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POWERING FINANCIAL SERVICES INNOVATION WITH A HYBRID MULTICLOUD STRATEGY

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Introduction

The financial services sector has come under heavy pressure to accelerate its ability to innovate, to adapt more quickly to changing market developments, and to improve resilience in light of widespread system outages and the growing threat from cybercrime. This forces financial institutions (FSI) to modernize their IT infrastructure, capitalize on data better, and transform legacy business processes to develop necessary capabilities such as proactive risk management, digital trust, compliance, and resilience, and address customer needs with new products and services in the digital world.

This transformative pressure is further amplified by the sea change ushered in by COVID-19. With digital becoming de facto the main customer touchpoint, the pandemic raised the importance of improved data capabilities to engage customers with more personalized services, but also to empower and secure a digital remote workforce.

With resilience becoming the main focus in this new operating environment, financial institutions are rethinking the role of cloud in their crisis recovery and digital journeys. Cloud perceptions are far from unambiguous, however, and depend on the size and digital maturity of an organization as well as regulatory and internal risk policies. Despite its constraints, the benefits of cloud in terms of scalability, flexibility, speed, availability, and enabling the digital workspace have become widely accepted. IDC's COVID-19 Impact Survey from May 2020 showed that 94% of organizations plan to change their long-term IT strategy in the post-pandemic era. The change includes an aggressive push to the multi-hybrid cloud.

AT A GLANCE

KEY TAKEAWAYS

- The massive transformative pressure on financial institutions is forcing organizations to pivot to stay competitive, relevant, and secure. Cloud has evolved as the most critical enabler of change for the industry.
- With the "if" out of the way, the focus has now shifted to "how." IDC believes that most FSIs will opt for a multi-hybrid cloud strategy to evolve infrastructures, applications, processes, and cultures if and when it makes sense. This means that innovation initiatives and data-driven initiatives are likely to be the first to migrate.
- To succeed, FSIs need to consider 4 key priorities to build a futureproof foundation for their organization:
  - Digital trust and compliance
  - Digital resilience
  - Data control and complexity
  - Data mobility, infrastructure, and data management.

With the "if" out of the way, the focus has now turned towards the "how." FSIs are investing in making cloud strategy impactful, sustainable, and suitable for supporting digital-native apps and services. They are also modernizing core applications and tapping into the rapidly evolving ecosystem for instance through Fintech partnerships. The reality is that there is no one-size-fits-all cloud strategy. Each organization will have to determine how to de-risk their cloud journey, how to avoid creating new legacies as they modernize existing infrastructure, and out how to operationalize cloud to drive innovation and customer-centricity and ensure security across the whole organization. FSIs face difficult choices, whether to go cloud-native with a specific public cloud provider, or adopt multicloud strategies across multiple providers in both public and private cloud, or opt for a hybrid strategy, hosting workloads wherever they make most sense, no matter if this is on-premises or in any cloud type. IDC's 2020 Multicloud Survey reveals that 82% of FSIs are already running hybrid cloud environments. Exploring and optimizing the value that each of the cloud technologies bring, FSIs are taking an "and" approach to public and private cloud rather than an "or" approach. As a result, hybrid multicloud environments are becoming the natural evolution.

By taking a data-first and security-first approach to cloud migration, application modernization, and legacy transformation, FSIs lay the foundation to futureproof their infrastructure and application estate for the challenges and successes of tomorrow.

Key Business Priorities

Digital transformation (DX) is a diverse and complex journey for FSIs. The fact that the journey's destination is constantly evolving makes flexibility, agility, and scalability all the more important, particularly when making long-lasting infrastructure decisions. The future of financial services is predicted to center around new operating principles such as data-driven, infrastructure-light, innovative, and green. This means FSIs need to rethink and align their strategic priorities with these new principles.

The focus of DX initiatives is therefore centered around three focus areas (See Figure 1):

- Digital Innovation — Increasing the velocity and scale of application development and delivery. Operating the business as a software company.
- Digital Infrastructure — Cloud-centric modern infrastructure that can support both digital innovation needs and existing key workloads and processes.
- Data Mobility, Management, and Intelligence — Modern data strategies such as improved data mobility in hybrid multicloud environments, unified data management, and moving to a data-driven business.

Cloud will play an important role in delivering these in an efficient and sustainable manner.

