

Accelerating Digital-First, Customer-First Banking with App and Cloud Transformation

VMware Market Insights Report,
Financial Services Edition

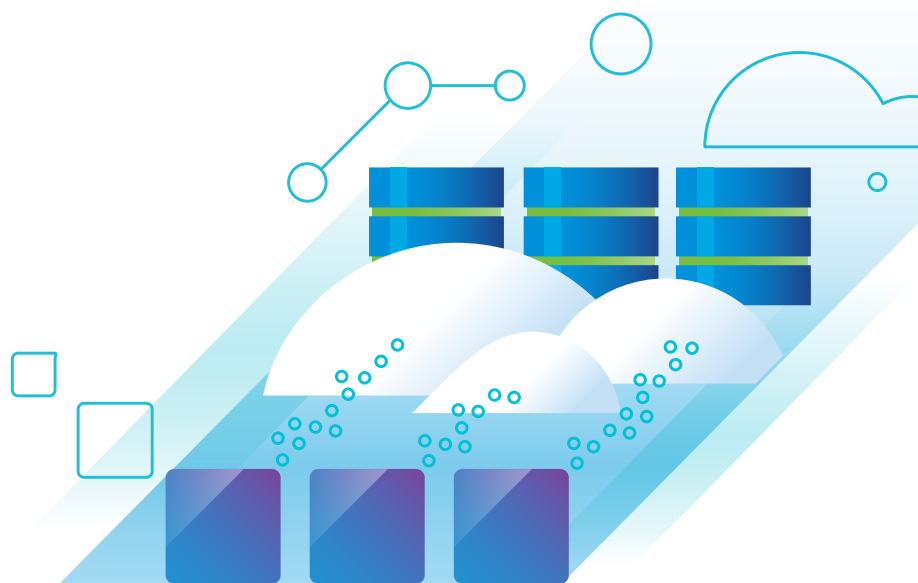
FOREWORD

Driving Digital-First Banking

Every financial services organization is defined by the services it delivers. For more than a decade, financial institutions have recognized the importance of technology in reshaping business models and redefining the customer experience. COVID-19 didn't change that—but it certainly accelerated the need to meet expectations for digital banking services that are always on, always convenient, and always secure.

Between January and March 2021, Management Insight Technologies fielded a global cloud and applications study on behalf of VMware. We collected more than 200 responses from financial services C-suite and senior technology decision-makers involved in application and infrastructure platform decisions. Through this research, specific trends emerged, including the reasons why financial organizations are evolving IT infrastructure and operations for the future and the challenges they're overcoming along the way.

Digital banking transformation is essential. While expectations are high, efforts are often slowed or stalled by the complexities and interdependencies among existing apps, infrastructure and operations. This research brief explores how financial services institutions can successfully modernize cloud and application infrastructure in an age of increasingly distributed digital banking experiences.



MARKET FORCES

The Distributed, Multi-Cloud Era Arrives

For financial services organizations, COVID-19 drove massive IT investments in public cloud, modern (cloud-native) apps and software as a service (SaaS). Compared to other industries, financial institutions were especially ahead of the pack when it came to deploying modern apps and SaaS.

A global *MIT Technology Review Insights report* published in partnership with VMware in December 2020, found that 98 percent of financial services leaders accelerated adoption of a cloud-based platform to support modern application development, and nearly two-thirds (65 percent) expanded agile practices and continuous integration and continuous delivery (CI/CD) methods during the pandemic.¹

The benefits of the cloud in financial services are well documented, from enabling business continuity at scale, to increasing operational agility or delivering new apps and services that drive customer engagement, loyalty and growth. These benefits are among the reasons why financial services organizations are increasing investments in the cloud and, over the next three years, the cloud will become their primary workload environment. Apps will also continue to grow within this time frame, increasing in complexity, diversity and strategic value.

Cloud-deployed financial services workloads are **expected to increase**

22% by 2024.²

When choosing a public cloud service provider, financial services leaders place the highest priority on a **platform that is easy to deploy and manage**, in addition to one that offers high availability, app and data security, a high degree of visibility and a broad developer ecosystem.³

Top Financial Services Priorities When Choosing a Cloud Service Provider³



#1

Platform that is easy to deploy and manage



#2

High availability and continuous uptime



#3

Application and data security



#4

High degree of visibility and control



#5

Broad developer and partner ecosystem

MARKET FORCES

The Future State of Cloud in Financial Services

Today's cloud infrastructure is increasingly distributed—in fact, **84 percent** of the global financial services IT organizations surveyed use a combination of public clouds, on-premises private cloud and edge environments to deploy applications and data.²

