

## **Digital Transformation of Indian Public Sector Banks**

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The Indian Public Sector Banks (PSBs) are undergoing digital transformation with a notable shift towards modernisation and high customer satisfaction. Embracing this transformation and innovation, PSBs are leveraging advancements such as UPI, cloud computing, AI/ML, data analytics, robotics, and metaverse to enhance operations, personalise offerings, and improve decision-making.

However, this transformation is not without challenges, including legacy infrastructure, data security concerns, talent shortages, and competition from other players. PSBs are positioned to navigate these challenges, expand digital services, and drive India's economic development. Additionally, their exploration of the Open Network for Digital Commerce (ONDC) and innovative approaches to the Digital Rupee, is creating a customer-centric digital ecosystem for tech-savvy India.

Being the center of the Indian banking industry, PSBs are taking a leap with digital transformation and innovation to align themselves with the rapidly changing banking landscape. At its core, this means upgrading CBSs. Customer centricity, leadership commitment, talent development, partnerships, and agile methodologies are other critical aspects of this transformation. In one example Indian Bank partnered with IBM to speed up its journey to modernisation by providing flexible and secure compute infrastructure for rolling out new front-end banking applications that address business growth of CBS workloads for the bank. It enabled real-time transactions on mobile apps while supporting data analytics and being seamlessly linked with other banking platforms.

## **Adoption Drivers and Evolving Trends**

The adoption rate of digital transformation has increased significantly due to several advantages, including optimised efficiency through process reengineering that reduces manual tasks and costs incurred. This enables easy cashless transactions without cumbersome intermediaries and other additional charges. For instance, a bank spends an average of Rs 40 for each transaction conducted at a branch. If a customer uses the ATM facility, the cost drops to Rs 18-20 per transaction, which is still much higher than the cost of online banking. The advancements in systems and digital channels increase customer bases and provide them with a more satisfying and

~72% of transactions of PSBs were done through digital channels, with customers active on digital channels having doubled between FY2020 and FY2021.

convenient experience. Not only are the banks evolving, but they are overreaching to shape the future of operations. For instance, Union Bank of India has created "Uni-verse," a metaverse platform where customers can choose their avatars to enter the lounge and interactively browse the bank's various products and services. It has further re-imagined the Virtual Lounge by incorporating additional services to enhance the user and customer experience.



**Government interventions** play a crucial role in the digitalisation of PSBs through initiatives such as Digital India, which encourages digital payments. The foundation of this shift towards digital payments was laid in 2009 through the policy initiative of setting up a digital public infrastructure called IndiaStack. Unified Payments Interface (UPI), a part of IndiaStack and one of the most used digital payment platforms in India, reported 1,200 crore transactions in February 2024. Other positive policy interventions like Open Credit



Enablement Network (OCEN) and ONDC are responsible for the conscious and conspicuous acceleration of digital adoption among PSBs. The Reserve Bank of India (RBI) backed Central Bank Digital Currency (CBDC) or Digital Rupee has received a positive response from customers; for instance, SBI recorded ~900,000 transactions in a year after its launch in December 2022.

Digital transformation in PSBs is also driven by the need to comply with regulatory requirements. Regulatory bodies, such as the RBI and the Securities and Exchange Board of India (SEBI), increasingly emphasise technology for compliance, risk management, and fraud prevention. Digital tech helps these banks meet regulatory requirements more effectively.

PSBs are facing increasing competition not just from other traditional banks but also from neo-banks, fintech startups, digital banks, and non-banking financial companies (NBFCs). In September 2023, fintechs captured 70% of overall digital payment transactions. Fintechs have captured a significant share in payment gateways, small ticket personal loans, or the Buy-Now-Pay-Later (BNPL) market. They also have a rapidly growing market share in the card issuing business and wealth & insurance distribution segment. To retain market share and attract customers, PSBs need to transition from traditional physical branches to digital banking channels.

According to the study 'Trends in, and progress of, banking in India', published by the RBI, in the end of June 2023, 11 out of 12 PSBs had some form of chatbot and virtual assistant by using AI and ML technologies.

To increase the pace of digital transformation, PSBs are leveraging data analytics and AI technologies to gain insights into customer behaviour, enhance credit risk assessment, and personalise offerings, enabling better decision-making and improving customer satisfaction and profitability. For instance, by using ILA or Interactive Live Assistant for State Bank of India (SBI) Cards, everyone can chat effortlessly to learn about card features, advantages, services and much more. They adopted this conversational generative AI system which helped them generate over 130k leads and increase top-line revenue. The bank also announced its plans to leverage AI and ML to enhance its decision-making processes and operations by deploying NextGen Data Warehouse and Data Lake.



In terms of the adoption of technology and digital systems, PSBs have always been behind their private peers. However, they presently are accelerating their digital transformation initiatives. Risk assessment, customer acquisition, credit underwriting and lending, and customer service are all areas in which they are driving large-scale transformation initiatives together with fintechs, account aggregators, payment providers as well as digital financial service enablers. For example, 12 PSBs set up an entity called PSB Alliance to handle a countrywide unified cloud-based supply chain financing (SCF) ecosystem which was contracted to Veefin Solutions Ltd. They are also collaborating with international giants so that they can shift from brick-and-mortar units to digitally enabled channels of financial service providers. For instance, Canara Bank partnered with Microsoft Azure to build a data lakehouse to store its refined data. It also set up a Data and Analytics Centre to accelerate innovation and move towards real-time alerts, connecting with organisations such as credit information companies.

## **Navigating Challenges and Strategic Considerations to Maximise Benefits**

Digital transformation does not come without challenges. To meet these challenges, PSBs need a multifaceted approach that addresses issues such as legacy infrastructure, customer education, data security, the digital divide, regulatory compliance, talent shortages, and competition from fintechs and private banks.

Viewing the challenges as opportunities for growth and innovation, PSBs are investing in modernising IT infrastructure, enhancing customer awareness and trust, expanding digital services to underserved populations and strengthening cybersecurity measures.

In navigating through challenges post-digitisation, PSBs have taken proactive measures to address cybersecurity risks. Banks such as SBI, Bank of Maharashtra, and Indian Overseas Bank have hired senior technical experts to safeguard the reputation and trust of customers. Moreover, despite facing challenges related to asset quality, profitability, and efficiency, PSBs have played a significant role in India's economic growth, particularly in providing financial access to underserved sectors and promoting financial inclusion. For instance, PSBs are the main players in Pradhan Mantri Jan Dhan Yojana (PMJDY), with around 24.40 crore beneficiaries.

The digital transformation journey of PSBs in India reflects a significant shift towards modernisation, efficiency, and customer satisfaction, evolving the banking sector landscape. Through strategic partnerships, technological advancements, and government initiatives, PSBs are overcoming challenges such as legacy infrastructure and competition from private banks and fintechs to enhance operational efficiency, expand digital services, and strengthen cybersecurity. Despite the challenges, PSBs remain crucial drivers of economic development and financial inclusion, underscoring their commitment to serving diverse customer needs and contributing to India's ongoing digital revolution.



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