FIGURE 1

Focus Areas for Digital Transformation
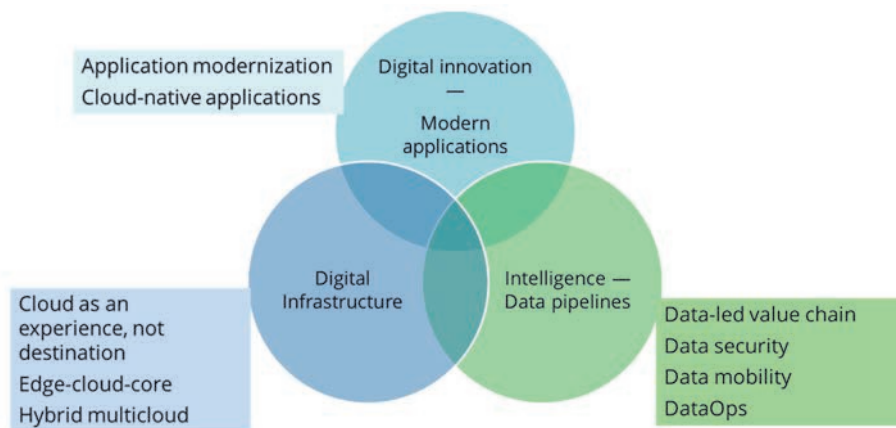
Source: IDC

The cloud maturity of European FSIs differs considerably across the types of organization, the markets they operate in, their age and digital maturity, and the age of their infrastructure. IDC has identified four critical priorities that influence decision making on future infrastructures:

- Digital trust and compliance
- Digital resilience
- Data control and complexity
- Data mobility, infrastructure, and data management

These priorities will fundamentally determine the success and sustainability of an organization's cloud strategy.

Digital Trust and Compliance

Cyberattacks surged in the pandemic, particularly those aimed at the financial sector. A study registered a 238% rise in attacks from February to April 2020[1]. 27% of those attacks targeted the health and financial sectors. It is not surprising, therefore, that security is a priority for the sector. But traditional security approaches are increasingly falling short, given the growing sophistication and orchestration of attacks. FSIs are therefore investing in a new and performance-hungry generation of threat and vulnerability detection capabilities.

The cloud will not only deliver the processing power to mine much larger datasets to identify anomalies and suspicious behaviors, but also deliver workloads on robust and fortified infrastructures. New technologies such as confidential computing provide better protection across the entirety of the compute lifecycle, giving data owners complete authority over their sensitive data at rest, in transit, and in use. Security is also becoming a team sport, with a growing role of the ecosystem to exchange threat intelligence and source new solutions and data.

While regulation in many instances was an inhibitor of cloud, the transformation of the compliance function requires FSIs to invest in more advanced analytics, smart automation, and increasingly real-time data exchange and will ultimately benefit from the cloud. The identification of operational risks, such as fraud, sanction violations, and money laundering force a data-driven approach to compliance. This also means that regulators expect that where there are violations, internal investigations teams can deliver and uncover evidence in a reliable and comprehensive manner quickly.

As the trend towards evidence-based compliance intensifies it forces a better alignment of compliance and customer centricity. The cloud therefore not only accelerates the ability of banks to accelerate time to market, but also to design and manage products in a compliant manner from the ground up.

Digital Resilience

Resilience quickly evolved into the operating paradigm of 2020. However, resilience is not a new theme, given the countless system outages plaguing the sector over recent years. The digital resilience banner encompasses several important business concepts including change management, business resilience, operational risk, and even competitiveness. It is the very foundation of the modern financial institution and should be recognized as the most valuable long-term property of an organization, something to be managed at senior level but understood by everyone at all levels. New technologies and new digital infrastructures must therefore be assessed in terms of their overall impact on business resilience in terms of both opportunity and risk.

What is new is the fundamental shift to remote working due to the pandemic. Financial services have long resisted the ongoing trend toward home working as this was regarded as insecure, unproductive, and impossible to implement at scale given traditional process architectures, data security policies, and the lack of enabling technology. The lockdowns in March 2020 forced FSIs to reconsider, and within days, thousands of employees were enabled to work remotely. Their success was so striking that some, such as Barclays Bank, quickly questioned whether staff would ever return to costly prime office locations in financial centers around the world.

"... the notion of putting 7,000 people in a building may be a thing of the past,"
said Barclays CEO Jes Staley

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[1] VM Ware Carbon Black: *Modern Bank Heists 3.0, 2020*

IDC predicts that by 2023, 75% of the G2000 will commit to providing technical parity to a workforce that is hybrid by design rather than by circumstance, enabling them to work together separately and in real-time.

Following the massive pressure on digital delivery, the ability to maintain, change, or recover technology-dependent operational capability is moving up the CIO agenda.

