



## Capturing value in the cloud

**Cloud adoption by banks has accelerated since the start of the pandemic, as banks seek to cut costs and ramp up digital transformation projects. But challenges around security, governance and skills remain. What is the state of cloud-based banking in 2021?**

- Just under three-quarters (72%) of IT executives at banks surveyed by The Economist Intelligence Unit report that incorporating the cloud into their organisation's products and services will help them to achieve their business priorities.
- Business agility, elasticity and scalability are together cited by 40% of respondents as top drivers of cloud adoption.
- Yet barriers stand in the way of a wholehearted embrace of the cloud—including security, privacy, compliance and governance concerns. These challenges are leading firms to invest in both technology and talent.

In his latest letter to shareholders, JPMorgan Chase chief executive Jamie Dimon does not hold back in his embrace of cloud

technology. "We cannot overemphasise the extraordinary importance of new technology in the new world," he writes, referring to the turbocharging effect that covid-19 has had on the adoption of the cloud and artificial intelligence (AI) in financial services.<sup>1</sup>

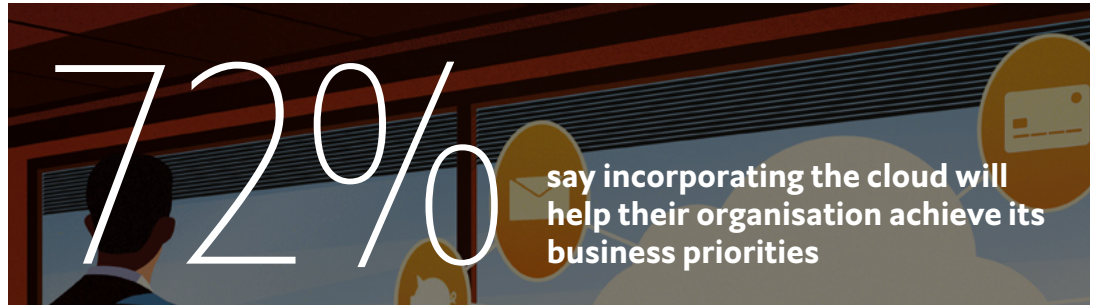
Before the pandemic, not all banks were quick to spot the advantages in offloading applications to the cloud, where virtually unlimited computing power allows enormous efficiencies. Banks have generally been slower to take to cloud computing than other sectors. But the adoption of software as a service (SaaS) and cloud infrastructure—for additional processing capacity, improved service capabilities and to outsource data storage—has accelerated since the start of the pandemic, as banks seize an opportunity to cut costs and ramp up their digital transformation projects.

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<sup>1</sup> <https://reports.jpmorganchase.com/investor-relations/2020/ar-ceo-letters.htm>



Last year saw a flurry of deals. HSBC committed to using Amazon Web Services to develop new digital products and support security and compliance standards, while Wells Fargo has signed on Microsoft and Google as public cloud providers. Google has agreed similar partnerships with Goldman Sachs and Deutsche Bank.

