

# HORSES for DIFFERENT COURSES

There is no one right cloud strategy for banks and financial services companies. A holistic, cloud-based transformation of an enterprise is desired, but the key is the right mix of architecture planning, integration of verticals, security and regulatory consciousness.

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The banking and financial services industry faces similar IT challenges as other industries: reworking monolithic architectures, scaling up creaking infrastructure, and dealing with gargantuan amounts of data for enhanced customer experience. Beyond IT, though, finance firms face some of the most stringent regulatory compliance and security standards. In addition, the industry has seen an array of nimble, tech-savvy start-ups challenge the big boys. Which means the latter are now engaged in a no-holds-barred contest for growth in a hyper-competitive environment.

How do they cope? One bulwark that has been established in recent times is cloud computing. Effectively employing cloud as a business asset can help financial services organisations transform their operating models and create a shield against business disruption. Cloud computing platforms provide greater agility at (relatively) lower cost, plus

What is driving cloud adoption - it is architecture - it is phenomenally different what it can do from a shared perspective. That is why increasingly customers want to move from on-premise, non-cloud to a balance between private and public cloud

AVNEESH SAXENA  
Group VP- Asia Pacific, IDC

Cloud is inevitable. Management buy-in is there, but the issue is only about how you scale up. It is a matter of 'when' and not 'if'

K.V. DIPU  
President & Head of Operations, Bajaj Allianz General Insurance Company Ltd.



In the last five years, private-hybrid workloads have nearly doubled. It was 6 per cent in 2013; in 2018, it is 12 per cent. We believe that's where the world is headed, especially in analytics and AI

PRAKASH MALIYA  
MD, Intel

Except for some of the core applications like core banking and loan applications which are legacy applications and still running on traditional IT, most other applications are deployed on the cloud.

SHIV KUMAR BHASIN  
CTO, SBI



Cloud brings a huge benefit in the way we work as teams. We all know the power of vertical collaboration. But cloud opens a whole new dimension of horizontal collaboration

ABHIJIT SINGH  
Head Technology and GM, ICICI Bank

As banks, what data we take to the cloud is subjected to regulation. Keeping that part aside, most new things we would want to do would be on cloud-native architecture

AVINASH RACHAVENDRA  
SVP-Head IT, Axis Bank



If the underlying infrastructure is getting patched and affects an application, it is a legacy problem, you cannot get away from it. We are starting to unwind this, but the applications have to mature and we are probably 5-8 years away

SANKARSON BANERJEE  
CTO, National Stock Exchange



One of the big positives from cloud approach is reducing administrative complexity. But the challenge is the readiness of the platforms and the institutions

SHRINATH BOLLOJU  
COO, RBL Bank



Business says they are getting value, whenever there is a direct correlation between the investment and the business outcome they are expecting. If business signs your cloud bills, it will be much more successful rather than IT paying for it

KERSI TAWADIA  
CIO, Bombay Stock Exchange

their uptime. The bank is also looking at how it can migrate to a simplified architecture and, further, get into micro-services, in order to build core competencies around key areas such as mobile and 360-degree view of the customer.

Clearly, there's ample ground evidence of IDC's survey results of accelerated adoption of cloud technology and the value it brings. National Stock Exchange's CTO Sankarson Banerjee focused on the three advantages that cloud offers: 1. Administrative simplicity, 2. Unlimited computing 3. Cloud can make compute local. Even though cloud doesn't offer unlimited vertical computing and things don't automatically become local just because you put it on cloud (architectural revamp is required for that), these three advantages can serve to strengthen the adoption roadmap for cloud computing. Plus, cloud helps scale up offerings much easier and faster. Therefore, today,

There are three aspects for the data: 1. Regulatory 2. Analytical and 3. Transactional. Data management is an important aspect from cloud perspective as huge data is being generated by the banks

SANJAY NARKAR  
CTO, IDFC Bank



whenever the finance sector talks of future investments and data centre refresh, cloud is inevitable.

The one big challenge around cloud adoption is people and organisational culture. The fact that IT personnel in older, conventional organisations don't think cloud or micro-services when they develop applications, is a bottleneck, though not insurmountable. Being used to monolithic, all-encompassing legacy architecture and software, the IT function finds it difficult to transform into an agile, modular thought engine. Happily, though, things are changing and a culture shift is underway.