Data Mobility, Infrastructure, and Data Management

Cloud infrastructure remains a key building block for digital innovation, workspace modernization, and digital resilience. But there's a growing concern among financial services regulators (such as the FCA) around financial services organizations' over-reliance on a single cloud as they bring their "crown jewels" applications to the cloud world. This is mainly because of the following risks:

- Security, data sovereignty, and compliance obligations (particularly GDPR and international regulations such as the CLOUD Act).
- Concerns about vendor lock-in, technology lock-in, and a lack of data portability.
- Loss of IT control around costs, speed of innovation, and outages.
- Cloud concentration risk for the financial services sector — deeper penetration of fewer hyperscalers within financial services could increase dependence on providers and create a single point of failure, raising questions about the organizations' cyber resilience.

Limited visibility into data, data silos, and the spiraling costs of data management were cited by financial services in the top 5 data management challenges, according to IDC's 2020 Multicloud survey. Complex European financial regulatory frameworks, concentration risks, digital sovereignty needs, and data regulations are prompting financial services organizations to consider data mobility and management as a critical consideration for de-risking their cloud journeys.

Deutsche Borse, for example, is building its multicloud strategy with a datacentric and regulation-centric strategy. It is adding data layer abstractions for exit strategy, adding more data protection and info-sec features, redesigning its applications, and continuously auditing the approach.

IDC believes that having an agnostic data mobility and management strategy can help FSIs:

- Build deep integrations with their infrastructure of choice and overcome concentration risks by eliminating data gravity to a specific cloud.
- Build on an agile data-driven digital infrastructure to unlock digital innovation.
- Pivot to Open Banking mandates by ensuring secure data federation and sharing strategies.

More FSIs will invest in data services including data protection, security and compliance, data integration and orchestration, and data location optimization to succeed in their hybrid multicloud migration strategies. In Europe alone, the data services functional market is expected to grow at 17.2% CAGR to 2024.

Data management is no longer a niche discipline, it is a boardroom priority as FSIs become increasingly data driven. Simplicity, automation, and flexibility driven from a data-centric point of view means IT, data teams, and business users can work together effectively.

FIGURE 2

Top Data Services Priorities in Multicloud for FSI
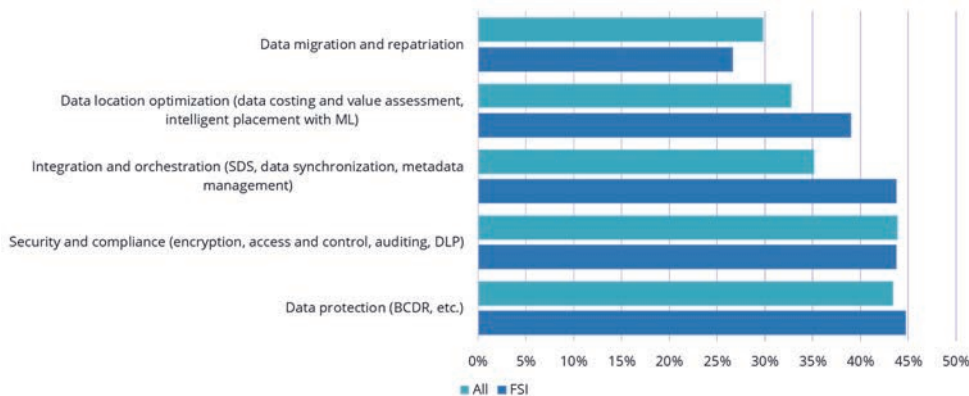
Source: IDC 2021

The growing interest in hybrid multicloud data services is aimed at ensuring that enterprises can connect the right data source to the right persona at speed, scale, and cost-efficiently.

Data Control and Complexity

The importance of data to futureproof banking business models must not be underestimated. While the importance of data to optimize experiences, operations, and decision-making has been widely understood, the commercialization of data is only just starting. IDC predicts that 5%–10% of bank revenues will be based on data monetization and information-based products. This makes data mastery not just a nice to have, but mission critical.

For too long, challenges such as data silos, security and governance loopholes, the rising costs of managing disparate systems for different data, and making data users themselves perform tasks such as combine, curate, and prepare data have marred companies' speed. It is time to create a new paradigm to present and consume data.

Data strategies help in immediate crisis recovery and long-term value creation for all verticals including the FSI. However, poor data management, data silos, poor data quality, traditional data architectures, and the lack of automation are key barriers. Some organizations have overcome these barriers with modern data foundations and data-driven practices. These best practices include unified data management to monitor and manage data across heterogeneous infrastructure that can eliminate management complexities.