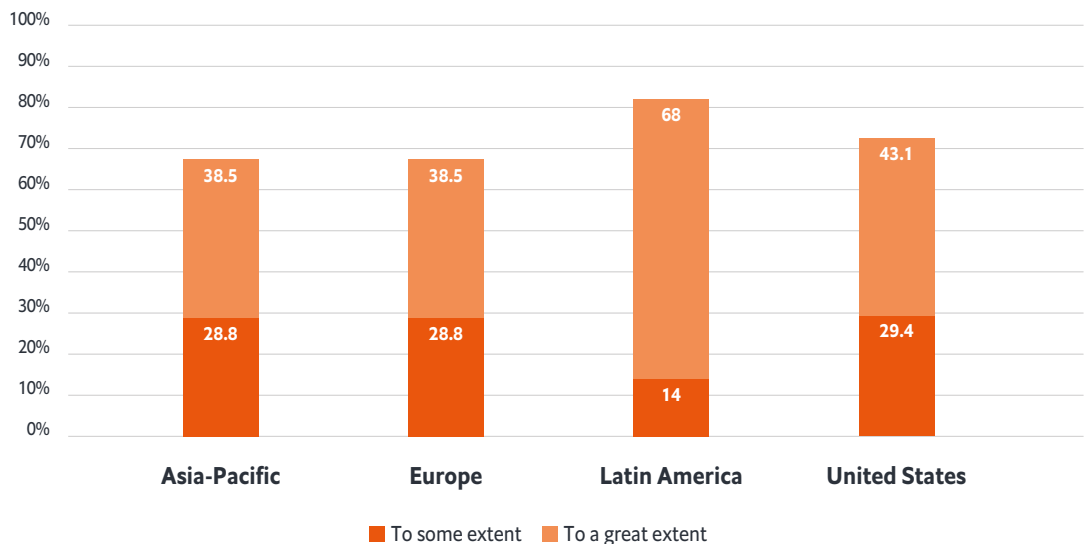
This comes as established banks figure out how to use incumbency to fend off fintechs and “challenger” banks, while the newer entrants use the cloud to advance quickly into new market opportunities.

In a new survey of IT executives in the banking sector, conducted by The Economist Intelligence Unit and supported by Temenos,

more than seven in ten (72%) report that incorporating the cloud into their organisation’s products and services will help them to achieve their business priorities. Just under half (47%) say that it will do so “to a great extent”, with Latin American respondents the most bullish (see Figure 1).

Microsoft, a large player in cloud services, believes that the pandemic has accelerated cloud adoption in four ways that go beyond cost considerations. The first is creation of economic efficiency, by moving away from reliance on a clunky computer mainframe environment. Second is enabling agility and speed to market by, for example, improving the customer onboarding experience in retail banking. Third is reimagining the modern

**Figure 1. To what extent do you think incorporating cloud computing into your organisation’s products and services will help you achieve your top business priorities?**



workplace and process modernisation to increase productivity, while fourth is digital innovation through, for instance, the adoption of AI.

“The adoption of the cloud is all about business value creation, not only cost reduction, and we see this in the way the model is maturing,” says Christian Sarafidis, chief business development officer in Microsoft’s worldwide financial services division.

The EIU survey reveals that cost reduction is still the biggest driver of cloud adoption, with 42% of respondents citing this (see Figure 2). Yet with the cloud’s enablement of AI cited as the second driver (by 34%), it is no surprise that the cloud providers are positioning themselves not just as cost-reduction solutions but also as partners on that digital journey. Business agility, elasticity and scalability are together cited by 40% of respondents as top drivers of cloud adoption. The Deutsche Bank arrangement with Google allows both to “co-innovate new products and services”, the two businesses say, such

as mobile self-service options and AI-based recommendations.

