customer Experiences that do not align with the Expectations of the Contemporary Consumer. Procedural Delays are Prevalent, resulting in Customers often enduring prolonged waiting periods before their issues are addressed. Conversely, FinTech Companies prioritize enhancing Convenience and improving Customer Experiences. These innovative firms are capable of resolving Customer Issues more expeditiously through the Utilization of AI-driven Chatbots, which can address Inquiries faster than a Human Representative.

FinTechs Moving to Banking: FinTech Startups can offer Peer-to-Peer Payment Services and various other Financial Services; however, without a Banking License, they are not permitted to Accept Deposits from their Clients.

Fintech Organizations are recognizing that acquiring a Banking License would enable them to expand their Service Offerings. Many of these firms possess broader and more diversified Customer Bases compared to Traditional Banks, Attributable to their Digital Capabilities, which facilitates substantial Scaling through Cross-selling Opportunities.

These Companies are poised to disrupt the established Banking Paradigm via Innovation, Adaptability, and expedited Decision-making Processes. They are set to enhance Banking Convenience and Pose Significant Competition to Traditional Banks. Furthermore, they are bridging the disparity between the services proffered by Traditional Banks and the Speed and Convenience anticipated by Modern Consumers. Contemporary Customers are increasingly unwilling to endure lengthy waits at Local Banks; instead, they prefer to engage online with FinTech providers that can Significantly Expedite the Process.

Banks Launching Fintech Offerings: A 2016 Study indicated that 84% of Americans Utilize FinTech Solutions to manage their Financial Affairs. Financial Institutions are becoming increasingly aware that failing to integrate into the FinTech Landscape may lead to significant customer attrition and a gradual decline in viability. Banks that have recognized the evolving FinTech Environment have commenced actions to penetrate this sector. For Instance, Goldman Sachs has begun issuing Credit Cards in Partnership with Apple, While JP Morgan has acquired a 75% stake in Volkswagen's Payment business with intentions to diversify into other Sectors. Additionally, Citi has invested in Lending Firms such as C2FO, BlueVine, and FastPay, While JP Morgan has allocated resources to Prosper, LevelUp, and Gopago.

FinTechs and Banks Working Together:

At first glance, it may appear that a conflict exists between the disruptive FinTech Startups and the Traditional Banking Institutions. However, this perception merely scratches the surface.

Upon Closer Examination, it becomes evident that Numerous Banks are actively seeking to Collaborate with emerging FinTech Enterprises or to invest in their Ventures.

Banks possess the Foundational Knowledge of antiquated manual processes and Institutional Frameworks established prior to the Internet Era. They hold Invaluable Historical Expertise regarding these Systems, while Innovative Fintech Firms provide the Technological Advancements and Novel Concepts essential for Enhancing, Streamlining, and Optimizing these processes, thereby Fostering Greater Efficiency and Convenience for Consumers.

Fintech Companies possess the Capacity to Assist Conventional Banks by infusing Innovation and Agility into their Operations. A Significant benefit that FinTechs will derive from such Partnerships is the Substantial Customer Loyalty and Trust that Banks have Cultivated over Decades, trust that is likely to extend to FinTechs as a result of this Collaboration. This Dynamic will engender Greater receptivity among Consumers towards Engaging with FinTech Services.

In essence, to deliver Financial Services that Maximize Value for their Clientele, FinTechs and Banks must Forge Co-operative Relationships and Collaboratively shape the Financial Landscape of the Future.

FinTech in India:

In the year 2021, the FinTech sector in India experienced a rapid augmentation, escalating to a valuation of $50 Billion, with projections indicating a remarkable ascent to $150 billion by the Year 2025. This Extraordinary Expansion is propelled by Crucial FinTech domains such as Payments, Digital Lending, InsurTech, and WealthTech, each contributing distinctively to the reconfiguration of the Nation's Financial Ecosystem.

The Payments Domain serves as a Dynamic Catalyst facilitating the transition towards a predominantly Cashless Economy. By the Year 2030, the Transactional Volume within the Payments Sphere is anticipated to escalate to an Astonishing $100 Trillion, accompanied by Revenues Projected to attain $50 Billion. This accelerated Transformation is Principally ascribed to the pervasive adoption of Digital Payment Systems, with the Unified Payments Interface (UPI) emerging as the Frontrunner. In the Fiscal Year 2022-23, Digital Transactions surpassed 13 Crores, thereby highlighting the increasing dependence on digital payment modalities.

Digital Lending:

Estimated at $270 billion in 2022, the Digital Lending Sector is poised to ascend to $350 billion by 2023. This increase underscores the transformative impact of FinTech in democratizing access to credit. By employing alternative credit assessment methodologies and optimizing digital loan processing, FinTech enterprises are effectively addressing the credit disparity in India, thereby extending financial solutions to a wider demographic spectrum.

InsurTech:

India occupies the position of the Second-largest InsurTech market within the Asia-Pacific region, with projections suggesting a Growth Trajectory of approximately 15 times, culminating in a valuation of $88.4 billion by 2030. This expansion signifies a fundamental shift in the perception and accessibility of insurance products.

Innovations such as Artificial Intelligence-driven risk evaluation and the advent of Micro-insurance offerings are not only enlarging the market but also rendering insurance services more inclusive and tailored to individual needs.

WealthTech:

The WealthTech sector is capitalizing on the burgeoning population of retail investors, which is anticipated to reach $237 billion by 2030. WealthTech is instrumental in facilitating more straightforward and accessible investment avenues. The emergence of Robo-advisors, Micro-investing platforms, and Customized Wealth Management Solutions is Fundamentally transforming conventional investment paradigms, thereby endowing financial empowerment to the average investor.

FinTech Funding and Valuation-India on the Global Map:

The FinTech Sector in India has achieved a Noteworthy 14% share of global funding, establishing itself as a significant entity on the international platform. The nation occupies the second position in terms of deal volume, and projections indicate that the FinTech Market Opportunity is poised to attain an extraordinary $2.1 trillion by the year 2030. In the year 2022, Indian FinTech startups garnered a remarkable $5.65 billion in funding, positioning it as the second most financed startup sector within the country.

RBI's Vision 2025: Shaping the Future of Payments:

The Reserve Bank of India (RBI) has Articulated ambitious objectives through its Payments Vision 2025 initiative. These objectives encompass a threefold augmentation in the volume of digital payment transactions, a 50% Compound Annual Growth Rate (CAGR) in the registered customer base for mobile-based transactions, a 150% rise in Prepaid Payment Instruments (PPI) transactions, and the enhancement of card acceptance infrastructure to reach 25 million by 2025. These targets underscore the pivotal role that digital payments are anticipated to occupy in the future landscape of India's financial system.

Account Aggregator Framework:

A Sophisticated framework referred to as the Account Aggregator (AA) Framework is enabling the consent-driven exchange of financial data between Financial Information Providers (FIPs) and Financial Information Users (FIUs). With 23 Banking Institutions integrated into the AA framework, over 1.1 Billion Bank Accounts are now eligible to Transmit Data via the AA system.

This development not only augments data accessibility but also creates opportunities for digital invoice financing, thereby supplying essential credit to the Micro, Small, and Medium Enterprises (MSME) Sector.

To Conclude:

The Government of India is proactively endorsing Gandhinagar as a leading hub for FinTech, with the objective of nurturing innovation and expansion within the sector. Numerous initiatives are currently in progress, encompassing:

The establishment of a specialized Fintech Park within Gift City, which will provide tailored infrastructure and support for FinTech startups and enterprises.

Facilitated regulatory conditions and streamlined operational processes for FinTech firms functioning within Gift City.

Government-sponsored initiatives and financial instruments aimed at stimulating investment and advancement in the FinTech domain.

References:

(a) Government of India Data.

(b) IMF Document on FinTech.

FinTech Vs. Financial Inclusion

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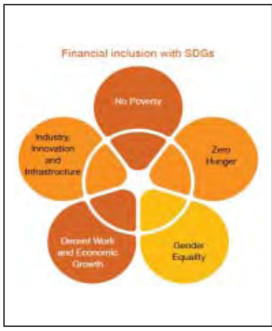
Fintech Enterprises are significantly contributing to the mitigation of financial exclusion and gender disparities within the Indian context. Through the utilization of advanced technology, these enterprises enhance the accessibility, affordability, and user-friendliness of financial services, thereby facilitating the empowerment of women and other marginalized demographics. The Financial Inclusion Index disseminated by the Reserve Bank of India demonstrates this advancement, increasing from 43.4 in 2017 to 56.4 in 2022, principally attributable to improved financial accessibility.

The Government of India has been instrumental in promoting the fintech sector through initiatives such as Digital India and the creation of India Stack, which constitutes a robust digital framework. The JAM Trinity-Jan Dhan, Aadhar, and mobile internet connectivity has equipped individuals, particularly women and marginalized enterprises, to avail themselves of financial services via smartphones. Furthermore, the inception of the Unified Payment Interface has revolutionized India's digital payment landscape by facilitating the linkage of bank accounts to mobile phone numbers for seamless transactional processes.

"Fintech firms are playing a significant role in bridging financial inclusion and gender gaps in India by making financial services more accessible, affordable, and user-friendly, thereby helping to empower women and other underserved groups."

A report published by Global Findex indicates that 76% of the global populace holds an account with a financial institution or a mobile money provider. Conversely, 80% of adults in India maintain a bank account.

Technology for Financial Inclusion:



a) Artificial Intelligence and machine learning algorithms facilitate precise evaluations of credit risk by scrutinizing alternative data sources. This innovation enables individuals to secure credit access even in the absence of established banking histories.

b) Novel financial paradigms such as Buy Now, Pay Later (BNPL) empower consumers to undertake purchases without the necessity of immediate full payment. Instead, they are permitted to remit payments over time without incurring additional charges, which proves particularly advantageous for individuals who may encounter difficulties affording purchases initially.

c) Another noteworthy advancement is the inception of open banking, which employs Application Programming Interfaces (APIs). This framework allows users to securely disseminate their banking information to various organizations, thereby enabling access to an array of financial services from different providers through their bank accounts.

Challenges of Financial Inclusion:

Several Primary challenges that obstruct the advancement of Technology for financial inclusion in India encompass:

a) **Non-price Barriers**: Adequate documentation, encompassing proof of identity, address, income, etc., is requisite for utilizing financial services. Typically, individuals within the underserved demographic lack such documentation, consequently precluding them from benefiting from these services.

b) **Behavioural Aspects**: As delineated in the IDBI Gilts Report, a considerable segment of the populace exhibits discomfort in engaging with formal financial services. The rationale for this discomfort is primarily attributed to the complexities associated with the terminology and related concepts. Additionally, individuals perceive these financial services as exclusively tailored for the affluent tiers of society.

(a) **High Cost for Service Provider & Utiliser**: The provision and utilization of financial services entail challenges that extend beyond superficial appearances. It is evident that both the service provider and the user incur significant costs associated with these services.

d) **Financial Illiteracy**: Individuals aspiring to utilize financial services must possess at least a foundational understanding of financial concepts, including basic arithmetic and proficiency in English. Nonetheless, those residing in rural areas frequently lack such comprehension, thereby presenting a formidable obstacle to accessing financial services.

e) **Technological Hindrances**: Certain individuals harbour feelings of apprehension or uncertainty regarding the utilization of novel technologies for their banking requirements. Concerns surrounding security, alongside discomfort stemming from the unfamiliarity associated with digital banking platforms, further exacerbate this issue.

f) **Social barrier**: This dimension encompasses two principal concerns:

✓ **Gender concerns**: This predicament predominantly affects women, who encounter challenges in securing loans due to potential lack of property or land ownership. In some instances, the necessity for a male guarantor complicates their ability to obtain financial assistance.

✓ **Age issues**: Financial institutions typically prioritize the economically active demographic, often neglecting the financial necessities of both younger and older age groups.

FinTech Solutions for Financial Inclusion in India:

Fintech enterprises are assuming a pivotal role in advancing financial inclusion throughout India. They are actively engaging with marginalized and underserved communities to facilitate access to essential financial services, including banking, credit, and insurance.

According to a report by BCG, projections indicate that India's fintech sector is anticipated to achieve a revenue milestone of $200 billion by the year 2030.

Some of the fintech innovations that are fostering inclusive finance:

a) Digital Payments: Digital or electronic payments are characterized by the absence of a physical exchange of currency. They obviate the necessity for cash management and establish a transparent record for accounting purposes. Such payments are executed through digital payment platforms.

The various digital payment methods currently accessible in India include:

✓ Banking Cards.

✓ Aadhaar Enabled Payment System (AEPS).

✓ Unstructured Supplementary Service Data (USSD).

✓ Mobile Wallets (According to a report by Mastercard, 76% of customers believe that mobile wallets offer a more convenient payment method than traditional options.).

✓ Unified Payments Interface (UPI).

✓ PoS Terminals.

✓ Mobile Banking.

✓ Internet Banking.

With advancements in technology, India is witnessing the emergence of several successful fintech startups that are championing technological solutions for financial inclusion. Notable entities within this landscape include Google Pay, Paytm, CRED, PhonePe, among others.

b) **Microfinance Platforms**: Fintech entities have significantly enhanced the provision of microfinance services to underserved communities, encompassing small-scale entrepreneurs and low-income individuals. These platforms leverage digital lending algorithms and alternative credit evaluation methodologies to offer small loans to borrowers who may lack access to conventional banking avenues.

Some of the principal advantages associated with microfinance encompass:

- ✓ Facilitates straightforward access to credit that conventional banks typically do not provide.
- ✓ Empowers individuals to investigate new opportunities and renders future investments feasible.
- ✓ A notable aspect of these loans is that they are predominantly availed by women.
- ✓ Promotes enhanced credit management practices.
- ✓ Addresses the financial needs of the underrepresented segments of society, including the unemployed and individuals with disabilities.

c) **Peer-to-Peer (P2P) Lending Platforms**: P2P lending platforms serve to connect borrowers directly with lenders via online marketplaces, thereby circumventing traditional financial intermediaries. These platforms proffer affordable credit alternatives for individuals and small enterprises that may be marginalized from the formal banking system due to insufficient collateral or credit history.

Advantages of P2P encompass:

- ✓ P2P lending platforms deliver expedited services with minimal documentation requirements, thereby eliminating protracted processes.
- ✓ The loan approval mechanism is considerably accelerated.
- ✓ Lenders are permitted to allocate funds across multiple loans with varying risk profiles, facilitating portfolio diversification, which mitigates risks and optimizes returns.
- ✓ Individuals can also participate in these platforms to achieve a high Return on Investment (ROI).

d) **Insurtech Solutions**: Insurtech solutions represent technological advancements and applications that seek to enhance and transform the insurance sector. These solutions capitalize on developments in technologies such as artificial intelligence, machine learning, big data analytics, Internet of Things (IoT), blockchain, and mobile technology to optimize processes, enhance customer experiences, and reduce risks. Insurtech solutions encompass a diverse array of applications, including digital insurance platforms, usage-based insurance, telematics for risk evaluation, automated claims processing, chatbots for customer service, predictive analytics for underwriting, and blockchain for secure data management and smart contracts.

e) **Alternative Credit Scoring**: Fintech enterprises utilize alternative data sources such as mobile phone usage, utility bill payments, and social media engagement to evaluate creditworthiness and extend credit to individuals who possess insufficient traditional credit histories. Through the application of inventive credit scoring models, fintech companies facilitate access to loans and other financial instruments for underserved demographics.

Government Initiatives:

1) **Pradhan Mantri Jan Dhan Yojana (PMJDY)**: This initiative seeks to enhance financial literacy at the grassroots level and establishes a framework for universal access to banking services, which includes:

- ✓ Financial literacy,
- ✓ Provision of at least one fundamental banking account for each household,
- ✓ Facilitation of access to credit, insurance, and pension schemes.

2) **Pradhan Mantri Gramin Digital Saksharta Abhiyaan (PMGDISHA)**:

- ✓ This initiative is centered on fostering digital literacy in rural locales. It aspires to empower a minimum of one individual per household with the requisite knowledge and competencies to utilize digital financial services.
- ✓ Through the provision of essential training, PMGDISHA promotes the transition towards cashless transactions and online banking practices.

3) **Digital India**:

This initiative encompasses pivotal vision domains of:

- ✓ Digital empowerment of the citizenry.
- ✓ Governance and services available on demand.
- ✓ Digital infrastructure as a fundamental benefit for every citizen of India.

4) **Aadhaar Enabled Payment System (AePS)**: The Aadhaar Enabled Payment System (AePS) constitutes a bank-driven framework. This system facilitates interoperable financial inclusion transactions at Points of Sale (PoS) or MicroATMs via the business contributors of any banking institution by employing Aadhaar authentication.

The Banking Services provided by AePS Encompass:

- ✓ Cash Withdrawal.
- ✓ Balance Inquiry.
- ✓ Cash Deposit.
- ✓ Authentication.
- ✓ BHIM Aadhaar Pay.
- ✓ Aadhaar to Aadhaar Fund Transfer.
- ✓ Mini Statement.

5) **Unified Payments Interface (UPI)**: The Unified Payments Interface (UPI) represents a real-time payment mechanism that enables:

- ✓ Consolidation of multiple bank accounts into a singular mobile application,
- ✓ Integration of various banking functionalities,
- ✓ Flawless fund routing and merchant payments within a unified platform.
- ✓ Insufficient infrastructure and the lack of access to suitable financial products, particularly in rural locales.
- ✓ Deficient financial literacy levels.
- ✓ Given that finance is fundamentally dependent on data, safeguarding the privacy and security of individual data is of paramount importance.
- ✓ Inadequate internet connectivity presents considerable obstacles to the adoption of financial technology (fintech).
- ✓ A pervasive lack of trust in banking institutions, among other issues.

The Path Forward for Financial Inclusion: The trajectory for advancing Financial Inclusion through technology necessitates a collaborative effort among diverse stakeholders to harness innovative solutions, cultivate partnerships, and confront persisting challenges. The following is the framework for the path ahead:

- ✓ **Innovative Product Development**: Financial technology enterprises alongside conventional financial institutions ought to perpetuate the innovation and creation of offerings specifically designed to meet the exigencies of marginalized populations.
- ✓ **Tech-driven Credit Scoring**: It is imperative to adopt alternative data sources and sophisticated analytics in order to devise more inclusive credit scoring frameworks.

- ✓ **Infrastructure Development**: There is a pressing need to enhance digital infrastructure, which includes internet connectivity and mobile network accessibility, particularly in rural and isolated regions.
- ✓ **Forge Partnerships and Collaborations**: The collaboration between Fintech entities and various banking institutions, Microfinance Organizations (MFIs), Governmental Bodies, Non-governmental organizations (NGOs), and other relevant stakeholders is essential to optimize their influence on financial inclusion.
- ✓ **Promote Financial Literacy and Education**: There should be a concerted investment in financial literacy initiatives, educational resources, and interactive instruments that empower individuals with the requisite knowledge and skills to make prudent financial choices.
- ✓ **Drive Regulatory Innovation and Policy Support**: Engagement with regulatory bodies and policymakers

is crucial to champion regulatory frameworks that endorse innovation, consumer protection, and financial inclusion.

✓ **Addressing Trust and Security Concerns**: It is vital to cultivate trust and assurance in digital financial services through the implementation of stringent security protocols, data protection measures, and fraud deterrent strategies.

By adopting these strategic measures and collaborating towards shared objectives, the potential for technology to enhance financial inclusion promises the establishment of a more inclusive, resilient, and equitable financial ecosystem for all.

Conclusion: Considering all aspects, India is poised to emerge as a global leader in digital financial services. The evolution of online payment systems and the accessibility of banking services from remote locations have significantly transformed finance for the better. This technological advancement in financial inclusion has afforded numerous individuals, who were previously marginalized, the opportunity to partake in the financial system.

References:

(a) Asian Development Bank.

(b) Invest India.

(c) CFA Institute.

Unified Lending Interface (ULI) Shall Enhance India's GDP

Shri Hargovind Sachdev
Former General Manager
State Bank of India

"For India's $3.74 trillion economy, the loan book size of the banking system is $1.6 trillion. For $5 trillion, it should go up to $2.6 trillion. Banks have a huge opportunity to lend an incremental $ 1.0 trillion to this journey towards a $5 trillion economy."

The Reserve Bank of India, as a critical player in the financial sector, is shortly launching a Unified Lending Interface (ULI), a new platform for 'frictionless credit.' The project is now in the pilot stage for a nationwide launch. The technology aims to reduce the time taken for appraisal, especially for smaller borrowers in rural areas. The software platform shall reduce the time taken for appraisal, especially for smaller borrowers in rural areas, and simplify multiple technical integrations.

The utility shall facilitate a seamless and consent-based flow of digital information, including land records of various states, from multiple data service providers to lenders. The initiative reduces the time taken for credit appraisal for rural borrowers, thereby increasing their access to credit. The ULI architecture has common and standardised APIs designed for a 'plug and play' approach to ensure digital access to information from diverse sources. The step reduces the complexity of multiple technical integrations and enables borrowers to benefit from seamless credit delivery and quicker turnaround time without requiring extensive documentation.

With the advent of online and mobile banking, customers now have access to a wide range of banking services from the convenience of their smartphones and computers. This digital transformation has improved the efficiency and speed of banking operations and enhanced the overall customer experience. ULI is a step towards consolidating the digital transformation, expediting lending, and taking India toward a $5.0 trillion economy.

By digitising access to customer's financial and non-financial data that otherwise resided in disparate silos, ULI shall cater to a significant unmet demand for credit across various sectors, particularly for agricultural and MSME borrowers, which are the actual makers of the Indian economy.

Just as UPI revolutionised the payments ecosystem, the RBI anticipates that ULI will play a similarly transformative role in the lending space in India. The RBI is continually devising policies, systems, and platforms to fortify the financial sector in an agile and customer-centric manner, instilling a sense of optimism for the future.

The Unified Loan Interface operates on the Open repository concept. Like those in the research and academic ecosystem, open repositories provide free access to data, publications, and other scholarly works. Under RBI supervision and financial support, the ULI shall carve a niche as a useful platform in the Indian financial world, operating on a similar principle of open access to information.

Setting up an open repository is a commendable initiative that contributes significantly to the financial community. A systematic approach to securing an online loan can effectively finance the repository's development and maintenance. However, it is crucial to plan thoroughly and be diligent throughout the process to ensure that the repository project is sustainable in the long run.

According to the RBI, ULI fosters market innovation by reducing transaction costs, democratising access, ensuring competition through interoperability, and attracting private capital. This inspires a new wave of innovation in the financial sector, promising growth and development.

PLI shall enable India to achieve, in less than a decade, levels of financial inclusion that would have otherwise taken several decades. As per RBI, PLI fosters market innovation by lowering transaction costs, democratising access, ensuring competition through interoperability, and drawing in private capital, inspiring a new wave of innovation in the financial sector.

The advent of technology has revolutionised the way financial services operate worldwide. Among these innovations, online loans have garnered significant attention. The latest developments in PLI innovations across the globe are as follows:-

United States: In the U.S., academic institutions and libraries have adopted online loans to enhance open repositories. Services like Project MUSE and JSTOR started incorporating loans to fund their extensive research databases. National Institutes of Health (NIH) increasingly leverage fintech platforms to secure online loans to fund open access to scientific research.

Canada: Canada has adopted online loans for open repositories, mainly through its Tri-Agency Open Access Policy. The Canadian government encourages online loans to establish and maintain institutional repositories, which is crucial in promoting quick lending.

United Kingdom: British universities use online loans to establish and sustain open repositories. Jisc, a not-for-profit organisation that provides digital services to U.K. academia, is facilitating this process by advising on funding and offering financial services.

Germany: Germany has adopted a robust approach to open access, with the government providing subsidies and supporting online loan services for open repositories. The German Research Foundation actively supports universities and research institutions in securing online loans for open-access publishing and repositories.

China: Online micro-lending platforms are popular for financing these repositories, making research and data accessible to a broader audience.

Kenya: As a leader in mobile money and financial technology in Africa, Kenya uses online loans to facilitate open repositories. The Kenyan government encourages mobile lending platforms to fund the establishment and maintenance of open repositories.

South Africa: South Africa embraces online loans for open repositories through the National Research Foundation. The foundation provides financial support to researchers who are establishing repositories.

With a rapidly growing economy, India is witnessing a surge in the use of online loans for various sectors, including open repositories. The Indian government, through its National Digital Library initiative, encourages institutions to use online loans to create repositories that enable access to educational resources. The initiation of ULI takes the RBI's vision forward to expedite loan processing, which will add to GDP growth as institutional funding of every one rupee shall add rupee three to the Indian GDP, instilling hope for accelerated economic prosperity.

Rightly said:"Do not try to reinvent the wheel; try to perfect it."

Re-shaping of Financial Services : Open Banking

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Open banking is fundamentally transforming the landscape of financial services as regulatory bodies and governmental institutions endeavour to augment competition and enhance consumer choices. Furthermore, consumers are increasingly demanding greater convenience and adaptable access to services, propelled by an expansive digital experience and the advent of novel technologies.

The banking sector is undergoing rapid transformation, influenced by evolving customer expectations and behaviours, intensified regulatory oversight, and the emergence of technologies that facilitate a wider array of products and services. In this fluid context, financial institutions must also prioritize compliance, cost management, and the preservation of security and trust. Additionally, governmental entities are actively participating in this evolution, seeking methods to foster innovation and competition within the banking sector.

The concept of Open Banking was formalized in 2015 when the European Parliament ratified the revised Payment Services Directive, commonly known as PSD2. The regulations pertaining to open banking were instituted to enhance competition and stimulate innovation within banking services by allowing new entrants into the sector and granting third parties access to customer data held by banks through Application Programming Interfaces (APIs).

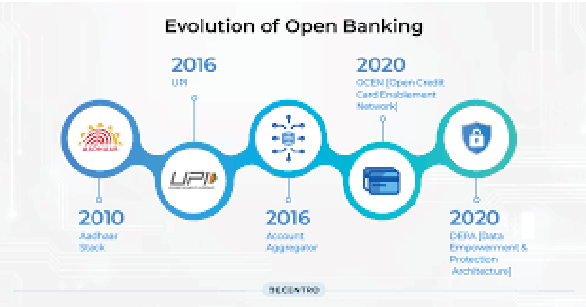
India's trajectory toward open banking commenced in 2010, catalysed by governmental initiatives, particularly the establishment of the Aadhaar Identification System along with infrastructural projects aimed at advancing financial inclusion via digital technologies collectively termed "India Stack."

In contrast to the wider data policy frameworks deployed globally, India's strategy is predicated on the development

In response to these dynamics, a new global banking ecosystem, referred to as Open Banking, is taking shape.

of an extensive public infrastructure and standardized protocols. This stack consists of four distinct layers of infrastructure and standards.

- ✓ The initial "presence-less layer" incorporates the Aadhaar digital ID system, enabling identity verification and the mapping of information across various datasets.
- ✓ The subsequent "cashless layer" is predicated on the interoperable payment system of the Unified Payments Interface.
- ✓ The third layer, termed the "paperless layer," facilitates the verification of digital documents, thereby supplanting traditional paper-based systems.



- ✓ The fourth layer, known as the “consent layer,” is on the cusp of full operational capability and involves the functioning of financial data aggregators that serve as intermediaries between individuals and financial institutions.

These aggregators are designed to enable the consolidation of individuals’ financial data across multiple accounts at various financial institutions, subsequently sharing that data with authorized third parties contingent upon the individual’s consent. This initiative represents a concerted effort to establish a secure, consent-driven data-sharing framework. The first two layers, which have been operational since 2016, constitute the interoperable payment system that lies at the heart of open banking frameworks.

India Stack	What is it?	What is in it?	Who is the owner?
Consent layer	A modern privacy data sharing framework	Open personal data store	Reserve Bank of India
Cashless layer	An electronic interoperable payment network	IMPS, AEPS,APB, UPI	National Payments Corporation of India
Paperless layer	Easily store and retrieve information digitally	Aadhaar e-KYC, e-Sign, Digital Locker	Department of Electronics and Information Technology
Presence-less layer	Unique digital biometric identity with open API access	Aadhaar card, Mobile Aadhaar	Unique Identification Authority of India

The trajectory towards open banking differs across various geographies and markets; nonetheless, the underlying objectives remain consistent. Open banking fosters enhanced collaboration among financial services providers, catalysing greater innovation and yielding improved products and services for consumers.

In contemporary times, India has exhibited considerable advancement in the domain of open banking. This progress is evidenced by governmental initiatives, the establishment of scalable open banking projects by banking institutions, the increasing traction of neobanks, as well as the financial support and expansion of numerous Banking-As-A-Service Platforms. India ranks as the second-fastest digitizing economy among the 17 foremost economies globally. The government anticipates that the digital economy will yield a value of $1 trillion by the year 2025, predominantly deriving from emergent digital ecosystems.

Central to these ambitious objectives is the India Stack, which delineates a collection of application programming interfaces (APIs) that enable governments, enterprises, startups, and developers within the nation to leverage a distinctive digital infrastructure for the acceleration of digital transactions and data-driven operations.

The India Stack is instrumental in fostering the emergence of an open banking API ecosystem in India, which possesses the capacity to fundamentally transform the financial milieu. Open banking constitutes a banking methodology that permits third-party payment services and other financial service providers unfettered access to consumer banking, transactional, and supplementary financial data from both banks and non-banking financial institutions via APIs.

Open banking enhances interoperability and connectivity between banking information and service providers, thereby engendering a seamless user experience while integrating all user accounts. The following will elucidate how this framework has the potential to revolutionize the operational paradigms of the financial sector in India.

India Stack-The Core of Open Banking in India:

India Stack is recognized as the quintessence of open banking in India. Utilizing Aadhaar as its foundational layer, India Stack amalgamates electronic Know Your Customer (eKYC), an Aadhaar-enabled payments system, and the Unified Payments Interface (UPI). India Stack is aptly positioned to guide the nation's financial services sector towards a paradigm of presence-less, paperless, and cashless service delivery. Equipped with state-of-the-art digital capabilities, India Stack, in conjunction with the Jan Dhan Yojana bank account, Aadhaar, and mobile number, has facilitated the penetration of digital banking into the most remote areas of India, where traditional banking services were previously unattainable.

The introduction of the Reserve Bank of India's Account Aggregator framework represents the subsequent pivotal advancement. This paradigm enables data sharing among services, contingent upon user consent. Its primary objective is to streamline the process for financial services providers to acquire transactional and banking data from users, with the aim of refining product offerings for their clientele. Leading banking institutions in India are presently exploring various use cases for the implementation of the open banking API framework. Upon realization, this framework will facilitate seamless data sharing among financial service providers, thereby ensuring secure and convenient access to these services for all citizens of India.

Open Banking Transforming the Financial Services Ecosystem:

Open banking APIs have commenced implementation across various facets of financial services ecosystems on a global scale, and the emerging use cases appear to be promising.

The following delineates several modalities through which open banking can revolutionize processes and service delivery within India:

a) **Account Aggregation**: The paradigm of open banking facilitates the provision of secure application programming interfaces (APIs) that enable access to financial account information, yielding advantages for all stakeholders, including banking institutions, account holders, and fintech companies. Through the implementation of open banking, financial institutions and service providers gain enhanced oversight and governance over external entities that engage with their clients' financial data, as well as insight into the specific purposes for which such data is employed. This framework is instrumental in optimizing account aggregation processes and streamlining centralized transactions, thereby ameliorating various operational functions for consumers.

b) **Consumer Spending Insights**: The integration of financial documents and data sourced from external credit and banking accounts serves to bridge the divide between banking activities and consumer purchasing behaviours, thereby illuminating the opportunities for financial institutions to proactively engage with their clientele. Factors such as customer life stages, psychographic attributes, brand allegiance, and additional variables play a significant role in the formulation of a tailored consumer experience.

a) **Wealth Management**: The incorporation of open banking functionalities within wealth management services significantly enhances the quality of customer service. By facilitating the retrieval of data from external accounts and conducting a digital Know Your Customer (KYC) procedure, the onboarding process is rendered more efficient for both new and existing clients seeking to access the financial planning services offered by banks or service providers.

d) **Personalization**: The integration of open banking functionalities within wealth management services significantly enhances the quality of customer service. By facilitating the retrieval of data from external accounts and conducting a digital Know Your Customer (KYC) procedure, the onboarding process is rendered more efficient for both new and existing clients seeking to access the financial planning services offered by banks or service providers.

e) **Payments**: The incorporation of open banking functionalities within wealth management services significantly enhances the quality of customer service. By facilitating the retrieval of data from external accounts and conducting a digital Know Your Customer (KYC) procedure, the onboarding process is rendered more efficient for both new and existing clients seeking to access the financial planning services offered by banks or service providers.

f) **Streamlining Processes**: The necessity for manual data entry by users is eradicated through the implementation of open banking, digital identity verification, and the cross-referencing of external accounts. This advancement accelerates the processes associated with account establishment, as well as activities such as loan applications and disbursements. This is particularly advantageous for last-mile consumers, as it enhances accessibility and simplifies the onboarding experience.

g) **Caveats to Consider**: As the adoption of open banking proliferates across various regions, it becomes increasingly apparent that effective customer authentication will remain an indispensable component of the open banking application programming interface (API) ecosystem. This aspect must be prioritized by both banking institutions and third-party service providers. The establishment and maintenance of trust may pose challenges for certain third-party providers, as they may not possess the same level of security acumen as traditional banks and financial entities.

They may inadvertently create an authentication process that is either excessively simple or unduly complex. India has the opportunity to glean insights from the experiences of other nations in this regard, ensuring that rigorous yet straightforward securitization protocols are enforced during the implementation phase to safeguard client security and privacy. Among the potential risks are:

- ✓ Customers may exhibit a deficiency in trust towards Open Banking systems, predominantly stemming from apprehensions regarding the sharing of personal information, coupled with a limited comprehension of the operational mechanisms involved.
- ✓ As the landscape of banking increasingly transitions to a digital format, the frequency of direct, face-to-face engagements between customers and financial institutions is diminishing, potentially resulting in a deterioration of the psychological rapport between the consumer and the supplier, which can subsequently erode brand loyalty.

- ✓ Although client data can be effectively utilized by financial service providers and third-party entities to enhance and optimize service delivery, there exists the potential for such data to be misappropriated for exploitative and predatory practices.

Conclusion:

Prominent Indian banking institutions are presently exploring the implementation of open banking APIs to remain competitive in the evolving digital banking and Fintech landscape. Kinara Capital, a distinguished Fintech entity catering to MSME borrowers, has already undertaken numerous initiatives in this regard, such as the integration of APIs to enhance the loan application process and facilitate a seamless customer experience. The customer-centric application, myKinara, empowers users to apply for loans via a fully digital process from their personal devices, ensuring security throughout the transaction.

This innovation is broadening the organization’s outreach, enabling a progressively larger demographic of MSME borrowers to secure the essential capital they require.

For MSME business proprietors, the myKinara digital application offers the capability to ascertain eligibility for a collateral-free business loan in under a minute.

The predominant open banking models globally tend to concentrate on consumer data and their accessibility to financial services. In contrast, the Indian paradigm is more expansive compared to most other jurisdictions. The Indian framework encompasses small enterprises, allowing them to engage with the payments and data layers of the financial stack, thereby gaining access to enhanced financial services and funding opportunities.

The open banking ecosystem in India continues to flourish, propelled by governmental initiatives and market support. The advent of account aggregators, the readiness of banking institutions, and NBFC APIs, along with the emergence of various neobanks, positions India as a paradigmatic example for open banking implementations on a global scale. India has successfully integrated open banking principles within its financial sector. The overarching architecture of publicly accessible digital infrastructure possesses the potential to further advance financial inclusion and development.

Sources:

(a) Amazon AWS Documentation.

(b) Open Legacy.

(c) WSO2.

Financial Inclusion : A key imperative for Inclusive growth

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The Perspective

The two decades of post reform period in India demonstrated the transformation of the economy in to one of the fastest growing economies of the world signalling the emergence of the nation in the new geo political and economic order and hence eliciting lot of international attention. But this higher economic growth is confined to some affluent sections and failed to translate in to wellbeing of the large number of deprived and marginalised sections due to various structural rigidities. This is amply exhibited in the marginal improvement in the socio economic indicators of the lower rungs of the population. Even though poverty is declining, the rate of decline is not satisfactory. There is also a divide between the 'haves' and 'have not's which reflects large disparities in health and nutritional status, education and skills, as also in availability of clean water and sanitation.

Financial inclusion is an innovative concept, and its central role has been widely recognized by world leaders and policymakers since it is closely interrelated with the more general notions of inclusive economic growth and sustainable development, as highlighted in the 2015 United Nations Global Sustainable Development Report. The commitment to 'leave no-one behind' is one of the core targets in the post-2015 Millennium Development Goals Framework[4] of the 2030 Agenda to promote a broader access and usage of financial services. Indeed, when access to finance and the available range of services are limited, many individuals, families and firms are not likely to gain from financial development, leaving much of the population in absolute poverty.

Any growth strategy that does not pay attention to inclusive growth is not holistic and sustainable. Inclusive growth is the only mantra to ensure market enlargement as nearly 73% of the rural households remain unbanked by the Banking system. As C.K. Prahlad aptly put it, "the real source of market power is not the wealthy few in the developing world, or even the emerging middle income consumers; it is that billions of aspiring poor who are joining the market economy for the first time''. EY research shows that financial inclusion can: Boost GDP by up to 14% in large developing economies such as India, Increase banking revenues significantly. The scope of the opportunity correlates to the massive number of people and businesses that remain excluded from traditional banking systems: more than 1.6 billion individuals worldwide, out of a total population of 7.6 billion. Approximately 75% of these individuals are clustered in just 25 countries.

Financial Inclusion – Definition

There are many definitions on Financial Inclusion. Financial inclusion can be defined as a state in which all people of working age have access to a full suite of quality financial services, provided at affordable prices, in a convenient manner, and with dignity for the clients. The Rangarajan Committee defined financial inclusion as "the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost".

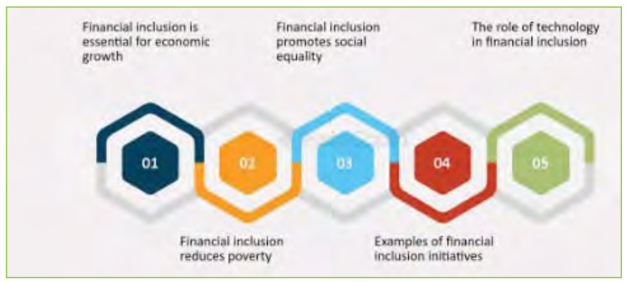
It includes access to banking services, credit, insurance, savings and assets, money advice and financial literacy and capability affordable to all individuals and businesses, regardless of their personal net worth or company size. Financial inclusion strives to remove the barriers that exclude people from participating in the financial sector and using these services to improve their lives. Financial inclusion is a method of offering banking and financial services to individuals. It aims to include everybody in society by giving them basic financial services regardless of their income or savings. It focuses on providing financial solutions to the economically underprivileged. The term is broadly used to describe the provision of savings and loan services to the poor in an inexpensive and easy-to-use form.

Financial inclusion is one of the methods through which Inclusive Growth can be achieved in India where large sections are unable or incompetent to participate in the Financial System. An inclusive financial system mobilizes more resources for productive purposes leading to higher economic growth, better opportunities and reduction of poverty. On the other hand financial market imperfections, such as information asymmetries and transactions costs adversely affect the poor, the micro- and small enterprises resulting in lack of opportunities, persistent inequality and slower growth.

Also financial inclusion is inevitable in creating economic opportunities to the poor, sustaining it, overcome the risk associated with it and continue to participate so that they become successful economic agents to the growth process of the country. Keeping this in mind Government, RBI, banks and other financial institutions are making policy interventions to accommodate the vulnerable in to the financial system. In this backdrop, the paper discusses various strategies for financial inclusion in India in the larger context of inclusive growth in the country.

How Financial Inclusion Works

There is growing realisation that while the "trickle down" effect of economic growth no doubt works, it takes too long a time and hence there is a need to focus on inclusive growth. "Inclusive growth", is a little more than just the benefits of growth being distributed equitably and evenly; it is the participation of all sections and regions of society in the growth story and their reaping the benefits of growth. While in developed countries, the formal financial sector comprising mainly the banking system serves most of the population, in developing countries, a large segment of the society, mainly the low-income group, has little access to financial services, either formal or semi - formal. As a result, many people have to necessarily depend either on their own sources or informal sources of finance, which are generally at high cost.



As the World Bank notes on its website, financial inclusion "facilitates day-to-day living, and helps families and businesses plan for everything from long-term goals to unexpected emergencies." What's more, it adds, "As accountholders, people are more likely to use other financial services, such as savings, credit, and insurance, start and expand businesses, invest in education or health, manage risk, and weather financial shocks, which can improve the overall quality of their lives.