Cloud service models allow organisations to shift from a capital intensive approach to a more flexible approach that lowers operational costs. The key to success lies in selecting the right cloud strategy to match business needs

People are beginning to adopt newer technologies and faster ways of working

In addition, the potential for cloud technologies is huge. Many financial services firms are using cloud to improve their current systems and operating models, rather than using it for fundamental transformation. There is much that cloud technology can do here. Then, to realize the full potential of cloud, people need to be adequately skilled, a process that is ongoing. Plus, the process to get them to 'think' cloud when planning applications is also underway.

An interesting way for finance companies in India to leverage cloud technology could be to create what Sanjay Narkar, CTO of IDFC Bank, calls a 'community cloud' - a technology platform for banks to collaborate on matters related to bank frauds and NPAs. Such a community platform would help immensely, because banks can then exchange data and information on such critical matters and ensure higher security.

The technology leaders opined in one voice that while every organisation is working towards simplifying infrastructure and processes, a great cloud strategy is possible when the business and IT integrate their thinking, which is something that is beginning to take shape on the ground.

Rounding off the discussion, Malley of Intel felt that there is space for both private and public cloud. And the usage may depend on vertical needs. But in the Indian context, a rich mix will be of value to most financial services organisations.

\*Sankarson Banerjee is now the CTO of RBL Bank

other benefits, and finance companies are in a race to make the most of these opportunities. Indeed, BFSI organisations are already on the cloud, especially public cloud, but what should be an optimal cloud strategy is a matter of much debate. What should be an optimal cloud strategy? Which platform works best - private, public or hybrid or a rich mix? How does one tackle the task of 'cloudification' of legacy applications? How does one face the cultural challenges of cloud adoption? These questions were debated with gusto at a closed-door gathering of top banking and finance CIOs and CTOs in Mumbai recently, including from banks, insurance companies, and stock exchanges. The initiative was brought to life by The Economic Times and Intel, and the discussion took on the burning topic of "Finance in the Cloud".

Kicking off the discussion, Prakash Malley, Managing Director-Sales and Marketing Group, Intel India, pointed to some interesting trends - less than 1 per cent of data generated has been analysed; data will rise 10X in the next 10 years; current data centre infrastructure needs to be reimagined to meet this rise; and demand for more intelligent storage will rise, to drive analytics and insights. Perhaps the most germane point was that private-hybrid workloads have doubled from 6 per cent in 2013 to 12 per cent in 2018. Clearly, the trend towards hybrid cloud is accelerating.

## Key Takeaways

- >>> As per an IDC survey, there is a huge shift from public cloud to private cloud, both on-premise and hosted
- >>> Hybrid cloud is gaining momentum because data is safer, it is relatively low-cost, and some workloads perform better on hybrid cloud
- >>> Most new applications being built and new technologies being deployed are using cloud as the platform
- >>> Some of the digital and mobile initiatives of finance companies are going straight into the cloud owing to its flexibility
- >>> Some of the legacy applications would need to be migrated into new applications, and be moved into the cloud
- >>> Banks could create a community cloud to share data and information, which would help tackle bank fraud and bad loans better

### CHALLENGES IN CLOUD ADOPTION

#### INTERNAL CHALLENGES

- IT and Business Integration
- Monolithic Infrastructure
- Operational Complexity
- Skills Gap
- Cultural Shifts

#### MARKET AND INDUSTRY CHALLENGES

- Regulations and Compliance
- Cost reduction

#### EXTERNAL CHALLENGES

- Disruptive technologies
- Innovative and Agile Non-Traditional Competitors
- Ever-increasing customer expectations

**In India, there is a place for both public cloud and private cloud. The share of the two changes from vertical to vertical, but in financial services, there is a healthy mix of both**

robust cloud infrastructure. For instance, many start-ups are putting their credit decision management engines on the cloud. Large banks and finance institutions could emulate that strategy, and even look to take their origination or customer acquisition systems onto a cloud-based architecture. They could also consider other devops practices such as Docker, so that applications are cloud-native while being developed.

ICICI Bank's Abhijit Singh spoke about using a multi-prong strategy in terms of what to deploy on cloud. Whether, for instance, container-as-a-service could be used for some applications to increase