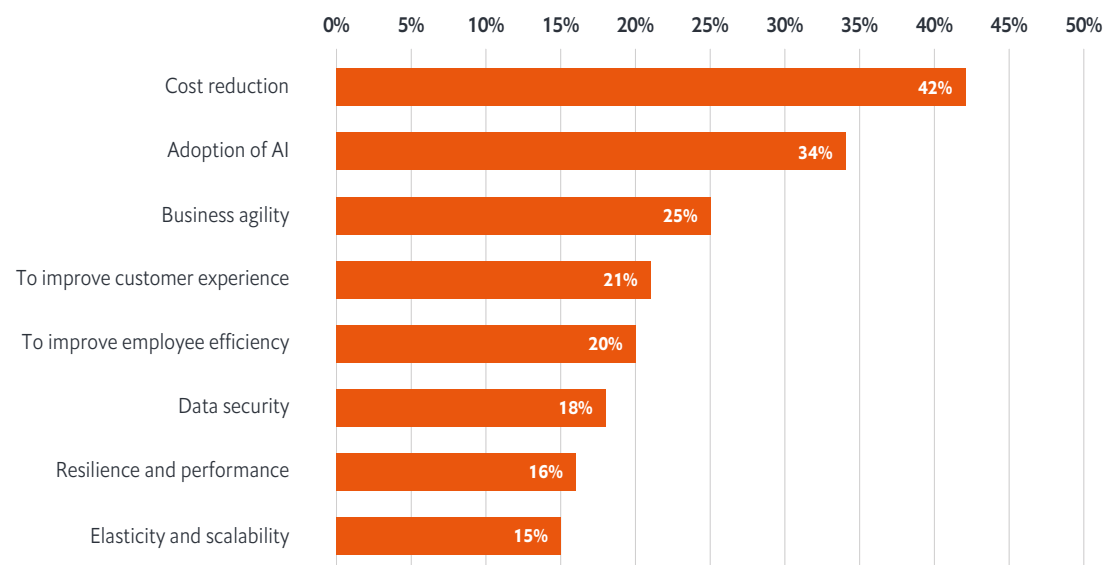
In seeking these solutions, banks are tapping into the cloud to speed up their ability to gain insights from data, and in turn to be able to innovate faster—critical in an environment in which the pandemic has turbocharged digital technology adoption. “We’ve looked at cloud not just as a cost play, but rather as an opportunity to move faster and expand the use of analytics, data integration and machine learning across our entire business,” says Sandip Sahota, enterprise chief data and analytics officer at BMO Financial Group, a Canadian bank.

**Up in the air?**

Around four in five banking IT executives say they have a clear strategy for adopting cloud technology. Yet some barriers stand in the way of a wholehearted embrace of cloud. One fear for banks concerns the security, privacy and compliance of data stored by third-party providers: six in ten respondents cite this as the greatest risk posed by cloud adoption

Cost is the biggest driver of cloud adoption, while business agility, elasticity and scalability are together cited by 40% of respondents as top drivers.

**Figure 2. What have been the primary drivers of your adoption of cloud computing technologies at your organisation?** Select up to two.





(see Figure 3). European banks are particularly wary, with 69% of respondents in this region citing it as a top risk.

“You have challenges with the cloud which are largely due to understanding how to get a very clear picture of what you want to do with it, as well as its limitations [and challenges with respect to] data privacy and security,” says Jimmy Ng, chief information officer at DBS Bank, Singapore’s largest domestic bank. “It all comes down to what you should be putting in the cloud because of the challenges of data security.”

#### GOING YOUR OWN WAY

DBS started its cloud journey when it embarked on a wholesale digitisation of the bank in 2014. It had two options: adopt the public cloud, or create its own virtual private cloud (VPC). It chose the latter.

Jimmy Ng, chief information officer, explains that a VPC allowed the bank greater control. “We are not hindered by data security challenges,” he says. “We don’t have an overriding concern about putting data on the cloud because we make changes ‘on prem’ [on premise].”

Where necessary, DBS brings data up into the public cloud and uses its computing power to create machine

learning models. With greater use of computationally heavy neural networks, it makes less sense to create that computing power on premise. “If you put it on the public cloud, its computing power gets you where you want to be faster,” says Mr Ng.

One recent example of DBS using both its VPC and the public cloud for certain applications is its rollout of NAV Planner, an AI-powered financial and retirement planning tool launched in early 2020 that provides investment recommendations tailored to DBS customers’ investment profiles. This is part of the bank’s goal of helping 1m customers—roughly a fifth of Singapore’s residents—take advantage of insurance and investment options by 2023 as they take steps towards securing financial and retirement resilience.