Rationale and Benefits of Financial Inclusion

The need for financial inclusion arises out of multiplicity of reasons. For vast number of remote and inaccessible areas, the physical distance is acting as deterrent to reach the financial institutions and access varied financial services. Compounding this is the demand and supply side constraints affecting the spread of financial services to the marginalized sections of the society. On the demand side the barriers to financial inclusion include lack of awareness, low incomes/assets, social exclusion and illiteracy. The supply side difficulties include distance from branch, branch timings, cumbersome documentation and procedures, unsuitable products, language and staff attitudes. Also the Know your Customer (KYC) norms of the financial institutions provide valuable identity and address proof to the section of population who otherwise looking for some kind of identities. The central problem faced by the excluded population are the lack of access to the formal system, lack of perception about the functioning of the financial system, lack of information about the diverse products and services and lack of selection of the appropriate instrument and services which is most suited for them. The sheer magnitude and size of the excluded population make financial exclusion the barrier to unleashing the "fortune at the bottom of the pyramid."

Financial inclusion presents number of benefits to low income households and small and microenterprises in the country. First and foremost it facilitates economic transactions to the large number of new economic agents. Financial inclusion helps low-income families who have small, unpredictable, and often seasonal incomes to manage their resources well. Families use financial services to gain access to education, health care, and other necessities that improve their quality of life. Low-income families who are subjected to many vulnerabilities can protect against these vulnerabilities through savings, credit, insurance, remittances provide sustainable and low-cost coping strategies. Enterprise owners can use credit or savings to make productivity enhancing investments in productive assets.

Financial inclusion in India

An inclusive financial system facilitates efficient allocation of productive resources and thus can potentially reduce the cost of capital. Access to appropriate financial services can significantly improve the day to-day management of finances (bill payment, money transfer etc.). Also inclusion in to financial system protect unbanked people from informal sources of credit, who charge higher interest rates and often resort to unethical/harsh recovery practices. Access to a bank account provides avenues for secure and safe saving practices. A bank account can also provide a passport to wide ranging financial services such as overdraft facilities, debit card and credit cards. A number of financial services, such as insurance and pension, necessarily require access to a bank account. Thus, an inclusive financial system enhances efficiency and welfare of a society.

Financial inclusion also benefits society more broadly. Shifting payments from cash into accounts allows for more efficient and more transparent payments from governments or businesses to individuals – and from individuals to government or businesses. Although no conclusive evidence exists at this point, access to the formal financial system and appropriate credit can potentially facilitate investments in education and business opportunities that could, in the long term, boost economic growth and productivity.

The NSSO survey indicates that nearly 27% of the rural households have access to the formal credit system and 22% under informal credit system. In spite of the abovementioned initiatives by Government of India to enhance the outreach of the formal credit system, there is still 73% of the rural households do not have access to formal credit system. This is mainly because of the following dimensions

- Majority of rural population reside in small villages which are far away from the branches,
- Non familiarity with the systems and procedures; multiple visits to bank branches for securing a. loan and inadequacy of local transport system etc.
- High transaction cost to the customer in terms of time and money
- Bankers shy away as their transaction cost is very high to deal with such customers as they have to spend lot of time for these customers; the loan amount is small and the population to be handled is large, etc.

Challenges to Financial Inclusion

There are many challenges faced by banks in India on financial inclusion process.

- Penetration of bank branches in to rural areas is difficult as they are unviable, saturated and having higher transaction cost. The villages are fragmented limiting the scale of operation of banks in rural areas. This necessitates last mile of financial inclusion to be met with a combination of agents and providers through technology leverage.
- The present Business Correspondent (BC) model is too restrictive, cash delivery points are too modest and the ideal financial inclusion model is yet to evolve in the country.
- The robust financial inclusion model requires comprehensive participation of all stakeholders which is currently lacking in the country. Financial inclusion among urban poor warrants an alternate strategy as the physical access is not the critical issue here.
- The pricing of financial assets and services is delicate in urban areas as it should ensure the poor are able to afford them at these prices.
- Also urban poor, particularly the slum dwellers suffer from identification problem as they are frequently moving from one part of the city to another or from one city to another.

- Lack of financial literacy among the urban poor or lack of marketing of financial instruments to the urban poor lead to limited awareness of financial portfolios by these people.
- Sometimes there is a self - exclusion by the poor from the formal system as they are heavily depended on the informal credit sources which cater according to their convenience.

Perspectives on Financial Inclusion

- Economic growth in India has to be inclusive in order to make it sustainable. Inclusiveness is an essential element in a democracy. If policies that bring about economic growth do not benefit the people in a wide and inclusive manner, they will not be sustainable. Equally, inclusive growth is essential to grow the market size, which alone will sustain growth momentum. Inclusive growth is the only just and equitable way that any society can grow. Financial Inclusion rests on three pillars viz. access to financial services, affordability of such services and actual utilization of such services. Financial Inclusion can be achieved only if all the three pillars show affirmative results. It may prove to be very useful for the banking Industry and the overall Indian economy. It will be useful for policy makers, academicians and researchers in the field.
- Specific focus on financial inclusion commenced in India when the Reserve Bank advised banks to make available a basic banking 'no-frills' account with low or 'nil' minimum balance as well as charges, with a view to expanding the outreach of such accounts. In such accounts, banks are required to make available all printed material used by retail customers in the regional language concerned.
- In order to ensure that persons belonging to low income groups, both in the urban and rural areas do not encounter difficulties in opening bank accounts, the know your customer (KYC) procedure for opening accounts has been simplified. Besides the Kisan Credit Cards (KCCs), banks have been asked to consider introduction of a General purpose Credit Card (GCC) facility at their rural and semi urban braches. This facility is in the nature of revolving credit, which entitles the holder to withdraw up to the limit sanctioned. Based on assessment of household cash flows, limits are sanctioned without insistence on security or purpose. Interest rate on the facility is completely deregulated. Fifty per cent of GCC loans can be treated as priority sector lending.
- Despite the difficulties faced by banks to expand their operations in the rural areas, RBI is seized with the idea of issuing fresh banking licenses to private players with the intension of improving financial inclusion indicators. The idea behind this thinking is that country's credit - GDP ratio is about 50 percent which warrants expansion of banking networks. But this expansion should be directed towards the coverage of unbanked/under banked/excluded sections in rural area.
- To fully realize the benefits of financial inclusion then, financial products first and foremost need to be tailored to the needs of people to be relevant and make a difference in their financial lives. This also includes consumer education and protection to build and ensure trust in the formal financial system.
- On a more fundamental level, realizing the benefits of financial inclusion depends on an adequate financial infrastructure and a regulatory environment that is conducive to innovation, making small financial transactions economically viable and ensuring a safe, stable, and reliable financial system.
- Traditional credit scoring metrics may alienate or discriminate against those with limited credit history. Financial inclusion strives to explore alternative credit scoring methods that consider non-traditional data sources can extend credit access to those with limited credit history.
- Fintech lending platforms connect borrowers and lenders directly through online platforms. Borrowers can apply for loans, and lenders can assess their creditworthiness based on data analytics and alternative credit scoring. This streamlines the lending process and extends credit access to individuals and businesses underserved by traditional banks or those who would have otherwise been excluded from securing traditional credit.
- According to Women's World Banking, 31% of women are more likely than men to have an inactive bank account. By focusing on gender-specific financial inclusion initiatives, financial inclusion can help empower women economically and close the gender gap in financial services.
- Financial education and financial literacy refers to providing financial education and programs that equip individuals with essential financial knowledge and skills. This empowers them to make informed decisions, budget effectively, and understand the benefits of using formal financial services instead of relying on informal or potentially exploitative alternatives.

- While regulators in certain markets have required banks to offer basic accounts, simplify onerous documentation or allow correspondent banking (e.g. by post or phone), such measures do not always deliver desired results. Banks must structure highly relevant and possibly simplified financial solutions that meet specific customer needs at an affordable cost.

- Digital channels have been instrumental in helping providers overcome challenges related to infrastructure and geography in many developing countries. While digital channels may have the lowest operational costs, effective financial inclusion will likely require a "bricks and clicks" distribution model that includes physical branches to build trust and confidence.
- Agent Banking - Post Offices in India can play an important role in providing banking services to rural areas in view of the low-bank penetration, credit needs of workers, and wide occupational, income and educational variations found in villages. India Post has the largest postal network in the world with 155,000 post offices, 139,000 of which are in rural areas.
- Mobile banking is considered the next big step in banking expansion particularly in the rural sector. Mobile banking provides a banking interface at low transaction cost using technology. Cost of an ATM transaction is five times that of a M-banking transactions and transaction at a bank branch is almost 15 times more expensive.
- Micro Finance Institutions: Based on the success of Grameen Bank in Bangladesh, large number of micro finance institutions have emerged in India to provide credit and financial products to marginalized sections of the society. The network of MFIs need to be expanded.
- Credit Guarantee through SIDBI for MSME: Similar measures have been taken to step up credit to the micro, small and medium enterprises (MSME) sector. The Government operates a credit guarantee scheme through SIDBI for providing credit guarantee to banks for their loans to MSME so that they can give such loans based on the viability of the project and not insist on collateral. The guarantee premium has been reduced and coverage increased for smaller loans and backward areas. Credit rating by SIDBI at concessional rates and putting in place of a comprehensive credit information system for this sector will go a long way in better credit allocation and pricing.
- Credit counselling services in addition to financial literacy and financial education are being perceived as important tools to enable people to overcome the problem of indebtedness and seek re-access to banking system.
- It is equally important for banks to strengthen their functioning at the local level for meeting developmental objectives of the Government. The various fora under the Lead Bank Scheme have been very useful in sorting out mutual coordination issues. RBI plays a catalytic, as well as a coordinating role, in these initiatives for enhancing co-operation between the States and the banking system.
- The future of financial inclusion is likely to be shaped by advancements in fintech, such as artificial intelligence, blockchain, and digital currencies. Additionally, greater emphasis on data privacy and security, along with regulatory developments, will influence the trajectory of financial inclusion initiatives worldwide.

Financial inclusion – Catalytic role of CMAs

With over 100000 Cost and Management Accountants spread across 94% (17854) cities and Pin Codes (1583) they are well poised to catalyse financial inclusion within the country by harnessing the following strengths and skills :

- CMAs are associated with various Micro small and Medium enterprise and also with large corporates and thus are intricately connected with broad spectrum of activities in the Indian economy. By virtue of their knowledge and expertise in financial matters they are in a pivotal position to encourage and facilitate financial inclusion of the unreached segment of the population by creating awareness, necessary hand holding and credit counselling thus making them join the mainstream for realizing the objectives of Inclusive growth and viksit Bharat.
- CMAs can provide advisory services to the banks and other financial institutions regarding cost – benefit analysis and pricing of financial products and services to ensure that the poor are able to afford them.
- CMAs can provide support to the banks and financial institutions in assessment and cost effective implementation of various Information Communication Technology (ICT) initiatives for building an broad architecture of last mile connectivity and access and convenience of financial products and services for the unreached.
- CMAs can support the banks and financial institutions in developing an alternative credit scoring system that considers non-traditional data points so as to enable extending credit access to those with limited credit history.

Conclusion

Financial inclusion means that adults have access to and can effectively use a range of appropriate financial services. Such services must be provided responsibly and safely to the consumer and sustainably to the provider in a well regulated environment. At its most basic level, financial inclusion starts with having a deposit or transaction account at a bank or other financial institution or through a mobile money service provider, which can be used to make and receive payments and to store or save money

The purpose of financial inclusion is to provide equitable opportunities to every individual, including those who are marginalised, by accessing formal financial channels in order to get affordable and suitable services for better life and better income. In the light of the implications that inclusive finance has on people's standard of living and macroeconomic growth, governments around the world are increasingly viewing financial inclusion as essential to economic and social development. As the economy began to grow at higher rates, the regional and societal disparities call for new strategies to ensure that the banking system meets the requirements of inclusive growth. Such strategies need to be fashioned in a manner that they do not undermine the stability and efficiency of the financial system.

There has never been a better time to seek revenue growth through financial inclusion. Banks that seize this opportunity today — and are able to customize offerings strategically, take advantage of innovative channels and mitigate risk creatively — will be well positioned to capture market share and play a transformative role in the growth of emerging market for years to come. Accordingly, over the last few years or so, several measures have been taken by the Reserve Bank and Government of India to ensure better banking penetration and outreach, particularly that the credit needs of agriculture and small enterprises are met while allowing sufficient flexibility to each bank to evolve its own policies and strategies for the purpose.

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FinTech : Decentralized Finance

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The emergence of public blockchain networks, such as Ethereum, has facilitated the execution of peer-to-peer transactions of value in a programmatic manner, contingent upon a specified set of conditions via "smart contracts," which are essentially segments of code that are deployed and executed within the blockchain environment. Applications constructed utilizing smart contracts are informally referred to as decentralized applications, or 'dapps' for brevity, and have served as a significant driving force for the heightened investigation of cryptocurrency, or digital currency, in various industrial applications. In practical terms, DeFi services represent dApps that capitalize on the capabilities of smart contracts and the inherently decentralized characteristics of public blockchains to deliver globally accessible financial services, including:

- ✓ Lending & Borrowing.
- ✓ Spot Trading.
- ✓ Asset Exchange & Swap.
- ✓ Savings & Yield Products.
- ✓ Stablecoins (Fiat-pegged Cryptocurrencies).
- ✓ Insurance.
- ✓ Prediction Markets.
- ✓ Arbitrage.

Understanding the DeFi:

Decentralized Finance, commonly referred to as DeFi, signifies a transformative evolution within the financial domain, employing distributed ledger technology to provide financial services including lending, investing, and the trading of digital assets, all while circumventing traditional centralized entities. DeFi integrates decentralized exchanges (DEXs) to facilitate cryptocurrency transactions among individuals effectively. Moreover, the DeFi ecosystem frequently converges with the realm of decentralized applications (dApps), particularly those designed for financial interactions.

The foundational framework of DeFi is encapsulated within the Ethereum blockchain, emphasizing the execution of code. By harnessing smart contracts and digital currencies, DeFi avails services that eliminate the necessity for intermediaries. The global network of computers operating under the Ethereum protocol establishes a bedrock for communities, applications, organizations, and digital assets accessible to all participants. Utilizing this network, a smart contract can effectively migrate certain financial transactions from a Centralized Finance (CeFi) model to a decentralized paradigm. Within the blockchain ecosystem, smart contracts streamline transactions between both anonymous and identifiable entities, thereby obviating the requirement for intermediaries. Additionally, smart contracts diminish the costs and complexities associated with traditional methodologies without compromising on integrity and authenticity.

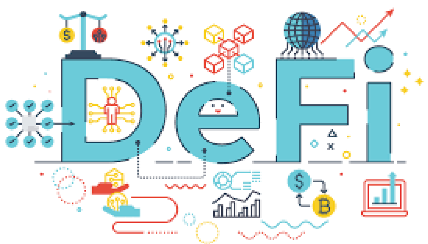
DeFi Vs. Conventional Financial Services:

In contrast to traditional reliance on an institution and its personnel to initially authorize an individual to utilize their service and subsequently validate their transactions, smart contract(s) operating on a blockchain can autonomously facilitate these responsibilities in a decentralized framework. This marks a paradigm shift in the foundational trust model for financial services, transitioning from trust in an institution to trust in code that is executed on a blockchain network, which is safeguarded by economic incentives among decentralized participants. These open and decentralized financial applications furnish a globally accessible and transparent foundation upon which to foster innovation within the financial services sector. Generally speaking, most DeFi applications adhere to a set of prevailing characteristics:

Features of DeFi Applications:

Decentralized: In lieu of centralized institutions, code serves as the sole intermediary throughout the process. Amendments to that code are predominantly executed democratically through community governance voting mechanisms.

Open & Permissionless: Access is unrestricted and without borders; whether one seeks to establish their own DeFi application or merely utilize an existing one, the requisite for entry is an internet-connected device.



Transparent: The code governing the operation of the service is open to scrutiny by all participants on the blockchain, thereby enabling users to verify and/or audit the service at their discretion.

User-centric: Incentive models are structured to reward users for their engagement with the service (e.g., providing liquidity for lending), and users possess the autonomy to access the service either through their own customized interface or a publicly available one.

Interoperable: Decentralized Finance (DeFi) services inherently possess a high degree of interoperability with one another as a direct consequence of their foundational existence upon a common blockchain network; the emergence and subsequent adoption of cross-blockchain interoperability networks are anticipated to further augment this phenomenon.

Composable: The extensive interoperability facilitates the simultaneous utilization of a diverse array of distinctive DeFi protocols and services, thereby enhancing user experience or serving as modular components for the creation of entirely new applications that yield increased value for end-users.

DeFi Functions:

1. In lieu of depositing funds within a conventional banking institution, financial resources are staked on a DeFi protocol.
2. Your cryptocurrencies are allocated as loans to engage with smart contracts, while retaining your ownership and custody rights.
3. A liquidity pool is established through contributions made to the inherent smart contract of the protocol. Borrowers subsequently access loans through crypto-backed financing sourced from this pool.
4. Staking your cryptocurrency assets on a protocol can yield interest, concurrently supporting the operational functionality of the network.
5. Utilizing this protocol, one can secure a cryptocurrency loan by pledging collateral to an individual or collective entity.
6. Each DeFi smart contract signifies a digital covenant between a borrower and a lender, devoid of interference from external entities. The stipulations of the contract remain immutable.

1. A specific fee is levied for each loan processed by the protocol.

Advantages of DeFi:

A Decentralized Finance (DeFi) application fundamentally represents a product derived from the Ethereum blockchain, enabling users to interact with various financial services devoid of intermediaries. These services encompass lending, insurance, and an array of other financial activities. DeFi applications utilize smart contracts, the Ethereum blockchain architecture, and cryptographic techniques.

DeFi applications present numerous advantages in comparison to conventional financial systems. Firstly, they afford users enhanced autonomy over their financial assets as reliance on centralized institutions for asset management is rendered unnecessary. Furthermore, DeFi applications exhibit heightened accessibility, necessitating solely an internet connection for participation. Additionally, they provide reduced transaction fees and expedited processing times relative to traditional financial counterparts. Finally, with all transactions recorded on a public blockchain, DeFi applications enhance transparency, visibility, and accountability.

DeFi-Associated Risks:

1. **Deficiencies**: Smart contracts exhibit vulnerability to programming errors, which can result in discrepancies during contract execution and the potential forfeiture of tokens.
2. **Protocol Termination**: Lesser-known cryptocurrency exchanges face the threat of cyberattacks, and in the absence of explicitly defined terms of service, user assets may be irretrievably lost in the event of platform discontinuation.

3. **Network Saturation**: Elevated demand for specific cryptocurrency pairs may lead to network saturation on the Ethereum blockchain. Anticipated enhancements with Ethereum V2 are designed to mitigate this issue by improving network throughput.
4. **Insufficient Liquidity**: Liquidity is a crucial component for initiatives based on DeFi tokens and blockchain protocols. Although the total value locked in DeFi surpassed $134.21 billion in 2022, peaking at $53.63 billion on April 14, 2023, these amounts are minimal in comparison to the magnitude of conventional financial systems.

Consensus Mechanisms and Algorithms:

Consensus mechanisms are integral to the operational efficacy of cryptocurrencies. They establish protocols for agreement that authenticate transactions and regulate blockchain processes, primarily aimed at thwarting double-spending. In the context of the Bitcoin blockchain, for example, it is imperative that each computer maintaining the chain possesses uniform data regarding wallet balances to avert fraudulent activities.

Corporations are progressively adopting cryptocurrencies and blockchain technology for revenue generation, data integrity, and verification of investor identities. Various applications deploy distinctive blockchain consensus mechanisms, which guarantee the synchronization of all network nodes and the validation of transactions. Among the array of emerging consensus mechanisms, Proof of Work (POW) and Proof of Stake (POS) continue to be foundational. Additionally, the Byzantine Fault Tolerance (BFT) consensus protocol provides protection against system malfunctions, data corruption, and nefarious assaults by ensuring uniform data integrity across all nodes.

By providing incentives and rewards, typically manifested in the form of newly minted coins, consensus mechanisms motivate network participants to propose only authentic transactions. This framework effectively discourages fraudulent behaviour by imposing significant costs and complexities. To exert control over the majority of protocols, an individual would need to command over 51% of the network's computational capacity or possess a considerable portion of the underlying network's currency.

The inherent global accessibility and transparency of blockchains render them susceptible to various threats. Therefore, a financial consensus mechanism must integrate strategies for risk mitigation while preserving asset ownership for users. Certain consensus mechanisms can enhance security contingent upon the nature of potential security vulnerabilities that a blockchain may encounter. Protocols such as RAFT, PoB, and PoA exhibit resilience against Distributed Denial of Service (DDoS) attacks, while PoT and Ripple are effective against Sybil attacks. As we progress toward a future characterized by applications operating on decentralized blockchains, capable of secure interactions, we foresee a wider spectrum of algorithms being utilized.

The Fourth Industrial Revolution is catalysing a transition from mere digitized frameworks to decentralized, secure, and resilient cyber-physical systems. The objective is to harness advanced technologies to facilitate the development of efficient and meticulously engineered products and services for Web3.0 and other nascent technologies. DeFi epitomizes the frontier of financial services predicated on blockchain technology for the purpose of decentralization.

The rapid pace of innovation in this domain, evidenced by the creation of over 72 distinct consensus algorithms within a few years, heralds a promising outlook for DeFi.

DeFi and Financial Inclusion:

Although a significant portion of the current focus and investment in decentralized technologies is motivated by speculative interests, the intrinsic value and societal impact of these innovations are of paramount importance. For instance, in various regions across the globe, essential financial services are either inaccessible or insufficient due to an array of challenges, including

(i) Economic underdevelopment.

(ii) Substandard infrastructure.

(iii) Regulatory impediments, among others.

For context, global research conducted by the World Bank and Gallup regarding financial inclusion revealed that approximately 1.7 billion adults aged 15 and older lacked access to basic banking services as of 2017. Even in economically advanced nations, both the accessibility and the quality of financial services available are contingent upon an individual's socioeconomic status.

For example, a 2019 survey conducted by the Federal Deposit Insurance Corporation (FDIC) indicated that 22% of individuals in the United States are categorized as either unbanked or underbanked, with a considerable portion of this demographic comprising individuals with lower income levels or limited educational attainment. Against this distinct backdrop, it becomes increasingly evident that the advancement and widespread adoption of open, borderless financial services possess the potential to close the expanding chasm in financial inclusion and opportunity on a global scale.

To Conclude:

Decentralized finance (DeFi) represents a burgeoning financial technology that fundamentally contests the prevailing centralized banking paradigm. DeFi endeavours to eradicate the fees imposed by banks and other financial service entities while fostering direct peer-to-peer transactions.

DeFi, akin to the blockchains and cryptocurrencies it undergirds, remains in a nascent stage of development. Considerable obstacles must be surmounted prior to its potential substitution of the current financial system, which is beset by its own intricate challenges. Ultimately, financial service providers and banking institutions are unlikely to concede without resistance should there exist a mechanism for them to derive profit from the shift to a blockchain-oriented financial structure, they will undoubtedly seek to engage in that transformation and ensure their participation.

Source:

(a) AWS.

(b) World Bank / Gallup Findex Database

(c) FDIC report on the economic well-being of U.S. households in 2018 - May 2019

Money Mule Accounts

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With increasing on line transactions fraudulent transactions are also increasing with every passing day. Though the transactions are routing through banking systems, however it becomes very difficult to identify the end beneficiary of these transactions. This is mainly because of Money Mule. Let us understand what is Money Mule in banking system, what is the purpose and how fraudsters are using Money Mule accounts.

What is Money Mule ?

A money mule is someone who receives and moves money that comes from fraudulent or illegal transactions. Some money mules know they are assisting with criminal activity, but others are unaware that their actions are helping fraudsters.

If someone you don't know sends you money and asks you to forward or transfer the money to another account whose beneficiary is not known to you. In such situation you are assisting fraudster by serving as a money mule. Money mules may be recruited through an online job ad or social media post that promises easy money for little effort. Or money mules may agree to help a love interest they've met online or over the phone receive and send money.

Criminal organizations mainly use money laundering route to conceal the origin of their illicit funds so as to appear these funds as legitimate one and make it difficult for investigeting agencies to trace the money trails.

Money mules are people who knowingly or, in certain cases, unknowingly help criminal organizations for money laundering. They do this by providing their own accounts to help receive and transfer fraudulent funds, thereby.

How are money mules recruited?

Criminals recruit money mules in various ways. For example, some individuals are lured with the promise of financial gain or they receive a commission for their service. In other cases, they are motivated by trust or are solicited via online scams. Some people get into this trap because they believe they have a romantic relationship with the individual who is asking for help.

Job scams: you are contacted about a new job through mail/sms/WhatsApp without having applied to any position and where the "employer" doesn't provide any details about their company, these are fraudulent job offers

Romance scams: you are contacted online via social media or a dating platform;

Investment scams: you receive a message to make big returns on an investment relatively at low risk.

Impersonation scams: calls or messages from individuals pretending to be from courier companies or government agencies, banks, insurance company, MNGL, mobile service provider, online platforms such as Amezon/ Flipkart etc. asking you for your personal/bank details, and threating to discontinue your respective service with immediate effect if you fail to respond.

Money Mules are broadly of three types :

The first one is the victim mule who is not aware that his account is being used for transfer of funds arising out of fradulent activities often due to data breach.

The second one is the misled party who unknowingly sends or transfers the illicit funds for fraudsters typically after responding to job adverisement or trusting the relationship.

The third one is one who sells his existing bank account or opens new bank account at the instructions of fraudster with undestanding that certain percentage of transfer amount will be received as commision.

How to recognize a Money Mule scam

Criminals normally send offer on letter head of reputed orgnisation which primafacie appears as genuine one, sometimes even copying the website of real companies and creating similar URLs with minor changes

- The job offers reasonably good amount of money for minimal effort.
- You're asked to work as local representative for an overseas company under the pretext of save transaction charges or local taxes.
- The job offers does not ask for educational qualification and experience.
- Work from home facility is offered .
- All work is done online.
- Emails are having gramatical mistakes
- Email is from a web-based server like gmail or hotmail

How to protect from becoming a Mule :

- One should be sceptical of unexpected communication offering lucrative or effortless jobs and to be cautious of high payment for simple task. Job offers involving transfer of funds needs to be accepted only after having detailed information of the employer. Don't yield to pressure for immediate response.
- Verify company information online or give them a call.
- Double check job offers from overseas companies.
- Never give your bank account information.

Impact of being Money Mule :

Criminal Charges: Under Indian law, money laundering is a serious offense, punishable under the Prevention of Money Laundering Act (PMLA), 2002. Being involved in the transfer of illegal funds, even unknowingly, can result in criminal charges, a criminal record, hefty fines, and imprisonment.

Financial Loss: Money mules may suffer financial losses if their bank accounts are flagged for suspicious activity. Banks, under RBI regulations, are required to freeze or close accounts suspected of being involved in illegal transactions, which could result in the loss of funds.

Damage to Reputation: Being associated with criminal activity can severely damage an individual's reputation. It can affect their ability to secure loans, open new bank accounts, or gain employment in the future, particularly in industries that require background checks.

Very recently RBI Governor, Mr. Shaktikanta Das has called on banks to intensify measures against Mule accounts, this is mainly because of the recent studies it is revealed that nine out of ten mule accounts at one Indian Bank went undetected. Study further noted that though the mule accounts were initially opened for transactions in India however later on were used for international involvement. RBI has instructed banks and regulated entities to adopt risk based approach for periodic updating of KYC data and meticulous monitoring of account opening and transactions to curb the use of Money Mule Accounts in the banking system.

In short Money mule accounts are a significant enabler of financial crimes in India, making it challenging for authorities to detect and prevent illegal activities. By understanding how these schemes operate and taking proactive steps to protect yourself, you can avoid becoming a victim or an participant in such activities. Always be cautious with financial transactions, and remember that ignorance of the law is not a defence against legal consequences.

Financial Innovation : White-Label Banking

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In the contemporary era characterized by digital transformation, enterprises consistently strive to implement innovative strategies aimed at enhancing customer interactions and expanding service dimensions. White-label banking emerges as a significant advantage, enabling non-banking entities to provide financial services under their unique brand representations.

White-label banking constitutes a collaborative framework wherein a licensed financial institution aligns with a non-banking entity to deliver banking products and services under the branding of the non-banking partner. This arrangement permits non-banking organizations to offer financial services without necessitating the acquisition of a banking license or investing in the establishment of their proprietary banking infrastructure.

The distinctive methodology of white-label banking, while facilitating extended reach, improved digital functionalities, and varied revenue opportunities for banks, is particularly noteworthy. Within an increasingly saturated fintech environment, the demand for comprehensive fraud prevention mechanisms escalates, underscoring the essential function of white-label banking in reconfiguring fraud deterrence strategies and strengthening the integrity of the financial ecosystem.

By utilizing the infrastructure and regulatory endorsements of established banking institutions, white-label banking fosters the development of pioneering solutions. This partnership not only enhances customer interactions but also propels the sector towards unparalleled levels of service personalization and accessibility.

The Comprehensive Nature of White Label Banking:

White-label banking is frequently referred to interchangeably as Banking-As-A-Service (BaaS), representing a transformative element within the fluid financial landscape. BaaS encompasses a wider array of services, pertaining to the integration of banking functionalities, while white-label banking specifically refers to the provision of banking services under an alternate brand identity. The fundamental differentiation resides in their focal points: white-label banking underscores branding, whereas BaaS emphasizes the seamless incorporation of banking services.

White-label banking is also commonly conflated with alternative forms of label banking, including private-label banking and co-branded banking. The principal distinction between white-label and private-label banking pertains to the degree of customization. White-label banking generally entails the provision of a pre-existing banking product or service under the brand of the non-banking partner. This methodology facilitates expedited implementation and reduced costs; however, it concurrently constrains the capacity to customize the product to meet specific customer requirements. Conversely, private-label banking affords greater latitude in the design and customization of banking products and services. The non-banking partner exercises more influence over product attributes, branding, and marketing, thereby enabling the creation of a distinctive and tailored offering.

Nevertheless, this level of customization incurs greater expenses and necessitates an extended development timeframe. Similarly, co-branded banking diverges from white-label banking in that it entails a collaborative branding initiative between the bank and the non-banking partner. Both parties contribute to the design and promotion of the banking products, culminating in a cohesive brand experience for consumers. This partnership can bolster brand visibility and enhance customer loyalty, yet it also mandates a higher degree of coordination and synchronization between the collaborating entities.

Why Implement White-Label Banking: The concept of white-label banking offers a multitude of benefits for both non-bank collaborators and banking entities:

For Non-Bank Partners:

Expanded Service Offering: This model facilitates the provision of an extensive array of financial services without the requisite obligation of developing or overseeing banking infrastructure.

Enhanced Customer Experience: It integrates a fluid banking interface within the non-bank partner's platform, enhancing the convenience for end-users.

Brand Control: This approach grants partners the autonomy to govern branding and communication strategies, thereby ensuring coherence in brand identity.

Cost Reduction: By avoiding the financial burdens associated with obtaining a banking license and constructing infrastructure, partners can significantly lower expenditures.

For Banking Institutions:

New Revenue Streams: It provides a mechanism for generating additional income through the provision of banking services to non-bank partners.

Market Expansion: This strategy allows for the penetration of previously unexplored customer demographics, thereby extending their market reach and influence.

Enhanced Brand Reputation: It aligns banking institutions with pioneering fintech companies, enhancing their brand perception and solidifying their position in the sector.

White Label Banking Example:

A Notable illustration of white-label banking is Apple Pay; a mobile payment solution provided by Apple. Apple has formed alliances with several financial institutions, including Goldman Sachs and Bank of America, to facilitate payment processing and account management services.

This partnership enabled Apple to deliver a cohesive payment solution within its ecosystem, while the banks benefited by accessing new consumer demographics, particularly those inclined towards technology.

On Selecting a White Label Provider:

In the context of engaging with a white-label provider, it is imperative to ensure that your bank's vision aligns with that of the provider. A thorough assessment of the provider's market reputation, historical performance, and technological proficiency is essential. Investigating their certifications, adherence to regulatory standards, and the robustness of their support infrastructure establishes a solid foundation for potential collaboration.

In a similar vein, utilizing value stream mapping and detailed analysis of the production supply chain provides an extensive perspective on strengths, areas requiring enhancement, and prospective growth avenues. Evaluating the product's conformity with functional and technical specifications is crucial for fostering seamless integration into your operational framework. Additionally, assessing the product's flexibility and compatibility with your existing infrastructure is vital in determining its adaptability and appropriateness.

In the rapidly evolving financial milieu, fintech solutions present nimble and economically viable alternatives to confront prevailing challenges. The readiness and fiscal feasibility of these solutions underscore the imperative for strategic partnerships and discerning decision-making.

Navigating technological advancements within various sectors accentuates the necessity of remaining informed about emerging innovations. Utilizing fintech solutions can accelerate development, underscoring the importance of judiciously selecting white-label providers to ensure alignment with your business objectives and facilitating smooth integration into established operations.

Key Steps in Implementing White-Label Banking:

The execution of white-label banking necessitates a collaborative effort between a banking institution and a non-bank partner. The process unfolds through several critical phases, principally orchestrated by the banking institution to guarantee seamless integration and service delivery:

Identifying Needs: The commencement of this process is initiated by the non-bank partner, which delineates the financial services to be offered and identifies the target customer segment. This precise specification of services and customer preferences establishes the foundation for subsequent initiatives.

Partner Selection: Meticulous evaluation is afforded to the process of selecting a distinguished banking institution that possesses the essential infrastructure, cutting-edge technology, and regulatory acumen. This crucial step guarantees a congruence between the capabilities of the bank and the exigencies of the non-bank partner.

API Integration: The incorporation of the banking institution's Application Programming Interfaces (APIs) into the platform of the non-bank partner is of utmost significance. This integration promotes seamless interconnectivity between the systems, thereby ensuring effective data interchange and operational cohesiveness.

Branding and Customization: The personalization of banking products and services to align with the brand identity of the non-bank partner and to enhance the overall customer experience emerges as a central concern. This endeavour ensures alignment with the partner's distinct branding strategies.

Testing and Launch: Comprehensive testing of the integrated solution becomes essential to affirm its smooth operation and compliance with established standards. Following rigorous scrutiny, the white-label banking services are launched to the designated customer demographic.

White Label Banking Products Encompass:

Bank accounts: Neo Banks can provide personalized accounts featuring customizable attributes, including interest rates, rewards programs, and account management functionalities. These accounts may also qualify for insurance protection.

Credit, Debit, and Charge Cards: Neo Banks can furnish clientele with branded cards, which they may utilize at any Point Of Sale (POS). Through the issuance of these cards, platforms are able to cultivate interchange revenue. The revenue model indicates that interchange fees can constitute up to 75% of a fintech organization's total revenue.

Embedded Payments: Neo Banks can facilitate secure, rapid, and economically efficient payments and transfers within an application or website. These payment modalities encompass cards, wire transfers, and inter-bank transactions.

Embedded Lending and Financing: Neo Banks can extend to customers access to a diverse array of loan types, such as lines of credit and personal, business, or mortgage loans. They can present flexible repayment alternatives, including instalment plans or buy now, pay later schemes. Given that they possess a more profound understanding of their customers than conventional banks, they are better positioned to ascertain the requisite financing, the customers' repayment capabilities, and the appropriate pricing for their services.

Factors Motivating Customers to select White Label Banking:

Convenience: Customers prefer not to segregate their business operations from their financial management. They would rather utilize a singular software solution, particularly one that they are already familiar with and trust.

Faster Payouts: For the majority of employees, the process of accessing their wages within bank accounts typically requires a minimum of 2-5 business days. However, with white label banking, they can facilitate significantly expedited payments, even instantaneously.

Better Financing: A significant 62% of small enterprises surveyed indicated their inability to secure the financing they require. Because they possess insights into customers' business models and cash flow dynamics, they can provide financing solutions that are particularly appealing.

Fewer Fees: Numerous conventional financial service providers continue to impose a variety of onerous fees on businesses and consumers, such as minimum deposit fees, monthly service charges, ATM fees, overdraft fees, and foreign transaction fees. Through white label banking, one may potentially eliminate some or all of these charges.

Targeted Rewards: With white label banking, it is feasible to offer rewards that resonate with customers. The Uber Pro Debit Card serves as a pertinent example; through this card, drivers can earn up to 6% cash back on fuel purchases.

Common White Label Banking Services include:

- Savings and checking accounts.
- Current accounts.
- Debit and credit cards.
- Simplified bill payments.
- Online payment transfer systems.
- Personal loans.
- Mortgages.
- Insurance.
- Bank statements with transaction details.
- Balance notifications

In Conclusion:

In the dynamic financial landscape, white-label banking serves as a formidable facilitator for enterprises, promoting service diversification, enhanced customer experiences, and competitive leverage. Through collaborations with licensed financial institutions, non-bank entities are enabled to provide financial services without the encumbrance of establishing or managing banking infrastructure.

White-label banking frameworks are positioned to play a crucial role as the financial sector progresses. Enterprises proficient in effectively leveraging these frameworks are well-equipped for success in the digital age, where flexibility and strategic utilization of innovative financial solutions are paramount.

Appzillon is a multifaceted white-label banking platform recognized for its robust capabilities in empowering financial institutions to deliver personalized, branded digital banking solutions. With an emphasis on agility and innovation, Appzillon enables banks to provide seamless user experiences while preserving a distinct brand identity.

Sources:

(a) iexceed.

(b) Bankera.

(c) Verified Payments.

Band, Baja Barat & Bima – The art of indemnifying loss

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You are getting married to a wonderful person with a planned wedding date. When this date is chosen, you will probably wonder how to organise all the pieces that create your special day. Who will be the wedding planner? How much will be the budget? Then, filtering the expenses and the guest list and dealing with the wedding and the reception requires discussions with several vendors. The process of where to get married, food, music and photography requires a massive coordinated effort. After all these arrangements, you pay a lot for the "perfect wedding". The stress and pressure are a natural occurrence leading up to the wedding day. All the arrangements appear to be in place, but there are always uncertainties.

Thankfully, several insurance companies have developed marriage insurance schemes to provide a safety net against the loss arising from such uncertainties during wedding events. This can bring a sense of relief, knowing that your special day is protected.

Wedding in India:

Indians invest a significant part of their wealth in wedding ceremonies. In a country where the guest lists are long, and hospitality is essential, a substantial amount of money is spent on wedding preparations, including customary expenses on gold jewellery. This financial burden underscores the urgent need for protection against unforeseen events.

With trends of destination weddings and grandeur experiences picking up, Indian general insurance companies, including National Insurance, ICICI Lombard, Future Generali, Oriental Insurance, and Bajaj Allianz, have formulated covers for unexpected events at these big-budget ceremonies.

According to industry reports, the average cost of hosting a wedding celebration in India was Rs.29.00 lacs, with an average guest list of 330. An Indian couple hires an average of 10 wedding vendors, including photographers, make-up artists, gifting specialists, etc. Over the past two decades, India has seen significant growth in the size of the wedding business due to increasing disposable income and demand for lavish celebrations. The Wedding Industry is poised to reach a staggering USD 100 billion by 2025, setting the stage for exponential growth in the sector.

A survey by the Confederation of All India Traders (CAIT) research arm highlighted 2023 as possibly the most significant wedding season, with 35 lakh weddings generating an estimated revenue of Rs.4.74 lakh crore that surpasses the GDP of numerous countries. Several hotel chains are increasingly launching campaigns to lure customers – Hyatt's Perfectly Yours, and Taj's timeless weddings are examples of how to grab a pie in the wedding market. The Prime Minister of India introduced the concept " Wed In India" during his " Mann ki Baat."

According to Economic Times (2019) reports, around 20% of the loan applications received from young Indians aged 20-30 in 2019 were for funding their marriage. This number indicates the potential risk and loss due to unexpected events during the wedding ceremony and highlights the need for wedding insurance in a country like India.

Wedding Insurance:

Wedding Insurance policies are not just financial products but crucial risk management tools specifically designed for the unique challenges of a wedding ceremony in India. They protect against potential disruptions from natural calamities, fire, theft, and other unforeseen events. For instance, if the event has to be postponed for any reason, the insurance can mitigate the no- refund policy followed by the venue providers and caterers, providing a practical solution to a common problem. Especially in weddings involving big budgets and a large crowd, cancellation, postponement, or an accident could cause a massive hit on one's finances and plans. An insurance plan covers these risks, making it an essential part of wedding planning.

Wedding insurance policies offer a high degree of flexibility, allowing you to tailor the cover to your needs. While the standard policy includes losses from natural disasters, fire, terror attacks, riots, curfews, and theft, you can customise it based on the risks associated with your venue. You can also add cover for unforeseen injury or death of a family member, damages to property or the life of guests, and burglary of jewellery or cash at home.

The wedding insurance coverage is designed to provide peace of mind from the moment you purchase it. It becomes active 24 hours before the start of the wedding-associated ceremonies, regardless of when you buy the policy. It covers a period of close to seven days, including all marriage events such as mehendi, sangeet, and other rituals

The Premium charged on these insurance covers varies on a case-by-case basis depending on the information related to the parties involved, the cost of decoration, the cost of event management, the destination, the number of people involved, etc. Some of the exclusions for this product are – any family disputes between the bride and groom, expected seasonal rains, intentional damage to the properties, and financial damages if the bride and groom call off the wedding. In specific communities, celebratory gunfire is part of the wedding ceremony. There are incidences of fatalities due to such gun fires. Insurance does not cover such incidents, as firing shots into the air during such social gatherings is illegal. Generally, the premium ranges between 0.50% - 2% of the sum assured.