84% of financial services IT organizations deploy apps and data to multiple environments across public cloud, on-premises private cloud, and edge environments.²

Distributed multi-cloud emerging as the dominant cloud model

Financial services CIOs are challenged with meeting the diverse needs of users, teams and lines of business. A distributed, multi-cloud operating model holds several key advantages for organizations. Executives surveyed agreed that cost optimization, avoiding dependence on a single vendor, and aligning applications to specific cloud provider capabilities as top reasons why they opt to deploy apps to multiple cloud environments.⁴

Financial services organizations are pursuing multi-cloud strategies to



Optimize costs



Avoid dependence on a single vendor

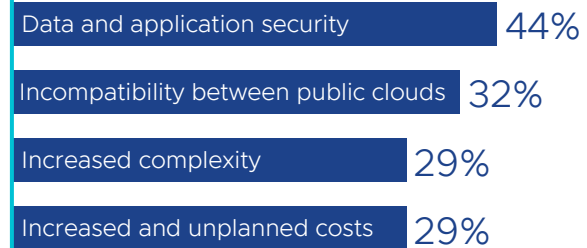


Align apps to specific capabilities offered from any cloud provider

While multi-cloud operations lead to new opportunities, they often also lead to a decentralized system of infrastructure and resources that continues to grow, thus creating challenges for managing and securing applications across clouds.

FINANCIAL SERVICES

Top Concerns When Operating a Multi-Cloud Environment⁵



Organizations with an existing multi-cloud strategy, defined as using two or more public clouds, cited security as their greatest concern and risk to multi-cloud.⁵ In addition, financial services organizations listed incompatibility between public clouds, increased complexity, and increased or unplanned costs as top multi-cloud challenges.

Clearly, a new model for cloud infrastructure is required. But first, we must address applications.

MARKET FORCES

The Transformations Powering App Modernization in Financial Services

The apps powering business systems are evolving to power the business goals of tomorrow. This modernization is pervasive—financial services technology decision-makers anticipate that **modern apps will grow 29 percent on average across the cloud and data center by 2024²**—surpassing other industries⁶ average growth by 9%.

Three transformations are powering app modernization in the financial services industry:



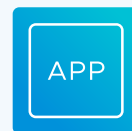
Infrastructure transformation

Data centers today are software-defined, hyperconverged and automated. Cloud migrations are accelerating, and IT organizations are looking at ways to further optimize operations, reduce costs and access elastic capacity with minimal friction.



DevOps transformation

Alongside data center transformation comes the need to support a shift in operating models. DevOps practices and continuous delivery ensure that higher-quality code is delivered to production faster and more frequently. These practices depend on a tremendous amount of automation, for which an ecosystem of container-centric technology, the so-called “cloud native” ecosystem, has emerged.



Application transformation

Atop the evolving data center infrastructure and DevSecOps platform are the applications themselves. To support more frequent changes, security best practices, and novel uses of data, applications need to follow modern patterns, such as microservices architectures and API-first design. But this is easier said than done. Many organizations are struggling with application modernization because of the complexity that comes with modernizing their large application portfolio.

The need for **workflow transformation** also increases as organizations add more clouds. Developers in the financial services sector want the capabilities and technology to develop new products and features faster, with the flexibility to pick the right environment and services for each application. Infrastructure and operations professionals are concerned with overall management and security, wanting a high degree of visibility and control over the entire application environment to ensure application and data security. With modern multi-cloud and application infrastructure, both parties can successfully achieve these goals and speed time to market.



THE VMWARE VISION

A Path Forward: Delivering Multi-Cloud Services for All Apps

Market and technological forces are reshaping how apps are developed and delivered. Not only do financial services organizations need to build modern apps at speed and scale, but they also must be able to run any app in any environment—cloud, data center and edge.

To support both traditional and cloud-native applications, IT organizations need an underlying infrastructure that is optimized for the unique needs of all apps, agile DevSecOps teams and low-code platforms. They also must focus on untangling the complexity of managing and operating multi-cloud environments.