By 2023, 50% of organizations will adopt a "data supermarket" strategy to unify data storage, access, and governance capabilities to deliver a consistent data experience and maximize the value of data.

Considering NetApp

NetApp has been one of the early infrastructure providers that understood the role of cloud for digital innovation and the challenges in making cloud strategy successful. Transforming itself from an on-premises storage company, it evolved into a cloud data services company.

NetApp is not only continuing to invest in its unified cloud data management strategy but is also extending its capabilities to cover all the infrastructure and data needs of all types of applications:

- Cloud-native
- Legacy applications
- Transforming workloads

NetApp's acquisition of cloud vendors including Spot, CloudJumper, Talon Storage, and GreenQloud and its deeper integration with public cloud vendors including SAP, VMware, and ISVs, is helping it expand into new adjacent markets. Its container-focused strategy Project Astra — a software-driven service for app data management in the Kubernetes world — is aimed at developer personas to improve Kubernetes admin's experience of developing cloud-native applications and rearchitecting traditional workloads on to containers.

NetApp is well positioned to meet the FSI sector's current priorities with hybrid multicloud management, application modernization, and data unification and integration.

To support businesses in their cloud migration strategies, NetApp has transformed its portfolio with a software-defined, scalable, and cloud-like approach. It has also integrated into the infrastructure services portfolio of leading public cloud providers to be available as a "first party" service.

NetApp has also evolved its pricing strategies to deliver its technologies via flexible/as-a-service pricing options for on-premises consumption.

From a data technology perspective, NetApp delivers a full stack of data and infrastructure services (see Figure 3).

FIGURE 3
NetApp's Full Stack Cloud Data Services
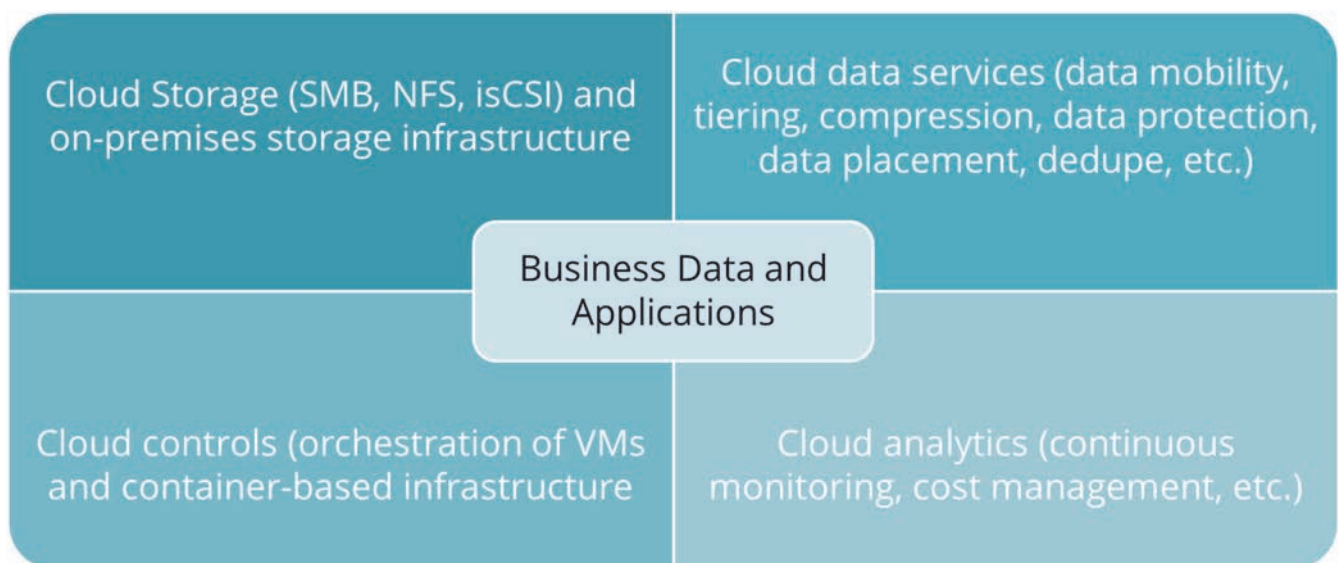
Source: IDC, 2021

NetApp's strategy is to "complement customer's cloud migration instead of competing with cloud providers." In IDC's opinion, this strategy can help FSI customers have the flexibility to:

- De-risk their cloud strategy by being in control of their data destiny.
- Design a hybrid or multicloud strategy at their own pace, own terms, and own unique business drivers.
- Support a spectrum of traditional and cloud-native workloads that have a different set of requirements for compute and storage.
- Chart out their own data (information), application, and infrastructure architecture.