Uncertainties in weddings:

Marriages are made in heaven but can turn sour on earth. " Srirangam Marriage Hall fire" was a famous incident that happened in the year 2004 during a marriage function where a total of 64 people, including the groom, were killed overall, and 33 others were injured in the fire. The reason for the fire was a short circuit in the electric wire connecting a video camera, which lit up the temporary thatched roof on the hall's first level.

Despite the vast market, wedding insurance must be discussed during wedding meetings. There needs to be more awareness about the availability of this product in India. Currently, it is primarily distributed by event management companies and wedding planners, targeting customers with a minimum Wedding budget of Rs. 2.00 Crs.

General Sample of Wedding Insurance Cover

Section - I Wedding Cancellation Scope of cover:

Cancellation or postponement of the wedding ceremonies due to:

- Fire & allied perils, including earthquake at the venue
- Burglary & theft at the venue

Sudden, unexplained, unintimated failure of the named person (s) to appear for the wedding ceremonies on account of any of the following contingencies:

- Death of such named person(s)
- Personal injury, either temporary or permanent, renders the named person(s) incapable of appearing at the insured event.
- Illness resulting in hospitalisation of the named person 7 days before the printed declared wedding date.

Basis of the sum insured for wedding cancellation:

Expenses on the following things will be covered:

- Printing of cards
- Advances that are given to the venue
- Advances that are given to the caterer
- Advances for decorations, music, etc
- Advance given to hotel room bookings/travel bookings
- Subject to a maximum of the sum insured

Main exclusions:

The company shall not be liable for cancellation of the wedding event due to the following: Civil unrest

Any act of terrorism

Kidnapping of the named person

Complete breakdown of transportation services which prevent the Named Person(s) from reaching the venue

The non-appearance of any Named Person(s) due to such Named Person(s) being a part of an air flight, other than as a passenger in a duly licensed commercial aircraft, without the knowledge and consent of the company

Any consequential loss due to the cancellation of the insured event

Unexplained or mysterious disappearance or shortage regarding the property to be utilised for the insured event discovered upon taking inventory.

Damage to, or destruction of, property caused intentionally by the Insured or at the Insured's direction

Section - II Damage to Property

Scope of Cover: Direct physical loss/ damage caused to property insured due to: Standard fire and allied perils, including earthquake Burglary and theft

Basis of the sum insured for material damage:

The cost of decoration and shamiana, as well as appliances, will be given by Blood Relations and in-laws. A sum insured break-up will be required.

Main exclusions: The company shall not be liable for material damage due to the following: Any damage caused to any property to be utilised for the insured event caused by wear and tear, gradual deterioration, depreciation, mechanical or electrical breakdown

Unexplained or mysterious disappearance or shortage in respect of the property to be utilised for the insured event discovered upon taking of inventory

Loss or damage to property stored outdoors without due attendance or supervision

Section - III Personal Accident

Scope of cover: Named persons, including blood relations and relatives, are covered against: Accidental death

Permanent partial Disablement

Permanent total disablement (names to be declared)

Main Exclusions: The Company shall not be liable for material damage due to:

Compensation under more than one of the preceding sub-clauses regarding the same period of disablement of the insured person.

Compensation in respect of death or bodily injury or any disease or illness to the insured person directly or indirectly caused by or contributed to by nuclear weapons, arising from ionising radiations or nuclear contamination by radioactivity from any nuclear fuel or any nuclear waste from the combustion of nuclear fuel.

Compensation in respect of death, injury or disablement of the insured person due to or arising out of or directly or indirectly connected with or traceable to war, invasion, act of foreign enemy, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection, mutiny, military or usurped power, seizure, capture, arrests, restraint and detainment of whatever nature

Compensation in respect of death, injury or disablement of the insured person from:

(a) intentional self-injury, suicide or attempted suicide,

(b) whilst under the influence of intoxicating liquor or drugs,

Section - IV Public Liability

Scope of cover: Liability towards third parties for any accidents resulting in injury or damage occurring at the venue of the wedding, in connection with the wedding, during the policy period

Main exclusions: The Company shall not be liable for any liability arising due to: Pollution

Acts of God, earthquakes, earth-tremor, volcanic eruptions, floods, storms, tempests, typhoons, hurricanes, tornados, cyclones or other similar acts or convulsions of nature and atmospheric disturbances

Deliberate, willful or intentional non-compliance of any statutory requirements.

Fines, penalties, punitive or exemplary damages or any other damages resulting from the multiplication of compensatory damages or arising out of any criminal liabilities

Consequence of war, invasion, act of foreign enemy, hostilities (whether war be declared or not), civil war, rebellion, revolution, terrorism, insurrection or military or usurped power

Ionising radiation or contamination by radioactivity from any nuclear fuel or any nuclear waste from the combustion of nuclear fuel

The radioactive, toxic, explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof

Claims arising out of any motor vehicle or trailer temporarily in the Insured’s custody or control for parking

Damage to property owned, leased or hired or under hire purchase or on loan to the Insured or otherwise in the insured’s care, custody or control other than:

Premises (or the contents thereof) temporarily occupied by the Insured for work thereon or other property in the Insured’s possession for work

Loss or damage to the Visitors’ clothing and personal effects

Damage to, or destruction of, property caused intentionally by the insured or at the insured’s direction

Any act of terrorism

Wedding Insurance Claim Process

In case of an unwanted event or risk during the marriage ceremony, the policyholder can claim compensation by following the below steps:

- Intimate the insurance company immediately after the eventuality occurs.

- Fill out the claim form and submit it to the insurance company with other required documents.
- A representative from the insurance company investigates the loss/damage.
- If the claim is genuine, the beneficiary account pays the compensation amount. Else, the claim is rejected.
- The insurance company may also pay the wedding venue or vendor directly.
- If the policyholder is unhappy with the claim amount or the resolution, he/she can raise a dispute in court.

Documents Required for Claim Process

The following documents are required to file the claim under the wedding insurance:

- Duly filled in claim form
- Photocopy of the policy
- Details of the damaged property
- List of valuables damaged/lost
- Invoice or purchase receipt of the valuables
- If there is a robbery or theft, an FIR copy
- Credit card statements, purchase dates and location details of the lost/damaged property
- Confirmation from a qualified expert if any of the damage cannot be repaired

How Long Does it Take to Pay Out a Claim?

A wedding insurance claim can be settled within 30 days of the mishap. Even if the insurance company needs some clarification, it has to be done within these 30 days.

Conclusion:

The Indian wedding industry is expected to grow by 20%-25% annually. The Indian Wedding industry has evolved, and couples have become more conscious and enterprising. Personalisation has increased the scope of business for associated industries. Couples are willing to experiment to create a unique and sensory ambience for their wedding, which provides an immense opportunity for wedding insurance.

Navigating the Evolving Landscape of Indian Equity Markets

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The Indian equity market, currently experiencing a remarkable recovery, offers a unique blend of opportunities and challenges for investors. As global and domestic dynamics shift, India's growth trajectory remains robust, driven by several key factors. In this article, we explore the current landscape of the Indian market, the impact of global events, and the trends shaping the long-term investment outlook.

Global Factors Influencing India's Market

1. **U.S. Recession and Federal Reserve's Stance on Interest Rates**

   The possibility of a U.S. recession has significant implications for global markets, including India. The Federal Reserve's recent shift in stance on interest rates, from aggressive hikes to a more cautious approach, has brought a sense of relief to global investors. This change has bolstered risk appetite, particularly in emerging markets like India, where equity markets have witnessed a broader recovery.

2. **U.S. Elections and Policy Changes**

   As the U.S. gears up for elections, potential policy shifts could impact global risk sentiment. Changes in trade policies, tax regulations, and foreign relations may influence investor behavior. However, India's relative stability and growth prospects position it as an attractive destination for global capital flows, mitigating some of the risks associated with U.S. policy uncertainty.

3. **China's Economic Challenges**

   China's ongoing economic challenges, including the dumping of steel and chemicals, have reverberated across global markets. For India, this presents both challenges and opportunities. While domestic industries may face pressure from cheaper imports, it also opens doors for Indian manufacturers to increase their global market share, particularly in sectors like steel, chemicals, and electronics.

4. **Bangladesh's Political Turmoil**

   The political situation in Bangladesh adds another layer of complexity to the regional economic landscape. India could potentially benefit from the instability in Bangladesh, as global companies may seek to diversify their supply chains and reduce dependency on a single country. This shift could lead to increased investments in India's manufacturing sector, further boosting its economic growth.

Key Trends Shaping India's Long-Term Equity Market

1. **Rise of Indian Manufacturing**

   India's manufacturing sector is on an upward trajectory, with significant contributions from companies like Apple, which has increased its production of iPhones in the country. In FY23, Apple exported iPhones worth approximately $7.5 billion from India, marking a significant rise from the previous year. The iphone maker's three India vendors – Foxconn, Pegatron and Tata Electronics have collectively assembled/produced Rs. 1,94,800 crore value of iphones in FY24, which is 455 higher than committed under the PLI scheme. Similar growth is witnessed across other sectors pharma, chemicals, textiles, engineering and auto products. This growth in manufacturing, driven by favorable government policies and a skilled workforce, is expected to continue, positioning India as a key player in the global supply chain.

2. **OLA IPO and the EV Market**

   The IPO of OLA, a leader in the electric vehicle (EV) 2-wheeler market, underscores the rapid growth and potential of India's EV sector. As the country pushes towards green mobility, companies like OLA are well-positioned to capitalize on this trend. The success of OLA's IPO could further fuel investor interest in the broader EV ecosystem, driving innovation and expansion in the industry.

3. **Favorable Monsoon and Rural Economy**

   A favorable monsoon season has led to improved rural terms of trade, that can potentially surprise on the upside. Better agricultural output and increased rural incomes could stimulate demand in rural markets, benefiting sectors such as FMCG, consumer durables, and auto in 2HFY24. The positive rural sentiment may also contribute to overall economic growth, supporting the equity market's long-term prospects.

Q1 FY25 Results: A Mixed Bag with Positive Signals

The first quarter of FY25 has provided a glimpse into the evolving dynamics of various sectors:

1. **IT Sector Stability**

   The IT sector has shown stability, with companies reporting steady earnings despite global uncertainties. As digital transformation continues to drive demand for IT services, Indian tech companies are expected to maintain their growth momentum.

2. **Banking Sector's Credit Growth**

   Banks have reported healthy credit growth, indicating a revival in corporate lending and a pick-up in economic activity. This trend is a positive sign for the financial sector, which remains a cornerstone of India's growth story. However, cost of funds and rising credit quality issues needs to be keenly watched for some of unsecured NBFC lenders.

3. **Real Estate and Capex Cycle Recovery**

   Real estate volumes have picked up, driven by increased demand for residential and commercial properties. Additionally, the capex cycle is showing signs of recovery, with companies beginning to invest in capacity expansion and new projects. These developments bode well for sectors such as construction, capital goods, and infrastructure.

Equity Markets: A Broader Recovery with Selective Opportunities

The Indian equity market has seen a much broader recovery, with the Nifty crossing an all-time high milestone of over 25,000. This surge reflects strong investor confidence in India's growth potential. However, it's important to note that the equity market may experience phases of consolidation or slowdowns, particularly in segments where valuations have become stretched, such as defense, PSU, and railway stocks, as well as in certain small/mid-caps and IPOs where valuations have gone ahead of time and largely discounting future earnings. One needs largely avoid investment in certain SME stock segments where SEBI has observed and given red flag of pump and dump behavior.

For investors, this environment calls for a strategic approach. Extending the investment horizon beyond three years can help navigate short-term volatility and capitalize on long-term growth opportunities. Being selective in choosing companies with strong fundamentals is crucial. Sectors like agriculture, rural consumption, pharmaceuticals, specialty chemicals, and selective construction and capital goods companies offer compelling opportunities, especially those with reasonable valuations and prospects for earnings growth, cash flow generation, and improving return on capital employed (ROCE).

Despite the potential for short-term consolidation, India's equity market remains a fertile ground for long-term investors and the equity investment story is far from over. With the right strategy, investors can navigate the evolving landscape to achieve sustainable returns.

Know About FinTech

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FinTech (Financial Technology) constitutes a comprehensive designation encompassing software, mobile applications, and various technologies devised to enhance and automate conventional financial practices for both enterprises and consumers. The FinTech domain encompasses a range of offerings, from rudimentary mobile payment applications to sophisticated blockchain infrastructures that facilitate encrypted financial transactions.

About FinTech:

The designation "fintech company" pertains to any enterprise that leverages technology to modify, augment, or automate financial services tailored for businesses or consumers.

Illustrative instances encompass mobile banking platforms, peer-to-peer payment systems, automated investment management solutions, and trading platforms. Furthermore, it extends to the creation and exchange of cryptocurrencies (e.g., Bitcoin, Dogecoin, Ether).

History of FinTech:

Although fintech may appear to be a recent phenomenon marked by technological advancements, the foundational concept has been in existence for an extended period. The introduction of early credit cards in the 1950s is widely regarded as the initial fintech innovation accessible to the public, as they alleviated the necessity for consumers to carry physical currency in their daily transactions. Subsequently, fintech evolved to encompass bank mainframe systems and online stock trading services. The establishment of PayPal in 1998 marked the inception of one of the first fintech enterprises operating predominantly on the internet, an innovation that has been further transformed by advancements in mobile technology, social media, and data encryption. This fintech evolution has culminated in the mobile payment applications, blockchain ecosystems, and social media-integrated payment solutions that are ubiquitously utilized today.

How FinTech Works:

While fintech represents a complex and multifaceted construct, it is feasible to attain a robust comprehension of its principles. FinTech facilitates the simplification of financial transactions for consumers or enterprises, rendering them more accessible and typically more cost-effective. Moreover, it encompasses enterprises and services that employ artificial intelligence, big data analytics, and encrypted blockchain technology to enable highly secure transactions within an internal framework.

In a broader context, fintech endeavours to optimize the transaction process, thereby removing potentially superfluous steps for all parties involved. For instance, a mobile service enables users to transfer payments to others at any time, directly directing funds to their designated bank accounts. Conversely, if payment were made via cash or check, the recipient would be required to undertake a trip to the bank to deposit the funds.

FinTech Trends:

Throughout the years, fintech has expanded and evolved in alignment with advancements in the broader technology landscape. In 2022, this expansion was characterized by several dominant trends:

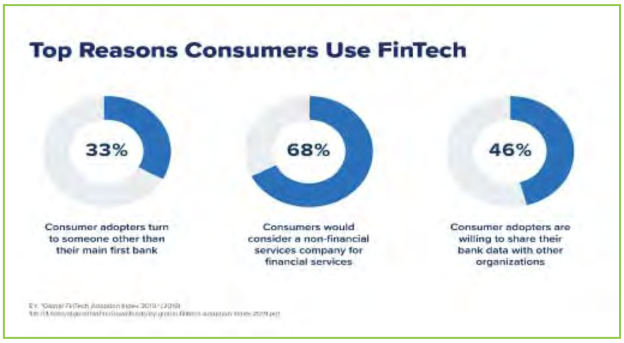
- **Digital Banking Continues to Expand**: The accessibility of digital banking has reached unprecedented levels. An increasing number of consumers are managing their finances, applying for and repaying loans, and purchasing insurance through digital-first banking institutions. This ease of use and convenience is anticipated to propel further growth within this sector, with the global digital banking platform market projected to achieve a compound annual growth rate (CAGR) of 11.5 percent by the year 2026.
- **Blockchain**: The advent of blockchain technology facilitates decentralized transactions, negating the

necessity for governmental entities or alternative third-party organizations to be involved. The proliferation of blockchain technology and its applications has accelerated significantly over the years, a trajectory that is anticipated to persist as a multitude of industries increasingly adopt sophisticated data encryption methodologies. For those seeking to expand their knowledge on blockchain technology, we recommend consulting our comprehensive guide.

- **Artificial Intelligence (AI) and Machine Learning (ML)**: The integration of AI and ML technologies has fundamentally transformed the scalability of fintech enterprises, thereby redefining the spectrum of services provided to clientele. The implementation of AI and ML has the potential to diminish operational expenditures, enhance the value delivered to clients, and facilitate the detection of fraudulent activities. As these technologies become progressively economical and accessible, one can expect them to assume an increasingly prominent role in the ongoing evolution of fintech, particularly as an increasing number of brick-and-mortar banking institutions transition to digital platforms.
- **Technologies That Power FinTech**: Contemporary fintech is predominantly propelled by AI, big data, and blockchain technology, each of which has irrevocably altered the modalities by which companies transfer, store, and safeguard digital assets. Specifically, AI can yield critical insights into consumer behaviours and spending patterns, thus enabling businesses to gain a more nuanced understanding of their customer base. Big data analytics serve to assist companies in forecasting market fluctuations and devising innovative, data-informed business strategies. Blockchain, as a relatively recent innovation within the financial sector, facilitates decentralized transactions without reliance on third-party inputs; it leverages a network of blockchain participants to oversee prospective modifications or augmentations to encrypted data.

How Safe is FinTech?

FinTech enterprises generally enjoy a considerable degree of trust among consumers, as reported by Forbes, 68% of individuals express a willingness to utilize financial tools developed by non-traditional institutions (e.g., those outside the financial sector or banking system). Nevertheless, a significant number of fintech applications are comparatively nascent and currently operate outside the ambit of the same safety regulations that govern traditional banking institutions. This situation does not inherently imply that consumers should refrain from placing their trust in fintech companies regarding their financial resources; it merely underscores the potential advantages of exercising caution. For the majority of consumers, the advantages derived from engaging with fintech companies outweigh the perceived risks associated with such interactions.



Types of FinTech:

FinTech has been instrumental in revolutionizing financial institutions for millions of individuals globally, fundamentally altering the methods by which we transact with one another, invest in stocks and other financial instruments, and seek financial counsel. A diverse array of fintech enterprises (**Across the Globe**) offers distinctive services tailored to their clientele. Below are several notable examples:

Robinhood (Stock Trading): Robinhood represents one of numerous applications that enable digital stock trading, effectively distilling the traditional broker-client relationship into an easily accessible online interface. The founders of Robinhood recognized that the majority of investment platforms imposed substantial fees on their users, despite the fact that executing trades incurs minimal costs. In response to this, the company introduced its fee-free trading platform, thereby empowering smartphone users to engage in stock trading with greater liberty. The service provides commission-free trading for stocks and exchange-traded funds and has recently expanded to include cryptocurrency trading for its users.

Venmo (P2P Payments): Venmo represents a prominent instance of a Peer-to-Peer (P2P) payment platform, which serves as a mechanism enabling users to execute transactions expeditiously through direct digital file-sharing technology. Enterprises such as Venmo facilitate the initiation of cost-free transactions among friends and family, as well as minimal-fee payments to commercial entities. Most significantly, the organization contextualizes its transactions within a social feed, thereby permitting users to disseminate and exhibit payments amongst their social connections. Platforms like Venmo have effectively leveraged the transition toward an increasingly cashless society through the integration of smart devices and social networking paradigms.

Klarna (E-Commerce): Klarna functions as a Financial Technology (FinTech) enterprise that delivers payment solutions tailored for e-commerce, which encompasses a wide range of activities involving digital transactions. In particular, Klarna presents direct payment options, pay-after-delivery arrangements, payment solutions for online retail platforms, and instalment financing plans. The service operates as a regulated banking institution that enables consumers to acquire goods under a "buy now, pay later" framework, with purchases being facilitated via interest-free or low-fee instalment agreements. By segmenting transactions in this manner, consumers are afforded the opportunity to finance a product over an extended period rather than making a lump-sum payment.

Wealthfront (Wealth Management): Wealthfront serves as a fintech robo-advisor, an advanced financial technology platform designed to assist users by automating the investment of their capital and delivering financial guidance aligned with their objectives. Robo-advisors employ sophisticated algorithms and proprietary software to construct an investment portfolio autonomously, without the need for direct input from a financial advisor. The software autonomously manages investments and rebalances portfolios in accordance with the user's specific requirements, aspirations, and prevailing market conditions. In particular, Wealthfront provides features such as automatic rebalancing, daily tax-loss harvesting, and various services rooted in automated investment strategies, thereby enhancing the manageability of investments for investors without necessitating conventional manual oversight.

Square (Business Payments): Square operates as a point-of-sale and payment processing solution for commercial enterprises, thereby enabling businesses to accept credit card transactions via smartphones, tablets, or dedicated terminals. Prior to the emergence of companies like Square, small enterprises often encountered significant challenges in processing credit card payments due to exorbitant fees and cumbersome equipment. Square offers a streamlined process that empowers businesses to accept payments, generate receipts, and provide virtual gift cards to their clientele.

FinTech Companies in India: Top Fintech Companies in India are:

- ✓ **Paytm**: Paytm is India's largest mobile payments and commerce app, according to its website. Besides various bill payment and money transfer services, the platform offers flight booking, ticketing and investment services, as well as savings accounts. The company also partners with other financial institutions to offer microloans and buy now, pay later financing to its customers. Paytm has more than 20,000 employees throughout India, many of whom work at its corporate headquarters in Noida.
- ✓ **PhonePe**: PhonePe's app allows users to pay their bills, invest, shop, transfer money and check their credit score all in one place. The Bangalore-based company is owned by American retail giant Walmart, and currently dominates transactions on the Unified Payments Interface. It has also launched its own app store, positioning itself as a competitor to the Google Playstore.
- ✓ **PayPal**: With more than 400 million global users, PayPal is one of the most popular digital payment platforms in the world, enabling individuals as well as businesses to send and receive money electronically. The company is headquartered in California, but has technology centers in Bangalore, Chennai and Hyderabad. These are PayPal's largest offices outside of the United States, according to its website, and are dedicated to artificial intelligence, product development, cloud computing and more.
- ✓ **Intuit**: California-based Intuit's primary India office is in Bangalore, where it employs nearly 2,000 people. The fintech company serves more than 100 million customers globally, offering a suite of products that includes tax preparation assistant TurboTax, credit monitoring service Credit Karma and accounting program QuickBooks. It also offers software specifically for small businesses and accountants to help them with tasks like payroll, taxes and digital payments.
- ✓ **Stripe**: Stripe provides digital payment services to a variety of companies, from e-commerce sites to subscription-based businesses. The platform allows these companies to accept payments in-person, online or through a mobile app, and supports more than 135 currencies, enabling business to be conducted all over the world. Besides its dual headquarters in San Francisco and Dublin, Stripe has a large office in Bangalore.
- ✓ **Visa Inc.**: Visa facilitates fund transfers for individuals, businesses and governments across more than 200 countries, most commonly through the branded credit, debit and prepaid cards that it provides via banks like Chase, Citi and Capital One. With more than 4 billion cards in circulation globally, Visa is the most widely used credit card company in the world. The company's headquarters is in California, but it also has a 10,000 square-foot tech development center

in Bangalore, where it employs about 2,000 people, as well as a smaller office in Mumbai.

- ✓ **Slice**: Boasting more than 17 million users throughout India, slice provides financial services to unbanked or underbanked people, enabling them to deposit and borrow money, pay bills and manage their expenses on one app. In 2023, the company merged with Guwahati-based North East Small Finance Bank, marking its entry into the banking ecosystem. Slice is headquartered in Bangalore and has more than 1,000 employees.
- ✓ **Wise**: Wise, previously known as TransferWise, enables international money transfers with real exchange rates and no fees. Users can hold a balance of more than 50 currencies in their digital wallet, send payments to more than 160 countries and make transactions using a branded debit card. Built by the co-founders of tech giants like PayPal and Skype, Wise's headquarters is in London but it has offices all over the world, including one in Mumbai.

Key FinTech Skills-FinTech Personnel:

Programming: As the prominence of cryptocurrency continues to expand within the fintech sector, the necessity for proficiency in blockchain technology has similarly escalated. It is advantageous for aspiring fintech professionals to possess at least a foundational understanding of blockchain's underlying framework, encryption mechanisms, and its diverse applications and ramifications in the widespread trading, lending, and reconciliation of currency globally. Given that blockchain-based cryptocurrency is anticipated to significantly transform the financial industry for the foreseeable future, acquiring this skill set can facilitate a more seamless transition into the field.

Cybersecurity: Contemporary fintech enterprises predominantly operate on a data-centric model and are frequently interconnected with extensive digital networks that provide novel experiences and opportunities for users. While this infrastructure offers considerable value, it simultaneously heightens the vulnerability to cyberattacks and security breaches. Consequently, aspiring fintech professionals can gain considerably from an informed understanding of cybersecurity, specifically by examining how it is employed to safeguard fintech organizations against malicious actors and other cyber threats.

AI/ML and Data Science: Current fintech consumers generate substantial volumes of data, with numerous fintech firms leveraging this information to tailor their services and enhance value delivery. Big data can be utilized to forecast financial trends predicated on client behaviour; thus, managing client finances can yield critical insights that foster more robust and informed decision-making. For this reason, driven fintech professionals should aspire to acquire a fundamental comprehension of data analysis, as it is likely to play a significant role in their professional trajectory.

In particular, Artificial Intelligence (AI) and Machine Learning (ML): Algorithms are routinely employed to process and analyse extensive datasets; this capability enables organizations to derive actionable insights. AI/ML algorithms can mitigate risk, enhance returns, automate operations, and forecast future trends thereby constituting an invaluable data-oriented competency for individuals aspiring to engage in the fintech sector.

Blockchain: A significant proportion of fintech organizations utilize mobile applications or web-based platforms to extend their reach and augment consumer value. Programmers and software developers are chiefly tasked with the creation and maintenance of these fintech platforms and applications, ensuring their design is secure, efficient, and user-friendly. Prominent programming languages in the fintech domain include Java, C++, Python, and Ruby.

Conclusion:

India's Digital Economy has been witnessing a remarkable growth trajectory over the past few years, transforming the traditional financial landscape and reshaping the way businesses operate. Fintech, or financial technology, is playing a pivotal role in this revolution by creating innovative solutions that are making financial services more accessible, affordable and convenient for millions of Indians. From mobile payments to peer-to-peer lending platforms, fintech is changing how we transact and interact with money in ways that were unimaginable just a decade ago.

Sources:

(a) nasscom Community.

(b) builtin.

(c) Columbia Engineering.

FinTech and Self-Regulatory Organization(s)

CMA Debaraja Sahu
Practicing Cost Accountant

On January 15, 2023, the Reserve Bank of India (RBI) disseminated a preliminary Framework entitled "**Draft Framework for Self-Regulatory Organisation(s) in the Fintech Sector**" ('Draft Framework') with the aim of soliciting input and assessing stakeholder anticipations. Moreover, on May 30, 2024, (hereinafter referred to as the 'Framework') the RBI has successfully finalized and formalized the aforementioned draft Framework.

The FinTech sector is experiencing substantial growth and serves as both a market disruptor and facilitator; according to a report issued by Inc42, the projected market opportunity within the Indian fintech landscape is approximately $2.1 trillion, with the current presence of 23 FinTech "unicorns" collectively valued at over $74 billion and 34 FinTech "soonicorns" possessing a combined valuation exceeding $12.7 billion.

The RBI, within the Framework, has delineated FinTech's as entities that furnish technological solutions for the provision of financial products and services to both businesses and consumers, or that encompass regulatory and supervisory compliance in collaboration with traditional financial institutions or through alternative means.

Consequently, in line with this definition, a FinTech is characterized as an entity that offers solutions to Regulated Entities (REs) in both the capacity of outsourced information technology providers and as purveyors of lending services (including functions such as customer acquisition, KYC tasks, servicing, etc.). However, the sector's lack of direct oversight from the RBI may engender substantial risks concerning customer protection, data privacy, cybersecurity, grievance resolution, internal governance, and the integrity of the financial system.

In this context, the introduction of the Framework of Self-Regulatory Organisation(s) in the FinTech Sector (SRO-FT) represents a commendable initiative, whereby the SRO-FT would function as a mechanism of self-regulation for market participants, which may encompass both regulated and unregulated entities, by establishing its own policies, codes of conduct, and other measures aligned with industry standards, best practices, and the expectations / recommendations of the RBI and other sector regulators.

Need for Self-regulation: In India, existing Self-Regulatory Organisations (SROs) are already operational in the FinTech domain, with membership numbers ranging from 80 to 85 fintech entities per SRO. These SROs are considerably extensive in their operational scope and have a substantial number of members under their jurisdiction, currently regulating their members through established Codes of Conduct.

These SROs recognize that while regulations may not presently be applicable to their members, those members are nonetheless expected to comply with their Code of Conduct, which incorporates essential provisions to ensure alignment with the expectations of the RBI. This Framework could serve as a positive development for the SRO-FT, as it may now advocate for the interests of their unregulated members in engagements with the RBI.

Authority of the RBI to issue this Framework: In accordance with Section 45I(f)(iii) of the Reserve Bank of India Act, 1934, the Reserve Bank of India (RBI) possesses the authority to designate any company as a Non-Banking Financial Company (NBFC) with the prior consent of the Central Government and through a Notification published in the Official Gazette.

Although the RBI, pursuant to the aforementioned section, may have the capacity to encompass the unregulated FinTech Sector within its regulatory domain, contingent upon the prior approval of the Central Government, the absence of any existing legislative framework pertaining to such FinTech entities currently precludes the RBI from possessing any legislative authority to regulate these entities in relation to their Self-Regulatory Organizations (SROs), thereby necessitating reliance on the voluntary compliance of the SROs with the RBI's jurisdiction.

Applicability: The Framework is relevant to all Self-Regulatory Organizations (SROs) whose constituent members are FinTech entities, irrespective of the geographical jurisdiction of such FinTech operations. However, for an SRO to operate with recognition from the RBI, it is imperative that such SRO be registered or domiciled within the territorial confines of India.

SRO Apply for Recognition to RBI: Given that the SRO functions as a collective representative and adjudicator for the entire sector, the endorsement and recognition granted by the RBI would significantly benefit its members collectively, facilitating the attainment of legitimacy and regulatory assurance. FinTech entities predominantly serve as service providers, encompassing roles such as Licensed Service Providers (LSPs), financial service providers, or information technology providers to regulated entities (REs), which are obliged to execute due diligence and continuous oversight of such service providers. Consequently, the accreditation of the service provider by an RBI-recognized SRO may mitigate some of the onboarding and monitoring responsibilities of the RE, thereby enhancing the market attractiveness of the service provider and subsequently fortifying the membership of the SRO.

Fintech Company take Membership of an SRO: Given that a substantial portion of the FinTech sector remains unregulated, a pertinent inquiry arises regarding the rationale behind a FinTech company's voluntary submission to the oversight of an SRO, which is itself subject to the regulatory scrutiny of the RBI. As previously articulated, it is crucial to comprehend that despite the predominantly unregulated status of FinTech companies, they function as outsourcing partners or technology service providers for REs, which are consequently obligated to impose contractual stipulations on such service providers to ensure that a comparable level of diligence is exercised by the FinTech in the execution of services as would have been observed by the RE, had the corresponding activity not been outsourced.

Furthermore, every RE is anticipated to conduct thorough due diligence on its outsourced partner or technology service provider prior to onboarding, as well as throughout the duration of service provision by the FinTech. Additionally, REs bear accountability and responsibility to the RBI for any instances of non-compliance attributable to their FinTech partners.

Eligibility and Application Process: In accordance with the established Framework, the Self-Regulatory Organization (SRO) derives its authority as a Self-Regulator from its substantial membership base comprised of entities within the FinTech Sector. The stipulation regarding a minimum membership threshold is essential for assessing the SRO's competence and jurisdiction in regulating and enforcing its standards, which includes the authority to impose punitive measures.

Furthermore, in addition to the requirement for minimum membership, the SRO must strive to be a genuine representative of the sector by maintaining independence from the conflicting interests of any individual member. Consequently, it necessitates the establishment of an autonomous board and a distinct set of operations, which should be explicitly articulated within its Articles of Association (AoA).

Governance and Management Framework: As a governance mechanism, the operations of the SRO must embody principles of transparency, professionalism, and autonomy. Such prerequisites are anticipated to cultivate a sense of trust and integrity among the SRO's membership.

The SRO must fulfil the independence criteria delineated by the regulatory authority. Genuine independence is attainable solely when the individuals or bodies overseeing the entity, specifically the Directors, are free from conflicts of interest.

Roles, Responsibility, and Functions of an SRO-FT: The SRO is conceptualized as a governance entity tasked with guiding and supervising its members to ensure compliance with established industry standards. It places significant emphasis on ethical conduct, adherence to industry norms, and compliance with applicable laws as fundamental objectives. According to the Framework, an SRO-FT aims to promote responsible innovation while safeguarding consumer protection, data security, and privacy. Its responsibilities encompass standard-setting, whereby it formulates rules, codes of conduct, industry benchmarks, and governance standards.

Characteristics of Self-Regulatory Organisation for FinTechs:

(a) **Representative Membership**: Membership should be voluntary and comprise FinTechs to ensure broad industry representation. The SRO-FT must be acknowledged as the primary body for setting market standards and defining rules of conduct.

(b) **Development-oriented**: Actively contribute to industry growth by providing expertise, guidance, and capacity-building programs. Prescribe minimum eligibility criteria for members to enhance industry standards.

(c) **Independence and Impartiality**: Operate independently to ensure unbiased decision-making. Avoid conflicts of interest and maintain impartiality in oversight to prevent influence by any dominant member or group.

(d) **Dispute Resolution**: Establish a transparent and fair dispute resolution mechanism to be perceived as a legitimate arbiter. Instil confidence in the industry through credible conflict resolution.

(e) **Proactive Engagement**: Motivate members to align with regulatory priorities. Facilitate communication between industry players and regulatory bodies for necessary changes and compliance culture promotion.

(f) **Information Repository**: Collect, analyse, and disseminate relevant data about members' activities and general requirements.

SRO-FT Set-up Process:

SRO-FT should be set up as a not-for-profit company under Section 8 of the Companies Act, 2013. Demonstrate sufficient net worth and capability for effective infrastructure. Maintain a robust IT infrastructure and deploy technological solutions promptly. Seek prior approval from RBI for setting up entities/offices overseas.

(a) **Membership Criteria**: Represent the FinTech sector with membership across entities of all sizes, stages, and activities. Include a roadmap for achieving comprehensive membership within a reasonable timeline.

(b) **Functions**: Guide members' conduct, ensure adherence to standards and laws, and address grievances. Frame a code of conduct, industry benchmarks, and baseline technology standards. Develop standardized documents for specific requirements within the FinTech sector.

c) **Governance Standards**: Board of Directors (BoD) and Key Managerial Personnel (KMP) should possess professional competence, fairness, and integrity. Follow fit and proper criteria. Adhere to guidelines for transparency, accountability, integrity, and fairness. Allow RBI to nominate or depute observers on the SRO-FT Board if necessary.

Conclusion:

The Framework constitutes a pivotal advancement towards a more dynamic, cooperative, and efficacious regulatory environment, congruent with the progressive requirements of the FinTech industry. The initiative undertaken by the RBI will not only afford a representative voice to the SRO on behalf of the FinTech sector, but will also facilitate a level playing field that ensures standardized compliance with pertinent regulations, encompassing consumer protection, data privacy, data security statutes, and others. Overall, the framework establishes a robust basis for ethical and accountable SROs, thereby contributing to the stability and growth of the FinTech ecosystem under the aegis of RBI oversight.

Sources:

(a) RBI Directives.

India - A Global FinTech Superpower

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India is amongst the fastest growing Fintech markets in the world. Indian FinTech industry's market size is $584 Bn in 2022 and is estimated at ~$1.5 Tn by 2025.

The Indian Fintech industry's Total Addressable Market is estimated to be $1.3 Tn by 2025 and Assets Under Management & Revenue to be $1 Tn and $200 Bn by 2030, respectively.

Major segments under Fintech include Payments, Digital Lending, InsurTech, WealthTech.

- The Payments landscape in India is expected to reach $100 Tn in transaction volume and $50 Bn in terms of revenue by 2030.

- India's digital lending market was worth $270 Bn in 2022 and is reached $350 Bn by 2023.
- India is the 2nd largest Insurtech market in Asia-Pacific and is expected to grow by ~15X to reach $88.4 Bn by 2030; India is poised to emerge as one of the fastest growing insurance markets in the world.
- The Indian WealthTech market is expected to grow to $237 Bn by 2030 on the back of a growing base of retail investors.
  - 185 Bn-Number of digital transactions in FY 2023-24.
  - INR 139 Lakh Cr-Value of digital payment transactions done via UPI (FY 2022-23).
  - 17-Fintech Unicorns.
  - $34 Bn-Fintech Funding (2014-2022) (Approx).
  - 3rd largest fintech ecosystem globally.
  - Over 3000 fintech startups are registered by DPIIT in India.
  - India accounted for 46% of all real-time transactions worldwide in 2022

FinTech Industry Scenario:

(a) Fintech Funding & Valuation:

The Fintech sector in India has witnessed funding accounting to 14% share of Global Funding. India Ranks #2 on Deal Volume. The FinTech Market Opportunity is estimated to be $2.1 Tn by 2030. Indian FinTechs were the 2nd most funded startup sector in India in 2022. Indian FinTech startups raised $5.65 Bn in 2022. The total number of unique institutional investors in Indian fintech almost doubled between 2021 and 2022, rising from 535 to 1019 respectively.

(b) Digital Payments:

- From just 1 Mn transactions in 2016, UPI has since crossed the landmark 10 Bn transactions.
- UPI recorded the highest ever volume of transactions in May 2024-14.03 Bn.
- Daily transactions on the UPI platform can touch 1 Bn by 2025.
- Digital Payments increased by 76% in transactions and 91% in value (2022).
- A pan-India Digital Payments Survey (Covering 90,000 respondents) revealed that 42% of respondents have used digital payments.
- Acceptance of Digital Payments Infrastructure has increased from 170 Mn touch points to 361 Mn touch points (increase of 34%).

(c) Regulatory Landscape:

- **India Stack**: A set of APIs that allows governments, businesses, startups and developers to utilise a unique digital infrastructure. One of the most important digital initiatives undertaken globally, aimed at putting up a public digital infrastructure based on open APIs to promote public and private digital initiatives. The 'Indiastack.global' website serves as a single repository of all major projects on India Stack.

- **JAM Trinity**:
  - ✓ **Jan Dhan Yojana**: The world's largest financial inclusion initiative, "Jan Dhan Yojna", has helped in new bank account enrolment of over 529 Mn beneficiaries.
  - ✓ **Aadhaar**: The World's Largest Biometric Identification System (1.3 + Bn Aadhaars generated so far).
  - ✓ **Mobile Connectivity**: India has the 2nd Highest Number of Smartphone Users.

✓ Cross border linkage of India's fast payment systems (UPI & RuPay Network-QR Code & P2M based payments) with other countries, is aiding in enhancing the Global Footprint.

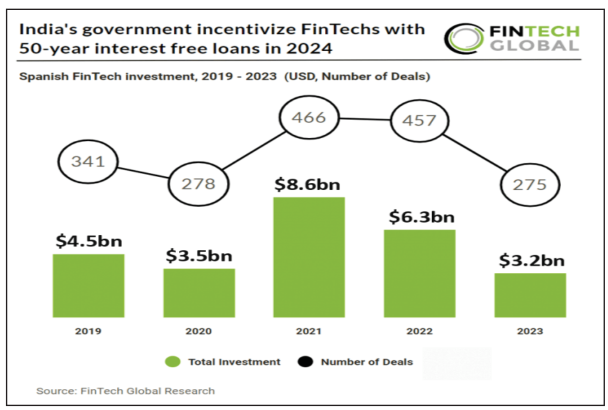
✓ **Financial Inclusion**: India's financial inclusion has improved significantly over calendar years 2014 to 2021 as adult population with bank accounts increased from 53% to 78%.

✓ **Financial Literacy**: The RBI has set up the National Centre for Financial Education and plans to expand the reach of Centres for Financial Literacy (CFLs) to every block of the. These steps aim to promote financial education across India for all sections of the population.

✓ **Introduction of UPI123Pay and UPI Lite**: Allows access to UPI to 400+ Mn feature phone subscribers and facilitates low value transactions in offline mode through on-device wallet.

✓ **RBI Payments Vision 2025**: The RBI plans to achieve certain outcomes such as 3x increase in number of digital payment transactions, increase of registered customer base for mobile based transactions by 50% CAGR, increase in PPI transactions by 150%, increase of and acceptance infrastructure to 25 Mn by 2025.

✓ **Account Aggregator Framework (AA)**: AA is an advanced framework of sharing consent based financial information between Financial Information Providers (FIPs) and Financial Information Users (FIUs). With 23 Banks onboarded to the AA framework, more than 1.1 Bn bank accounts are eligible to share data on AA. 70.89 Mn users have linked their accounts on the AA framework and shared data. RBI has also notified GSTN as FIP which will enable digital invoice financing and provide much-needed credit to the MSME sector.



Key Indian FinTech investment Statistics in 2023:

✓ Indian FinTech companies raised a combined $3.2bn in 2023, a 49% drop from 2022.

✓ Indian FinTech deal activity totalled at 275 deals in 2023, a 40% drop from the previous year.

✓ Lending Technology was the most active Indian FinTech subsector in 2023 with 58 transactions, a 21% share of total.

In 2023, Indian FinTech firms faced a notable decline in their fundraising efforts, collectively securing $3.2bn, which marked a significant 49% decrease compared to the previous year. This downturn was mirrored in the deal activity within the Indian FinTech sector, as the number of deals dwindled to 275, reflecting a substantial 40% drop from 2022.