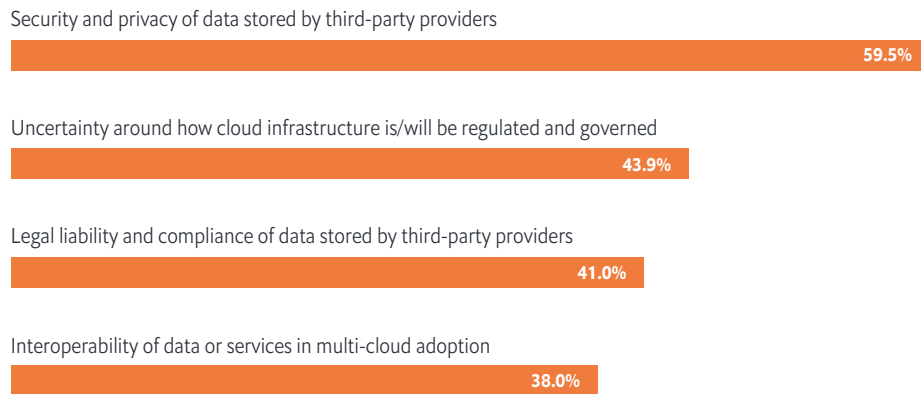
DBS is currently using its VPC for the NAV Planner but intends to migrate certain aspects of the work involved to the public cloud in 12-18 months. “We currently have 2.4m digital customers on that channel and we generate 30m insights a month and therefore the type of computation power that we need is massive,” explains Mr Ng. “So, if you start thinking about it at scale, even for something quite simple, you need the computational power. When you start democratising more services, you will need more computational capacity.”

There are cost advantages in using a VPC. “When we use the public cloud, it costs more than our private cloud because we run such an efficient VPC and our cost of ownership is better. This is also a cost-benefit issue that all the other banks are facing when it comes to the public cloud,” Mr Ng says.



### Figure 3. In your view, what are the greatest risks associated with cloud computing adoption?

Select up to two.



Questions remain over how cloud infrastructure is regulated and governed. Regulators, noting a recent increase in the dependency of financial services firms on cloud providers, are concerned that banks may over-rely on particular service providers to run critical systems, threatening financial stability.

The cloud affords various kinds of protection—including against physical risk to infrastructure—but the lack of substitution inherent in having only a few firms providing the same service poses systemic risk to the banking system, should one fail or come under cyber-attack. Regulators are monitoring this area closely, and more than two-thirds (68%) of executives surveyed agreed that big tech companies will become so mission-critical to the banking industry that they will become regulated institutions.

Providers are starting to invest in solutions that could allow users to transfer services elsewhere, in support of a multi-cloud strategy. In a wider survey of banking executives conducted by the EIU earlier in 2021, including those outside the IT function, 81% of respondents agreed that a multi-cloud strategy will become a regulatory prerequisite. Yet multi-cloud implementation presents

practical challenges around the management and interoperability of data, the IT survey shows. The more that firms ask for multi-cloud switching capability, the greater the importance of having operational resilience policies in place.

As firms navigate tricky and technical new territory, 44% agreed that their organisation lacks the regulatory understanding it needs to advance its digital transformation objectives. This is not for lack of regulations that govern, or affect, the cloud: under Europe's 2018 General Data Protection Regulation (GDPR), a cloud service provider assumes responsibility for the transfer of data by a company from its clients across borders, for example. Inevitably, the liability issues that flow from regulations such as these not only create work for lawyers but highlight the complexity that has arisen around crossborder data and cloud usage. As many as 41% of firms responding cited legal liability and compliance of data stored by third-party providers as one of the most serious risks associated with cloud adoption, behind only security/privacy, and doubts about the regulatory environment (see Figure 3).



In spite of the challenges, the pandemic has clearly lit a fuse under cloud adoption, and banks are busy exploring how it can best be leveraged beyond its initial cost-reduction and scalability benefits. Many regulatory bodies are now providing guidance on the risks that need to be considered when moving workloads to the cloud, while providers are building services that help meet different regulatory requirements. This is helping banks understand the controls in place and what actions they can take to ensure compliance.

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