The VMware Vision for Modern Multi-Cloud Apps and Operations

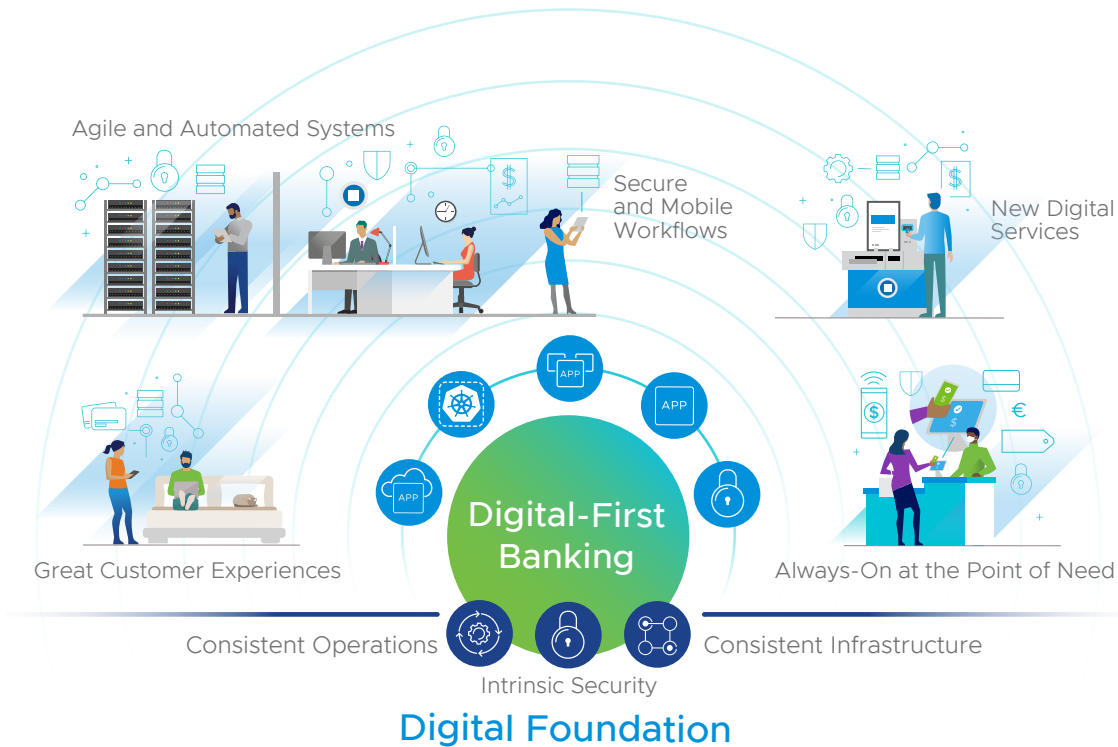
VMware has a unique vision for the cloud market and a unique solution built for today's distributed, multi-cloud world. The VMware Digital Foundation for Financial Services, built on VMware Cloud™, delivers multi-cloud services and a single platform for apps that spans the data center, edge and any cloud. VMware's globally consistent cloud operating model unifies environments, delivering the reliability, resiliency and governance financial services organizations need across clouds while significantly reducing total cost of ownership.

With VMware, financial services organizations can incrementally modernize traditional applications while accelerating the development and delivery of modern apps and services.

CONCLUSION

Multi-Cloud Means Freedom

A multi-cloud environment should give financial services organizations the freedom to deploy apps anywhere and the ability to move apps freely to the best environment. VMware enables financial institutions to operate flexible, agile IT infrastructure that builds on existing investments to support new and future business requirements.



Together, VMware and financial services organizations are transforming IT and application strategies to safely accelerate digital-first banking experiences and build innovation, agility and resiliency into the core of the organization.

Learn more at www.vmware.com/go/financialservices.

1 VMware & MIT Technology Review Insights. "MIT Executive Study Uncovers Top Financial Services Trends Shaping IT Resilience." November 2020.

2 VMware FY22 H1 Benchmark, Cloud and Applications, March 2021. "Considering all of your organization's applications, approximately what percentage is deployed on each type of Infrastructure platform today? What percentage mix do you expect in three years?" N=197 Global Financial Services Technology Decision Makers

3 VMware FY22 H1 Benchmark, Cloud and Applications, March 2021. "Which of these capabilities are most important in selecting an infrastructure platform for your organization?" N=72 Global Financial Services Technology Decision Makers

4 VMware FY22 H1 Benchmark, Cloud and Applications, March 2021. "What are the primary drivers for your multi-cloud strategy?" N=72 Global Financial Services Technology Decision Makers

5 VMware FY22 H1 Benchmark, Cloud and Applications, March 2021. "What are the biggest obstacles to achieving the benefits associated with a multi-cloud future state? What challenges have you encountered regarding utilization of multiple Public Clouds?" N=72 Global Financial Services Technology Decision Makers

6 VMware FY22 H1 Benchmark, Cloud and Applications, March 2021. "How many total applications (considering physical, virtualized, containerized, deployed in your datacenter, on Private Cloud, or on Public Cloud Infrastructure) does your organization have? And how many do you expect to have in three years?" N=194 Global Financial Services Technology Decision Makers