PhonePe, an Indian payments application, raised the largest amount of funding in India during 2023, raising $850m in total during the year. PhonePe plans to use the funding to enter and scale new businesses such as Insurance, Wealth management, Lending, Shopping and Account Aggregators with the new funding.

PhonePe's most recent update was releasing Share. Market, a stock broking app, which is available as a mobile app or web platform and will enable retail investors and traders to purchase stocks, mutual funds, and ETFs. Established in 2015, PhonePe claims to be India's largest payments app, catering to both consumers and merchants, serving over 440 million users across the subcontinent. It offers payment services, including bill payments, as well as investments and insurance products.

Lending Technology was the most active Indian FinTech subsector in 2023 with 58 deals, a 21% share of total deals. This was followed by WealthTech with 41 deals, a 15% share of deals and third was RegTech with 39 deals, a 14% share of total deals.

Smt. Nirmala Sitharaman's interim budget for the FinTech sector unveils a promising landscape with a ₹ 1 lakh crore ($12bn) fund offering 50-year interest-free loans for tech-driven growth, fostering innovation and potentially intensifying competition in lending. While presenting a stable roadmap for innovation within the financial sector, Budget 2024 brings a mixed bag for FinTech lending and NBFC sectors, with promising initiatives like the DBT scheme and tech-savvy growth funds which contrasts against concerns about fiscal deficit and tighter credit conditions.

Key takeaways include a push towards digital transactions for government schemes, amounting to benefits over ₹ 2.7 lakh crore ($32.6bn), which could empower technology players offering innovative payment solutions and disrupting traditional banking channels. Additionally, the focus on budgets for skill development, financial inclusion, and youth empowerment promises a more productive workforce, echoing the government's commitment to initiatives like PM Mudra Yojana and overall financial inclusion efforts.

Inter-Ministerial Steering Committee on Fintech (IMSC):

A Steering Committee was set up under the Chairmanship of then Secretary, DEA on 05.03.2018 to consider various issues relating to development of Fintech space in India with a view to make fintech related regulations more flexible and vis-a-vis other emerging economies. The committee submitted its report to the Finance Ministry on 02.09.2019.

An Inter-Ministerial Steering Committee ("IMSC") was set up in Department of Economic Affairs (DEA), Ministry of Finance, to carry on the tasks of implementing the report, including exploring and suggesting the potential applications in government financial processes and applications, particularly accounting and asset management, welfare services, taxation, and handling citizen grievances.

IMSC has been meeting on continuous basis since the release of Report to implement its mandate. So far, IMSC has met 5 times to discuss developments across fintech.

Joint Working Groups on Fintech (JWG):

Joint Working Groups have been established bilaterally with UK & Singapore to improve regulatory connect, adopt learnings and best practices and boost entrepreneurship and collaboration between the nations and promote joint development of FinTech Solutions, Interoperability Standards, and Payments Linkages.

(a) UK-India:

The UK and India have built a strong partnership on FinTech. The UK-India FinTech Joint working Group met most recently in March 2020 and agreed to collaborate on facilitating the flow of faster and cheaper UK-India remittances. In particular, we agreed to work together to explore potential options for greater connectivity between India's Unified Payments Interface System and the UK Payments System, and to support greater acceptance of Rupay Cards in the UK.

(b) Singapore-India:

The Joint Working Group on FinTech between India and Singapore has been constituted for Co-operation in the area of FinTech between the Two Countries. Collaboration of India with Singapore will benefit both India and Singapore to excel in the fields of Development of Application Programming Interfaces (APIs), Regulatory Sandbox, Security in payment and digital cash flow, integration of RuPay-Network for Electronic Transfers (NETS), UPI-FASt payment link, AADHAR Stack and e-KYC in ASEAN Region and Co-operation on Regulations, Solutions for Financial markets and insurance sector and sandbox models.

International Financial Services Centre Authority (IFSCA):

The IFSCA iOS a unified authority for the development and regulation of financial products, financial services and financial institutions in the International Financial Services Centre (IFSC) in India. The IFSCA has been established on April 27, 2020 under the International Financial Services Centres Authority Act, 2019.

It is headquartered at GIFT City, Gandhinagar in Gujarat. The main objective of the IFSCA is to develop a strong lobal connect and focus on the needs of the Indian economy as well as to serve as an international financial platform for the entire region and the global economy as a whole. In the Union Budget 2021-22 the Government has announced its support for development of a world-class FinTech Hub at the GIFT-IFSC.

Conclusion:

In the diverse and dynamic landscape of India, where tradition intertwines seamlessly with technology, a new force has taken the spotlight, the explosive rise of Financial Technology, or FinTech. This potent blend of finance and technology is reshaping the way individuals manage their finances, ushering in a financial revolution.

Sources:

(a) Invest India.

(b) FinTech Global.

(c) linearloop.

(d) statista.

Life Story of State Bank of India

Dr. Jyotsna Haran
Visiting Professor

The State Bank of India (SBI), a venerable institution that stands as a beacon of India's banking sector, traces its origins to the early 19th century. Its story begins with the establishment of the Bank of Calcutta in 1806, which was later renamed the Bank of Bengal. Alongside the Bank of Bombay (1840) and the Bank of Madras (1843), these three banks collectively became known as the Presidency Banks. Each served as a cornerstone of financial operations in their respective regions during the British colonial era.

In 1921, a significant chapter in the history of Indian banking unfolded when these three banks merged to form the Imperial Bank of India. This newly created entity was a colossus in the Indian financial landscape, controlling around 80% of the country's banking operations. The Imperial Bank of India was not just a commercial bank; it also undertook many functions of a central bank, though it was privately owned.

The journey from the Imperial Bank of India to the State Bank of India occurred in 1955, a watershed year when the Government of India, together with the Reserve Bank of India (RBI), nationalized the Imperial Bank under the State Bank of India Act. This transformation was driven by the vision of making banking more accessible to the masses, particularly in the rural and semi-urban areas. Thus, the State Bank of India was born, with a renewed focus on being the "banker to every Indian."

SBI embarked on an ambitious path of expansion and innovation, aligning itself with the goals of national development. The bank played a pivotal role in the post-independence economic reconstruction of India, providing financial support for infrastructure projects, agriculture, and small industries, thereby fostering the growth of the nation.

Over the decades, SBI has continually evolved, embracing modernization and digitalization while retaining its commitment to social welfare. It became a trendsetter in the Indian banking industry, pioneering various services, including internet banking, mobile banking, and other technology-driven initiatives. SBI's extensive network, with thousands of branches spread across the length and breadth of the country, coupled with its presence in numerous countries worldwide, underscores its status as a global banking giant.

The merger of its associate banks and Bharatiya Mahila Bank with SBI in 2017 was another significant milestone in its illustrious history, further cementing its position as the largest public sector bank in India.

Today, the State Bank of India stands as a symbol of trust, reliability, and unwavering commitment to serving the financial needs of millions of Indians. Its journey from the Bank of Calcutta to its present stature is a testament to its resilience, adaptability, and enduring relevance in the ever-changing landscape of global finance.

The triumph story

The success story of the State Bank of India (SBI) is a tale of growth, resilience, and unwavering commitment to the economic development of India. From its inception as the Bank of Calcutta in 1806, the institution that would become SBI began its journey in a colonial India that was just beginning to develop its financial infrastructure. The bank soon established itself as a vital player in the country's nascent banking industry, with a vision that extended far beyond the horizons of its time.

The early 20th century marked a significant transformation when the Bank of Calcutta, along with the Bank of Bombay and the Bank of Madras, merged to form the Imperial Bank of India in 1921. This amalgamation created a financial powerhouse that was instrumental in shaping India's banking landscape. The Imperial Bank of

India, though privately owned, performed many functions akin to those of a central bank, setting the stage for its future as the State Bank of India.

In 1955, the Imperial Bank of India was nationalized under the State Bank of India Act, and thus, SBI was born. This nationalization was a crucial step in aligning the bank's operations with the country's socio-economic goals, particularly in the post-independence era. SBI's mission was clear: to extend banking services to the farthest corners of India, making financial inclusion a reality for millions of Indians who had previously been outside the ambit of formal banking.

SBI quickly emerged as a pillar of the Indian banking sector, known for its extensive network, which grew exponentially as it opened branches across urban and rural India. This expansion was not merely about increasing its reach; it was a concerted effort to democratize access to banking services, especially in underserved and remote areas. SBI became synonymous with reliability and trust, offering a wide range of financial products and services tailored to the diverse needs of its customers.

During the decades leading up to the merger in 2017, SBI's success was driven by its adaptability and innovation. The bank was at the forefront of introducing modern banking practices in India, from computerized operations to internet banking, always ensuring that it stayed ahead of the curve in an increasingly digital world. Despite the challenges posed by a rapidly changing financial landscape, SBI maintained its leadership position by continuously evolving and embracing new technologies.

SBI's role in supporting India's development cannot be overstated. The bank played a crucial role in funding key infrastructure projects, supporting agriculture, and nurturing small and medium enterprises, which are the backbone of the Indian economy. Its involvement in these sectors not only fueled economic growth but also empowered millions of individuals and businesses to achieve their financial goals.

By the time of its merger with its associate banks in 2017, SBI had firmly established itself as India's premier public sector bank. Its success was not just measured by its balance sheet but by the positive impact it had on the lives of countless Indians. The State Bank of India had become more than just a financial institution; it was a trusted partner in the nation's journey towards prosperity and self-reliance.

The story of SBI before its merger is one of vision, leadership, and an unwavering commitment to the people of India. It is a story of how a bank, starting from modest beginnings, grew into a national institution that has touched the lives of millions, driving financial inclusion and economic progress across the length and breadth of the country.

Success story of SBI after merger

The success story of the State Bank of India (SBI) after its historic merger in 2017 is a testament to the bank's enduring strength and its capacity to navigate the complexities of a rapidly evolving financial landscape. The merger, which saw SBI assimilate its five associate banks—State Bank of Bikaner & Jaipur, State Bank of Hyderabad, State Bank of Mysore, State Bank of Patiala, and State Bank of Travancore—along with the Bharatiya Mahila Bank, marked a new era in the bank's illustrious history.

This consolidation was not just a strategic move; it was a bold statement of SBI's intent to solidify its position as India's preeminent banking institution. The merger transformed SBI into one of the largest banks in the world, with a customer base exceeding 500 million, a vast network of over 24,000 branches, and a global presence spanning numerous countries. This scale brought with it enhanced capabilities, allowing SBI to leverage its extensive resources to better serve its customers and strengthen its role in the Indian economy.

Post-merger, SBI focused on integrating the diverse operations of its erstwhile associate banks into a cohesive entity. This integration process was a complex and challenging endeavor, requiring meticulous planning and execution to ensure a seamless transition for customers and employees alike. However, SBI's deep-rooted organizational strength and its commitment to excellence enabled it to overcome these challenges, resulting in a unified banking system that offered enhanced efficiency and a wider array of services.

The merger also paved the way for significant improvements in operational efficiency and cost optimization. By streamlining its processes and eliminating redundancies, SBI was able to reduce operational costs while improving service delivery. This, in turn, allowed the bank to pass on the benefits to its customers in the form of competitive interest rates and innovative financial products.

SBI's post-merger success is also characterized by its relentless pursuit of technological advancement. The bank has been at the forefront of digital banking in India, continuously enhancing its digital platforms to offer customers a seamless and secure banking experience. From mobile banking apps to internet banking services, SBI has embraced digital transformation, making banking more accessible and convenient for millions of customers across the globe.

Moreover, SBI has maintained its strong focus on financial inclusion, a cornerstone of its mission. The bank has continued to extend its reach into rural and semi-urban areas, providing essential banking services to under banked and unbanked populations. This commitment has played a crucial role in supporting the Indian government's initiatives aimed at promoting financial literacy and inclusion.

As SBI emerged from the merger stronger and more resilient, it also demonstrated its capacity to contribute meaningfully to the nation's economic growth. The bank has been instrumental in financing large-scale infrastructure projects, supporting small and medium enterprises, and providing financial assistance to key sectors of the economy. Its efforts have helped drive economic development and create opportunities for millions of individuals and businesses.

Today, the State Bank of India stands as a towering symbol of stability and trust in the global banking arena. Its journey since the merger is one of strategic foresight, operational excellence, and a deep commitment to its customers and the nation. SBI's continued success is a reflection of its ability to adapt to change, innovate, and lead with integrity—ensuring that it remains not just a bank, but a vital partner in the progress and prosperity of India.

NPA status of SBI

The Non-Performing Asset (NPA) status of the State Bank of India (SBI) is a crucial indicator of the bank's financial health and its ability to manage risk in a complex economic environment. As the largest public sector bank in India, SBI's approach to handling NPAs has significant implications, not just for the bank itself, but for the broader Indian banking system.

Over the years, SBI, like many other banks in India, has faced the challenge of rising NPAs, particularly in sectors such as infrastructure, power, and manufacturing. These sectors, which are pivotal to India's economy, have at times struggled due to various macroeconomic factors, leading to a higher incidence of loan defaults. As a bank with a vast and diverse portfolio, SBI was inevitably affected, seeing an uptick in its NPA levels during periods of economic stress.

However, SBI has consistently demonstrated a proactive approach to managing its NPAs. The bank has implemented stringent measures to identify and classify stressed assets early, which has been a cornerstone of its strategy to address the issue head-on. By recognizing NPAs promptly, SBI has been able to initiate recovery processes more effectively, mitigating potential losses.

In recent years, SBI has intensified its efforts to reduce its NPA burden. The bank has adopted a multi-pronged strategy that includes focused recovery efforts, restructuring of viable accounts, and leveraging legal avenues for the resolution of bad debts. These efforts have been supported by the use of technology to monitor loan portfolios more closely, enabling the bank to take timely corrective actions.

The bank's focus on recovery and resolution has yielded positive results. Over time, SBI has managed to bring down its gross NPA ratio, reflecting its success in cleaning up its balance sheet and improving asset quality. This reduction in NPAs has been achieved despite the challenges posed by external factors, underscoring the bank's resilience and effective risk management practices.

Moreover, SBI has been at the forefront of implementing industry-wide reforms aimed at strengthening the banking sector's ability to deal with stressed assets. The bank has actively participated in initiatives such as the Insolvency and Bankruptcy Code (IBC) process, which has provided a more structured framework for resolving NPAs in a time-bound manner.

SBI's NPA status, while reflective of the challenges inherent in managing a large and diverse portfolio, also highlights the bank's commitment to financial discipline and sustainable growth. By continuously refining its approach to risk management and recovery, SBI has positioned itself to navigate the complexities of the banking environment while maintaining its role as a leader in the industry.

The State Bank of India's handling of its NPA situation demonstrates its resilience and strategic acumen. Through diligent management and a focus on innovation in risk mitigation, SBI continues to strengthen its financial foundation, ensuring its ability to support India's economic growth and development in the years to come.

USP of SBI

The Unique Selling Proposition (USP) of the State Bank of India (SBI) lies in its extensive reach, reliability, and comprehensive range of services. As the largest public sector bank in India, SBI is known for its vast network of branches and ATMs across the country, even in the most remote areas. This allows SBI to serve millions of customers, including those in rural and semi-urban regions, where access to banking services is often limited.

SBI is also trusted for its stability and long history, making it a preferred choice for individuals and businesses alike. The bank offers a wide array of financial products, from savings accounts and loans to investment and insurance services, catering to diverse customer needs.

Additionally, SBI has embraced digital innovation, providing convenient and secure online banking services that make managing finances easier for its customers. This combination of reach, trust, and comprehensive offerings is what sets SBI apart from other banks in India.

Cases of extensive reach of SBI

The extensive reach of the State Bank of India (SBI) is one of its most defining features, reflecting its deep commitment to serving the diverse needs of the nation. SBI's presence is felt in every corner of India, from the bustling metropolises to the tranquil villages, making it a true people's bank.

In the vast plains of Uttar Pradesh, SBI's branches are often the only financial lifeline for farmers and small traders, providing them with access to essential banking services that support their livelihoods. In the remote hills of Himachal Pradesh, where connectivity can be a challenge, SBI ensures that even the most isolated communities have access to banking, helping them save, invest, and grow.

Down south, in the coastal regions of Tamil Nadu and Kerala, SBI's network facilitates financial inclusion, empowering fishermen and small entrepreneurs with the credit and insurance products they need to sustain and expand their businesses. In the northeast, a region known for its challenging terrain and diverse cultures, SBI's branches and mobile banking units bring financial services to communities that might otherwise be left out of the formal banking system.

SBI's reach extends beyond India's borders as well. With a significant presence in key global financial centers, the bank connects the Indian diaspora to their homeland, offering them seamless access to banking services whether they are in New York, London, or Singapore.

This vast network, encompassing thousands of branches and ATMs, is not merely about physical presence; it is a testament to SBI's unwavering commitment to ensuring that every Indian, regardless of their location, has access to the financial tools they need to build a better future. Through its extensive reach, SBI embodies the principle of banking for all, bridging the gap between the underserved and the world of financial opportunity.

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FinTech Business Models

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"Hey Rahul! I saw in newspapers that Mumbai in Maharashtra became a centre of the FinTech world in the last week of Aug 2024, as it hosted the Global FinTech Festival with much fanfare. While I could read many news items and see so many videos, I am still not convinced how these FinTechs will survive in the long run. As you see, the financial world is already flooded with a long list of participants like Banks, Regional Rural Banks, Payment Banks, Small Finance Banks, Cooperative Banks, Micro Finance Institutions, Mutual Fund institutions. And everyone is embracing technology on a large scale, unlike the olden days. In such a situation, where these FinTechs will get a foothold and what are their business models?" asked Kishan to his friend.

"Kishan! I also got a similar doubt sometime back. As you know, my father is in the software field, he gave a lucid description of FinTechs and their business models. Would you like to listen to his version?" replied Rahul.

"Why not? I want to have a complete understanding of FinTechs and their business models."

FinTech – a short form of Financial Technology - is venturing into many areas, not only payments, lending, but also into emerging fields like Insurtech, wealthtech, supply chain finance.

Many Fintechs are crossing the borders and targeting the Global South for their business. India is ready to share its knowledge of Digital Public Infrastructure to other countries as well, since this became the backbone of innovations.

The latest data shows that FinTech funding for Indian firms has stabilised at $7-$10 billion per quarter, and India is now the world's third-largest FinTech hub, with Indian FinTechs raising $25 billion in 2023. This sector is projected to grow by 35-40% by 2030. However, the pertinent question for many FinTechs is whether they can build sustainable and profitable business with this capital.

So, let us see the opportunities to build a business model by taking a case of loan to a customer. As per traditional banking, once a customer approaches any banking institution for a loan, his credentials by way of KYC, CIBIL score, eligibility, loan amount, security offered, etc., will be verified. If one or the other doesn't fit the criteria, then getting a loan will be difficult.

Here, FinTechs are coming up with two types of innovations.

One, supporting the Banking institutions by providing various integrations. For example, creating simplified KYC solutions where the necessary integrations with various organisations can be arranged for online check, creating rule engines to arrive at the loan eligibility, loan amount etc. In this case, FinTechs will be collaborating with outside agencies and support the Banking institutions by way of innovations. Still it goes in the traditional banking way only.

The other innovation comes in, where the customer will not fit into the regular criteria. For example, when the customer does not fit in a regular credit score, FinTechs are coming up with alternative credit scoring models, performing transaction analysis, encouraging small ticket loans at low cost and also peer-to-peer lending. Let us discuss them one by one.

Alternative Credit Scoring:

Many self-employed individuals who possess a regular income, but fail to meet the criteria employed in traditional bank loan assessments. FinTechs, which specialise in Credit Ratings, such as "Nova Credit", aggregate global credit bureau and bank transaction data, thus helping the lenders and businesses to see borrowers in a new light. They help global citizens to apply for financial services in their new home using their credit history from their country of origin. Using technology that translates international credit data into a local-equivalent score, they are currently serving individuals coming from Australia, Canada, India, to get loans in the U.S. They are adopting innovative methodologies by bringing alternative data indicators, including social attributes and percentile rankings within analogous borrower demographics. The inclusion of these qualitative variables, in conjunction with sophisticated and adaptive algorithms, has the potential to enhance the Quality of Lending determination over a period of time.

Transaction Analysis:

Data became an important resource, and its analysis will yield profound insights into customer preferences and requirements. FinTechs operating in the transaction analysis domain are coming up with innovative products, such as expense management applications, type of credits coming into the account over a period of time, to aggregate customer data, subsequently cross-referencing this information with broader datasets to evaluate customers' potential to fulfil repayment obligations. The operational model adopted by these FinTechs is fee-based, typically deriving revenue from the number of analyses carried out on the customer data, on behalf of the lender.

Business Rule Engine:

Some FinTechs are facilitating creation of Business Rule Engines for the financial institutions. Taking the criteria and requirements for providing a loan, the Business Rule Engine will be designed in such a way that by inputting the key details of the customer, the Engine will utilise the algorithms and come up with Go/No Go criteria. The lending decision becomes simple and quicker. The same type of engines can be used by alternative lenders as well to arrive at a credit decision and offer loans to customers.

Small Ticket Loans:

Lenders generally find it difficult to finance large numbers of small value loans due to their inherent nature of huge underwriting expenses and cost of recovery processes. FinTechs operating in the market (for example, Affirm in US) are providing mechanisms for impulsive purchases (BNPL - Buy Now, Pay Later) along with one-click purchasing options on e-commerce platforms. It will facilitate quick consumer transactions without necessitating the input of any form of authentication or credit card information. These loans underwritten at an interest rate of 0%, allows for the outright acquisition of a wide array of products with the flexibility to pay in instalments. In the process, they disseminate customer data to original equipment manufacturers (OEMs), who stand to gain the most being able to design suitable marketing campaigns to sell their products. While the company gets the customer data in lieu of interest, the customer gets a loan without specifically going to any lender.

Peer-to-Peer Lending:

Whenever the customer may not fit into traditional lending norms, the new concept of Peer-to-peer (P2P) lending emerged. This refers to the practice whereby an individual secures finance from other individuals. Correspondingly, peer-to-business (P2B) lending occurs when a business obtains capital from one or more individuals. While the customer gets loans through this process, the lenders (or investors) get enhanced returns compared to those available in traditional debt markets by enabling the allocation of funds to borrowers who are pre-approved and thoroughly vetted by these FinTechs. These FinTechs (like Funding Circle) establish web platforms designed to connect borrowers with lenders (or investors), generally levying a fee on the repayments made by borrowers.

Thus, the initiation of Credit Scores, Risk Assessment, and Credit Evaluation are being leveraged by FinTechs to provide diverse offerings of traditional banking institutions, thereby transforming the established business paradigms in the financial segment.

According to Mr Rabi Sankar, Dy. Governor of RBI, these Fintech companies have yet to establish the trust that stems from being licensed, regulated, and having a proven track record. Speaking at the Global Fintech Fest of 2024, he noted that fintech firms are largely not licensed by a regulator, making it even more crucial for them to prove that they can operate responsibly and earn public trust. This is something that is built over time, requiring continuous and consistent behaviour that evokes trust.

"Kishan! This is in a nutshell what my father told me about Fintechs. May be, I will explore more information from him and share it with you from time to time."

"Thank you Rahul! This information helped me to understand the nuances of Fintechs.

FinTech: What next?

At the end of the Global Fintech Fest, RBI Governor Mr Shaktikanta Das said that India is on the brink of a transformation, with technology expected to drive the fulfilment of every citizens' aspirations. He said that from mobile banking and digital innovations to AI-driven lending and blockchain innovations, the FinTech ecosystem is continually evolving to meet the diverse needs of India's expanding economy.

Future of the Insurance Sector : "InsurTech"

Shri A. Ashwin Kumar

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India's Insurance Sector represents a prominent domain that is currently experiencing significant upward momentum. This ascendant Trajectory of the Insurance Industry can be primarily ascribed to the enhancement of disposable incomes and the burgeoning awareness within the sector. India ranks as the **Fifth Largest** Life Insurance Market among the World's emerging Insurance Markets, exhibiting an annual growth rate of Approximately 32-34%. In recent years, the Sector has witnessed intense Competition among its constituents, which has catalysed the introduction of novel and Innovative Products within the domain.

Over the preceding Nine Years, the Insurance Sector has Successfully attracted considerable Foreign Direct Investment, totalling nearly ₹54,000 Crores (US$ 6.5 Billion), primarily propelled by the government's progressive relaxation of regulations governing overseas capital inflows.

The Indian Insurance Industry Comprises 57 Distinct Insurance Entities, 24 Operating within the Life Insurance Sector and 34 in the Non-life Insurance Domain. Among the life insurers, the Life Insurance Corporation (LIC) serves as the exclusive public sector entity. The Non-life Insurance Segment is supported by Six Public Sector Insurers. Additionally, there exists a Sole National Re-insurer, known as the General Insurance Corporation of India (GIC Re).

Other Integral Stakeholders in the Indian Insurance Marketplace encompass Agents (Both Individual and Corporate), Brokers, Surveyors, and Third-party Administrators responsible for managing Health Insurance Claims.

The Insurance Sector has undergone a Plethora of Transformations characterized by novel developments, revised regulations, proposed amendments, and growth throughout 2022. These advancements have facilitated New Growth Opportunities for the Sector while ensuring that Insurers remain pertinent amidst evolving Circumstances and the Latest Digital Disruptions.

The Insurance Regulatory and Development Authority of India (IRDA) Operates with Vigilance and a Progressive outlook, Steadfast in its Mission to realize the Objective of 'Insurance for all by 2047,' accompanied by Robust Strategies to confront the Industry's Challenges.

The Expansion of the Insurance Market is bolstered by Pivotal Government Initiatives, Strong Democratic Principles, a favourable regulatory environment, enhanced partnerships, product innovations, and dynamic distribution channels.

Historically, the Insurance Industry has been predominantly governed by offline channels, such as Corporate Agents, Traditional Brokers, and Banks.

Presently, Rapid Digitization, Product Innovation, and progressive regulatory policies have facilitated consumers in acquiring insurance through a multitude of distribution channels with mere clicks. The disruptions caused by the COVID-19 Pandemic underscored the imperative for Consumers to Invest in Products that augment Financial Security, with Life Insurance being a notable Example.

InsurTech:

The outcomes associated with the establishment of a contemporary Technological Framework through the appropriate 'InsurTech' initiatives may encompass various elements such as:

- ✓ The handling of routine service inquiries is accelerated via workflow automation and intelligent chatbots.
- ✓ The process of claims submission and processing is rendered seamless through mobile applications and the provision of real-time data.
- ✓ From conventional insurance firms to agile startups, InsurTech is currently instigating substantial transformations across the industry, thereby challenging the perceptions of those who previously regarded the sector as sluggish in its capacity for change and adaptation.
- ✓ However, both carriers and brokers have now come to recognize that InsurTech possesses the capability to facilitate the cultivation of enduring and more gratifying relationships with clients and policyholders, particularly as we prepare to incorporate automation and AI into our operational frameworks.
- ✓ Furthermore, they are adept at navigating intricate regulations while upholding the highest standards of financial ethics.

The efficiency of policies is significantly enhanced through the application of artificial intelligence (AI).

Significance of InsurTech:

Insurance Technology has the potential to serve as a catalyst for innovation within an industry that has historically been characterized by a penchant for extensive paperwork. InsurTech liberates carriers and brokers, enabling them to address challenges with greater efficiency and to adopt a more human-centric approach simply by implementing and integrating AI, automation, and data analytics. A reduction in paperwork correlates with an increase in client engagement.

Current Technological Trends are propelling changes within InsurTech, and these technological advancements can transform certain interactions in the insurance domain into delightful experiences.

For instance, a prominent Insurance Brokerage, has developed a program that allows consumers to promptly purchase warranty insurance for their high-value acquisitions. This innovation facilitates a near-instantaneous transition from quote to binding in a mere two minutes. Such digital advancements enable straightforward, automated shopping experiences that provide customers with reassurance, devoid of cumbersome paperwork.

InsurTech Addresses:

These pivotal moments represent transformative opportunities for the Insurance Sector. The enthusiasm exhibited by investors towards InsurTech is readily understandable. The advantages of InsurTech encompass the enhancement of service quality, the optimization of distribution channels, and the aggregation of data for significant analytical insights. It epitomizes an ultimate virtuous cycle, delight, data collection, and subsequent improvements. This can be executed across various channels, including Slack, email, and telephone communication.

Advantages of InsurTech:

Through the Deployment of Appropriate Insurance Technology, we can optimize business processes and facilitate collaboration that transcends time and location. Furthermore, the instrumentation of cross-channel communication empowers all members of the organization to attain visibility, thereby fostering an enhanced relationship between carriers, agents, and customers.

The Insurance Firm has not attained its dominant market position over the course of 150 years without a forward-looking focus on emerging trends. Similar enduring competitors, InsurTech is central to the strategic vision. In fact, 80% of leaders within the insurance sector assert that their business and technological strategies are intrinsically linked.

Financial Services Cloud was designated as the preferred Customer Relationship Management (CRM) Solution, with the objective of delivering a retail-standard experience to customers. This facilitated the carrier's capacity to engage more efficiently with independent agents and clients through a comprehensive 360-degree perspective of their data. For instance, by leveraging CRM Analytics, the carrier executed data-informed decisions to ascertain the subsequent optimal actions, augmented by Artificial Intelligence and sophisticated data visualization. The subsequent focus of its business strategy involves establishing connections with customers and brokers through their preferred communication channels be it email, chat, social media, text, or telephonic correspondence.

Technological advancements and innovation enable sizable Companies to investigate new alternatives and transcend historically inflexible frameworks. In recent years, the Application of Technological innovations has fundamentally transformed the Insurance Sector regarding:

- ✓ Cost Reduction.
- ✓ Enhanced Efficiency, and
- ✓ The Increased Customization of Offerings Tailored to the Specific Needs of Individual Clients.

INDIA INSURTECH ASSOCIATION	This transformation, which is gaining traction within the Industry, is referred to as "InsurTech."

According to 'Grand View Research', the Valuation of the Global Insurtech Market was approximated at 5.45 Billion US Dollars in 2022, with projections indicating a compound Annual Growth Rate of 52.7% from 2023 to 2030. The Research revealed that Insurance Firms are progressively Investing in Digital Technologies to Diminish Operational Expenditures, Enhance Operational Efficiency, and Improve the Overall Customer Experience.

Anticipated Trends:

The Automobile remains prevalent across Europe, with 88% of Respondents reporting Ownership of at least 'One Vehicle' within their Household. Nonetheless, there exist Apprehensions, particularly pronounced in 'Spain and Portugal', regarding the Ecological repercussions of Driving, as 54% of Europeans Express concern over their 'Environmental Impact' associated with this 'Transportation Mode'. However, merely one-third of Individuals contemplate the prospect of **Not Owning** a Personal Vehicle in the Future, with only 8% asserting that they could "Definitely" manage without it.

The Report further indicated that despite these Apprehensions alongside 31% of Respondents expressing Interest in acquiring an 'Electric or Hybrid Vehicle', various obstacles are Hindering the adoption of this Novel Sustainable Mobility Alternative. A Significant 56% of Europeans Identified Cost as a Substantial Barrier, 30% Cited Range Limitations Affecting Long-distance Travel Capabilities, and 32% Raised Concerns regarding Accessibility to Charging Stations.

Innovations in Insurance:

The Prevailing Strategy includes an 'Integrated Application of Diverse Technologies' that have been previously validated in Sectors such as Finance:

- ✓ **Big Data** and **Data Analytics**, which empower Insurers to formulate predictive Models that increasingly Correspond with Consumer Behaviour and Fulfil their requirements;
- ✓ **Machine Learning** and **Artificial Intelligence**, which are Indispensable for Expediting and Enhancing the Accuracy of Responses;
- ✓ The **Internet of Things** (IoT), which Leverages Network-connected Devices, ranging from Automotive GPS Systems to Wearable Technology, to Optimize Data Collection and provide increasingly Personalized Policy Options;
- ✓ **Drones**, which can be Employed to conduct Progressively Precise Assessments, even in High-risk Areas;
- ✓ **Blockchain Technology**, utilized to Bolster Data Security Standards and Guarantee Safe and Efficient Data Collection.

The Indian insurance sector is undergoing rapid evolution, propelled by significant regulatory reforms and technological advancements. With projections indicating that the country's insurance market is poised to triple in size by 2032, substantial opportunities for innovation abound.

InsurTech startups are harnessing digital public infrastructure, artificial intelligence, the Internet of Things, and data analytics to enhance underwriting, claims management, and customer engagement. Despite the industry's prevailing dependence on offline channels, the momentum toward digital adoption is steadily increasing. The emphasis is transitioning towards hyper-personalization, risk mitigation, and the enhancement of the overall customer experience, thereby rendering India a highly appealing landscape for InsurTech enterprises.

Innovative Insurance Products-Pay as You Drive Insurance (PAYD):

PAYD represents a novel and unconventional approach to affordable Automobile Insurance, wherein the premium is relatively reduced as it is determined by the number of kilometres the policyholder has operated their vehicle. This indicates that the insured individual remits the premium proportionate to the distance traversed by their automobile.

In the Indian context, possessing Car Insurance is Compulsory; however, it often results in financial inefficiency when individuals are required to remit full premiums for infrequently utilized vehicles or for those who drive sporadically. Consequently, the Pay as You Drive (PAYD) model emerges as an optimal solution for individuals who do not engage in regular driving.

For example, a Policyholder whose Vehicle is driven less than an average of 2,500 kilometres annually is eligible for a substantial 25% reduction in the Premium, which is computed based on the annual kilometre threshold and the odometer readings.

The "Pay as You Drive" (PAYD) Automobile Insurance is analogous to a comprehensive car insurance policy encompassing both Own Damage (OD) Coverage and Third-party Insurance; however, the distinguishing feature of the PAYD policy is its utilization of advanced technology to monitor the driving behaviours of the insured, subsequently offering a premium that is significantly Lower in comparison to a traditional comprehensive insurance policy. Moreover, the premium associated with the PAYD policy is contingent upon the kilometres the insured operates their vehicle.

How Does PAYD Function:

The operational framework of this Technology-driven PAYD model markedly deviates from conventional Car Insurance Policies as it facilitates a more pragmatic pricing structure. When acquiring the OD coverage, the policyholder is mandated to disclose the vehicle's usage according to the usage categories stipulated by the insurer. In accordance with the vehicle's utilization and the kilometres accrued during the policy term, the insurance provider extends a discount on the OD premium, which can reach a maximum of 25%.

Typically, PAYD plans encompass various distance categories such as 2,000 kilometres per annum, 5,000 kilometres per annum, 7,500 kilometres per annum, 10,000 kilometres per annum, and so forth. Under this particular Coverage Model, the premium is computed based on the aggregate distance traversed over the course of a policy year. There are distinct distance categories available for selection, tailored to the policyholder's usage patterns.

To Conclude:

In the dynamic landscape of insurance, the year 2024 is shaping up to bring transformative change in India. Backed by an optimistic economic scenario, evolving customer preferences and support from regulators, this sector displayed resilience and adapted to new requirements in recent years. India's InsurTech sector is expected to grow by 17% annually to reach $307 Bn by 2030. Today, the landscape of insurance has evolved beyond conventional domains like life, health, property, motor, and jewellery. Insurance can be one of the important enablers of India's socio-economic development in the coming years.

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Generative AI

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Introduction:

The Banking industry has been transforming with advanced technologies such as Machine learning, Artificial Intelligence, Internet of Things (IoT),etc. Generative AI is the latest and most influential development. Today, numerous enterprises are experimenting with Generative AI and other expansive language models. The capability of these systems to articulate intricate concepts is remarkable. However, these models are predominantly trained on internet-based information which limits their ability to address queries related to proprietary knowledge.

What is generative AI in Banking?

Generative AI refers to an ensemble of algorithms capable of creating realistic-appearing text, photos, videos, audio, code, data from the huge amount of data they are trained on. Generative AI models learn the patterns and structure of their input training data, and then generate new data that has similar characteristics

Generative AI in banking is all about using smart computer programs to make banking more efficient, personalised, and innovative, ultimately making your financial life easier and more secure.

Generative AI in banking can also help you with customer service by answering questions, solving problems, and even detecting fraud by looking for unusual patterns in transactions. It's like having a helpful financial expert who never gets tired and can work around the clock.

Some Generative AI applications in Banking Industry:

- **JPMorgan Chase is** applying Gen AI across various areas, including fraud detection, loan approvals, and even generating reports
- **Wells Fargo** is using generative AI to automate the process of generating financial statements for its customer.
- **HSBC** is using Gen AI to enhance back-office tasks and streamline operations.
- **Bank of America** is using Gen AI to develop chatbots that can answer customer questions about their accounts and transactions.
- **Bank of Baroda** launches Gen AI powered virtual relationship manager and credit line on UPI.

How does generative AI work?

Generative AI starts with a prompt that could be in the form of a text, an image, a video, a design, musical notes, or any input that the AI system can process. Various AI algorithms then return new content in response to the prompt. Content can include essays, solutions to problems, or realistic fakes created from pictures or audio of a person.

Early versions of generative AI required submitting data via an API or an otherwise complicated process. Developers had to familiarize themselves with special tools and write applications using languages such as Python. Now, pioneers in generative AI are developing better user experiences that let you describe a request in plain language.

Types of Generative AI Models

GPT-3, or Generative Pretrained Transformer 3, is an autoregressive model pre-trained on a large corpus of text to produce natural language text at high-quality levels. GPT-3's design makes it flexible enough for various language tasks, including translation, summarization, and question-answering.

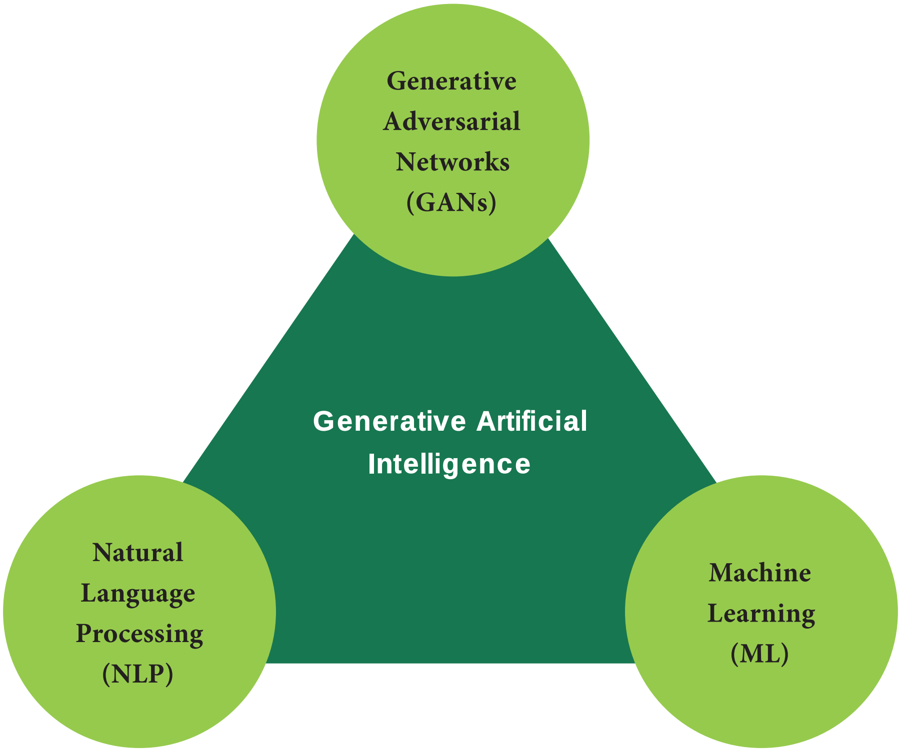
LaMDA, or Language Model for Dialogue Applications, is a pre-trained transformer language model trained specifically on dialogue to produce high-quality natural language text similar to GPT but designed with the aim of picking up on subtleties of open-ended conversation.

LLaMA is a small natural language processing model created to meet GPT-4 and LaMDA's goal of optimizing performance while remaining as cost-efficient as possible. As an autoregressive model based on transformers, LLaMA can train more tokens efficiently, allowing for lower numbers of parameters required.

GPT-4, released recently as the latest member of GPT class models, is an advanced multimodal approach capable of accepting image and text inputs and outputting text outputs. Pretrained to predict the next token in the document. The post-training alignment process leads to improved factuality measures as well as adhesion with desired behavior measures.

DALL-E is a multimodal algorithm capable of operating across different data modalities to generate novel images or artwork derived from natural language text input.

Key Technologies: GANs consist of two neural networks, a generator, and a discriminator, that work together to create new data. In the banking sector, GANs generate synthetic data for training fraud detection systems, simulate market conditions for risk management, and create realistic financial scenarios for stress testing



NLP enables machines to understand, interpret, and respond to human language. In finance, NLP is utilized for sentiment analysis, automated report generation, and customer service chatbots. It helps banks analyse vast amounts of unstructured data, such as news articles and social media posts, to gauge market sentiment and inform trading strategies.

Machine learning algorithms are central to Gen AI, powering predictive analytics, credit scoring, risk assessment, and algorithmic trading. **ML Model** learn from historical data to make accurate predictions and automate complex decision-making processes, improving efficiency and accuracy in financial operations.

Which Industries Will AI Impact the Most?