IDC believes that this strategy of facilitating its customers' embrace of public cloud services early on has helped NetApp be a part of customers' accelerated transformation and cloud migration efforts.

In the past two years, NetApp has placed strategic bets on new markets and made key acquisitions in support of its vision to facilitate cloud-centric digital innovation and to provide end-to-end "hybrid cloud/multicloud" solutions. Each of its strategies and cloud company acquisitions has extended NetApp's capabilities beyond data authority to include compute, desktop, and cloud-native technology pillars.

Challenges

Changing expectations of IT in a connected digital ecosystem and the architectures being developed to support these changes mean that FSI customers reevaluate their data strategies continuously and seek to adopt best-of -breed technologies. They seek solutions and technology partners that deliver business value, multicloud support, cloud financial models, and advances in data capitalization. Data monetization and data capitalization is a top digital transformation priority for about 34% of FSI enterprises. As more big data analytics and AI workloads enter the enterprise architecture, demand for unified data management capabilities and next-generation storage infrastructure will also grow. Moving forward, NetApp needs to be mindful of the competition ramping up in the cloud data services space. It also needs to continue its innovation streak and build expertise in additional areas such as edge and distributed data management needs.

Dealing with FSIs and data is another topic, as every organization's data policies and every country's regulations around privacy and data sovereignty differ. This patchwork of requirements is clearly a massive challenge for the sector and for vendors trying to support it, but getting it right in terms of flexibility, control, reporting, and compliance will be a massive competitive advantage. The complexity will benefit market leaders and keep smaller competitors at bay.

Takeaways

The future of financial services infrastructure is in the cloud, as organizations continue and accelerate their transformation journey to become more digital, more innovative, more agile, more collaborative and open, and more data driven. While the industry has finally moved past its skepticism over the security, regulation, and reliability of cloud, the actual work has only just begun. Each organization now has to define its strategy and place in this new digital world, but also make decisions around what role cloud will play to deliver this change and explore the pros and cons of the many options at their disposal.

Essentially, this means they need to build the foundations to effectively ensure digital trust and compliance, improve digital resilience and empower customers and staff digitally, and improve the handling of data to control and manage data more effectively to unlock the value deeply entrenched in it. The good news is that every FSI is facing the same tough choices, as the future remains highly dynamic. Setting your organization up to flexibly respond to change while avoiding new legacies will be essential. The right partners can accelerate this learning curve.

MESSAGE FROM THE SPONSOR

NetApp is a cloud-led, data-centric software company. We help the largest financial services companies -including retail banking, capital markets, hedge funds and insurance - to take advantage of their vast volumes of readily available data to improve business performance and efficiency.

Our aim is to help companies:

- Achieve a customer-centric vision for better insights and business intelligence by breaking silos and leveraging data assets.
- Manage end-to-end industry-specific compliance processes such as AML-KYC, FRTB and MIFID.
- Adopt banking-as-a-service (BaaS) to unlock financial ecosystem collaboration opportunities presented by Open Banking.
- Support cost/income ratio reduction initiatives through the ability to build financial models based on operating expenditure (Opex) vs. capital expenditure (Capex).
- Improve banking operations efficiency, business continuity, and recovery strategies.
- Deliver better digital business and new digital experiences with cloud as a vehicle to enable new data technologies, platforms, systems, and infrastructures.
- Modernize the workplace with digital cloud-based-solutions offering mobility and collaborative suites to accelerate cross-functional engagement, including DevOps and artificial intelligence projects.

Our offering covers the full range of capabilities required to build and manage the unique data fabric, which provides a common framework to simplify the integration and orchestration of data services across your choice of clouds.

About the Analysts

Tom Zink — Research Director

Tom leads IDC's European financial services research and covers digital transformation in banking, retail payments, global transaction banking and wealth management. His key focus is on Open Banking and the emergence of an interconnected, collaborative, and accelerated ecosystem as well as the transformation towards the data-driven bank.

Archana Venkatraman — Associate Research Director

Archana's primary research coverage is cloud data management. She covers multiple topics including data protection, edge to cloud data trends, application and data availability, compliance, data integration, intelligent data management, DataOps, data quality, and multicloud priorities and trends.

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications, and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

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