

## Cloud Computing in FinTech

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### A B S T R A C T

The introduction of cloud computing has altered how it satisfies IT requirements. A new era in IT has evolved with cloud computing, and all CIOs have it high on their agendas. Cloud technology is increasingly widely used by banks to accomplish a variety of objectives. Business models that offer greater client experiences, effective teamwork, quicker marketing, and more IT efficiency are made possible by cloud computing<sup>1</sup>. The focus of the paper is the digital disruption occurring in the financial industry, which has led to a rise in new collaborations between banking institutions and fintech businesses. It is the latter that is accountable for the technologies that control entities use and that must contend with the multitude of restrictions imposed by those entities<sup>2</sup>.

**Keywords:** Cloud Computing, FinTech, Banking, Cybersecurity, SaaS

### 1. Introduction

Utilising data that is accessible over the Internet from an external server is known as cloud computing. It is described as easy, accessible, on-demand network access to a shared pool of quickly provided and released programmable computing resources with little involvement from service providers or management<sup>1</sup>. Many banks already use cloud computing for non-essential and non-core functions like email, customer relationship management, human resources, analytics, development, and testing. A small number of banks have also moved their whole core service portfolio to the cloud or are in the process of doing so<sup>1</sup>.

Now, a lot of financial institutions are creating and testing cloud-based services, but very few have chosen to use the shared services that the Big Tech companies have made available. For instance, Amazon has been persuading significant organisations about the security of using their shared storage for several years<sup>2</sup>. Banks are moving some of their surface systems to the cloud, and many of their applications are managed in the hybrid

cloud or hosted by third parties, but they are unable to adapt to changing client expectations due to incompatibilities caused by their outdated infrastructure and new front-end<sup>2</sup>.

For organisations to really consider moving their core activities to the cloud, service providers have fixed flaws in their systems. Encryption keys, which are necessary for storing consumer personal data in external settings, are now owned and managed by entities. Public clouds have become possible because of evolving cyber-security tactics and mindsets<sup>2</sup>.

### 2. Benefits

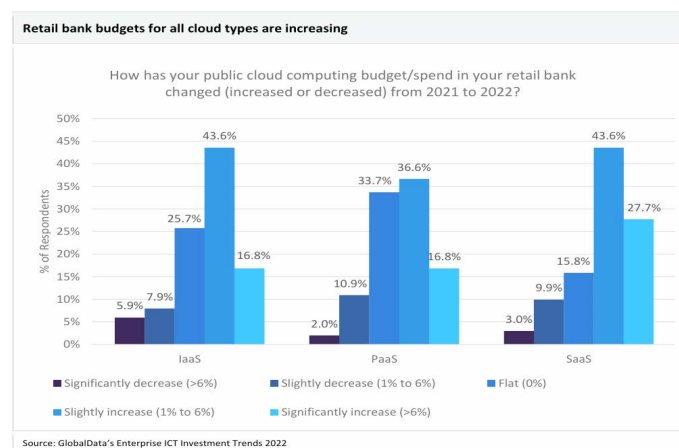
- **Scalability:** One of the main advantages of cloud computing for fintech enterprises is scalability. As these businesses grow, they need to be able to handle increasing volumes of data and traffic. With cloud computing, they can easily scale up their infrastructure to meet these demands, without having to invest in additional hardware<sup>3</sup>.
- **Cost-effectiveness:** - Cost-effectiveness is another advantage of cloud computing for fintech businesses. These companies can save money up front by employing cloud

services instead of buying and maintaining their own gear and software. As an alternative, they can simply scale up or down as their needs vary and only pay for what they need, when they need it<sup>3</sup>.

- **Security:** - Although some companies might be reluctant to put sensitive financial data on the cloud, the reality is that cloud providers frequently provide stronger security standards than many companies can accomplish on their own. To guard against cyberattacks and data breaches, cloud providers have put in place strong security measures, such as firewalls, intrusion detection and prevention systems, and encryption<sup>3</sup>.
- **Data analytics:** - Data analytics is a key component used by fintech companies to make well-informed business decisions. With the use of cloud computing, these companies can now access robust analytics tools that make it simple and rapid to analyse enormous volumes of data<sup>3</sup>.

### 3. Challenges

According to Global Data's Enterprise ICT Investment Trends 2022 survey, the majority of retail banks are still using cloud computing and have significant exposure to cloud infrastructure. According to half of the respondents, in 2022 compared to 2021, their ICT spending for cloud computing increased marginally (by 1% to 6%). Furthermore, 21.8% of respondents said that in 2022 compared to 2021, their ICT budget for cloud computing had increased significantly (by more than 6%)<sup>4</sup>.



Most businesses prefer to use a SaaS arrangement when implementing their corporate applications in the quickly changing retail banking industry because it offers greater flexibility, client involvement, and product agility. According to a survey conducted by Global Data, 43% of retail banks reported that, in comparison to the prior year, their enterprise ICT budget allocation for SaaS had increased marginally (1% to 6%)<sup>4</sup>.

Other challenges are: -

- **Data Privacy and Security:** Any technology presents security challenges, and the Cloud is no different. Since bank data is the most sensitive data, the financial sector must protect it from cyberattacks<sup>6</sup>.
- **Lost Productivity:** Businesses that still use outdated systems lose out on cloud apps' productivity advantages. As banks race to shift to the Cloud, they risk server disruptions lasting hours or days, which affects both customers and employees<sup>6</sup>.
- **Compliance and Reporting:** It is clear in this context that

banks need to take care of regulatory issues before making extensive use of cloud services. Regulators worry about storing confidential information on the cloud, particularly as non-banking companies join the market<sup>6</sup>.

### 4. Future

Financial technologies are bringing about a dramatic upheaval in the corporate sector. Over the past ten years, there has been a noticeable change in the perception of traditional banking and lending as well as the necessity for digital money transfers, payment methods, online lending, and online stock trading platforms. With the help of innovative thinkers, the financial industry, which gained from the digital revolution, became the next big thing in technology. Fintech entrepreneurs are revolutionising society by introducing innovative ideas that address everyday financial issues<sup>5</sup>.

Fintech companies use technology to create a working financial system in a way that has never been done before. Among these, cloud computing is causing a stir in the banking sector. Fintech cloud service companies are making the most of this sector's potential. Cloud computing allows banks and Fintech companies to innovate while saving money on operational and regulatory costs. Customers benefit because it boosts the competitiveness and efficiency of the banking industry<sup>5</sup>.

The cloud provides excellent security, prompt service, innovative processes, and infinite scalability to the financial industry. The cloud has accounted for 23.84 percent of the projected compound annual growth rate<sup>5</sup>.

### 5. Solutions

Most retail banks use cloud computing heavily, despite obstacles such as data privacy, security, loss of productivity, and compliance. ICT investment for cloud computing surged for many banks, with 21.8% experiencing significant growth, according to Global Data's 2022 report. SaaS agreements are favoured because of their adaptability and speed. Banks need to use cloud solutions to solve issues by upgrading cybersecurity defences, updating antiquated systems, and guaranteeing regulatory compliance. This strategy will preserve data integrity while maximising productivity.

### 6. Conclusion

FinTech is revolutionised by cloud computing because it provides scalable, affordable, and safe IT solutions. It speeds up market entrance, facilitates effective teamwork, and improves consumer experiences. Cloud technology enables banks and fintech companies to innovate and cut expenses associated with operations, even in the face of obstacles like data privacy, security, and compliance. This encourages efficiency and competition, which propels the digital revolution and future expansion of the financial sector.

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