There's virtually no major industry that modern AI hasn't already affected. Here are a few of the industries undergoing the greatest changes as a result of AI.

- AI in Manufacturing
- AI in Healthcare
- AI in Finance
- AI in Education
- AI in Customer Service
- AI in Media
- AI in Transportation, etc.

How Gen AI is reshaping Banking Processes:

The advent of generative AI in the banking industry is not about technology evolution—generative artificial intelligence is set to redefine the very essence of banking by shaping entirely new business models. The impact Gen AI has on the banking sector is immense across literally all banking functions, especially in terms of banking operations and decision-making. In the data-rich banking environment, where customer interaction plays a critical role and a substantial workforce performs a wide range of daily routine tasks, generative AI emerges as a catalyst for redefining the boundaries of operational efficiency, customer experience, and rule-based decision-making.

- AI models that can help generate actionable insights for accurate **business forecasting**, facilitate hyper-personalised offers for customers and enable data-led insights for fraud detection, prevention and mitigation.
- **In risk management**, Gen AI could be used to better simulate different risk scenarios and stress test investment strategies and portfolios because of its ability to trawl humungous unstructured data sets.
- Customer servicing and **marketing/sales** is tagged as the third most popular Gen AI use case in the banking sector. Financial services companies have already adopted AI to improve customer-facing processes, such as help desks and robo-advisor services.
- **Streamlining Account Opening Processes:** Opening a new bank account can be a lengthy and tedious process. Gen AI can automate customer onboarding, verify documents, and manage compliance checks. This significantly reduces processing times and improves customer satisfaction

Generative AI can be applied extensively across many **other areas of the business**. Some of the potential areas include the following:

Improved Business Automation: AI's ability to analyse massive amounts of data and convert its findings into convenient visual formats can also accelerate the decision-making process.

Improved customer satisfaction: AI is playing a significant role in shaping our future by improving customer experiences through data analysis, understanding customer behaviour, and predicting trends.

Automating the manual process of writing content: Generative AI can automate the manual process of writing content, saving time and effort by generating text or other forms of content

Decease Detection and Climate Change Concerns: On a far grander scale, AI is poised to have a major effect on sustainability, climate change and environmental issues.

Chatbots and Virtual Assistants, etc.: Generative AI can be used to develop better chatbots and virtual assistants that can provide customers with 24/7 support and assistance, thus creating quicker and more relevant responses

Challenges and Future Prospects:

While there are several challenges that organizations face while developing and implementing Gen AI, the primary ones are:

Data Quality and Quantity: Gen AI, the primary ones are centered around data quality and quantity. Gen AI models require large amount of high-quality data to perform efficiently.

Data Security and Privacy: One of the crucial challenges that companies may encounter while implementing generative AI is data security and privacy.

Computational Costs and Resources: Training generation AI models requires substantial computational resources, including high-performance GPUs and significant memory

Limited Talent Pool: Given the excitement around generative AI, engineers who specialize in its development seem in high demand. Unfortunately, there may not be enough qualified candidates available, particularly if commercial experience with specific models is required.

Conclusion:

Generative AI stands at the forefront of technological innovation, offering businesses across industries a myriad of opportunities for growth and transformation. From unlocking new dimensions of creativity to optimizing operational processes, the potential impact of Generative AI is vast and far-reaching. By embracing this technology, businesses can enhance creativity, streamline operations, and deliver personalized experiences that resonate with their target audience.

As Generative AI continues to advance, its role in shaping the future of industries becomes increasingly prominent. The key to unlocking its full potential lies in strategic adoption, collaboration with experts in the field, and a commitment to leveraging this technology responsibly. As we embark on this transformative journey, the possibilities are limitless, and the businesses that embrace Generative AI today will undoubtedly be the leaders of tomorrow.

Financial institutions must up their game in harnessing Gen AI's transformative power and opening doors to new opportunities for growth, innovation, and customer-centric services.

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Application Programming Interface (API)

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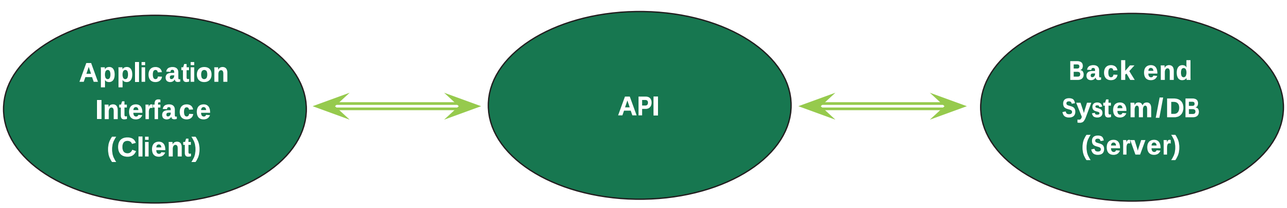
The emergence of digital world has led to much talk on the APIs which is an acronym for Application Programming Interface. While the world existed and so as the concept from many decades, its popularization did occur in past 2 decades and now it is used in the today's digital world frequently. Historically speaking, term API (application program interface) was first used in a paper "Data structures and techniques for remote computer graphics" published in year 1968. Before we delve into the realm of API, let us talk about the basic communication. When two humans communicate, it is through a common language which both sender and receiver understand or it is sometimes through the mutually known expressions. When we interact with the computer or other systems, a user interface is created that has a screen, a navigation tool say mouse and information feeding tool say a keyboard to talk to the computer/system. So how two software or similar systems communicate? Here comes the API that indeed is a messenger, which essentially is machine readable interface that facilitates communication between two systems, softwares, software components and helps in the exchange of the data, information and functionalities. The most critical component of any communication is the language or set of rules/protocols so is the case with the APIs. The systems when communicate through an API, there are applicable protocols for the request and responses and these are contained in the document or contract called "API Specifications", an architectural blueprint that describes the interface behaviour and also serves a guide for making APIs. In the world of tech jargons, we need to understand that API is different from the user interface (UI) where latter takes data from the user gives it to the APIs for processing and then displays the result to the user in the user friendly and readable format. In API communication, user is missing. A typical API communication flow looks like:



The basic functions of the APIs are listed below:

- **Facilitating Communication between two systems/ softwares/software components**
- **Enables and facilitates Exchange of Data**
- **Controlled Access to the functionalities**

Let us understand the functioning of API through an example. When we log into any digital banking application say Yono application of SBI, the first step is to authenticate the user to verify his/her genuineness. So, when user inputs user id and password a request (API call) is initiated by the UI interface that gets the response from backend system/Data base having data of the user like account details, mobile no as well as other parameters that are mandated for the user verification including the response for correctness of user ID and password combination. The front end application then takes this response (API response) and runs the rules and based on the result allows or denies access to the application.

The key components of an API are **Calls, keys and endpoint**. An API call is a request that a client sends to a server, keys are authentication tool to identify a client and endpoint is URL address of the destination. Keys are important from the perspective of the security and ensures that all request have been initiated from the genuine source. End point is important to know where to land up for getting the desired response. Keys and endpoint are embedded in the API calls.

As is apparent from the above that APIs are means of two way or bilateral communication. There is another communication that is triggered when any event occurs and it is unilateral in nature. To achieve one way communication we use **reverse APIs, also known as webhooks**. When an event occurs, a webhook automatically performs the task and pushes contents from the server to the client. The best use cases for the webhooks can be in sending auto triggered notifications, reminders and updates. Though these are relatively easy to set up, they are not suitable for the complex communications with secure laden features.

Types of APIs:

There are various types of APIs depending upon their purpose and availability for use. In terms of availability of release policies, APIs are categorized into Public, Private and Partner.

- **Public APIs** are open, may be commercial and can be used by any developer. One example is OpenWeatherMap API. All public APIs may not be open and require authentication for their access.
- **Private APIs** are used by the organization internally for their systems and these are not available to the outside users. These are used for the integration of internal systems within organization.
- **Partner APIs** are meant to be used by the known users/partners. These are used for integration of systems between two organization who use product and services of each other.

Based on the type of systems, APIs are used for the integration, APIs can be classified into following 4 categories:

- **Database APIs** enable communication between an application and database. One example is Drupal 7 Database API which allows writing queries for different types of databases.
- **Operating System APIs** enable communication between application and operating system. Every OS has its own set of APIs like Linux APIs
- **Remote APIs** enable interaction between systems running on different machines. JAVA Database connectivity API is one example of Remote API.
- **Web APIs** are the most commonly used type and are used to deliver requests from web applications and responses from servers using HTTP protocol.

Further, based on the API Specification protocols/formats, APIs can be classified into four types which are:

- **SOAP APIs or Simple Object Access Protocol APIs** are lightweight APIs which are used for exchanging information among decentralized and distributed architecture systems. The client and server engage in the exchange of messages formatted in XML over HTTP or SMTP protocol. Extensible Markup Language or XML uses set of rules or format that both humans and machines can read. SOAP is mostly used with web based applications and ensures high security of the transmitted data. It is perhaps for this reason payment gateway systems like Paypal uses SOAP APIs. It is often used to support old legacy systems.
- **REST APIs or Representational State Transfer APIs** represent the most prevalent and adaptable forms of APIs currently available on the web. The word REST was used by the computer scientist Roy Fielding in year 2000. Rest is not a protocol instead it is architectural style that is used to build application that work on http protocol. APIs that comply with this architectural design are known as RESTful APIs. REST delineates a collection of functions such as GET, PUT, POST, PATCH, DELETE etc, which clients may employ to retrieve data from the server. This protocol or architectural style supports messaging in different formats viz. plain text, HTML, XML, JSON, which is far more extended than that SOAP which allows only XML format for messaging.
- **RPC APIs or Remote Procedure Call APIs** enable interaction between applications based on the client-server architecture. One program known as client sends requests from another program called server, located in another computer on a network, and the server sends the required response. gRPC is an open source API framework released by the google in 2015 and as such is one of the newest framework. Both RPC and gRPC allows developers to define any kind of function calls, rather than selecting from preset options like GET, POST etc.
- **Websocket APIs** facilitates bidirectional interactive communication between client applications and the server using JASON over user configured route for incoming messages to reach backend systems. Using these APIs message can be sent to the server and an event driven response can be received.

The two most critical parts in API creation are specification and documentation. While specifications has details related to request and response structures and formats that help in building the API, a well-defined API documentation which captures all the requisite details on how it can be used and integrates with other systems ensures that API testing is seamless and its performance is impeccable. API documentation is a subset of Code documentation. Besides specification and documentation, another term used and important in creating complete documentation of API is API definition. API definition provides a machine-readable format of an API specification for use by automation tools like automatic API documentation and SDK generators. From API definition, documentation, code samples, and SDKs can be generated using tools like swaggerhub or swagger inspector through automation process.

The standardization in the specification and Documentation is critical so that these documents can be well understood by the developer community There are tools for automating API documentation. Swagger is such a framework that is used to describe APIs in language that everyone can understand. This is most commonly used, however there are other frameworks too that include RAML, Summation, APIBlueprint. There are two main approaches to use the swagger viz. **Code first (Bottom Up Approach) and Design First (Top down approach)**. While in code first approach code is written first and then swagger is used for API documentation, in design first approach API design is first created using swagger and then code is written. The code first approach was adopted earlier however design first approach is gaining traction as it helps in generating cleaner code by having more inputs at the design stage itself. In summary swagger has emerged as popular approach to API design. It has moved to Linux foundation under the name of "The Open API Initiative". So now question arises what constitutes a good API document and what it should contain. Some of the guiding principles for creating API documentation or Specification document are below (illustrative only):

- Functional and no functional requirements
- Details of every API request
- Examples/format of every request
- Details of every API response
- Examples/format of every response
- Description of error messages
- Code sample for popular programming languages
- Key details for authentication
- A quick start guide for helping developers
- Tutorials, videos for users

Creating an API:

A five step process detailed below helps in the creating APIs that are good in design, easy in integration and high on performance:

1. Plan the API: Finalizing API specifications along with the prevalent API design and development standards. Proper and comprehensive coverage of requirements, especially non-functional requirements.
2. Build the API: Create a prototype using the design finalized.
3. Test the API: API testing is imperative to avert bugs and defects. Tools for API testing may be used for testing the functional and security requirements.
4. Document the API: Comprehensive API documentation is necessary.
5. Market the API: This is applicable where a third party creates API for the purpose of monetization or else organization can use API at this stage for the purpose it is meant for.

Some of the most commonly used APIs include google maps, skyscanner, weatherAPI and this API world is expanding at the unprecedented pace with new advancements in API development and also use cases. With pace of digital transformation gathering momentum, and Fintech ecosystem expanding, integration with more and more systems is becoming norm than exception and this makes role of APIs even more critical in the entire value chain. Some of the key benefits which API offer include:

- Enhanced flexibility and outreach
- High degree of customization
- Increased efficiency in data sharing
- Greater adaptability
- Enhanced security as certain features like Single Sign on (SSO) are implementable due to API availability.
- Offers interoperability

To conclude the way digital economy is ascending and penetrating each and every walk of life, APIs have assumed a critical role and going forward this is going to expand at exponential rate in the any foreseeable future.

FinTech Business Model: Innovation at the Intersection of Finance and Technology

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The financial services industry has undergone a radical transformation over the past decade, largely driven by the rise of Financial Technology, or FinTech. FinTech companies leverage technology to offer innovative financial services and products that are more efficient, accessible, and customer-centric than traditional financial institutions. As these companies continue to disrupt the financial landscape, understanding the FinTech business model becomes crucial for anyone looking to grasp the future of finance.

Defining FinTech

FinTech refers to the integration of technology into offerings by financial services companies to improve their use and delivery to consumers. This can include everything from mobile banking and payment apps to blockchain-based platforms and AI-driven financial advisory services. FinTech is not just about startups; even established financial institutions are adopting these technologies to stay competitive in a rapidly changing environment.

The Evolution of FinTech

FinTech has evolved through several phases:

1. **FinTech 1.0 (1866-1987):** The earliest phase involved the transition from analog to digital. This included the introduction of financial services like telegraph and telephone communications for financial transactions.
2. **FinTech 2.0 (1987-2008):** This phase saw the development of online banking, electronic payments, and the initial adoption of internet-based financial services. Traditional financial institutions began to integrate digital processes into their operations.
3. **FinTech 3.0 (2008-Present):** Post the 2008 financial crisis, FinTech startups began to emerge, focusing on disrupting traditional financial services by leveraging new technologies like mobile apps, cloud computing, and big data.
4. **FinTech 4.0 (Emerging):** The current phase is characterized by advanced technologies such as blockchain, artificial intelligence, and decentralized finance (DeFi), which are pushing the boundaries of what FinTech can achieve.

Key FinTech Business Models

FinTech companies operate under various business models, each with unique strategies and value propositions. Below are some of the most prominent FinTech business models:

1. Payments and Money Transfers

Overview: Payment FinTechs facilitate the transfer of money between individuals, businesses, and financial institutions. These companies have revolutionized how transactions are conducted, making them faster, more secure, and more convenient.

Examples:

- **Mobile Wallets:** Platforms like PayPal, Venmo, and Apple Pay allow users to store money digitally and make transactions directly from their mobile devices.
- **Cross-Border Payments:** Companies like TransferWise (now Wise) and Revolut have significantly reduced the cost and time required for international money transfers, challenging traditional bank wire services.

Revenue Model: Payment FinTechs typically earn revenue through transaction fees, currency exchange spreads, and premium services for faster or higher-value transactions.

Key Challenges:

- Regulatory compliance across different jurisdictions.
- Ensuring security and preventing fraud.
- Competing with traditional banks and newer digital competitors.

2. Lending Platforms

Overview: Lending FinTechs use technology to streamline the borrowing process, making it easier and faster for individuals and businesses to obtain loans. These platforms often leverage data analytics and alternative credit scoring methods to assess risk.

Examples:

- **Peer-to-Peer Lending (P2P):** Platforms like LendingClub and Prosper connect borrowers directly with investors, bypassing traditional banks.
- **Business Loans:** Companies like Kabbage and OnDeck provide small and medium-sized enterprises (SMEs) with quick access to capital through automated loan processing.

Revenue Model: Lending platforms earn revenue through origination fees, interest rate spreads, and servicing fees. Some also offer subscription models for premium features or services.

Key Challenges:

- Managing credit risk and default rates.
- Navigating complex regulatory environments.
- Competing with both traditional lenders and other FinTech startups.

3. Wealth Management and Robo-Advisors

Overview: Wealth management FinTechs, particularly robo-advisors, offer automated investment advice and portfolio management services. These platforms use algorithms to create and manage diversified investment portfolios based on the user's risk tolerance and financial goals.

Examples:

- **Robo-Advisors:** Companies like Betterment, Wealthfront, and Robinhood provide automated, low-cost investment management services to retail investors.
- **Personal Finance Apps:** Tools like Mint and YNAB (You Need A Budget) help users manage their finances by tracking spending, budgeting, and saving.

Revenue Model: Robo-advisors typically charge a management fee based on assets under management (AUM). Some also earn revenue from premium features, such as financial planning services or higher-tier investment products.

Key Challenges:

- Building trust with users who may prefer human advisors.
- Differentiating services in a crowded market.
- Complying with investment and advisory regulations.

4. InsurTech

Overview: InsurTech companies aim to modernize the insurance industry by using technology to enhance customer experience, streamline processes, and create innovative insurance products. This can include anything from AI-driven underwriting to on-demand insurance policies.

Examples:

- **On-Demand Insurance:** Companies like Lemonade offer instant, customizable insurance policies via mobile apps, using AI to process claims quickly.
- **Usage-Based Insurance (UBI):** Platforms like Metromile provide auto insurance based on actual driving behavior, which can lower premiums for safe drivers.

Revenue Model: InsurTech companies generate revenue through premiums, policy fees, and by leveraging data analytics to improve risk assessment and pricing strategies.

Key Challenges:

- Gaining consumer trust in a traditionally conservative industry.
- Balancing the need for innovation with regulatory requirements.
- Managing the financial risk associated with underwriting new types of policies.

5. Blockchain and Cryptocurrency

Overview: Blockchain and cryptocurrency FinTechs focus on decentralized financial systems that operate without intermediaries. These platforms leverage blockchain technology to offer services such as digital payments, smart contracts, and decentralized finance (DeFi).

Examples:

- **Cryptocurrency Exchanges:** Platforms like Coinbase and Binance facilitate the buying, selling, and trading of cryptocurrencies.
- **DeFi Platforms:** Services like Uniswap and Aave allow users to lend, borrow, and trade digital assets without the need for traditional financial intermediaries.

Revenue Model: Blockchain and cryptocurrency FinTechs typically earn revenue through transaction fees, trading fees, and token sales. Some platforms also generate income from staking, lending, and yield farming activities.

Key Challenges:

- Navigating uncertain and evolving regulatory landscapes.
- Ensuring security and preventing hacks or fraud.
- Managing the volatility and risks associated with cryptocurrencies.

6. RegTech (Regulatory Technology)

Overview: RegTech companies provide technological solutions to help financial institutions comply with regulations more efficiently. These solutions often involve automating compliance processes, managing risk, and ensuring that financial transactions adhere to legal standards.

Examples:

- **Compliance Management:** Companies like ComplyAdvantage and Trulioo offer platforms that streamline KYC (Know Your Customer) and AML (Anti-Money Laundering) processes.
- **Risk Management:** Tools like MetricStream and Riskified help financial institutions monitor and manage risks in real-time.

Revenue Model: RegTech companies typically operate on a subscription or SaaS (Software as a Service) model, charging financial institutions for access to their platforms and services.

Key Challenges:

- Keeping up with constantly changing regulations.
- Ensuring data security and privacy.
- Integrating with existing systems in traditional financial institutions.

The Role of Data and Analytics in FinTech

Data is the lifeblood of FinTech. Companies in this space rely heavily on data analytics to gain insights, assess risk, personalize services, and drive decision-making. Big data, machine learning, and artificial intelligence are particularly crucial in areas such as:

- **Credit Scoring:** Alternative credit scoring models that use data from social media, e-commerce, and other sources to assess the creditworthiness of individuals without traditional credit histories.
- **Fraud Detection:** Real-time monitoring and analytics to detect fraudulent transactions and mitigate risks.
- **Customer Segmentation:** Using data to identify and target specific customer segments with tailored financial products and services.

Regulatory Challenges and Compliance

The rapid growth of FinTech has outpaced regulatory frameworks in many regions. This presents both opportunities and challenges:

- **Opportunities:** FinTech companies can innovate in relatively unregulated spaces, offering services that traditional financial institutions might be slow to adopt due to regulatory constraints.
- **Challenges:** Navigating a complex and evolving regulatory landscape can be difficult, particularly as governments and international bodies work to establish guidelines for new technologies like blockchain and AI.

Key regulatory concerns include:

- **Consumer Protection:** Ensuring that FinTech products are safe and transparent for consumers, especially those that involve lending, investing, or insurance.
- **Data Privacy:** Complying with regulations like GDPR (General Data Protection Regulation) that govern the use and storage of personal data.
- **Anti-Money Laundering (AML) and Counter-Terrorism Financing (CTF):** Implementing robust measures to prevent FinTech platforms from being used for illegal activities.

The Future of FinTech Business Models

The future of FinTech is likely to be shaped by several key trends:

- **Convergence:** As FinTech matures, we are likely to see more convergence between different sectors, such as payments, lending, and wealth management. This could lead to the emergence of “super apps” that offer a wide range of financial services within a single platform.
- **Embedded Finance:** Financial services are increasingly being integrated into non-financial platforms, such as e-commerce sites and social media networks. This trend, known as embedded finance, could further blur the lines between FinTech and other industries.
- **Decentralized Finance (DeFi):** DeFi is expected to continue growing, offering an alternative to traditional financial systems that is decentralized, transparent, and accessible to a global audience.
- **Sustainability and ESG (Environmental, Social, and Governance):** FinTech companies are beginning to integrate ESG considerations into their business models, offering products and services that promote sustainable finance.

Generative AI in Fintech Business Model

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Generative AI has taken the AI world by storm with the introduction of GPT models by Open AI. The increasing popularity of Generative AI is due to the creation of human like content by using natural language text as user prompts. It has the power to generate new data by understanding the distribution of the data and generating human like content. The power of generative AI comes from the Generative Pre-trained Transformers used as the building blocks for this models that is trained on an encoder decoder architecture on vast amounts of training data. The model is capable not only to generate human like text but images, videos and audios too.

Applications of Generative AI

Generate Text: Generative AI can generate human like text and can be used in chatbots, creating creative content, marketing messages etc.

Generate Image: Generative AI can be used to generate synthetic images that looks like real images.

Generate Audio and Video: Generative AI can be used in music generation, automated voice tellers, video editing or video creations.

Tomorrow's Generative AI in Finance

According to a market study, the use of generative AI is expected to expand significantly from 847.2 million USD in 2022 to USD 9475.2 million USD by 2032. According to reports the market is seen to have a compounded growth rate of 28.1% from 2023 to 2032. Finance giants has already recognized the potential of Generative AI in finance and are trying to evaluate and integrate it in operations for a disruptive market growth willing to gain a competition edge. McKinsey global institute estimates the total revenue across banking sector using Generative AI technology would add $200 billion to $340 billion annually or 2.8 to 4.7 percent of the total revenue.

The growing volume of data in financial domain is making it likely to be trained for Generative AI based large language models. It can analyze this large volumes of data to generate insights for company's financial decision, market strategy, and risk strategy to make informed decisions. Generative AI based decision provides a competitive edge by making data driven decisions.

There are several opportunities that come with integrating generative AI solutions in banking, and they can assist enhance current financial operations. It can be used to stimulate data that resembles real world financial data which could be used to train the existing machine learning models on this synthetic data to improve the model predictions, identify patterns and trends. The synthetic data generated from this generative models have the benefit of being robust, unbiased and prevents missing value as seen in real world.

Application of Generative AI can transform the core finance operations of drafting contracts, invoices or ledger entries.

It can be used to comprehend budget insights and financial planning.

It can analyze huge customer relationship data and provide customizable insights and build strategic decisions.

It can be used to summarize huge financial reports and documents and extract key information for top management.

Generative AI can be leverage in detecting fraudulent activities by analyzing huge transaction data.

It can be used for marketing and sales by generating personalized marketing content, agent recommendation for Relationship managers to recommend product, insights on sales performance etc.

Document creation for credit notes, onboarding guides for new customers generating personalized audios and videos.

Generative AI can improve customer experience by powering chat bots that can impact customer loyalty and retention. Generative AI model can minimize customer wait time for contact center calls by real time data fetching from multiple sources and generating audios or text for response.

As per Gartner, Generative AI is focused to make a significant shift and strong impact over next 5 years. 40% of the organization is predicted to use conversational bots by 2024. By 2026 60% of website development effort will be automated by Generative AI technology.

Challenges on adaptation of Generative AI in Finance

Hallucinations in Generative AI models: The generative AI models are prone to provide in factual and incorrect responses which is a potential risk in productionizing such systems.

Models of Generative AI is highly complex and are generally very unpredictable and it is difficult to understand how they work making it difficult to control the model's output.

Data Privacy: Companies if are using any generative AI service has to send data through application interface where the model is hosted and might result in exposing sensitive information.

Data Bias: The model output is highly dependent on the data it is trained upon. Using a prebuilt generative AI model can have model bias and generate bias output.

Cost: Huge cost is associated in hosting generative AI models.

Generative AI Adaptation

2023 has seen a significant leap in adapting to GenAI technologies by banking giants. According to aimresearch generative AI is been adopted by major players like JPMorgan Chase, Goldman Sachs,Morgan Stanley to innovate customer experience and streamline processes.

Morgan Stanley with partnership with OpenAI has launched chatbot to enhance their wealth management services. JPMorgan Chase is developing its own IndexGPT for investment advice. Goldman Sachs' is harnessing generative AI capabilities to assist its developers in writing codes.

Generative AI has arrived and is evolving rapidly. The adaptation of these large banks for generative AI service signals a paradigm shift for the financial industry.

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B2B and B2C Payment Services: Transforming Transactions in the Digital Age

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In the modern business landscape, payment services are no longer simply mechanisms for transferring money. They have evolved into complex ecosystems that facilitate global commerce, drive business innovation, and enhance the customer experience. As businesses and consumers increasingly rely on digital solutions, payment services have adapted to meet their growing needs. This essay explores the key differences, challenges, and opportunities within Business-to-Business (B2B) and Business-to-Consumer (B2C) payment services, delving into how these systems have transformed transactions and what the future holds for both.

The Fundamentals of B2B and B2C Payment Services

Payment services exist to streamline and facilitate the transfer of funds between parties. While both B2B and B2C payments ultimately serve the same purpose—enabling transactions—the contexts in which they operate, the challenges they face, and the technology they use differ significantly.

B2B Payments: - Business-to-business (B2B) payments refer to financial transactions between companies. These transactions typically involve large sums of money and are often part of a supply chain or procurement process. B2B payments can range from a small vendor sending an invoice for services rendered to a massive international company making bulk purchases. The nature of these transactions demands a payment system that can handle large volumes, maintain security, and facilitate compliance with regulatory standards. Historically, B2B payments have been conducted through traditional methods like checks or wire transfers, but digital solutions are now transforming this space.

B2C Payments: - Business-to-consumer (B2C) payments involve the transfer of funds from an individual consumer to a business in exchange for goods or services. This is the type of transaction most people are familiar with, whether through online shopping, in-store purchases, or subscription services. B2C payments have evolved alongside technology, with credit and debit cards, mobile wallets, and payment gateways like PayPal becoming integral to the consumer experience. The rise of e-commerce has driven the need for frictionless and secure B2C payment systems that cater to a global audience.

While B2B payments are often characterized by complexity, high value, and longer transaction cycles, B2C payments are more streamlined, typically lower in value, and completed instantaneously. Each sector has its unique set of challenges, but both are being transformed by the rise of digital payment technologies.

The Evolution of Payment Services

The landscape of payment services has undergone a significant transformation over the past two decades. Digitalization has been a primary driver of this evolution, with advances in financial technology (fintech) leading to more efficient, secure, and accessible payment methods for both businesses and consumers.

In the early days of B2B payments, most transactions were processed manually, with businesses sending paper invoices and waiting weeks or even months for payment. Similarly, B2C payments largely relied on physical cash or checks before the widespread adoption of credit cards in the mid-20th century. The digital revolution, however, has changed everything.

With the advent of electronic payment systems, automated clearing houses (ACH), and digital wallets, businesses and consumers alike have gained access to faster, more secure methods of payment. The rise of online platforms has further accelerated this trend, as companies can now engage in cross-border transactions and consumers can make purchases from anywhere in the world with a few clicks.

Digital wallets, mobile payment apps, and contactless technology have especially revolutionized B2C payments, making transactions more seamless and convenient for consumers. Meanwhile, for B2B payments, innovations such as blockchain technology and automated accounts payable (AP) systems have increased transparency, reduced fraud, and improved the overall efficiency of financial transactions.

B2B Payment Services: Challenges and Opportunities

B2B payment services face a unique set of challenges that stem from the complexity of business transactions. One of the primary issues is the long payment cycle that many businesses encounter. Unlike B2C payments, which are often instant or settled within a few days, B2B transactions can take weeks or even months to complete, depending on the terms of the invoice or contract.

1. Payment Delays and Cash Flow Issues: - Late payments can have a significant impact on cash flow, especially for smaller businesses. According to research, approximately 40% of B2B invoices are paid late, creating cash flow gaps that can stifle growth and innovation. To address this issue, digital payment platforms have introduced features like real-time payment tracking and automated reminders to encourage timely payments.

2. Manual Processes and Inefficiencies: - Despite advancements in technology, many B2B payments are still processed manually, leading to inefficiencies and errors. Paper-based invoicing, manual data entry, and outdated systems can slow down the payment process and increase the risk of mistakes. To combat this, more businesses are adopting automated accounts payable and accounts receivable systems, which streamline the process and reduce the potential for human error.

3. Security and Fraud Prevention: - Given the large sums of money involved, B2B transactions are prime targets for fraud. Businesses need payment systems that prioritize security and compliance with international regulations. Blockchain technology, with its decentralized and immutable ledger, offers promising solutions to improve the security and transparency of B2B payments.

However, the digitalization of B2B payments also presents significant opportunities. As companies increasingly globalize, cross-border B2B transactions have become more prevalent. Digital payment platforms that can handle multiple currencies and comply with international regulatory standards are in high demand. Additionally, the rise of fintech solutions like Buy Now, Pay Later (BNPL) for businesses is creating more flexible payment options, which can help ease cash flow constraints.

B2C Payment Services: Challenges and Opportunities

The B2C payment landscape is characterized by speed, convenience, and the need to provide an exceptional customer experience. With the rise of e-commerce and the increasing use of mobile devices for purchases, B2C payment services must cater to the demands of a tech-savvy, always-connected consumer base. However, this shift also presents its own set of challenges.

1. Security and Fraud: -As consumers continue to shift to online and mobile payments, security remains a top concern. Payment fraud is a significant issue in the B2C space, with cybercriminals constantly finding new ways to exploit vulnerabilities in payment systems. In response, payment service providers are investing heavily in security features like encryption, two-factor authentication (2FA), and biometric verification to protect customer data and reduce fraud.

2. Consumer Expectations for Seamless Payments: - Today's consumers expect their payment experiences to be seamless, instant, and frictionless. A clunky or slow checkout process can lead to cart abandonment, hurting businesses' bottom lines. Payment gateways are continually improving to offer one-click checkouts, instant payment confirmations, and integration with digital wallets like Apple Pay and Google Pay.

3. The Rise of Digital Wallets and Mobile Payments: - Digital wallets and mobile payment platforms have quickly gained traction in the B2C payment space. These platforms offer consumers a convenient way to store their payment information and make purchases online or in-store with just a tap of their phone. This trend is only expected to grow, as more businesses adopt contactless payment systems and consumers become more comfortable with digital wallets.

4. Globalization of E-commerce: - The internet has opened up a global marketplace, enabling consumers to purchase goods and services from businesses halfway around the world. However, this also means that B2C payment services must support multiple currencies, comply with international regulations, and offer seamless cross-border payment solutions. Companies like PayPal and Stripe have been at the forefront of this shift, providing payment platforms that cater to a global audience.

The Future of B2B and B2C Payment Services

Looking ahead, the future of payment services is bright, with both B2B and B2C sectors poised for continued innovation. In the B2B space, we can expect greater adoption of blockchain technology to facilitate faster, more secure cross-border payments. Additionally, artificial intelligence (AI) and machine learning will play a bigger role in automating payment processes, reducing fraud, and improving cash flow management.

For B2C payments, the focus will continue to be on improving the consumer experience. As mobile payments and digital wallets become more widespread, businesses will need to integrate these technologies into their checkout processes. We may also see the rise of new payment models, such as subscription-based services or microtransactions, which cater to the changing preferences of younger consumers.

Moreover, the convergence of B2B and B2C payment technologies is likely. As more businesses engage in direct-to-consumer (D2C) sales and e-commerce, the lines between B2B and B2C payments will continue to blur. Payment platforms that can handle both types of transactions seamlessly will be in high demand.

Conclusion:

B2B and B2C payment services are essential components of the global economy, facilitating transactions that drive business and consumer activity. While each has its distinct challenges, from cash flow management in B2B to fraud prevention in B2C, both are being transformed by digital innovations. As technology continues to evolve, the future of payment services promises to be more efficient, secure, and accessible for businesses and consumers alike. Whether through the adoption of blockchain in B2B payments or the rise of digital wallets in B2C transactions, the world of payment services is poised for continued growth and innovation.

Robo-Advising : The Digital Financial Advisor

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In a world where technological advancements continue to reshape industries, the financial sector has seen its own transformation with the rise of robo-advisors. These automated platforms are designed to offer financial advice and portfolio management services through algorithms, with minimal human intervention. Once considered a niche offering, robo-advisors are now firmly entrenched in the financial ecosystem, attracting both novice investors and seasoned financial planners. The rise of robo- advising signals a broader trend toward digital automation in finance and poses questions about the future of financial advisory services. This essay delves into the rise of robo-advisors, their operational mechanisms, benefits, limitations, and the potential future of financial advisory services in a digital age.

The Emergence of Robo-Advisors

The concept of robo-advising can be traced back to the financial crisis of 2008. After the collapse of major financial institutions, public trust in traditional financial advisors plummeted. People began seeking more transparent, low-cost alternatives to manage their money. Enter robo-advisors. In 2008, companies like Betterment and Wealth front started offering automated investment services, providing individuals with a way to build portfolios and manage their investments without paying high fees to human financial advisors.

Robo-advisors, at their core, leverage algorithms and software to automate investment decisions, typically using exchange-traded funds (ETFs) to build diversified portfolios. By assessing an individual's financial goals, risk tolerance, and time horizon, these platforms can recommend a tailored portfolio strategy. This eliminates the need for direct human involvement in many cases, reducing costs and, theoretically, improving efficiency.

The automation of financial services fits within a broader narrative of digital disruption. Technology has rapidly transformed industries like retail, healthcare, and education, so it was inevitable that finance would undergo a similar evolution. As technology continues to develop, robo-advisors are positioned at the intersection of finance and artificial intelligence, making investment management more accessible to a broader audience.

How Robo-Advisors Work

The basic operation of a robo-advisor can be broken down into three key stages: data collection, portfolio construction, and ongoing management.

1. Data Collection: - Upon signing up for a robo-advising platform, users are asked to complete a questionnaire about their financial situation, including their income, investment goals, and risk tolerance. The goal of this questionnaire is to gather sufficient information to determine the appropriate investment strategy for the individual.

2. Portfolio Construction: - Once the platform has gathered enough data, it uses algorithms to recommend a portfolio. This typically consists of low-cost ETFs that track different asset classes, including stocks, bonds, and sometimes real estate or commodities. Robo-advisors prioritize diversification, using Modern Portfolio Theory (MPT) as the foundation for constructing portfolios. MPT seeks to maximize returns for a given level of risk by combining assets that are not perfectly correlated.

3. Ongoing Management: - After the initial portfolio is set up, the robo-advisor continues to monitor and manage it. This involves regular portfolio rebalancing, where the platform adjusts the portfolio's asset allocation to maintain the target risk level. Some robo-advisors also offer tax-loss harvesting, where investments are strategically sold at a loss to offset taxable gains, thereby reducing the investor's tax liability.

The beauty of robo-advisors lies in their ability to automate complex processes, making investing simple and accessible for users. The algorithms that drive these platforms are designed to minimize human error and behavioral biases, which often lead to poor investment decisions.

The Advantages of Robo-Advising

1. Lower Costs: One of the most significant advantages of robo-advisors is their cost- effectiveness. Traditional financial advisors typically charge around 1% to 2% of an investor's assets under management, in addition to investment fees. Robo-advisors, on the other hand, usually charge between 0.25% and 0.50%. This lower cost structure is particularly appealing to young investors or those with smaller portfolios, who might otherwise be priced out of traditional financial advisory services.

2. Accessibility: Historically, high-quality financial advice has been reserved for the wealthy. Many traditional advisors require clients to have a minimum investment amount, which can range from $100,000 to $1 million. Robo-advisors have democratized access to financial advice, allowing individuals with as little as $500 to start investing. This is particularly appealing to millennials, who are more accustomed to managing their finances digitally.

3. Efficiency and Simplicity: - Robo-advisors provide a user-friendly experience. Many of these platforms have intuitive interfaces that guide users through the investment process. Additionally, the automation of portfolio rebalancing and tax-loss harvesting ensures that portfolios remain optimized without requiring constant attention from the investor.

4. Behavioral Benefits: One of the biggest challenges for individual investors is managing their emotions. Fear and greed can drive irrational decision-making, leading investors to buy high and sell low. Robo-advisors, being devoid of emotional influence, make decisions based on data and long-term strategy. This helps investors stay disciplined, particularly during volatile markets.

5. Comprehensive services: It provides a wide range of services covering all aspects of financial planning. The services include retirement accounts, tax-strategy plans and portfolio rebalancing. It can manage the portfolio from one platform and ensures that the investor is on track to accomplish their financial goals and lower any liabilities.

6. Time-savings: It is very helpful for those who don't have the time for investment management and prefers to put their portfolios on autopilot.

The Drawbacks of Robo-Advising

Despite their many advantages, robo-advisors are not without their limitations.

1. Lack of Personalization: While robo-advisors can provide basic financial advice, they lack the depth of personalization that a human advisor can offer. For example, a human advisor can help clients navigate complex life events, such as divorce, inheritance, or retirement planning, tailoring advice to specific circumstances. Robo- advisors operate on a one-size-fits-all model that might not account for these nuances.

2. Limited Scope of Services: Most robo-advisors are designed for investment management, which is just one aspect of financial planning. They generally do not offer comprehensive financial planning services, such as estate planning, tax preparation, or insurance advice. Human financial advisors, on the other hand, can provide a more holistic approach to wealth management.

3. Over-Reliance on Algorithms: While algorithms are powerful tools, they are not infallible. Financial markets are unpredictable, and no algorithm can guarantee returns or predict market downturns. Additionally, robo-advisors tend to operate on historical data, which might not always be a reliable indicator of future performance.

4. Risk of Over-Simplification: One of the selling points of robo-advisors is their simplicity. However, this simplicity can sometimes mask the complexity of investing. Many investors might not fully understand the risks associated with their portfolios or the underlying assumptions that drive the robo-advisor's recommendations. This could lead to unrealistic expectations or poor decision-making during market downturns.

The Future of Robo-Advising

The rise of robo-advisors raises intriguing questions about the future of financial advisory services. Will they eventually replace human financial advisors, or will the two coexist in a hybrid model? While robo-advisors have made significant strides, it is unlikely that they will completely replace human advisors, especially for individuals with more complex financial needs.

One possible future is a hybrid model, where human advisors and robo-advisors work together to provide clients with a combination of automation and personalized advice. Some companies have already adopted this approach. For example, Vanguard offers a robo-advisory service that includes access to human advisors for clients with higher balances. This hybrid model allows clients to benefit from the cost-efficiency of robo- advisors while still receiving the personalized touch of a human advisor when needed.

Additionally, as artificial intelligence and machine learning continue to evolve, robo- advisors will likely become more sophisticated. Future iterations of robo-advisors might be able to offer more personalized advice, incorporating a wider range of financial planning services, such as retirement planning or insurance recommendations. This could help bridge the gap between automated platforms and human advisors.

Furthermore, as fintech continues to grow, the integration of robo-advisors with other financial technologies will become more seamless. Imagine a future where a single app can handle everything from budgeting to investing to paying bills. This all-in-one financial platform could provide users with a comprehensive view of their financial health, making it easier to achieve their financial goals.

Conclusion:

Robo-advisors represent a significant shift in the world of financial advice. By leveraging technology and automation, they have made investing more accessible, affordable, and efficient. However, they are not without their limitations, particularly when it comes to personalization and the breadth of services offered. As the technology continues to evolve, it is likely that robo-advisors will become even more sophisticated, potentially transforming the way individuals manage their finances.

Ultimately, the rise of robo-advisors signals the ongoing evolution of the financial services industry. While they might not replace human advisors entirely, they are playing an increasingly important role in democratizing financial advice and empowering individuals to take control of their financial futures. Whether through pure automation or hybrid models that combine the best of both worlds, robo-advisors are here to stay. The future of financial advising is digital, and it is likely to be more accessible, efficient, and inclusive than ever before.

Management of Risks Entailed in Third Party Service Providers

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Now a days technology has been evolving at break neck speed. It has become a challenge for business to keep pace with and abreast of the changing trends while retaining all their functions in house. Consequently the range of functions that businesses are open to outsource has been fast widening in recent years since it first gained popularity as a management tool in the '90s.. Outsourcing is now no longer a means to cut costs and to focus greater attention only on areas of specialisation and comparative advantage. It has evolved into a mechanism for building partnerships that can add real strategic value to the firm. Thus, importance of Third Party Service Provider(TPSP) risk management has assumed greater importance in organisations. This article attempts to deliberate upon various risks entailed in engaging TPSP and how to deal with them.

Introduction

Since long business entities have been relying on outsourced services provided by third party agencies mainly to focus greater attention to core activities. Besides enabling access to specialised expertise, outsourcing opens up opportunities to economise on costs, to increase scalability, efficiency and operational resilience. With the advent of digitalisation and rapid adaption of various innovations organisations have become increasingly more dependent on Third Party Service Providers (TPSP) for services that organisations hitherto not undertaken.

Engagement of TPSPs may reduce organisations' direct control over their activities. This may give rise to new elements of risks and/or escalate existing risks facing the organisation. However, regulatory dictates are that the use of TPSPs should not lessen principals' responsibility to effectively meet their obligations and commitments to various stakeholders and nor hinder regulatory oversight. It is well understood that effective risk management ,if in place, for TPSP arrangements, supply chain and consequential concentration risk emanating therefrom would boost organisations' capability to endure, adapt to and recover from operational disruptions emanating out of the TPSP arrangements in place and thereby mitigate the impact of potentially severe disorderly events. Identification of the criticalness of operations buoyed by TPSP services at beginning and periodical assessment thereof throughout the life cycle of a TPSP would be of enormous value to monitoring and managing risks associated with TPSP arrangements in place.

The phases of the life cycle of TPSP arrangement will typically include risk assessment, due diligence, contracting, onboarding and ongoing monitoring, and termination. Not all TPSP arrangements present the same level of risk and therefore not all arrangements require the same level or type of oversight or risk management. Critical services would require a greater level of attention so far as risk management is concerned. The processes in place should enable services and designated critical TPSP arrangements to receive more comprehensive oversight and more rigorous risk management. They may be supported by robust business continuity management (BCM).

Identification and Management of TPSP related risks

Engagement of services of TPSP entails various types of risks on the workings and functions of the organisations. Disruptions in delivery of services of critical service providers have the potential to adversely impact organisational business continuity, security, and compliance. Effective management of various risks posed by potential disruptions in services of the TPSP is crucial for ensuring that the organization's resilience is not compromised by issues outside its direct control. Key types of third-party service provider risks are enumerated below:

1. **Operational Risk:** The risk that a third-party provider will fail to deliver services as expected due to operational inefficiencies or disruptions like delays in service delivery, system outages, or inadequate staffing. To mitigate impacts thereof Service Level Agreements (SLAs) with clear performance metrics (e.g., uptime, response times) may be entered into and vendor performance may be monitored regularly.

2. **Financial Risk:** This risk arises when a third-party provider faces financial difficulties or bankruptcy, leading to service interruptions or termination. For example, a key cloud provider might go bankrupt or experience severe cash flow issues. To mitigate the potential impact financial health assessments exercise of vendors before onboarding may be carried out. The contract agreement should include clauses for early termination or alternative service arrangements.

3. **Cybersecurity Risk:** A vendor with weak security practices would be vulnerable to hacking exposing sensitive customer data. The risk of security breaches, data leaks, or cyberattacks might originate from third-party service providers. Conduct of regular and effective cybersecurity assessments of vendor and ensuring data encryption, adherence to industry standards and robust access controls would go a long way to mitigate any potential cyber security risk.

4. **Compliance and Regulatory Risk:** It is the risk that third-party service providers do not comply with legal, regulatory, or industry standards, which can lead to fines or legal action against the principal engaging their services . For example non-payment of minimum wages to labours engaged by the TPSP for work of the organisation would involve violation of extant labour law by and entail financial obligations on the principal. The principal should therefore ensure third-party providers comply with applicable laws and meet relevant compliance standards. The contract agreement should include compliance obligations with indemnity clause to protect against any violation of laws and breach of compliance whatsoever. Regular audit may be conducted to ensure that the TPSP is compliant in this regard.

5. **Reputational Risk:** This risk devolves on the organisation when a TPSP's actions or failures damage principal'(organization's) reputation. Sometimes a third-party vendor is found to be involved in unethical practices or public scandals for which the reputation of the principal might get damaged. The principal may put in place contingency plans for managing reputational fallouts.

6. **Concentration Risk:** Over-reliance on a single or few TPSP might be the cause of vulnerabilities to continuance of critical organisational activities in the eventualities of TPSP's failure or disruption. For example, relying exclusively on one cloud provider or software vendor, might cause a single point of failure. To avoid over-reliance on one provider diversification of vendor engagement may be considered to the extent feasible. Side by side contingency plans may be put in place with alternative vendors or in-house solutions.

7. **Supply Chain Risk:** It is the risk that a third-party vendor's supply chain, which may include its own vendors or raw material suppliers, experiences disruptions. A supplier might face logistical issues that delay production or service delivery. Resilience of vendors' supply chains need be assessed mapping to key dependencies.

   Nth party service provider is often part of a TPSP's supply chain and supports the ultimate delivery of services to one or more entities which includes subcontractors of the TPSP. TPSP arrangements often involve dependencies on Nth parties ('The term "Nth party" refers to any party beyond the third-party i.e, fourth parties, fifth parties, and so on, depending on how many levels of dependencies exist.) in the supply chain for delivery of services on account of different factors (eg., specialisation, innovations). Such chains might be long and intricate, giving rise to additional or increased risks to the entities. Organisations should have suitable risk management framework to identify and manage the supply chain risks, commensurate with the criticality of the services being provided.

8. **Contractual and Legal Risk:** This risk arises when the service contract entered into with the TPSP is poorly defined and not precisely drafted containing unclear responsibilities and /or insufficient recourses in case of service failures which may lead to legal disputes. Organisations should ensure that contracts are comprehensive, clearly delineate the roles and responsibilities, and include provisions for dispute resolution, penalties, and suitable exit options.

9. **Data Privacy Risk:** It is the risk that TPSPs mishandle personal or sensitive data, leading to privacy breaches. For example, a cloud provider might mishandle encryption keys or transfer data to jurisdictions with weak privacy laws. As risk mitigation measure precise data handling policies must be in place and strictly implemented. Compliance with privacy regulations need be ensured.

10. **Geopolitical Risk:** While TPSP operating in certain geographical regions is impacted by political instability in the region wherein trade restrictions or sanctions may also be operative, their supply chain might get disrupted. For example a vendor in a politically unstable country might be facing supply chain disruptions due to civil unrest. It might be a potential source of disruption for organisations, depending on their services, in continuing uninterrupted critical functions of these organisations. Evaluation of geopolitical risks during vendor selection, diversification of vendors across regions, and monitoring of global political developments that may affect vendor operations would help mitigating this risk.

11. **Intellectual Property (IP) Risk:** This is the risk that TPSP may expose, misuse, or fail to protect the intellectual property rights of the principal. For example a software development partner might use proprietary code without permission or expos it to unauthorized parties. To protect against possible breach of IP right the engagement contract should carry well understood non-disclosure covenant clearly outlining IP ownerships . Limiting consciously the access to sensitive information will help mitigating this risk to a significant extent.

12. **Service Disruption Risk:** It is the risk that a TPSP's internal issues (e.g., technical failures, labour strikes etc.) will cause service disruptions. For example a data centre might experience power outages or technical failures, causing downtime for the principal's services. At the onboarding stage disaster recovery plans put in place by the vendors as also their business continuity practices may be thoroughly appraised to ensure adequacy thereof. Monitoring of the Vendors' historical performance in this regard will be of added value for the principals.

13. **Exit Strategy Risk:** This risk devolves in the absence of a definitive or feasible exit strategy from a third-party relationship, which can lead to business disruption or vendor lock-in. Difficulties may be faced in migrating to a new provider due to proprietary systems or lack of data portability. Towards mitigation of this risk a clear exit strategy may be worked out. It may be ensured that contracts include provisions for smooth transitions. Vendor lock-in may be obviated by using open standards when and wherever possible.

14. **Performance Risk:** This risk arises in the eventuality of a third-party provider failing to perform up to the agreed-upon standards, resulting in degraded service quality or failures. Monitoring of performance vis a vis the service standards set out in the service contract and strict enforcement contractual penalties for underperformance revealed in periodical reviews are advisable.

TPSP Risk Mitigation

Managing third-party risks should be an indispensable component of enterprise risk management framework for maintaining operational resilience and ensuring that external disruptions emanating from TPSPs do not significantly impact critical functions of the organization. Key Mitigation Strategies in management of the above risks entailed on engagement of TPSP by any entity may be summarised as under:

- *Vendor Risk Assessments:* Regular assessment of third-party risks, including financial health, operational capabilities, and compliance status.
- *Third-Party Audits:* Conduct of periodical audits to verify that vendors are meeting their contractual obligations and maintaining appropriate risk management practices. Audit irregularities must be pursued diligently to ensure that same irregularities do not recur.
- *Contract Management:* It should be ensured that all contracts with third parties include clear risk mitigation clauses, compliance obligations, and exit strategies.
- *Monitoring and Reporting:* A system should be in place to carry out continuous monitoring of vendor performance and risks. Appropriate system and mechanisms must be in place for reporting any issues or changes in vendor risk profiles to specific functionary for oversight, appropriate direction and remedial action .
- *Business Continuity and Disaster Recovery Plans:* Testing of robustness of business continuity and disaster recovery plans in place with the vendors may be carried out regularly and follow up corrective actions may be taken expeditiously wherever considered necessary.

Conclusion:

Typically a risk management framework for TPSP arrangements would immensely benefit from identification of the criticality of organisational operations to be supported by services provided by third party prior to onboarding stage as also subsequently through periodic assessment thereof over the life cycle of TPSP arrangement. The life cycle of TPSP arrangement typically include five phases viz., risk assessment, due diligence, contracting, onboarding, ongoing monitoring, and termination. The organisation's governance, risk management and strategy should be integral to each stage of the life cycle.

The following key concepts are ingrained in all stages of the life cycle

- *Criticality:* This is to emphasise additional areas to be kept in focus when TPSP arrangements cover critical services. Critical services would inevitably deserve a greater level of risk management consideration. Organisational processes should facilitate services and TPSP arrangements, which are identified as critical , to get wide-ranging oversight and more rigorous risk management treatments.

- *Concentration:* Concentration risk entailed in TPSP arrangements may be relevant either at the individual organisational levels or at the systemic level. While monitoring and managing concentration at the individual level is the responsibility of the individual entities, supervisors/regulators would be in a better position to monitor/ manage systemic concentrations. The organisations are expected to weigh and consider the implications thereof while entering into an arrangement with the TPSP

- *Proportionality:* Organisational risk management in respect of TPSP arrangements might diverge depending upon business model, complexity of business of a particular entity, its risk profile, international presence, scale, structure, and size. A service arrangement of one entity might not involve the same risks or same level of risks as those pertaining to another entity. An entity having operations in one jurisdiction while another having operations in multiple jurisdictions may not have same approach to risk management and governance emphasis regarding a service arrangement with the same TPSP.

Technology now a days has been evolving at break neck speed. It has become a challenge for business to keep pace with and abreast of the changing trends while retaining all their functions in house. Consequently the range of functions that businesses are open to outsource has been fast widening in recent years since it first gained popularity as a management tool in the '90s. Outsourcing is now no longer a means to cut costs and to focus greater attention only on areas of specialisation and comparative advantage. It has evolved into a mechanism for building partnerships that can add real strategic value to the firm. Thus, importance of TPSP risk management has increased manifold and it should receive due attention of the top management of the organisation. Advanced analytics and AI may be leveraged in identification and assessment of TPSP risks based on data harvested from the internet and proprietary databases.

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WEBINARS AND EVENTS ORGANIZED BY THE BFSIB

DIGITAL TRANSFORMATION OF BANKS FROM CATERPILLAR TO A BUTTERFLY

BANKING MONTH

Date: 12/07/2024

CMA Partha Choudhuri
Former Chief General Manager, RBI

The Banking, Financial Services and Insurance Board of The Institute of Cost Accountants of India organised a webinar on **Digital Transformation of Banks from Caterpillar to a Butterfly**. The webinar was graced by CMA Partha Choudhuri, Former Chief General Manager, RBI, Dr. A.C. Rout, Former ED, Bank of Maharashtra, as guest of honour and CMA Dr. Siva Rama Prasad, former AGM, SBI as guest speaker and CMA Chittaranjan Chattopadhyay, Chairman, BFSIB

CMA Chittaranjan Chattopadhyay, Chairman, BFSIB welcomed participants to the inaugural day of the banking month, emphasizing the significance of July as a dedicated period to celebrate the banking sector. He reflected on the importance of a sound banking system for a healthy economy, tracing the evolution of banking in India from its early days to its nationalization on July 19, 1969. With a well-established system under the Reserve Bank of India's authority, the speaker is proud of the continuous progress in the sector and looks forward to further contributions from members in the coming programs.

Dr. A.C. Rout, Former ED, Bank of Maharashtra, began by expressing admiration for the Indian Banking and Financial system, highlighting the significance of the program organized by the Institute. He noted that while last year's event focused on senior citizens and promoting savings, this year's program is more technologically advanced and relevant to participants, particularly those from the Chartered Management (CM) fraternity and banking sector. The speaker emphasized the collaborative atmosphere fostered by the presence of both central and commercial bankers. He specifically acknowledged Dr. Prasad, an expert on digital transformation in banking, as a key figure in the event. Recounting their personal experience in banking since 1983, the speaker recalls the heavy reliance on manual processes in the past, contrasting it with the paperless and digitally-driven banking of today. The eminent speaker mentioned the rapid technological advancements, particularly in AI, blockchain, and customer interaction, noting how these innovations have transformed banking in India and abroad.

CMA Partha Choudhuri, Former Chief General Manager, RBI, began by expressing gratitude to the Institute for the opportunity to discuss a highly relevant topic. He emphasized the value of having both a commercial banker and a regulator in the same forum, offering a comprehensive perspective. Referring to Dr. Rout's remarks, he highlighted key historical events that transformed India's banking sector, focusing on social upliftment, expanded coverage in remote areas, deposit safety, and technological advancement.

The speaker acknowledged progress, praising the State Bank of India for its role in extending services to remote

Dr. A.C.Rout
Former ED, Bank of Maharashtra

regions like the Northeast. They stress the need to improve customer service through technological upgrades while ensuring security. As a former ombudsman, they point out challenges in system vulnerabilities and customer ignorance, advocating for better education on safe banking practices.

CMAs are highlighted for their critical role in pricing and risk management. The speaker stressed the importance of transparency and customer education from a regulatory perspective. He concluded by advocating for a balanced approach to technology adoption and look forward to Dr. Prasad's insights on the technological revolution in banking.

CMA Dr. Siva Rama Prasad, former AGM, SBI, discussed the digital transformation of banks, emphasizing how these institutions are evolving from traditional setups into technology-driven entities. This transformation, likened to the metamorphosis of a caterpillar into a butterfly, signifies drastic changes in banking operations aimed at enhancing customer convenience and controlling costs. As the speaker points out, customers are central to the banking industry, and the shift toward digital processes is intended to improve customer experience and operational efficiency. The speaker highlighted that banking is no longer confined to physical branches but is increasingly virtual, with mobile and internet banking replacing traditional methods. This digital evolution is seen as necessary to meet the needs of a growing, tech-savvy population.

The speaker predicted that future banks will operate more like software companies, leveraging data analytics to understand customer behavior and reduce costs. The shift from physical branches to centralized processing centers is already underway, driven by the need to streamline operations and better serve customers.

Digital transformation, according to the speaker, is an ongoing journey, not a destination. Professionals in the banking sector must stay informed about technological advancements to remain competitive. The speaker also touched on the significant role of technologies such as AI, machine learning, blockchain, and cloud computing in driving banking's future. Failure to adopt these technologies could lead to the closure of banks, with licenses possibly being revoked by regulatory bodies like the Reserve Bank of India.

Key trends in the banking sector include hybrid and multi-cloud computing, which enhance scalability, security, and flexibility while reducing capital expenditure. Cloud integration is especially important in handling growing transaction volumes, such as those seen with UPI payments. Big data analytics is another critical trend, enabling banks to offer personalized services by analyzing customer behavior and making informed credit decisions. AI plays a transformative role in automating processes, improving customer service, and detecting fraud in real-time. Geolocation technology and AI are already being used by some banks to track customers, improve service, and streamline loan recovery.

Cybersecurity is another growing concern in the sector. Banks are investing in advanced security measures like Zero Trust Architecture and SD-WAN to protect against cyber threats and ensure secure data flow. These technologies help banks manage risks, reduce fraud, and improve operational efficiency. While AI and other digital solutions are essential for growth, they also present challenges, particularly in terms of data privacy and security. Thus, banks must carefully balance technological innovation with the need for strong security measures to ensure their long-term success.

CMA Debabrata Das, delivered the concluding remarks and proposed vote of thanks.

DEFI- DECENTRALISED FINANCE OR LENDING

BANKING MONTH

Date: 19/07/2024

Shri N.D.S.V. Nageswara Rao
General Manager (Information Technology), State Bank of India

The Banking, Financial Services and Insurance Board of The Institute of Cost Accountants of India organised a webinar on **DeFi- Decentralised Finance or Lending**. The webinar was graced by **Shri N.D.S.V. Nageswara Rao,** General Manager (Information Technology), State Bank of India, as guest of honour and CMA Dr. Siva Rama Prasad, former AGM, SBI as guest speaker and CMA Chittaranjan Chattopadhyay, Chairman, BFSIB.

CMA Chittaranjan Chattopadhyay, Chairman, BFSIB, reflected on the significance of July 19, 1969, marking the nationalization of Indian banks, which stabilized the financial system and contributed to the nation's growth. They emphasize India's ongoing fintech revolution as a unique opportunity for financial inclusion and sector efficiency, driven by open APIs and digital resources. The Reserve Bank of India's strategy balances innovation with regulation, while focusing on data privacy and customer protection. India is positioned to lead in global payment systems, particularly through Central Bank Digital Currency (CBDC) initiatives. The speaker also announced an upcoming fintech course aimed at enhancing professionals' contributions to the banking sector's growth.

Shri NTSV Nageshwar Rao, IT Loans and Trade finance, State Bank Global IT Centre. in his speech, expressed gratitude for the introduction and quickly moves to the topic of Decentralized Finance (DeFi). He provided an alternative interpretation of "DeFi," calling it "Developing Enablers for Fintech Integration" to emphasize the growing integration of financial technology (fintech) into the banking sector. The speaker highlighted how digitalization has transformed India's financial space, driven by initiatives like Aadhaar and Jan Dhan Yojana, which have accelerated financial inclusion and expanded banking services. The digital economy, online banking, blockchain, and fintechs have significantly increased digital payment systems and financial enrollments, with many new credit customers joining through fintech channels.

He noted that fintechs now capture a major share of digital payments, and the Reserve Bank of India (RBI) aims to triple digital payment volumes by 2025. Traditional banks are responding to fintech innovation in two ways: by internalizing digital advancements and competing with fintechs, and by collaborating with them. This partnership helps banks maintain regulatory oversight, while fintechs bring agility and insights into consumer behavior.

The RBI plays a central role in fostering innovation while ensuring financial stability through initiatives like regulatory sandboxes, fintech departments, and the Reserve Bank Innovation Hub. The speaker emphasized that traditional centralized finance (CeFi) relies on intermediaries like banks and regulators, while decentralized finance (DeFi) seeks to remove these intermediaries using technologies like blockchain. However, the rise of DeFi presents challenges for global financial stability, prompting international regulators like the Financial Action Task Force to monitor its growth.

In conclusion, the speaker, a traditional banker with 34 years of experience in centralized finance, acknowledged that DeFi is a new and emerging field that contrasts with their experience. He expressed a keen interest in learning more about its future impact and thanked the organizers for the opportunity to speak.

CMA Dr. Siva Rama Prasad, former AGM, SBI highlighted significant developments in the fintech world and technological advancements within the banking system. The speaker began by expressing gratitude to the BFSA Board for the opportunity to discuss decentralized finance (DeFi), promising a detailed and simple explanation of the topic later in the session. The rise of technology in banking is emphasized, as it offers convenience, reduces costs, and increases efficiency in financial transactions. Fintech companies are rapidly growing, with banks increasingly integrating technological solutions. A key development is the announcement of Vishakhapatnam becoming a fintech hub, supported by the state government.

The speaker introduced the importance of understanding decentralized finance and the evolving nature of digital currencies, specifically central bank digital currencies (CBDCs). They note the global shift from physical to digital currencies, with examples of countries, including India, rolling out CBDCs like the e-Rupee, which operates on blockchain technology. The digital transformation is changing the way payments and transactions are made, offering benefits like faster payments, reduced costs, and 24/7 access.

The address stressed that while technology brings numerous advantages, it also has its drawbacks, citing a case study where an individual faced issues with online banking, demonstrating the dual nature of technology. The speaker noted that future fintech developments, particularly DeFi, will eliminate intermediaries in financial transactions, reducing costs and delays, ultimately benefiting users by offering direct, peer-to-peer financial interactions without the involvement of banks or other intermediaries.

Finally, the address touched on how DeFi aims to cut intermediaries in financial services, increasing returns for investors and enabling direct interactions between lenders and borrowers.

The process described centers around the trust individuals place in traditional banking institutions, particularly government banks, over private and cooperative banks due to concerns about the security of their investments. In cases where intermediaries like banks fail, such as the example of Punjab Maharashtra Cooperative Bank or Yes Bank, depositors are only insured for up to ₹5 lakhs by the Deposit Insurance and Credit Guarantee Corporation (DICGC), regardless of how much they had invested. This creates a risk that is borne by the individual, not the intermediary.

The concept of decentralized finance (DeFi) emerges as a solution that eliminates the need for traditional intermediaries like banks. With DeFi, smart contracts, digital currency, and blockchain technology allow individuals to interact directly, managing their financial activities without intermediaries. Smart contracts, which are stored on blockchain, automatically execute once certain conditions are met, offering faster, more cost-effective transactions. These contracts replace the need for physical documentation and reduce the delays and costs associated with traditional legal processes.

Smart contracts offer a significant advantage in reducing third-party involvement, which is often costly and time-consuming in traditional settings. Blockchain technology ensures the security of these contracts, creating an immutable, encrypted record of transactions. This also enables the possibility of decentralized applications (DApps) and decentralized exchanges (DEXs), which allow users to manage financial activities like lending, borrowing, and trading without intermediaries.

In a decentralized financial system, trust shifts from institutions to technology. This ecosystem operates without brokers, lawyers, or other third parties typically involved in financial transactions. DeFi opens up the financial system to broader participation, providing faster, more accessible services, often at lower costs. This trend is particularly relevant as digital currencies and blockchain-based financial applications continue to grow, with India's fintech sector, for instance, expected to expand significantly by 2025.

In summary, decentralized finance represents a shift from traditional banking models to a technology-driven financial system where individuals can manage their own transactions using blockchain, smart contracts, and digital currencies. It offers a more efficient, secure, and accessible alternative to conventional financial services, reducing reliance on intermediaries and opening up opportunities for innovation in the financial sector. Borrowers generally need to provide digital currency as collateral when securing loans through decentralized finance (DeFi). This collateral allows borrowers to access funds quickly, often in major coins like Bitcoin. In some cases, borrowers can access larger loans than their collateral. DeFi platforms charge transaction fees for various services, such as lending, trading, and investments, generating revenue without intermediaries like banks. Participants in DeFi earn returns by providing liquidity and trading assets on decentralized exchanges. DeFi expands digital money into alternatives for stock exchanges, offering low-cost trading without traditional fees associated with centralized financial markets. DeFi is accessible globally to anyone with an internet connection and digital currency.

The benefits of DeFi include simplicity, requiring only a digital wallet to start, without needing personal information. Assets can be moved at any time with minimal fees, and interest rates are updated frequently, sometimes every 15 seconds, unlike traditional finance. Transactions are transparent, with full visibility for participants, creating a more open financial system compared to private corporations. However, technology knowledge is crucial for users to effectively benefit from DeFi.

In DeFi, users can lend out crypto assets and earn continuous interest, unlike traditional banking systems that pay out quarterly. Loans can be accessed instantly without paperwork, and flash loans—unavailable in traditional finance—are an option. Peer-to-peer trading and saving options with higher interest rates are also available, outperforming traditional banks where interest rates often lag behind inflation. Additionally, crypto derivatives and risk mitigation products allow users to hedge their bets in the digital finance space.

The eminent speaker concluded, DeFi represents the future of banking with rapid advancements. However, financial and digital literacy are essential for users to fully leverage its benefits. For those looking to deepen their understanding of fintech and DeFi, courses are available, such as the fintech course offered by the BFSI board.

CMA Dibbendu Roy, Additional Director, ICMAI and HOD, BFSIB, delivered the concluding remarks and proposed vote of thanks.

OPEN BANKING

BANKING MONTH

Date: 26/07/2024

Shri Hrishikesh Mishra

General Manager, Risk Management
Union Bank of India

The Banking, Financial Services and Insurance Board of The Institute of Cost Accountants of India organised a webinar on **Open Banking**. The webinar was graced by Shri Hrishikesh Mishra, GM, Risk Management, Union Bank of India as guest of honour and CMA Dr. Siva Rama Prasad, former AGM, SBI as guest speaker and CMA TCA Srinivasa Prasad, VP, ICMAI and CMA Chittaranjan Chattopadhyay, Chairman, BFSIB.

CMA Chittaranjan Chattopadhyay, Chairman, BFSIB welcomed all participants to this penultimate July program on digital banking, part of the BFSI board's events. He said that as technology reshapes India's financial landscape, cost accountants (CMAs) have evolved into key advisors, adapting to technological advancements and offering expert guidance. With India's focus on AI, data governance, and digitalization, he encouraged everyone to seize these opportunities to enhance their professional growth.

CMA TCA Srinivasa Prasad, VP, ICMAI highlighted the transformative impact of technology on India's financial landscape, especially through advancements like digital banking and UPI, which have broadened access to financial services. Open banking, a major shift in how financial data is accessed, enables consumers to share their data with third-party applications, fostering a more competitive and customer-focused environment. While the opportunities are vast, concerns about privacy and security remain critical. As technology reshapes the sector, professionals like CMAs have a key role in ensuring high-value customer protection and data security, navigating the challenges of this evolving landscape.

In this discussion, Shri Hrishikesh Mishra, GM, Risk Management, Union Bank of India, began by expressing gratitude for being part of a webinar focused on open banking, hosted by the Institute of Cost Accountants of India. The speaker highlighted the significant transformation happening in the banking industry, emphasizing how technology and fintech are reshaping traditional banking models. With open banking, the distinction between banks and fintech firms has blurred, and the use of technology is now pivotal in delivering banking services quickly and efficiently. Customers demand instant, on-time services, and banks must adapt to this new reality.

The speaker reflected on the evolution of banking, from the nationalization of banks in 1969 to the present digital era, where both physical and virtual banking coexist. Bill Gates' famous remark that "banking is necessary, but banks are not" is referenced to underscore how the industry is moving toward digital solutions, and with that shift, the banking business is increasingly one of trust and risk management. Protecting the interests of stakeholders, particularly depositors, is critical in this environment.

Open banking, while revolutionary, introduces challenges, especially in terms of data security. As customer data is shared with multiple parties, banks must implement strong

CMA (Dr.) P. Siva Rama Prasad
Former AGM, SBI

security measures to protect against breaches. The speaker underscores the importance of confidentiality, integrity, and availability of data in the cyber security landscape. The duty of a banker is to maintain customer trust, which hinges on protecting sensitive information.

Risk management is another focal point, with fraud prevention being essential in an increasingly complex and interconnected financial system. The speaker notes that both customers and third-party service providers are potential risk factors, and banks must remain vigilant to safeguard against fraud and ensure compliance with regulatory standards. As fintech companies continue to work alongside banks, ensuring the integrity of these partnerships is paramount.

The speaker also touched on the broader context in which banks operate, acknowledging global challenges like geopolitical events, climate change, and technological disruptions. These factors add to the volatility, uncertainty, complexity, and ambiguity (VUCA) that banks must navigate. To counter these challenges, the speaker advocates for agility, vision, and continuous learning. Knowledge is highlighted as the key to navigating this fast-evolving landscape, and the speaker draws attention to the importance of financial literacy, risk awareness, and the value of learning and development.

In conclusion, the speaker reiterated that the banking industry plays a central role in delivering prosperity and happiness to society, but it must adapt to new realities. The role of knowledge as a form of capital is emphasized, and the speaker calls on all participants to leverage their knowledge and expertise in this transformative era. The discussion ended with an open invitation for questions, stressing the value of sharing and acquiring knowledge to drive success in the banking industry.Top of Form

Bottom of Form

CMA Dr. Siva Rama Prasad, former AGM, SBI mentioned in the beginning that in today's banking landscape, fintech has become a transformative force, reshaping the delivery of financial services. Traditionally, banks were institutions of sovereign governments, but now they are increasingly influenced by IT companies and fintech firms. Open banking, a system allowing banks to share customer financial data with third-party service providers, is a prime example of this shift. It has enabled innovations like instant loan approvals, as seen with the State Bank of India's (SBI) ability to approve SME loans within seconds, leveraging digital data such as tax returns and GST filings. This stands in contrast to older banking models that prioritized confidentiality over accessibility. With open banking, data like account balances and transaction histories can now be accessed and shared across platforms, leading to faster and more efficient banking services.

The rise of fintech has also fostered partnerships between traditional banks and tech startups, signaling a future where technology-driven solutions dominate service delivery. Collaborations such as DBS Bank with Pine

Labs or HDFC with Paytm highlight the pivotal role of fintech in banking. Customers today expect seamless services—instant transactions, 24/7 access—emphasizing the need for banks to prioritize technological innovation and adaptability. Open banking, while offering numerous benefits, also introduces several challenges. Data security and privacy concerns arise as more third-party providers gain access to sensitive financial information, which must be managed with stringent regulatory oversight.

Open banking is designed to increase customer access to financial products and improve service offerings through APIs that allow third-party developers to access select customer data. This model has revolutionized financial transactions, from ATM withdrawals to online payments, making banking services faster and more convenient. Moreover, it enables businesses to provide tailored, data-driven services such as personalized financial advice, real-time fraud detection, and automated processes like invoice reconciliation.

While open banking accelerates financial innovation, allowing fintech startups to offer specialized services with minimal investment, it also exposes banks to significant risks. Integration issues between different servers and APIs can cause operational inefficiencies, increasing costs and security vulnerabilities. The regulatory environment adds complexity, as banks are held accountable for failures in service quality and data protection, even when caused by third-party providers.

Another challenge is the accountability gap. Customers hold banks responsible for service failures, regardless of whether the issue originated with a fintech partner or a cloud service provider, such as the instance where a Microsoft cloud outage disrupted global banking operations. Additionally, hidden costs and market uncertainties, especially related to technology obsolescence and the fast-evolving fintech landscape, pose risks that banks must navigate carefully. Cybersecurity is another significant concern, with fraud and data breaches on the rise.

In conclusion, he said that while open banking presents substantial opportunities for improving customer service and generating new revenue streams, it also brings significant risks. Banks must adopt open banking strategically, with robust risk management practices in place. Failing to address security vulnerabilities, regulatory requirements, or customer trust issues can lead to reputational damage and financial loss. Therefore, open banking should be embraced with caution, ensuring that both the advantages and the risks are carefully balanced. In conclusion, while open banking offers many benefits, the speaker advises banks to adopt it thoughtfully, strategically, and with strong risk mitigation measures. If risks, such as customer trust erosion, are not managed, banks may face significant losses and reputational damage.

CMA Dibbendu Roy, Additional Director, ICMAI and HOD, BFSIB, delivered the concluding remarks and proposed vote of thanks.

WHITE LABEL BANKING

BANKING MONTH

Date: 02/08/2024

CMA (Dr.) P. Siva Rama Prasad
Former AGM, SBI

The Banking, Financial Services and Insurance Board of The Institute of Cost Accountants of India organised a webinar on **White Label Banking**. The webinar was graced by CMA (Dr.) P. Siva Rama Prasad, Former AGM SBI as chief guest and speaker and CMA Chittaranjan Chattopadhyay, Chairman, BFSIB.

CMA Chittaranjan Chattopadhyay, Chairman, BFSIB, expressed his heartfelt gratitude to the guest speaker as well as to all the participants for attending this session on the emerging concept of white-label banking, also known as private-level financial services. He announced that BFSIB are launching a fintech course soon, designed to help participants understand the diverse range of fintech services provided by banks. And also requested all to review the course modules on Institute's website and feel free to submit any questions.

CMA (Dr.) P. Siva Rama Prasad, Former AGM SBI said that the discussion on fintech and white-label banking highlights the rapid evolution of banking through technological advancements. Over the years, the banking sector has undergone significant changes, particularly in liability products like deposits and asset products like advances and remittances. Core banking services, which began to gain traction in 2003, enable anywhere banking by connecting all branches, ATMs, internet banking, and mobile banking systems to a single central server.

He mentioned White-label banking is one example of how the banking system has evolved. This model allows fintech companies or other non-banking entities to offer banking services without owning or managing the underlying infrastructure. White-label banking allows companies to offer banking services without building the physical infrastructure themselves, focusing instead on branding and distribution.

The rise of fintech companies in banking has led to software companies increasingly playing a key role in managing and enhancing banking services. Banks like the State Bank of India (SBI) are forming partnerships with fintech firms and non-banking financial companies (NBFCs) to outsource services such as white-label ATMs and co-lending. This model reduces the bank's capital expenditure; as third-party companies handle infrastructure like ATMs while banks pay based on usage. Both banks and fintech companies benefit financially from this arrangement, creating a win-win situation.

In co-lending models, banks provide funding while fintech companies manage the technology to distribute loans, increasing the reach of banking services, particularly in underserved regions. Fintech companies leverage technology such as Application Programming Interfaces (APIs) and machine learning to streamline lending processes. The adoption of digital platforms and public cloud services by banks allows for faster, more efficient processing of loan applications.

This integration of fintech companies into banking operations is transforming the industry, improving financial inclusion by expanding services to previously unbanked or underserved populations.

In rural and semi-urban areas, small loans hold significant potential, yet despite bank nationalization, only 50% penetration has been achieved, leaving 15% of the market untapped. Tapping this market would lead to total financial inclusion. Subsidiaries of banks, such as SBI, provide cost-effective services, enabling the issuance of over 6.7 lakh new Kisan Credit Cards and extending ₹13,500 crores in agricultural loans. With new models like white-label banking emerging, the future of banking will integrate technology, particularly fintech, to enhance customer experiences. White-label banking allows third-party companies, including NBFCs, to rebrand existing banking products and offer them as their own. This model optimizes the banking process by leveraging the infrastructure of licensed banks, which provide regulatory compliance and core banking architecture. White-label banking creates a new customer experience without requiring large physical setups. Fintech and neo-banks are critical players in this model, focusing on digital-only services to reach untapped markets. This approach allows banks and fintech companies to penetrate the market with a lower cost structure while providing customized, innovative services. As this model continues to grow, it will play a pivotal role in redefining financial services, offering flexibility and efficiency through a mix of technology and banking expertise.

The pre-packaged white-label banking solution allows brands to create innovative financial solutions seamlessly integrated into their customer experiences. This model offers non-banking entities the capability to provide financial services without needing a banking license. White-label banking, particularly driven by technological advancements, enhances customer experience, increases market reach, and offers flexibility in product design and branding.

In today's competitive fintech landscape, innovation is crucial. Technology enables real-time improvements, fine-tuning customer experiences based on feedback, such as adjusting services when conditions aren't met (e.g., unclean cars or malfunctioning air conditioning). This approach significantly reduces the processing time for transactions compared to traditional banks, where paperwork and physical interaction slow down the process.

White-label banking empowers non-banking financial companies (NBFCs) by allowing them to leverage the infrastructure of licensed banks. NBFCs can expand their offerings without the heavy costs of acquiring a banking license, setting up branches, or establishing banking infrastructure. Through technology, these companies can deliver services even in remote areas, boosting financial inclusion.

He pointed out that however, banks need to be cautious when selecting NBFC partners. They must evaluate the NBFC's technical capabilities, market standing, and compatibility with the bank's existing systems. Effective API integration is critical to ensure seamless data exchange, efficient operations, and maintaining high service delivery standards. Additionally, maintaining the brand identity and ensuring consistency in messaging is vital for the success of white-label banking.

The eminent speaker concluded saying ultimately, the white-label banking model offers mutual benefits for both banks and NBFCs, with the potential to revolutionize financial services through technology. It promises speed, lower costs, and enhanced customer experiences, making it a significant development in the financial sector, especially in regions like India, where financial inclusion is a priority.

INSURTECH

Date: 09/08/2024

CMA Dr. Tarun Agarwal

Former Director, NIA

The Banking, Financial Services and Insurance Board of The Institute of Cost Accountants of India organised a webinar on **InsurTech**. The webinar was graced by CMA Dr. Tarun Agarwal, Former Director, NIA as guest of honour and CMA Dr. Siva Rama Prasad, former AGM, SBI as guest speaker and CMA TCA Srinivasa Prasad, VP, ICMAI and CMA Chittaranjan Chattopadhyay, Chairman, BFSIB.

CMA Chittaranjan Chattopadhyay, Chairman, BFSIB, extended his sincere thanks to the esteemed guests. He said that the BFSI board has organized a series of webinars on modern banking and insurance sector initiatives, focusing on fintech and insurtech in India. Today's concluding webinar centers on insurtech and the growing opportunities in this field, despite regulatory challenges. He thanked to all participants and esteemed guests for their ongoing support.

CMA TCA Srinivasa Prasad, VP, ICMAI, thanked the BFSI board and its officials for this event. He said that Insurtech, a blend of insurance and technology, is revolutionizing the industry by using big data analytics, mobile apps, and online platforms to enhance risk assessment and streamline services, as seen with companies like Policy Bazaar and Toffee Insurance. Globally, the insurtech market is expected to grow significantly, and in India, it's projected to reach a 52.7% growth rate by 2030. He expressed this event is a great opportunity to explore insights from esteemed speakers on this emerging topic.

CMA Dr. Tarun Agarwal, Former Director, NIA said that the looming threat of cybersecurity is becoming increasingly severe, with the potential to bring a country to its knees in moments. Simultaneously, climate change is drastically affecting daily life, manifesting through floods, extreme temperatures, and disruptions in agriculture, transportation, and health. Meanwhile, India's protection gap in insurance is a staggering 93%, presenting a massive opportunity for the insurance industry. With 15 to 18 new licenses expected in the health insurance sector, the industry is rapidly expanding, as demonstrated by major players like LIC showing interest in health insurance. The government's goal for "insurance for all" by 2047 underlines the growing importance of this sector.

InsureTech, the fusion of insurance and technology, is driving innovation in the industry, similar to the way fintech has revolutionized banking, as seen with UPI payments. InsureTech companies are optimizing and transforming the insurance value chain, enhancing underwriting, customer experience, and risk evaluation through digital technologies like artificial intelligence, blockchain, and IoT. These technologies are helping reduce costs, prevent fraud, and offer personalized policies while increasing convenience for users.

InsureTech startups, numbering over 3,500 globally and more than 500 in India, are introducing transformative changes. Examples include companies like Lemonade and Dada, which leverage AI and smart devices to improve insurance services and claims processing. With the global insurance market predicted to grow to $152 billion by 2030, automation, AI, and data-driven innovations are

CMA (Dr.) P. Siva Rama Prasad
Former AGM, SBI

poised to reshape the industry. However, established insurers are often hesitant to adopt these changes due to regulatory challenges and the cautious nature of the industry. Despite this, the push towards InsureTech is inevitable, as technology continues to provide ways to make insurance more accessible, affordable, and efficient.

The speaker emphasized on how technological integration can solve many inefficiencies in traditional insurance. They discuss how InsurTech is revolutionizing the sector, driven by consumer expectations for faster, digitalized services, such as instant policy issuance through apps or PDFs. Technology, such as artificial intelligence (AI), can significantly enhance various aspects of the insurance process, from underwriting to claims settlement. He further noted that AI and automation can reduce waiting times and improve customer satisfaction by simplifying claim settlements, as seen in developed countries.

Further, the speaker reflected on the rise of usage-based car insurance, which charges premiums based on driving behavior tracked through telematics, offering a fairer, behavior-driven pricing model. He explained how data like speed, acceleration, and mileage can be tracked to provide personalized insurance, as opposed to the blanket policies in traditional insurance, which treat all drivers equally regardless of behavior.

Insurance technology has also led to innovations such as telematics-based insurance, which is being embraced in developed countries and is gradually making its way to India. The speaker highlighted the benefits of such insurance, where premium amounts are dynamically adjusted based on data collected from the vehicle's behavior, promoting safer driving. Moreover, they touch upon the significance of satellite imagery in sectors like agriculture insurance, where loss assessments are conducted remotely and efficiently.

The speaker concluded by discussing how AI can further enhance underwriting and claims management, predicting risks and outcomes, and driving more efficient insurance operations. The adoption of these technologies is seen as pivotal in making insurance more accessible, reliable, and customer-friendly.

CMA Dr. Siva Rama Prasad, former AGM, SBI said in modern companies, sensors and CCTV cameras are integrated with servers to streamline operations like underwriting and claims settlement in the insurance industry. Drones are transforming the process by inspecting assets during claims and insurance processes, particularly in agriculture, where labor shortages are prevalent. Drones are useful in tasks such as spraying pesticides and fertilizers, reducing health risks to workers and enhancing productivity.

Insurance companies have also adopted drone technology to assess assets remotely, capturing photos and videos more efficiently than human surveyors. The Indian government is encouraging drone use by offering subsidies, especially in northeastern regions, and banks are providing loans to support this initiative. Privacy concerns regarding drone usage are being addressed by regulators.

He said that Insurance technology (InsurTech) is increasingly integrated with cloud services, artificial intelligence, machine learning, and automation to simplify processes, reduce paperwork, and provide faster, more efficient services to customers. Companies like Digit, Cover fox, and others in India are embracing InsurTech, though the transition from traditional to technology-driven processes is gradual.

The adoption of InsurTech enhances customer satisfaction by offering convenient, automated services, such as instant insurance coverage for high-value goods, which can be processed in minutes. This not only improves customer experience but also transforms customers into brand ambassadors. The integration of AI and automation allows companies to streamline operations, reduce costs, and offer more personalized services.

Leading global insurance companies have embraced InsurTech to remain competitive, offering 24/7 support, cloud-based services, and advanced analytics. For instance, companies like Pacific Life and Oscar have modernized their processes, focusing on customer satisfaction and innovative technologies, which have significantly boosted their market presence. They aim to double their business in the next decade by fully integrating technology into their operations.

Cloud services have made technology more affordable for insurers, allowing them to reduce capital expenditure and focus on delivering efficient, data-driven services. InsurTech enables insurers to optimize distribution channels, enhance customer relations, and ensure faster claims settlements. The adoption of AI, machine learning, and chatbots further improves customer interaction, making the entire insurance process more seamless.

The eminent speaker concluded by saying that InsurTech has become essential for modernizing insurance companies, enabling them to provide better customer service, faster claims processing, and more effective risk management. Companies that fail to adopt these technologies risk falling behind in an increasingly competitive market. The shift towards technology-driven processes is essential for improving customer satisfaction, reducing operational costs, and ensuring the long-term success of insurance companies.

CMA Dibbendu Roy, Additional Director, ICMAI and HOD, BFSIB, delivered the concluding remarks and proposed vote of thanks.

CLIMATE RISK FOR BANKS - IMPACT, MITIGATION AND DISCLOSURE

Date: 24/08/2024

CMA (Dr.) S. K. Gupta, MD, ICMAI RVO, CEO, ICMAI Social Auditors Organization and COO ICMAI International ADR Chamber

The Banking, Financial Services and Insurance Board of The Institute of Cost Accountants of India organised a webinar on Climate Risk for Banks - Impact, Mitigation and Disclosure. The webinar was graced by CMA (Dr.) S.K. Gupta, MD, ICMAI RVO, CEO, ICMAI Social Auditors Organization and COO ICMAI International ADR Chamber as chief guest and speaker

Dr. Gupta, at the outset said that the climate risk is undeniably one of the most significant challenges the world faces today. It has far-reaching impacts on the environment, businesses, and financial institutions, particularly banks. The effects of climate change—rising ocean levels, extreme weather, and natural disasters—are already disrupting global economies, including regions like India, where heat waves, droughts, and erratic rainfall are impacting productivity and livelihoods.

He said that banks are particularly vulnerable to climate risk, as it can damage assets, disrupt operations, and reduce borrowers' ability to repay debts, ultimately affecting cash flows and company valuations. The World Economic Forum's 2023 Global Risk Report highlights that four of the top global risks for the next decade are directly related to climate change. Banks must therefore be proactive in addressing these risks through mitigation and adaptation strategies.

To do so, banks need to first identify and quantify climate risks. This involves understanding physical risks (such as the impact of extreme weather on assets) and transition risks (arising from the shift toward a low-carbon economy). These risks can affect creditworthiness, potentially leading to loan defaults. Additionally, banks must comply with growing regulatory requirements for climate risk disclosure.

He further said that climate risk management must become integrated into a bank's overall risk management framework. This includes assessing exposure in vulnerable sectors and geographies, establishing early warning systems, and setting clear guidelines for financing decisions. It also requires banks to support the green transition, financing new ventures in the renewable energy sector and promoting sustainability.

While climate change presents risks, it also offers opportunities for banks to create sustainable portfolios and strategies that not only mitigate risks but also capitalize on emerging green sectors. By developing robust climate risk management systems, banks can ensure they remain resilient and profitable in a rapidly changing global environment.

Managing climate-related risks in banking requires careful integration into the institution's overall risk management architecture. The board and management must establish a clear credit risk appetite and lending limits, determining how much impact the bank is willing to absorb. This includes assessing liquidity risk, where regular evaluations of how climate risks might affect liquidity are essential, potentially adjusting liquidity buffers to address new challenges.

Operational risk management should consider climate impacts on business continuity and resilience. Interest rate risk must also be monitored conservatively, as climate risk disclosures are increasingly required globally. Risks can be classified into financial (credit, market, liquidity) and non-financial (operational, reputational), all of which can adversely affect the bank's reputation and operational integrity.

The eminent speaker stressed that to effectively manage these risks, banks should develop strategies that incorporate climate considerations into credit frameworks, reassess market segments, and introduce innovative green financial products. A robust understanding of "green" definitions and the mapping of climate risks across sectors is crucial, as is the use of data analytics for stress testing and portfolio monitoring.

Collateral management and hedging strategies must adapt to the new risks posed by climate change, with banks needing to refine their approaches to default management in cases where climate factors hinder repayment abilities. A sector-specific analysis is also vital, given that different sectors face varying degrees of climate risk.

Education and training for bank leaders on climate risks will enable better strategic goal setting regarding emissions reductions and investment activities. Challenges include assessing risk accurately, the need for skilled personnel, and the absence of universal industry standards for integrating climate risk into risk management practices. As the financial landscape evolves, banks must remain adaptive, learning from peers and developing governance structures that support sustainable practices.

The establishment of management-level climate risk committees within banks, while not mandatory, is increasingly common as institutions seek to prioritize climate risk. This initiative is crucial for ensuring comprehensive attention to the challenges posed by climate change. However, a significant challenge lies in the shortage of skilled professionals equipped to understand and manage these risks. To address this, banks are encouraged to train their existing risk management teams in climate science and relevant strategies, while also considering third-party consultancy support.

Effective climate risk management requires banks to embed climate considerations into their overall risk frameworks. This involves identifying the necessary processes and tools for managing climate risks, as well as establishing strong governance structures led by top management. Assigning a board member to oversee climate risk can help integrate these concerns throughout the organization, ensuring that all decisions account for potential climate impacts.

He said that banks should adopt scenario analysis and stress testing to assess their resilience to climate hazards. This includes evaluating the likelihood of specific climate events and their potential effects on various sectors. Tools such as the IPCC's Representative Concentration Pathways can assist in this analysis. Additionally, the regulatory environment is evolving, with bodies like the RBI recommending that banks voluntarily set targets for green finance and adopt frameworks for climate-related disclosures.

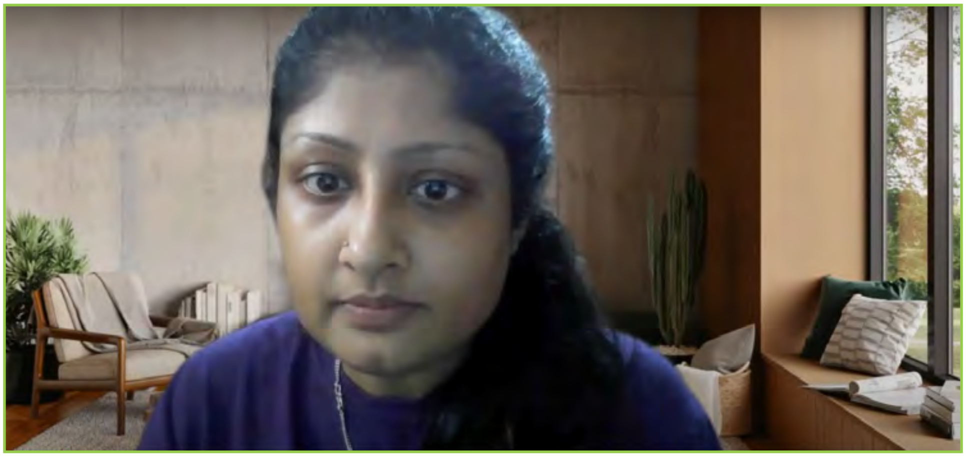
To enhance their operations, banks can develop green branches and data centers, promote green deposits, and identify strategic opportunities in the transition to a low-carbon economy. Embracing these changes not only helps mitigate risks but also positions banks to capitalize on new market demands for sustainable financial products.

The overall message emphasizes that addressing climate change is not just a regulatory obligation but an opportunity for innovation and growth within the banking sector. As financial intermediaries, banks play a vital role in shaping a sustainable future, and their actions today will determine their success in the evolving economic landscape.

CMA (Dr.) Aditi Dasgupta, Joint Director delivered the concluding remarks and proposed vote of thanks.

DUE DILIGENCE ON PROJECT FINANCING

Date: 30/08/2024



Ms. R. Sumitra

Credit Management Specialist

The Banking, Financial Services and Insurance Board of The Institute of Cost Accountants of India organised a webinar on Due Diligence on Project Financing. The webinar was graced by Ms. R. Sumitra, Credit Management Specialist as guest speaker.

The discussion centred around due diligence in the context of project financing, with a clear distinction made between project financing and regular financing. In regular financing, loans are provided based on a borrower's existing cash flow, like a textile company acquiring machinery. Project financing, however, is used for capital expenditures where the repayment comes from the future cash flow generated by the project itself, which has yet to begin. The speaker used the construction of a hospital as an example, emphasizing the high risks, significant capital expenditure, and uncertainties involved because the project is still in its planning phase.

Due diligence is critical in project financing due to potential risks like cost overruns, delays, and challenges related to promoter contributions. The detailed project report (DPR), which contains financial data, promoter background, and the project's feasibility, is pivotal for assessing the viability of the project. Banks rely heavily on this report to ensure the project can succeed and the promoters can contribute as required.

She said that due diligence process is thorough. It includes verifying the backgrounds of the promoters, assessing project feasibility through tools like civil reports and MCA 21, and engaging techno-economic viability (TEV) consultants. Digital tools such as Google and legal verification platforms are also employed to check the promoters' credibility, ensuring there are no hidden legal risks or pending litigations.

In conducting this process, the individual responsible for due diligence reviews documents submitted by the loan applicant, assesses their experience in the relevant business sector, and verifies financial statements prepared. The liquidity of the promoter, based on their net worth, is checked to ensure they can contribute financially to the project. The scrutiny extends to reviewing invoices for equipment purchases and analyzing the broader industry context.

The findings are then compiled into a report, which plays a crucial role in the bank's decision-making process for sanctioning the loan. This report also includes any necessary clarifications obtained through discussions with consultants. While certificates are reviewed, they are not taken at face value without verifying actual capital infusions, often requiring cross-referencing with documents like MCA 21 reports.

For non-corporate entities or individuals, the person handling due diligence examines income tax returns to ensure no funds are being siphoned through associated entities, particularly if there is substantial shareholding in another company. For proprietorships, they rely on balance sheets sourced from income tax records, as detailed financial statements are often unavailable.

Fraud detection is an integral part of due diligence, including cases where fraudulent balance sheets are uncovered. The individual verifies these with auditors and through UDIN verification, comparing financial statements with ROC reports to detect discrepancies. The speaker also highlights the importance of checking statutory dues to prevent borrowers from using the loan to settle tax obligations instead of advancing the project.

Market feasibility is evaluated by verifying work orders, confirming the authenticity of suppliers and buyers, especially in cases involving government contracts. Cross-verifying market claims ensures that fraudulent work orders are not being used to secure financing. Once the project is approved, the bank monitors its progress through an independent evaluator to ensure the development stays on track according to the sanctioned plan. This includes periodic site visits and invoice reviews to ensure everything is proceeding as planned.

Project financing is inherently risky due to potential delays in the Date of Commencement of Commercial Operations (DCCO), which could result in the loan becoming a Non-Performing Asset (NPA). This is a major concern for banks, making project monitoring essential to avoid such risks. Verifying suppliers is also critical. Borrowers may switch suppliers post-loan approval, which raises red flags. If such changes occur, the bank must investigate to ensure there are no issues related to cost or quality and that the new supplier is legitimate.

Once loans are disbursed, maintaining oversight is essential, with disbursement tied to project milestones. Regular inspections are necessary to confirm progress and ensure the borrower's capital contributions align with the agreed debt-equity ratio. Invoices are thoroughly reviewed, along with tax details and delivery schedules, to ensure transparency. Power Purchase Agreements (PPAs) or similar contracts, if involved, must also be verified to confirm they are valid and in place.

The discussion also addressed risks like round-tripping, where funds disbursed for the project are redirected back to the borrower's account through unrelated parties, as well as the danger of paying suppliers unrelated to the project. Monitoring transactions, especially in consortium or multiple banking arrangements, is crucial to ensure funds are used properly.

Lastly, she said enforcing terms and conditions on account maintenance is vital. Borrowers may open accounts with other banks, diverting cash flows and reducing the lending bank's control. As the project progresses, obtaining completion and commencement certificates, along with necessary licenses, is key. These signify the project's readiness to generate cash flow, reducing reliance on the bank's loan. Continuous monitoring, supplier verification, and controlled disbursements are crucial to mitigating the risks inherent in project financing.

CMA (Dr.) Aditi Dasgupta, Joint Director delivered the concluding remarks and proposed vote of thanks.

LEVERAGING INNOVATION FOR CATALYSING PERFORMANCE OF BANKS

Date: 06/09/2024

CMA (Dr.) S. K. Gupta, MD, ICMAI RVO, CEO, ICMAI Social Auditors Organization and COO ICMAI International ADR Chamber

The Banking, Financial Services and Insurance Board of The Institute of Cost Accountants of India organised a webinar on Leveraging Innovation For Catalysing Performance Of Banks. The webinar was graced by CMA (Dr.) S. K. Gupta, MD, ICMAI RVO, CEO, ICMAI Social Auditors Organization and COO ICMAI International ADR Chamber as chief guest and speaker and CMA TCA Srinivasa Prasad, Vice President, ICMAI and CMA Chittaranjan Chattopadhyay, Chairman, BFSIB.

The Chairman began by extending a warm welcome to everyone, including the vice president and the guest speaker, the head of the BFSI board, and all team members. He expressed gratitude to the participants for their continuous support and encouragement in organizing such programs. He said that the focus of the session is on a crucial topic: the innovations currently transforming the banking sector. He sounded hopeful, that the program will explore how leveraging these innovations can enhance bank performance, with a particular emphasis on the role of CMS professionals. The speaker was confident that Dr. SK Gupta's insights will inspire new perspectives and approaches to the subject matter.

The V.P. began by thanking the chairman of the BFSI board and the organizers of the webinar. The speaker emphasized that innovation often disrupts existing paradigms, requiring adaptation to new ways of working. They highlight the importance of continuous improvement and the role of enablers like technology, knowledge, and collaboration. He said digital transformation, particularly in banking, is a key focus, with the speaker noting that mobile banking has revolutionized how people interact with banks. Technologies like artificial intelligence (AI) and machine learning (ML) are driving these changes. The speaker stressed that cost and management accountants (CMAs) must adapt by acquiring skills in data analytics to better understand customer insights and mitigate risks. They mention the growing importance of fintech partnerships, blockchain technology, and regulatory technology (regtech) in compliance. The speaker also touched on sustainability and green banking, referencing previous webinars on these topics. The talk concluded with gratitude to the organizers and a positive outlook for the discussion to follow.

Dr. S. K. Gupta, emphasized the critical importance of innovation in the banking sector in response to the fast-paced and transformative changes in the global economy. The speaker highlighted on how the rise of disruptive business models, such as Uber and Amazon, has reshaped traditional industries, stressing that banks must also innovate to stay relevant. The evolution of technology, demographic shifts, and globalization are driving changes in stakeholder expectations, requiring banks to offer more personalized, efficient, and sustainable services. In this competitive landscape, banking leaders must balance immediate goals with long-term transformation strategies focused on value creation.

The speaker referred to Bill Gates' notion that while banking is essential, banks may become obsolete unless they adapt to technological changes. To survive, banks must focus on incremental improvements in products, services, and processes while also exploring disruptive innovations that can radically shift the industry. Innovation is not limited to major breakthroughs but encompasses all enhancements that improve customer satisfaction and operational efficiency.

The necessity of human-centered innovation is underscored, emphasizing the need for banks to create desirable, feasible, and viable solutions that align with customer needs. As fintech startups and new entrants challenge traditional banking, financial institutions must rethink their business models and offer innovative products and services through multiple channels.

Operational innovation, which improves efficiency, reduces errors, and creates new revenue streams, is equally important. Banks should foster a mindset of creativity, starting with incremental changes to minimize disruption, while involving stakeholders and having a clear vision for success. Flexibility and collaboration, both internally and with external partners, are essential to fostering innovation.

Throughout the innovation process, banks must track progress through performance indicators like the value of ideas, successful project implementation, and speed to market. Experimentation, iteration, and a willingness to accept failure are vital to developing new ideas. Additionally, sustainable finance and green banking are gaining importance as banks align with global priorities by creating eco-friendly financial products.

He said that the banking industry is experiencing significant changes globally, driven by technological innovations and evolving regulations. Banks must adopt regulatory technologies to comply with new standards and harness process automation to streamline operations, reducing manual errors and saving time. The rise of artificial intelligence, particularly generative AI, enables automation, leading to innovative products and services.

As technology advances, the role of banking employees will shift from repetitive tasks to intellectual and creative work. Collaboration with third-party providers is essential for rapid innovation, but banks must select partners whose values align with their innovation goals. Additionally, digital engagement is crucial, with banks needing to modernize back-office operations to enhance long-term customer relationships. Banks should focus on offering personalized, high-quality services across digital and physical channels, ensuring a seamless customer experience.

Key trends in banking include AI, blockchain, hyper-personalized banking, and quantum computing. Open banking, involving collaboration with third parties, is increasingly prioritized. Leadership plays a vital role in fostering a culture of innovation. Banks should adopt a phased approach to upgrading their systems, avoiding disruptive changes. Failure to innovate is no longer an option, as customers will silently leave if their needs aren't met.

However, barriers to innovation, such as organizational inertia and hierarchical structures, must be addressed. Banks need a startup mentality, accepting failures as part of the innovation process. Regulations should be viewed as enablers rather than obstacles, and banks should consider collaborating with competitors to drive progress. Ultimately, banks must continuously innovate to remain competitive, focusing on enhancing customer engagement and creating sustainable business models.

He said that innovation should not be pursued for its own sake but carefully analyzed for its potential impact. The future of banking lies in adopting human-centered approaches, using technology to maximize customer value and engagement while ensuring sustainability in a rapidly evolving marketplace.

CMA Dibbendu Roy, Additional Director, ICMAI, Secretary and HOD, BFSIB delivered the concluding remarks and proposed vote of thanks.

'ASSESSMENT OF LOANS' BASED ON 'DIGITAL FOOTPRINTS' OF 'BORROWER/BUSINESS ENTITIES' AND NOT ON 'BALANCE SHEETS' OF MSME SEGMENT (UNION BUDGET 2024-25)

Date: 18/09/2024

CMA (Dr.) P. Siva Rama Prasad
Former AGM, SBI

The Banking, Financial Services and Insurance Board of The Institute of Cost Accountants of India organised a webinar on 'Assessment of Loans' Based on 'Digital Footprints' Of 'Borrower/Business Entities' and Not on 'Balance Sheets' of Msme Segment (Union Budget 2024-25). The webinar was graced by CMA (Dr.) P. Siva Rama Prasad, Former AGM SBI as chief guest and speaker.

In this session, the speaker expressed gratitude to the BFSI board for the opportunity to discuss the concept of banks' lending through digital footprints, emphasizing its utility for reducing costs, improving accuracy, and mitigating credit risk. Introduced in the 2024-25 Union Finance Budget, this approach focuses particularly on the MSME sector and individuals. With the government's push for a digital India, he said, banks are exploring how to manage credit portfolios through these digital footprints.

The speaker highlighted the efficiency brought about by digital footprints, noting that loan processing times could potentially be reduced to just five minutes, as the system can access necessary information quickly without the need for extensive paperwork. This efficiency not only decreases non-performing assets but also enhances profitability for banks by optimizing fund utilization and operational costs.

A significant tool in this process is the Business Rule Engine (BRE), which leverages digital footprints—comprehensive data encompassing both financial and non-financial activities linked to an individual's KYC documentation. The speaker illustrated how digital footprints can be accessed via Aadhaar numbers, showcasing the breadth of information available regarding spending habits, transactions, and even geographical movement through platforms like Google Maps.

The discussion emphasized that digital footprints capture an individual's every interaction with financial institutions and other sectors, from online purchases to social media activity, all of which contribute to a more detailed understanding of a person's financial behavior. This data, when utilized effectively, can enhance the credit assessment process, reduce credit risk, and lead to faster, more informed lending decisions.

Ultimately, the integration of digital footprints into the banking system represents a paradigm shift, enabling banks to operate more efficiently and respond proactively to the financial behaviors of consumers. As this technology continues to evolve, it holds the potential to reshape how financial institutions evaluate creditworthiness and manage their lending operations. The session concluded with an invitation for questions, reflecting the speaker's commitment to engaging further on the topic.

The speaker discussed the transformative impact of technology on the lending process, emphasizing the efficiency brought about by real-time systems like the

Business Rule Engine (BRE). This technology facilitates instant verification of digital footprints, making it easier to assess the credibility of borrowers across various loan types. Digital footprints, including Aadhar and PAN numbers, streamline processes such as loan approvals and KYC verifications, significantly reducing the time required to obtain loans—often within 24 hours.

The speaker highlighted that technology enables the identification of suspicious transactions and helps banks avoid risks associated with shell companies. The integration of various data sources allows for comprehensive assessments of borrowers, including credit histories and potential legal issues. This data-driven approach reduces human intervention and enhances accuracy, as all relevant information can be accessed through unique identification numbers.

Furthermore, Dr. Prasad, asserted that banks will evolve into technology-driven institutions, relying on software and data analysis rather than traditional methods. The advent of digital currencies and the decline of cash transactions signify a major shift in the financial landscape. The importance of staying updated with technological advancements is emphasized, particularly for finance professionals, as knowledge of AI and IT is essential for success in the industry. The recent budget announcement for a new credit assessment model for micro, small, and medium enterprises further illustrates the growing reliance on digital footprints over traditional financial metrics like balance sheets.

The modern banking landscape has evolved significantly, moving away from traditional loan assessments based on balance sheets to a more nuanced approach that utilizes digital footprints of borrowers. This shift leverages advanced information technology, allowing banks to minimize cash transactions and streamline processes through digital payments like QR codes and mobile wallets. Tools such as GST analysis and bank statement analyzers enable financial institutions to access real-time data, providing a comprehensive view of a borrower's financial health and enhancing credit evaluation accuracy.

By automating data collection and analysis, banks can make informed lending decisions more quickly, reducing operational risks and costs associated with traditional manual processes. This innovation improves credit quality and operational efficiency, helping to mitigate non-performing assets. Furthermore, the integration of machine learning and artificial intelligence into legal data analysis tools simplifies the review of complex legal documents, ensuring banks can quickly assess the legitimacy of collateral and compliance with regulations.

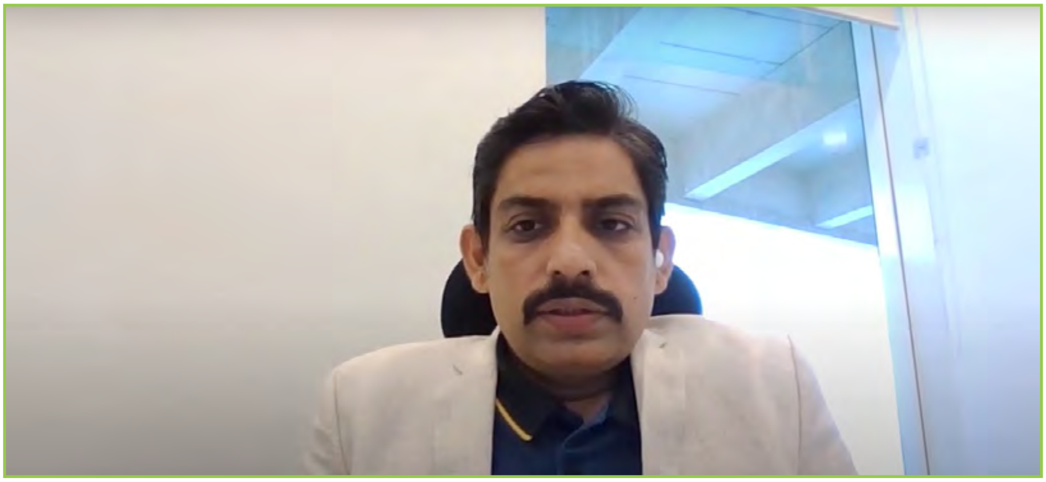
These advancements support more equitable lending practices and foster transparency, which benefits borrowers, banks, and depositors alike. By embracing these digital solutions, financial institutions can adapt to the evolving market landscape, improve customer satisfaction, and build stronger, long-term relationships with clients. Ultimately, the transition to data-driven decision-making enhances the overall lending environment, ensuring compliance and allowing for rapid responses to changing economic conditions.

The modern banking landscape has evolved significantly, moving away from traditional loan assessments based on balance sheets to a more nuanced approach that utilizes digital footprints of borrowers. This shift leverages advanced information technology, allowing banks to minimize cash transactions and streamline processes through digital payments like QR codes and mobile wallets. Tools such as GST analysis and bank statement analyzers enable financial institutions to access real-time data, providing a comprehensive view of a borrower's financial health and enhancing credit evaluation accuracy.

CMA Dibbendu Roy, Additional Director, ICMAI and HOD, BFSIB, delivered the concluding remarks and proposed vote of thanks.

FINTECH'S AND THEIR EVOLUTION IN INDIAN BANKING CONTEXT

Date: 21/09/2024



CMA Manoj Batra

Head, Product and Process Government Business Group, Bandhan Bank

The Banking, Financial Services and Insurance Board of The Institute of Cost Accountants of India organised a webinar on FinTech's and their evolution in Indian Banking context. The webinar was graced by CMA Manoj Batra, Head, Product and Process Government Business Group, Bandhan Bank as chief guest and speaker and CMA Chittaranjan Chattopadhyay, Chairman, BFSIB.

CMA Chittaranjan Chattopadhyay, Chairman, BFSIB, began the session by expressing gratitude for the presence of a distinguished guest speaker who plays a key role in Bandhan Bank. He warmly welcomed CMA Manoj Batra acknowledging his valuable contributions to previous programs and the professional community. He dedicated the session to the memory of Dr. CMA Shri Hari Chava, a respected figure in their profession.

The speaker began by expressing gratitude for the warm welcome and introduces the topic of fintech's significant impact on the banking, finance, and insurance sectors. Initially, finance was seen as money-focused, with technology playing a supporting role. However, fintech has now become a transformative force, with companies like Google Pay and Amazon Pay surpassing traditional banks in terms of user base and profits. The presentation outlines the evolution of fintech in India, noting that the country has the largest number of fintech firms globally due to its vast population. The discussion highlights several phases of fintech development in India, beginning with its emergence in 2008, followed by growth from 2015 to 2017, and the current diversification phase since 2018 and also the evolution of fintech, current trends, and how banks are adapting to these changes.

CMA Manoj Batra mentioned that Fintech has reshaped the financial services industry, particularly in enhancing customer experiences and driving innovation. The shift from manual processes to digital solutions is evident, with many users now conducting banking through mobile apps, while innovations like UPI have simplified money transfers. India has emerged as one of the fastest-growing fintech markets, supported by smartphone penetration and government initiatives. The discussion delved into three key phases of fintech evolution, including digital payments, lending, and the current diversification into broader financial services.

Fintech platforms like PhonePe and BharatPay have leveraged UPI to create their own ecosystems, offering services such as loans, insurance, and bill payments. These platforms address the credit gap left by traditional banks, particularly for MSMEs, through platforms like Lending kart and Capital Float. Since 2018, fintech has entered a maturity phase characterized by deeper integration with banks. Once seen as competitors, fintech companies are now essential partners for banks, expanding their reach to underserved customers.

He further mentioned, Neo-banking has also emerged, with companies like Jupiter and RazorpayX offering fully digital banking experiences, appealing to millennials and digital-first customers. Digital lending has expanded, with fintech companies using alternative data to assess creditworthiness more effectively than traditional banks. API banking, wealth tech, and insurtech are further examples of how technology is enhancing financial services.

The eminent speaker said that the evolution of fintech is driven by factors such as Aadhaar-based e-KYC for on boarding and regulatory sandboxes for testing innovations. The collaboration between fintech firms and banks is reshaping the landscape, making credit more accessible and efficient for consumers. The discussion also coverd advancements like the Bharat Bill Payment System (BBPS), which streamlines bill payments across platforms, and the account aggregator framework, which consolidates account balances from multiple banks. Emerging trends include embedded finance, block chain, and the Central Bank Digital Currency (CBDC), with AI and data analytics playing key roles in fraud detection and personalized services.

The conclusion emphasized the rapid evolution of India's fintech ecosystem, driven by collaboration between banks and fintech companies, technological advancements, and supportive regulations. Banks are adapting by partnering with fintechs, developing digital platforms, and leveraging AI to create customer-centric products. This collaboration benefits both consumers and regulators by expanding access to financial services and reducing costs. Traditional banks that embrace these innovations will thrive, while fintech companies gain opportunities for new product development, ultimately enhancing financial inclusion and the overall banking experience.

CMA (Dr.) Aditi Dasgupta, Joint Director delivered the concluding remarks and proposed vote of thanks.

SNAPSHOTS

Release of “Monograph on Net Zero Emissions Audit for Financing by Banks” on 21st July, 2024 at New Delhi by BFSIB of ICMAI in the hands of CMA Ashwin G. Dalwadi, Immediate Past President, ICMAI, (centre), CMA Bibhuti Bhusan Nayak, President, ICMAI (left of IPP, ICMAI), and other Council Members, ICMAI were also present

CMA Chittaranjan Chattopadhyay, Chairman, BFSIB, IAASB and ACMB of ICMAI (3rd from left), CMA Suresh R Gunjalli, Council Member, ICMAI (2nd from left) and CMA Vishwanath Bhat, Chairman, SIRC,ICMAI(extreme left) met Shri Debasish Mukherjee, Executive Director, Canara Bank and other Officials on 22nd August, 2024

Signing of MOU between ICMAI and International Financial Services Centres Authority (IFSCA) on 30th August, 2024 at Gandhinagar, Gujarat.

CMA Chittaranjan Chattopadhyay, Chairman, BFSIB, IAASB and ACMB of ICMAI, CMA Ashwin G. Dalwadi, Immediate Past President, ICMAI, CMA Dr. Kaushik Banerjee, Secretary, ICMAI, Shri K. Rajaraman, Chairperson, IFSCA, Dr. Dipesh Shah, ED (Development), IFSCA and CMA Malhar Dalwadi, Former Chairman, Ahmedabad Chapter, ICMAI (L to R).

CMA Chittaranjan Chattopadhyay, Chairman, BFSIB, IAASB and ACMB of ICMAI presented a copy of the Handbook on Aide Memoire on Infrastructure Financing (2nd enlarged revised edition) to Shri Anurag Jain, IAS, Secretary, Ministry of Road Transport & Highways, Government of India on 11th September, 2024 (L to R)

CMA Chittaranjan Chattopadhyay, Chairman, BFSIB, IAASB and ACMB of ICMAI presented a copy of Monograph on Net Zero Emissions Audit for Financing by Banks to CMA Punit Jain, Director, NIBSCOM on 12th September, 2024 (L to R)

CMA Chittaranjan Chattopadhyay, Chairman, BFSIB, IAASB and ACMB of ICMAI felicitating Dr. Adish C. Agarwalla, President,International Council of Jurists, London and Chairman, All India Bar Association at Kolkata along with CMA Abhijit Dutta, Treasurer, EIRC, ICMAI (L to R) on 13th August, 2024

CMA Chittaranjan Chattopadhyay, Chairman, BFSIB, IAASB and ACMB of ICMAI (3rd from left) presented a copy of BFSI Chronicle to Shri S B Mohanty, Director Finance, IREL (India) Ltd. (2nd from left) on 18th September, 2024.

CMA Chittaranjan Chattopadhyay, Chairman, BFSIB, IAASB and ACMB of ICMAI presented a copy of Handbook on Aide Memoire on Infrastructure Financing (2nd enlarged revised edition) to Shri Soumendra Mattagajasingh, Group Chief Human Resources Officer, ICICI Bank on 19th September, 2024. (L to R)

CMA Chittaranjan Chattopadhyay, Chairman, BFSIB, IAASB and ACMB of ICMAI presented a copy of The Management Accountant, August 2024 to Shri Abhijit Bhattacharya, Head- Talent Acquisition, Rewards & Leadership, Human Resources, ICICI Bank Ltdand Shri Sonandeep Singh Hattar, Head- Business HR: People & Leadership Capacity, HRM Group, ICICI Bank Ltd. on 19th September, 2024 (L to R)

CMA Chittaranjan Chattopadhyay, Chairman, BFSIB, IAASB and ACMB of ICMAI felicitating Shri Arun Kumar Bansal, MD & CEO of Paytm Payments Bankalong with CMA M K Anand, Council Member & Chairman, PD Committee, ICMAI on 23rd September, 2024. (L to R)

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THE INSTITUTE OF COST ACCOUNTANTS OF INDIA
Statutory Body under an Act of Parliament
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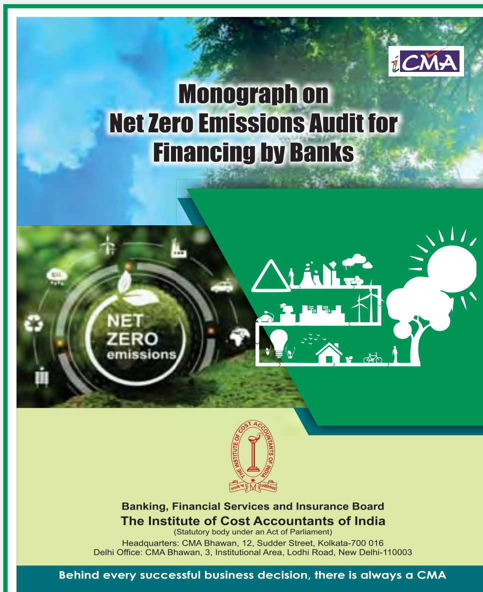
Monograph on
Net Zero Emissions Audit for Financing by Banks



- ***Introduction***
  - *Background on Climate Change*
  - *Economics of Climate Change*
  - *Overview of Net Zero Emissions*
  - *Importance of Net Zero Emissions Audits for Financing*
  - *Purpose and Scope of the Monograph*
- ***Global Treaties and Agreements related to Climate Change***
  - *IPCC*
  - *UNFCCC*
  - *Kyoto Protocol*
  - *Paris Agreement*
- ***Understanding Scope Emissions and Financed Emissions***
- ***Role of Banks in Financing Net Zero Emissions Projects***
  - *Importance of Financial Institutions in Achieving Net Zero Goals*
  - *Types of Financing Instruments Available for Net Zero Projects*
  - *Challenges and Opportunities for Banks in Financing Net Zero Projects*
- ***Framework for Net Zero Emissions Audit***
  - *Overview of Audit Process*
  - *Identifying Emissions Sources and Baselines*
  - *Assessing Emissions Reduction Strategies and Technologies*
  - *Evaluating Financial Viability and Risk Mitigation Measures*
  - *Compliance and Certification Standards for Net Zero Emissions*
- ***Building Capacity for Net Zero Emissions Auditing***
- ***Green Loan Principles***
- ***Assessment of 'Environmental Risk' by Banks***
- ***Conclusion***

Banking, Financial Services & Insurance Board (BFSIB) of The Institute of Cost Accountants of India (ICMAI)

Headquarters: CMA Bhawan, 12, Sudder Street, Kolkata - 700016

Delhi Office: CMA Bhawan, 3, Institutional Area, Lodhi Road, New Delhi - 110003

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ACTIVITIES OF THE BFSI BOARD

The Banking, Financial Services & Insurance Board of the Institute and the BFSI department continued its various activities and initiatives from July to September, 2024, a synopsis of which is presented herein under -

A. Representation letters for inclusion of CMAs

The BFSIB continues its efforts for further development of the profession in the BFSI sector with representations to authorities and employers for inclusion of CMAs in the sector. The concerted and diligent efforts have resulted in numerous opportunities for CMAs. The BFSI Board is greatly pleased to note the following developments: -

- CMAs are eligible for various posts of NaBFID
- CMAs are eligible for the post of Officer Grade- A (Assistant Manager) of SEBI in General Stream
- CMA are eligible for the post of Assistant Accounts Officer on deputation in UIDAI
- CMAs are eligible for recruitment of Specialist Officer in Bank of Baroda for various posts.

B. Certificate Courses of BFSI

i) Certificate Courses on Banking

The 10th batch of the Certificate Course on Credit Management of Banks started on 13th July, 2024. Shri Shri Rajib L Pattanayak, General Manager (Credit), Large Corporate Vertical, Union Bank of India graced the occasion as the Chief Guest for the inauguration of the course.

The 8th batch of the Certificate Course on Treasury and International Banking started on 16th June, 2024. Shri Arun Bansal, Executive Director and Head of Treasury, IDBI Bank graced the occasion as the Chief Guest for the inauguration of the 8th batch of the course.

The expression of interest for the 11th batch of the Certificate Course on Concurrent Audit of Banks and 11th batch of Certificate Course on Credit Management of Banks has also started along with 9th batch of the Certificate Course on Treasury and International Banking.

We request the members and students to enroll for the courses for professional development and capacity building.

ii) Advance Certificate Course on Fintech

The admission for the 1st batch of Advance Certificate Course on Fintech has started.

iii) Investment Management in collaboration with NSE Academy

The admission for the Level-1 (Fundamental Analysis & Valuations) Batch No. 2 of the Investment Management in collaboration with NSE Academy and Level-3 Batch No. 1 (Financial Derivatives & it's application are presently going on.

The admission window for the courses is stated as follows:

https://eicmai.in/OCMAC/BFSI/DelegatesApplicationForm-BFSI.aspx

C. Webinars

The following webinars were organized by the BFSI on various topics which are stated as follows:

i) Due Diligence on Project Financing held on 30th August from 4 to 6 pm

Ms. R.Sumitra, Former Chief Credit Officer, Bank of Baroda was the speaker.

ii) Climate Risk for Banks- Impact, Mitigation and Disclosure held on 24th August from 4 to 6 pm

CMA (Dr.) S.K.Gupta, CEO, Registered Valuers Organization was the speaker.

iii) Insurtech held on 9th August, 2024 from 6 to 8 pm

CMA (Dr.) P. Siva Rama Prasad, Former AGM, State Bank of India was the speaker. CMA (Dr.) Tarun Agarwal, Former Director, National Insurance Academy and BFSI Board Member, ICMAI graced the occasion as the Guest of

Honour. The webinar was also attended by CMA T.C.A. Srinivasa Prasad, Vice-President, ICMAI who provided the special address.

iv) White Label Banking held on 2nd August, 2024 from 6 to 8 pm

CMA (Dr.) P. Siva Rama Prasad, Former AGM, State Bank of India was the speaker.

v) Open Banking held on 26th July from 2 to 4 pm

The BFSI Board hosted the 3rd webinar of the Banking Month and CMA (Dr.) P. Siva Rama Prasad, Former AGM, State Bank of India was the speaker. Shri Hrishikesh Mishra, General Manager (Risk Management), Union Bank of India was the Chief Guest for the webinar.

vi) DeFi- Decentralised Finance or Lending held on 19th July from 4 to 6 pm

The BFSI Board hosted the 2nd webinar of the Banking Month and CMA (Dr.) P. Siva Rama Prasad, Former AGM, State Bank of India was the speaker. Shri N.D.S.V Nageswara **Rao, General Manager (IT-**Loans and Trade Finance), State Bank Global IT Centre, Corporate Centre, Navi Mumbai graced the occasion as the Chief Guest for the webinar.

vii) Digital Transformation of Banks from Caterpillar to a Butterfly held on 12th July, 2024 from 2 to 4 pm

The BFSI Board hosted the 1st webinar of the Banking Month and CMA (Dr.) P. Siva Rama Prasad, Former AGM, State Bank of India was the speaker. Dr. A.C. Routh, BFSI Board Member, ICMAI graced the occasion along with CMA Partha Choudhuri, Former Chief General Manager, RBI.

viii) Evolution of Web 3.0 and Finternet on 7th June, 2024

CMA (Dr.) Paritosh Basu, Senior Director (Services), Stagility Consulting Private Limited was the Speaker which was held on 7th June, 2024.

D. Publications

i) Aide Memoire on Infrastructure Financing (Revised and Enlarged 2nd Edition)

The online purchase link of the publication titled Aide Memoire on Infrastructure Financing (Revised and Enlarged 2nd Edition) is as follows:

https://eicmai.in/booksale_bfsi/Home.aspx

ii) Monograph on Net Zero Emissions Audit for Financing by Banks

CMA Ashwin G. Dalwadi, Immediate Past President, ICMAI in the 353rd Council Meeting held on 21st July 24 at New Delhi released the monograph. The online sale of the publication would be soon starting.

E. MoU with The International Financial Services Centres Authority (IFSCA)

ICMAI and IFSCA have exchanged Memorandum of Understanding (MoU) on 30th August, 2024 at IFSCA Headquarters, GIFT City, Gandhinagar The collaboration aims to position GIFT IFSC as a leading 'Global Finance and Accounting Hub.'

The MoU's primary objective is to support the export of financial services talent from GIFT IFSCA, ICMAI leveraging its extensive network of overseas chapters and members, will actively disseminate information about the opportunities available within GIFT IFSC. Additionally, ICMAI under the guidance of IFSCA, shall develop academic courses tailored to the specific needs of International Financial Services Centres aligned to the global best practices.

ICMAI will focus on emerging areas such as FinTech and TechFin, working to create specialized courses that cater to the evolving demands of GIFT IFSC, further enhancing India's position in the global financial services landscape. This partnership shall contribute to fostering a world-class financial services ecosystem at GIFT IFSC.

The event was graced by Shri K Rajaraman, Chairperson, Dr. Dipesh Shah, Executive Director(Development), Dr. Pradeep Ramakrishnan, Executive Director, Shri Arjun Prasad General Manager (Capital Market) , Shri Rishi Kale, IFSCA and CMA Gaurav Raval, Consultant (Development) in the presence of CMA Chittaranjan Chattopadhyay, Chairman, BFSIB, IAASB and ACMB of ICMAI, CMA Ashwin G. Dalwadi, IPP, ICMAI and CMA Malhar Dalwadi, Former Chairman, IFSCA. The event was also attended by CMA (Dr.) Kaushik Banerjee, Secretary, ICMAI.

BROCHURES – COURSES OFFERED BY THE BFSI BOARD

Banking, Financial Services & Insurance Board

BROCHURE

CERTIFICATE COURSE ON CREDIT MANAGEMENT OF BANKS

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Certificate Course on Credit Management of Banks

About The Institute

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The Institute has since been continuously contributing to the growth of the industrial and economic climate of the country. The Institute is the only recognised statutory professional organisation and licensing body in India specialising exclusively in Cost and Management Accountancy.

International Affiliation

The Institute of Cost Accountants of India is Founder member of International Federation of Accountants (IFAC), Confederation of Asian & Pacific Accountants (CAPA) & South Asian Federation of Accountants (SAFA). The Institute, being the only institution from India, is a member of the Accounting Bodies Network (ABN) of The Prince's Accounting for Sustainability (A4S) Project, UK and International Valuation Standards Council (IVSC), UK.

Institute's Strength

The Institute is the largest Cost & Management Accounting body in the World, having a large base of about 1,00,000 CMAs either in practice or in employment and around 5,00,000 students pursuing the CMA Course.

Institute's Network

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Vision Statement

"The Institute of Cost Accountants of India would be the preferred source of resources and professionals for the financial leadership of enterprises globally."

Mission Statement

"The Cost and Management Accountant professionals would ethically drive enterprises globally by creating value to stakeholders in the socio-economic context through competencies drawn from the integration of strategy, management and accounting."

Course Objective

The world is increasingly getting inter-connected and complex. Bank Credit mechanism has also undergone phenomenal changes in recent years. Few years ago, Credit meant only Cash Credit, Overdraft and Term Loan. Today quasi credit facilities like Letters of Credit, Bank Guarantees, Co-acceptances, Buyer's Credit and Supplier's Credit etc. are gaining predominance. Keeping in view of importance of Credit Management by banks, The Institute of Cost Accountants of India offers the **Certificate Course** on **Credit Management (CCCM)** for Officials of Private Sector Banks / Local Area Banks.

Professionals dealing with Finance or Financial Institutions in one way or other need to possess knowledge of 'Credit Management' guidelines of Financial Institutions like Banks, so that they can provide Value Additive Services to their clients like recommending to the banks the business proposals of entrepreneurs, performing preliminary credit appraisal on behalf of the banks and collate additional supporting information required by the banks/credit institutions etc.

In addition to the above, this course is also useful to the professionals who are dealing with:

- ✓ Various assignments like Forensic Audit, Stock and Book Debts Auditor (As recognized by IBA)
- ✓ Issuance of Compliance Certificate for Banks by practicing professionals in areas like Consortium and Multiple Lending by Banks (RBI Guidelines)
- ✓ Acting as Agencies for Specialized Monitoring (As recognized by IBA)
- ✓ Assignments like 'Concurrent Audit' of Banks and 'Credit Audit' of the Banks.

The Course provides a holistic insight into the various dimensions in Bank Credit Management.

Online Admission Link:
https://eicmai.in/advscc/DelegatesApplicationForm.aspx

CEP Hours: 10 hours
for members of The Institute of Cost Accountants of India

Course Eligibility

FCMA/ACMA/those who have qualified Final CMA examination, Final year Students of the CMA Course/Any Graduate.

Course Duration

a) Classroom Learning of 3 hours per day in the Weekend through online mode
b) 50 Hours on-line Coaching.
c) 2 months course
d) Online Examination for 100 marks

Course Fees

Course Fees (including learning kit) of Rs. 6,000/- plus GST of 18%. Final year Students of the CMA course for an amount of Rs. 4,500 plus GST of 18%.

Special Discount for Corporates
For number of employees 5-10, discount is 15%. For number of employees more than 10, discount is 20%

Examination

Rs. 750 plus GST per attempt.

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Certificate Course on Credit Management of Banks

Detailed Course Content (Syllabus-2024)

1. Introduction & Overview of Credit (Module 1)

a. **Principles of Lending:** Safety, Liquidity, Profitability, Purpose of the Loan, Diversification Risk.
b. **Credit. Policy:** Importance, Contents, Exposure Norms.
c. **Types of Borrowers:** Individuals, Proprietorship Firms, Partnership Firms, Private & Pubic Limited Companies, Limited Liability Partnerships (LLP).
d. **Types of Credit Facilities:** Various Types of Credit Facilities-Cash Credit, Overdrafts, Demand Loan, Term Loans, Bills Discounting.
e. **Credit Delivery:** Sole Banking Arrangement, Multiple Banking Arrangement, Consortium Lending, Syndication.
f. **Environmental Appraisal:**
Physical Risks: Flood Risk – Drought / Water Scarcity Risk – Storms Risk – Extreme Heat Risk – Wildfires Risk – Other Risks.
Transition Risks: Emissions / Intensity Risk (Scope 1 & 2) - Emission / Intensity Risk (Scope 3) – ESG – Indicators / Rating (Third Party).
g. **Credit Appraisal:** Validation of proposal, Dimensions of Credit Appraisals, Credit Risk, Credit Worthiness of Borrower, Purpose of Loan, Source of Repayment, Cash Flow, Collaterals, Guidelines on CERSAI.
h. **Project / Term Loan Appraisal:** Technical Appraisal, Commercial / Market Appraisal, Managerial Appraisal, Financial Appraisal, Economic Appraisal, Project Cost & Means of Finance, Cost of Production & Profitability, Sensitivity Analysis, Break-even Analysis, Capital Budgeting-Pay Back Period Method, Time Value Money, Net Present Value, Internal Rate of Return, Life of the Project.
i. **Credit Rating:** Objective of Rating, Internal & External Rating, Model Credit Rating, Measurement of Risk, Methodology of Rating, Internal & External Comparison, Model Rating Formats.
j. **Documentation:** Meaning, Importance, Types of documents, Requisites of documentation, stamping of different documents, Mode and time of Stamping, Remedy for un-stamped / under stamped documents, Documents of which registration is compulsory, Time limit of registration, Consequence of non-registration, Execution, Mode of Execution by different executants, Period of Limitation, Law of Limitation to Guarantor, Extension of period of limitation.
k. **Types of Charges:** Purpose, Various types of charges, Types of Security, Mode of charge, Lien, Negative Lien, Set Off, Assignment, Pledge, Right of Banker as a Pledgee, Duties as a Pledgee, Mode of Charges, Hypothecation, Mortgage - different types of mortgages, Difference between Simple and Equitable Mortgage.

2. Analysis of Financial Statements (Module 2)

a. **Analysis of Financial Statements:** Classification of Assets & Liabilities, Current Assets, Fixed Assets, Non-current Assets, Intangible & Fictitious Assets, Liabilities-Current Liabilities, Medium & Term Liabilities, Capital & Reserve.
b. Analysis of Profit & Loss Account, Auditor's Note.
c. **Ratio Analysis:** Classification of Ratios, Liquidity Ratios, Leverage Ratios, Activity Ratios, Profitability Ratios, Interpretation of important Financial Ratios, Fund Flow Statements and Cash Flow Statements.

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Certificate Course on Credit Management of Banks

3. Working Capital Management (Module 3)

a. **Working Capital Assessment:** Concept of Working Capital, Gross Working Capital, Net Working Capital, Working Capital Gap, Components of Working Capital, Source of Working Capital, Operating / Working Cycle, Various Methods of Assessment of Working Capital, Computation of Working Capital - Turnover Method, MPBF Method, Cash Budget System, Analysis of CMA Data.
b. **Quasi Credit Facilities:** Advantages of Non-Fund Facilities, Various types of NFB Facilities, Various types Letter of Credits, Assessment of LC limits, Bills Purchase / Discounting under LC.
c. **Various types of Bank Guarantees:** Performance Guarantee, Financial Guarantees, Deferred Payment Guarantees, Types of Performance and Financial Guarantees, Assessment of Bank Guarantees Limit, Period of Claim under Guarantee.

4. Other Credits (Module 4)

a. **Export Finance:** Pre-Shipment Finance-Export Packing Credit in Rupees, Pre-Shipment Credit in Foreign Currency (PCFC), Post Shipment Rupee Export Finance, Purchase / Discount of Export Bills, Negotiation of Export Bills, ECGC Coverage in Export / Import Finance.

5. Monitoring, Supervision, Follow-up & Management of Impaired Assets (Module 5)

a. **Credit Monitoring, Supervision, Follow-Up:** Credit Monitoring-Check-list, Monitoring by using Various Statements, QIS Formats / Guidelines, Supervision & Follow Up Loans.
b. **Expected Credit Loss (ECL):** Introduction & Evolution of Provisioning of Banks in India- Incurred Loss Approach Vs. Expected Credit Loss Approach- "Loan Loss Provisioning based on ECL -IFRS 9-Calculation of ECL on Retail / Commercial Advances Examples.
c. **Management of Impaired Assets:** Income Recognition and Assets Classification, Guidelines, Provisioning Norms for NPA, Wilful Defaulters, Compromise, Legal Action, Lok Adalat, Debt Recovery Tribunal, SARFAESI Act, 2002, IBC-2016, Loans Write-Off.

Contact for further queries

CMA Dibbendu Roy, Additional Director & HoD at bfsi.hod@icmai.in
CMA Dr. Aditi Dasgupta, Joint Director at bfsi@icmai.in

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Banking, Financial Services & Insurance Board

CERTIFICATE COURSE ON CONCURRENT AUDIT OF BANKS

BROCHURE

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Course Objective

The Banking, Financial Services and Insurance Board is pleased to offer **Certificate Course** on **"Concurrent Audit of Banks"** for Officials of Regional Rural Banks and Small Finance Banks to enable participants to understand the intricacies of Concurrent Audit of Banks.

This course aims to impart in-depth knowledge on concurrent audit of banks and to help the participants to acquire with the knowledge/skills to undertake related assignments/Special Audits of the Banks like:

- Income Leakage Audit
- KYC/AML Audit
- Treasury Department Audit
- Staff Accountability Exercise in respect of Failed/NPA Advances at incipient Stage
- To supplement the effort of the Banks in carrying out Internal Audit of the Transactions and other Verifications and Compliance with the Systems and Procedures laid down by the Banks and RBI

Online Admission Link:
https://eicmai.in/advscc/DelegatesApplicationForm.aspx

CEP Hours: 10 hours
for members of The Institute of Cost Accountants of India

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FCMA/ACMA/those who have qualified Final CMA examination, Bank Officer or Ex-Bank Officer.

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a) Classroom Learning of 3 hours per day in the Weekend through online mode
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Course Fees (including learning kit) of Rs. 5,000/- plus GST of 18 %.

Special Discount for Corporates
For number of employees 5-10, discount is 15%. For number of employees more than 10, discount is 20%

Examination

Rs. 750 plus GST per attempt.

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Certificate Course on Concurrent Audit of Banks

Detailed Course Content (Syllabus-2024)

1. Types of Audits in Banks Sector.
- 1.1 Risk Focused Internal Audit (RFIA).
- 1.2 Credit Audit / Stock & Book Debts Audit /Statutory Audit.
- 1.3 Concurrent Audit / e-Concurrent Audit etc.

2. Role of Concurrent Auditor.
- 2.1 Verification of Deposit, Advance Accounts.
- 2.2 Verification of Locker System, Cash Department Procedures, Alternative Delivery Channels etc.
- 2.3 Unit Inspection, End-use of Funds, Staff Accounts etc.

3. Credit, Market and Operational Risks.
- 3.1 Credit Risk Areas.
- 3.2 Market Risk Areas.
- 3.3 Operational Risk Areas.

4. Loans and Advances.
- 4.1 Demand Loans.
- 4.2 Term Loans.
- 4.3 Overdrafts, Working Capital Loans and Working Capital Term Loans.
- 4.4 Home Loans, Car Loans, Personal Loans, Mortgage Loans, Education Loans etc.

5. Credit Process: Pre-sanction, Sanction & Post-sanction.
- 5.1 KYC, Verification of Application / Project Report, CIBIL, CIC Reports.
- 5.2 Appraisal, Projections etc.
- 5.3 Verification of Proposal, Sanction and Submission of Control Forms.
- 5.4 Documentation, Types of Charges, Equitable Mortgage, Disbursement, etc.

6. Pre-shipment and Post-shipment Finance.
- 6.1 UCPDC Guidelines – FEDAI Guidelines – FEMA Guidelines.
- 6.2 Pre-shipment packing credit Advance.
- 6.3 Discounting of Export Bills / Import Bills payment etc.

7. Common Serious Lapses in Sanction, Follow-up & Documentation.
- 7.1 Delegation of Powers.
- 7.2 Take-over Norms.
- 7.3 Wrong Documentation.
- 7.4 Stock Statements, Insurance for both Primary and Collateral Security, Monitoring of SMA-0 to SMA-2 Accounts.

8. Legal and Regulatory Frame.
- 8.1 RBI Act and Banking Regulation Act.
- 8.2 Limitation Act.
- 8.3 Registration Act.
- 8.4 Indian Stamp Act.
- 8.5 Limitation Act.
- 8.6 SARFEASI Act and CERSAI etc.
- 8.7 KYC/AML Guidelines.

9. IRAC Provisioning Norms.
- 9.1 Classification of Advances.
- 9.2 Provision requirements.

10. Non-fund-based Business
- 10.1 Types of Bank Guarantees.
- 10.2 Types of Letters of Credits.
- 10.3 Margins, Collateral Security, Standard formats of BGs / LCs, Commission on BGs / LCs.

11. Operational Risk Management – ORM-I
- 11.1 Job Rotation–Staff Attendance-Branch Documents–Security Forms.
- 11.2 Security Systems (Fir-Extinguisher, Smoke Detectors, Gun Licences etc.), Currency Chest Fitness Certificate–Disaster Recovery Management– Business Continuity Plan etc.
- 11.3 Safe Deposit Lockers, Safe Deposit Articles, Deceased Claims Settlement etc.

12. Operational Risk Management – ORM-II
- 12.1 Complaints–Banking Ombudsman–Customer Forums.
- 12.2 Branch Duplicate Keys–Reconciliation of Office Accounts–Parking Accounts–Recovery of Service Charges–Income Leakages etc.
- 12.3 Display of Import Notice Boards–Cheque Truncation System–Complaints and Suggestion Box–Police Beat–ATM Cash Replenishment Outsourcing Agencies (Service Level Agreements).

13. Forex Transactions.
- 13.1 Opening of NRE / NRO / FCNR / RFC accounts.
- 13.2 Purchase & Sale of Foreign Currency Cheques / Currency / Export & Import Bills–Forex Rates.
- 13.3 Submission of R-Returns to RBI.
- 13.4 Verification of SWIFT Message Inward / Outward Remittances.
- 13.5 Nostro, Vostro and Loro Accounts etc.

14. Detection, Classification & Reporting of Frauds
- 14.1 Classification of Frauds–Internal & External Frauds.
- 14.2 Provisions / Recovery Efforts of Frauds.
- 14.3 Disciplinary action initiation / Reporting of Frauds to RBI through On-line.

15. Tools for Concurrent Audit of Banks
- 15.1 Bank Systems and Procedures / Standard Operating Procedures.
- 15.2 Current Chest Guidelines of RBI.
- 15.3 Delegation of Financial Powers.
- 15.4 Service Charges etc.

16. Audit in CBS Environment.
- 16.1 Core Banking System-Major functionalities.
- 16.2 Reports Generated by CBS like Exceptional Reports, Suspicious Transactions Reports etc.
- 16.3 Treasury Management Solutions-Front, Mid and Back-office Reports etc.

17. ESG Lending Audit.
- 17.1 Overview of Sustainability-linked Loans.
- 17.2 Principles of Sustainability-linked Loans.
- 17.3 Value Statements of Social and Environment Audit.

18. Expected Credit Loss Provisions.
- 18.1 Expected Credit Loss (ECL) Framework.
- 18.2 Verification of Stage-1, Stage-2 and Stage-3 Loan Portfolio by Auditors.
- 18.3 Implementation of Regulatory Guidelines on ECL.

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Certificate Course on Concurrent Audit of Banks

Contact for further queries

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Banking, Financial Services & Insurance Board

CERTIFICATE COURSE ON

TREASURY AND INTERNATIONAL BANKING

BROCHURE

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

Statutory Body under an Act of Parliament

www.icmai.in

Behind Every Successful Business Decision, there is always a CMA

Certificate Course on Treasury and International Banking

About The Institute

The Institute of Cost Accountants of India was first established in **1944** as a registered company under the Companies Act with the objects of promoting, regulating and developing the profession of Cost Accountancy. On **28th May, 1959,** the Institute was established by a special **Act of Parliament,** namely, the **Cost and Works Accountants Act, 1959** as a statutory professional body for the regulation of the profession of Cost and Management accountancy. The Institute is under the administrative control of **Ministry of Corporate Affairs, Government of India.**

The Institute has since been continuously contributing to the growth of the industrial and economic climate of the country. The Institute is the only recognised statutory professional organisation and licensing body in India specialising exclusively in Cost and Management Accountancy.

International Affiliation

The Institute of Cost Accountants of India is Founder member of International Federation of Accountants (IFAC), Confederation of Asian & Pacific Accountants (CAPA) & South Asian Federation of Accountants (SAFA). The Institute, being the only institution from India, is a member of the Accounting Bodies Network (ABN) of The Prince's Accounting for Sustainability (A4S) Project, UK and International Valuation Standards Council (IVSC), UK.

Institute's Strength

The Institute is the largest Cost & Management Accounting body in the World, having a large base of about 1,00,000 CMAs either in practice or in employment and around 5,00,000 students pursuing the CMA Course.

Institute's Network

Institute's headquarters is situated at Kolkata with another office at New Delhi. The Institute operates through four Regional Councils at Kolkata, Chennai, Delhi and Mumbai as well as through 117 Chapters situated in India, 11 Overseas Centres abroad, 2 Centres of Excellence, 61 CMA Support Centres and 401 Recognized Oral Coaching Centres.

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Course Objectives

Treasury Management is an essential function of a Bank or any Entity dealing with Large volume of funds. With the increased Globalization of Markets, it has become essential to have an in-depth knowledge of the functioning of the Domestic Money and Debt Markets as also the Foreign Exchange Markets for effective management of funds. On account of several Policy measures undertaken by Reserve Bank of India (RBI) and other Regulatory Authorities, different segment of financial markets (Money, Securities, Foreign Exchange and Derivatives Markets) have witnessed significant growth and development in terms of new financial instruments, number of players, volume of business, etc.

In the light of such developments, treasury functions in Banks, FIs and Corporates have grown manifold and therefore have become challenging to manage. Therefore, it has become indispensable for Banks, Financial Institutions and Corporates to make their newly inducted treasury officers well versed with various segment of the financial market, different products and operations, so that they not only serve their clients better, but also manage the risks inherent in Treasury.

Practicing CMAs who dealing with their Clients are in one way or other linked to Finance and Financial related Issues. Hence, they should possess Good knowledge of 'Treasury Operations', so that they can provide Value Addition Services to their Clients. Treasury Operations of Banks and Commercial Organizations are more are less with difference of Regulatory Compliance. Even in small business entities, Treasury Operations helps a lot to minimize the Cost of Borrowings and Maximize the Yield on Investments etc.

In addition to the above, this course is also useful to CMAs who are: -

- Empanelled with Banks for Treasury Audit and Forex Audit.
- For Forensic Audit of Treasury Operations / Forex Operations in Banking Industry
- In Credit Audit, if the Bank Sanctions Loans to Clients like Pre-shipment and Post Shipment Packing Credit Advance, this course is also useful.
- And also, useful to take up the Assignments like 'Concurrent Audit in Treasury Department' of Banks, Commercial entities etc.

The Course provides a holistic insight into the various dimensions in Bank Treasury and Forex Operations.

Online Admission Link:
https://eicmai.in/advscc/DelegatesApplicationForm.aspx

CEP Hours: 10 hours
for members of The Institute of Cost Accountants of India

Course Eligibility

FCMA/ACMA/those who have qualified Final CMA examination, Final year Students of the CMA Course/Any Graduate.

Course Duration

a) Classroom Learning of 3 hours per day in the Weekend through online mode
b) 50 Hours on-line Coaching.
c) 2 months course
d) Online Examination for 100 marks

Course Fees

Course Fees (including learning kit) of Rs. 6,000/- plus GST of 18%. Final year Students of the CMA course for an amount of Rs. 4,500 plus GST of 18%.

Special Discount for Corporates
For number of employees 5-10, discount is 15%. For number of employees more than 10, discount is 20%

Examination

Rs. 750 plus GST per attempt.

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Certificate Course on Treasury and International Banking

Syllabus

SECTION - 1

a. Introduction to the Money Market:

- ✓ Economic Function-Definition-Classification of Intermediaries
- ✓ Types of Markets-Participants-Nature of Domestic Market
- ✓ Repurchase Agreements

b. Capital Markets:

- ✓ Economic Function
- ✓ Classification of Instruments-by Issuer and Types
- ✓ Principles of Valuation

c. Foreign Exchange Markets:

- ✓ Introduction-Definitions-Direct and Indirect Quotations: Cross Rates, Factors affecting Exchange Rates
- ✓ Relationship with Market Operations-Financing Spot Operations Interest Arbitrage-Forward-Forward Business
- ✓ Forward Transactions-Factors affecting / influencing forward rates
- ✓ Premiums: Discounts, Forward Cross Rates
- ✓ Swap Transactions
- ✓ Outright Deals

d. External Markets:

- ✓ External Commercial Borrowings
- ✓ GDRs / ADRs

e. Derivatives Markets:

- ✓ Introduction – Definition and Characteristics of FUTURES, SWAPS and OPTIONS
- ✓ Elementary Hedge Applications

SECTION - 2

a. Scope and Function of Treasury Management:

- ✓ Objectives of Treasury
- ✓ Structure and Organisation
- ✓ Responsibilities of Treasury Manager

b. Cost Centre / Profit Centre:

- ✓ Financial Planning and Control
- ✓ Capital Budgeting
- ✓ Risk Analysis

c. Liquidity Management:

- ✓ Objectives
- ✓ Sources of Liquidity
- ✓ Maturity Concerns: Projected Cash Flow and Core Sources Contingency Plans
- ✓ Short term and Long-term Liquidity
- ✓ Maturity Ladder Limits
- ✓ Internal Control – The Need and Importance – Financial and Operational risks – Internal vs External Control Segregation of Duties among Front and Back Offices – Management Information – Netting

d. Treasury's Role in International Banking:

- ✓ Changing Global Scenario and Treasury Functions
- ✓ Treasury Structure- Front and Back Office
- ✓ Control of Dealing Operations – Trading Limits – Trading and Operational Policy – Moral and Ethical aspects
- ✓ Confirmations

e. Revaluation Mark to Market and Profit Calculations:

- ✓ Supervision and Exchange Control Departments
- ✓ RBI requirements
- ✓ Recent Developments in the Central Bank's Policy Framework

f. ESG Investments Trading:

- ✓ What is ESG Investing?
- ✓ How does ESG investing work?
- ✓ Why it is important to consider the environment while investing?
- ✓ How important it is to consider socially aware companies while investing?
- ✓ How important role does a company's corporate governance place for investors?
- ✓ Issuance requirements of Green Bonds.

SECTION - 3

a. Introduction:

- ✓ Meaning of Risk in Banking Operations-Financial and Non-Financial Risks
- ✓ Risk Process
- ✓ Key Risks in Relation to Treasury Management – Interest Rate Risk, Currency Risk, Liquidity Risk, Credit Risk and Operational Risk

Certificate Course on Treasury and International Banking

Syllabus

b. Measurement and Control of Risk:

- ✓ Identifying Measures and Controlling Risk – Statistical Methods
- ✓ Risk Exposure Analysis
- ✓ Risk Management Policies
- ✓ Fixation and Delegation of Limits
- ✓ Different Limits- Open Position / Asset Position Limits/ Deal Size/Individual Dealers/Stop Loss Limits

c. Assets Liability Management:

- ✓ Components of Assets and Liabilities – History of AL Management
- ✓ Organisational and Functions of ALCO
- ✓ Management and Interest rate Exposure / Liquidity
- ✓ Risk Adjusted Return on Capital
- ✓ Capital Adequacy Concerns

d. Hedging the Risk:

- ✓ Forward, Futures and Options Market
- ✓ Mechanics of Futures
- ✓ Foreign Currency Futures Market
- ✓ Options Market- Options Strategies
- ✓ Hedging Strategies and Arbitrage
- ✓ Call Options and Put Options

Contact for further queries

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CMA Dr. Aditi Dasgupta, Joint Director at bfsi@icmai.in

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ONLINE CERTIFICATE COURSE IN

INVESTMENT MANAGEMENT

(With Exclusive Hands on Trading in NSMART Lab)

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Certificate Course in Investment Management

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Institute's Strength

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Vision Statement

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Mission Statement

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About NSE Academy

"NSE Academy Limited is a wholly owned subsidiary of the National Stock Exchange of India Limited (NSE). NSE Academy Limited enables the next generation of BFSI and FinTech professionals with industry-aligned skills – through capacity building programs and certification courses, powered by an online examination and certification system. The courses are well-researched and carefully crafted with inputs from the industry professional. NSE Academy Limited works closely with reputed universities and institutions across India in building a competent workforce for the future of BFSI and FinTech. NSE Academy Limited also promotes financial literacy as an essential life skill among youngsters – a contribution towards financial inclusion and wellbeing.

For more information visit: *https://www.nseindia.com/"*

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Behind Every Successful Business Decision, there is always a **CMA**

Certificate Course in Investment Management

Powered by NSE Academy

ONLINE CERTIFICATE COURSE IN INVESTMENT MANAGEMENT

(With Exclusive Hands on Trading in NSMART Lab)

Course Objective

The course aims at providing a better understanding of the Investment decision making process and strategies for investment, with emphasis on equities, equity derivatives and mutual fund investments. The course helps to develop fundamental skills for successful investment by providing insights into how the models can be applied in the real world dynamic environment. Provides an exposure to trading simulations through the NSMART Lab.

Course Outline

The course is divided into **3 levels.** Each level can be taken separately and completed based on the needs and priorities of the participants. The contact classes and hands on practice time for **Level 1** will be **20 hours** and **Level 2** and **Level 3** will be **30 hours** each. All three levels put together aim at providing a holistic view of investment management and help in preparing for different roles offered by capital market intermediaries.

Fundamental Analysis & Valuations: 20 hrs – Level 1

Course Outline:
- Fundamental Analysis: An Introduction
- Brushing the basics
- Understanding Financial Statements
- Valuation Methodologies

Mutual Fund and Market Analysis with Technical: 30 hrs – Level 2

Mutual Fund
- Investment Landscape in India
- Concept and Role of Mutual Funds
- Legal Structure and Regulatory Framework
- Mutual Fund Offer Documents
- Channel Management Practices
- Valuation and Taxation
- Investor Services
- Mutual Fund Scheme Selection

Technical Analysis
- Introduction To Technical Analysis
- Candle Charts
- Pattern Study
- Major Indicators & Oscillators Trading Strategies
- Dow Theory and Elliot Wave Theory
- Trading Psychology and Risk Management
- Hand on session covering above topics

Financial Derivatives & its application: 30 hrs – Level 3

- Basics of Derivatives
- Understanding Index
- Introduction to Forwards, Futures and Options
- Option Trading Strategies and Systems
- Clearing and Settlement
- Legal and Regulatory Framework
- Taxation and Sales Practices
- Investor Protection Services
- Hands on session: Building derivative strategies & execution

Eligibility

- Students pursuing CMA Course (Foundation/Intermediate/Final)
- Qualified CMAs and members of the Institute of Cost Accountants
- Student with non-commerce or non-accounting bachelor's degree

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Certificate Course in Investment Management

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Course Fees

Module	Level 1	Level 2	Level 3
Course Name	Fundamental Analysis & Valuations	Mutual Fund and Market Analysis with Technical	Financial Derivatives & its application
Training hours per batch	20	30	30
Add-ons	NKH	NKH & NSMART	NKH & NSMART
Mode of Delivery	Online	Online	Online
Total Course Fees (including GST) per candidate	₹4791	₹6844	₹8213

Key Features

- Delivered online through WebEx platform by experienced faculty from NSE Academy
- Webex platform Offers opportunity for participant interaction and Q&A through chat box, questions etc
- Exposes the participants to the dynamic trading environment through lab based sessions
- Brings real world experiential learning to the classroom
- Course offers unique hands on trading and investment experience through the NSMART Lab
- Access to the NSMART Lab for self-study, assignment and hands on practice sessions as per market working hours on working days and Saturdays.
- Rigour maintained through periodic assessment – online quiz and lab based assignments

Assessment for Each Level

- Attendance - with weightage of 30%
- Quiz - with weightage of 30%
- Assignment - with weightage of 40%

Also, the program will be on webex platform and software is accessible on Windows Operating System of 7 and above. Good internet connectivity is a must for participants and connection must be through desktop/laptop

For more details

Course Coordinator from BFSI Department

CMA Dibbendu Roy - Additional Director, HoD & Secretary, BFSIB
E-mail: *bfsi@icmai.in* ; **Mobile:** 96434-43047
&
Mr. Vishwajeet Banick
E-mail: *vbanick@nse.co.in* ; **Mobile:** 98314-99052

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NSE Academy

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Advance Certificate Course on FinTech | The Institute of Cost Accountants of India

About The Institute

The Institute of Cost Accountants of India (ICMAI) is a statutory body set up under an Act of Parliament in the year 1959. The Institute as a part of its obligation, regulates the profession of Cost and Management Accountancy, enrols students for its courses, provides coaching facilities to the students, organizes professional development programmes for the members and undertakes research programmes in the field of Cost and Management Accountancy. The Institute pursues the vision of cost competitiveness, cost management, efficient use of resources and structured approach to cost accounting as the key drivers of the profession. In today's world, the profession of conventional accounting and auditing has taken a back seat and cost and management accountants increasingly contributing towards the management of scarce resources like funds, land and apply strategic decisions. This has opened up further scope and tremendous opportunities for cost accountants in India and abroad.

International Affiliation

The Institute is a founder member of International Federation of Accountants (IFAC), Confederation of Asian and Pacific Accountants (CAPA) and South Asian Federation of Accountants (SAFA). The Institute is also an Associate Member of ASEAN Federation of Accountants (AFA) and member in the Council of International Integrated Reporting Council (IIRC), UK.

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Course Objective

The Banking, Financial Services and Insurance Board is pleased to offer **"Advance Certificate Course on FinTech".** It is pertinent to mention that there is a significant demand for FinTech-qualified individuals in GIFT City, Gandhinagar, and Ahmedabad. India's inaugural International Financial Services Centre (IFSC) at GIFT City offers Indian corporates expanded access to Global Financial Markets. Entities Established within the IFSC also enjoy numerous Tax Benefits. IFSCs play a Crucial Role in Fostering the development of "Fintech Hubs". Given the substantial number of Indian Professionals Working in "FinTech Abroad", India has the Potential to Emerge as a Prominent "Fintech Hub".

This Advanced Certificate Course on **FinTech** covers the following Learning Objectives:

- Foundations of Fintech.
- Deep Dive into Blockchain.
- Fintech Innovation in Banking.
- Fintech Transforming Wealth Management.
- Fintech Revolutionising Insurance.
- Exploring New Frontiers of Fintech.

Course Eligibility

CMAs, Bankers (including Payment Banks, Small Finance Banks, Regional Rural Banks, Co-operative Banks, NBFCs., Scheduled Commercial Banks (Private Sectors, Public Sector and Foreign Banks), CMA Final Students, Graduates, IT Professionals.

Course Duration

a. Classroom Learning of 2 hours per day in the Weekend through online mode
b. 50 hours online Coaching
c. 3 months' course
d. Online Examination for 100 marks

Course Fees

Course Fees (including learning kit) of Rs. 10,000/- plus GST of 18%

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Advance Certificate Course on FinTech | The Institute of Cost Accountants of India

Detailed Course Content

1: Introduction to Fintech.

- Cloud Computing and APIs.
- Opensource Architecture.
- Blockchain Technology and DApps.
- Business Intelligence: AI & ML.
- Cyber Security.
- Generative AI.

2: Technology Innovation & Fintech Evolution.

- Understanding Financial Crisis.
- The building blocks of Blockchain.
- Public versus private blockchain.
- Understanding Smart Contracts.
- Web 2.0 versus Web.
- Decentralized finance.

3: Blockchain.

- Fintech and Disruption in Banking.
- Banking as a Service Model.
- Loan Apps and P-2-P lending.
- Open Banking Architecture.
- Case Study.

4: Fintech and Banking.

- Robo-advising: The Digital Financial advisor
- Goal Based Investing
- Disintermediation of Asset Management
- Digital transformation of Wealth Management
- Case Study

5: Fintech and Asset Management.

- Usage based Insurance and Microinsurance
- Machine Underwriting and Smart Contracts
- Probabilistic to Deterministic Models
- Insuring the uninsured
- Case Study

6: Fintech and Insurance.

- Global Payment Ecosystem
- Payment and Digital Wallets
- Programmable Payments
- B2B and B2C Payment services
- Case Study

7: Fintech and Payments.

- iCOs, Bitcoin, and beyond
- Cyrpto as an asset class
- Crypto Trading Strategies
- Non-Fungible Tokens
- Case Study

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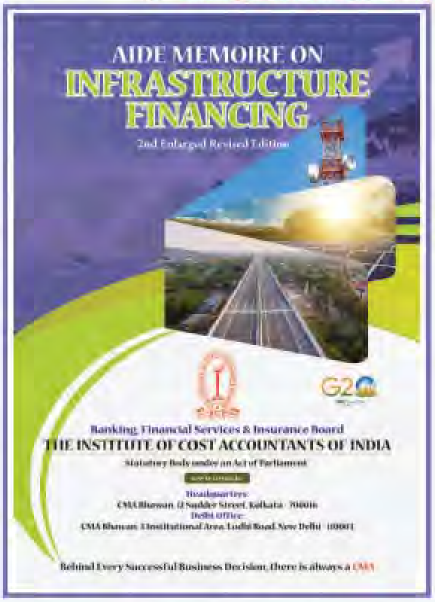
Aide Memoire on INFRASTRUCTURE FINANCING

(2nd Enlarged Revised Edition)



Infrastructure is the backbone of any economy. It is a well recognised fact that Infrastructure has a multiplier effect on the holistic development and rapid sustainable growth.

A Robust Infrastructure Finance mechanism therefore assumes utmost importance in the entire Eco system.

Synopsis - Salient Features of the book

- A one stop, single reference point, in the niche area of Infrastructure Finance.
- The book covers the basic theoretical concepts as also the real nitty gritty of processes & procedures and nuances involved in Infrastructure Finance with all the relevant topics which include the following:-
  - Definition of Infrastructure sector-Harmonised master list of infrastructure sub -sectors, as notified by Department of Economic Affairs, Ministry of Finance, Definition under Companies Act 2013 and under Income Tax Act 1961.
  - Elements of Financing Infrastructure.
  - Types of Public Private Partnership (PPP) models.
  - Formation of the Special Purpose Vehicle (SPV) and Key project documents/structure for Infrastructure Finance.
  - Financing mechanism consortium/syndication.
  - Credit appraisal process-covering management appraisal, economic appraisal, marketing appraisal, technical appraisal and Financial appraisal.
  - In depth analysis of cost of project and means of finance with specific reference to Infrastructure projects, including interest during construction (IDC), Debt Service Reserve Account (DSRA) etc.
  - Key performance indicators including financial indicators and non financial indicators. This includes detailed discussion on all financial ratios for long term funding like DSCR, IRR, BEP and concepts like ESG compliances.
  - Detailed discussion on the intricacies involved in appraisal and sanction, including various aspects of concession agreement, Power Purchase agreement, Escrow agreement, Fuel supply agreement Inter creditors agreement etc
  - Assessment of various Risks involved in infrastructure finance like sponsor risk , construction risk,market risk, financial risk etc and mitigation thereof.
  - Detailed Case studies on the following projects
    - Road sector -Hybrid annuity (HAM)model -New Project
    - Road sector- Toll Operate Transfer (TOT) model-Funding against existing project as a part of Asset Monetization Plan.
    - Renewable Energy sector - Solar Power Plant-New Project.
  - Case studies on Credit Risk Mitigation
    - Waste to Energy Project
    - Water supply management project.
    - Railway station Redevelopment project.
  - Project monitoring and performance audit of infra projects
  - Restructuring, management of weak accounts and NPA accounts.
  - Infrastructure thrust by Government of India- National Infrastructure pipeline , National Monetization Pipeline, NABFID and Atmanirbhar Bharat
  - Alternate sources of funding including InvITs, IDFs, Securitisation, Credit, Enhancement etc
  - ESG risks and mitigation measures, sustainable finance, energy transition and BRSR
  - Urban infrastructure - the way forward
  - Methodology for pricing of loans
  - Preventive vigilance
- Enthused by the overwhelming response and positive feedback to first edition of the book, the second enlarged and revised edition covers additional contemporary topics on
- 'ESG and Sustainable Finance' and
- 'Urban Infrastructure', besides additional sections on other relevant issues of infrastructure.

BOOK IS NOW AVAILABLE

Members & Students of the Institute of Cost Accountants of India are eligible for 20% discount on the book price

Online purchase can be made as per the following link:

https://eicmai.in/booksale_bfsi/Home.aspx

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FINANCIAL SNIPPETS

- Four nominees are allowed by an account holder in a Bank Account as per The Banking Law (Amendment) Bill, 2024
- RBI issues norms to improve safety of payment systems
- RBI issues two-factor check norms for digital payment transactions
- RBI has proposed the 'on-realization- settlement Cheque truncation system for faster clearing of cheques.
- RBI has proposed risk-based pricing for Bank Deposit Insurance
- RBI allows forex accounts in GIFT City
- RBI revises master directions on fraud risk management for regulated entities including RRBs, cooperative banks,NBFCs and others.
- RBI planning to include deposit insurance coverage for green deposits, climate risk based differential premiums and ex-ante funding needs for climate sustainability.
- RBI revises domestic money transfer norms from 1st November, 2024.
- IRDAI directs all insurance companies to upload the verified KYC information the website of Central Records Registry for transparency and security.
- IRDAI issues a master circular on submissions of periodic returns with one single reference.
- IRDAI lists new guidelines for Corporate Governance for insurers
- LIC Chairman redesignated to MD & CEO.
- SEBI has proposed to raise the threshold for a basic service demat account fivefold to Rs. 10 lakhs to achieve wider financial inclusion.
- Four PSU Banks presented dividend of Rs.6481 crore to Government of India for 2023-24
- SEBI is setting up two new Institutions-Performance Validation Agency and Data Benchmarking Institution for better information to investors.
- Mutual Funds crosses Asset Under Management above Rs. 10 lakh crore

Contact Details

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CMA Dibbendu Roy, Addl. Director, Secretary & HoD
Banking, Financial Services & Insurance Board - 96434 43047

CMA (Dr.) Aditi Dasgupta, Joint Director - 9831004666

E-mail: bfsi@icmai.in, bfsi.hod@icmai.in

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