Reimagining Financial Services

How Azure technologies empower intelligent banking

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Introduction

Twin forces of change—competition and regulation—continue to reshape the financial services industry. The global financial crisis and digitization have helped shift the financial services industry landscape, opening the traditional ecosystem to agile, innovative start-ups and adjacent industries.

Disruptive companies use modern applications and analytics to change the rules: banks without branches, insurers without agents, and brokerages without brokers. Startups and smaller institutions are winning with younger customers—the affluent digital natives who don't want or need traditional financial services. And increasingly, tech companies like Google, Amazon, and Apple are moving into the banking sphere.

Meanwhile, traditional companies contend with massive regulation that limits many of the high-risk, high-margin financial products and services, adds significant cost, and mandates growing capital reserves to hedge against failure. The new FinTech companies—built to be nimble—are less constrained but face increasing scrutiny from regulators.

For IT executives, this is a time of opportunity. To compete, financial services companies are undertaking digital transformation initiatives that help them reshape their businesses while they overcome common hurdles: legacy systems of record, data silos, outmoded analytics systems, risk-averse and change-resistant corporate cultures, increasingly sophisticated cybercriminals, the financial cost of data breaches, and new privacy mandates. Adopting cloud services is a key component of this digital transformation journey, yet many institutions are hesitant to go all in on cloud due to lack of expertise and outdated perceptions about security and governance concerns.

The reluctance of financial services institutions to fully embrace cloud services contributes to the continued complexity of business operations and underlying systems. Yet the advantages of cloud services are immense: By tapping cloud innovation, you can use valuable business data to improve the customer experience, streamline operations, transform products and services, and increase organizational value. Both newcomers and traditional companies can create new opportunities.

This document discusses two such motions that Microsoft sees across its financial services customer base.

1. Risk management in the cloud. Financial services institutions typically use their own IT infrastructures to run models that analyze data, optimize pricing, and manage risk and reserves. In today's global risk and regulatory environment, insurers and others need to analyze and manage risk across massive amounts of data. This includes bringing in streaming data from transactions, and complex parallel computations—often on an ad hoc, monthly, or quarterly basis—and sometimes in real time. Some companies are turning to high-performance computing in the cloud—they retire their physical infrastructure and shift the cost of

- their computing operations from capital expense to operations expense. As a result, these companies can now tap high performance compute as a utility, giving analysts access to elastic, pay-as-you-use compute power for ongoing cost savings. And with the ability to run more models and simulations more often, they are taking advantage of opportunities to overhaul and improve their risk management practices.
- 2. Real-time payments. Azure services are helping financial services institutions create the next generation of banking and transactional systems. Payments are fundamental to banking and wholesale payment transactions, annually generating \$262 billion USD in fee and balance revenues. The rise of FinTech firms, the shift in consumer habits and demands, the new data economy, and emerging technologies in financial services are forcing changes. Real-time payments (RTP) is not just about speed. Banks can achieve agility with RTP and enable new and open business models. Modern and global cloud services are enabling organizations to innovate and create solutions that process complex transactions across multiple parties faster than ever and gain insight from the transactions.

These two transformative motions are part of a larger industry effort to modernize financial services applications and data platforms. It's part of a growing industry trend to use cloud-based analytics for insight that can help optimize both back-end operations and the customer experience.

This document also outlines various approaches that can expedite your ability to become a data-driven organization, including how to apply innovative Azure services throughout the process of digital transformation.

Trusted platform: Foundational security and compliance in Azure

Keeping one step ahead of cyberattacks is harder as attacks have grown increasingly sophisticated. According to Verizon in its 2018 Data Breach Investigations Report, top patterns for financial and insurance sector were Denial of Service (DOS) attacks and ATM card-skimming. DOS attacks slow access to services, but also can result in malware, lost data, and reputational damage. The report also ranked ransomware as the top malware pattern for the industry. The most frequent data types compromised was personally identifiable information (36%) and payment card details (34%).

Financial institutions can improve their security and privacy position using the Azure platform. Azure offers unique security advantages built on global security intelligence, sophisticated customer-facing controls, and a secure hardened infrastructure. Azure services meet a broad set of international, industry-specific, and country-specific compliance standards. Microsoft verifies how it achieves compliance through rigorous third-party audits that validate Azure's adherence to standards-mandated security controls. Microsoft was the first cloud provider recognized by the European Union's data protection authorities for its commitment to rigorous EU privacy laws. Microsoft was also the first major cloud provider to adopt the new international cloud privacy standard, ISO 27018.

"From a security point of view, I think Azure is a demonstrably more secure environment than most banks' datacenters."

John Schlesinger
 Chief Enterprise Architect, Temenos

1. Moving risk-management platforms to the cloud

The industry is moving away from periodic batch processing toward newer models that support high-volume intraday trading. Does this mean elastic and scalable streaming analytics architectures are the next frontier for risk management? Near-real time risk management is already possible both on-premises and using cloud services. The biggest difference is that cloud-based solutions eliminate the need to build and sustain a costly high-performance computing infrastructure.

Feeding the beast: Risk management challenges

Volatile financial markets created a fast-moving risk landscape. Many, if not most, new risks over the last two decades can be attributed to globalization, explosion of new businesses, growth in technology, and gains in efficiency. The need for risk modelling has grown significantly, with projected demand often exceeding available compute power.

Financial simulations are computationally intensive and can involve several thousand calculation tasks across hundreds of gigabytes to petabytes of data such as the historical values of equity shares over several years. With rising data volumes and increasing complexity, financial institutions are turning to high-performance computing in the clouds like Azure. This has the added benefit of shifting on-premises, capital-funded operations to operational expenses.

Using cloud services with risk management

As discussed earlier, on-premises analytics systems are expensive to build and maintain. They also lack the scalability and agility required to support big data workloads and the increasing volume of queries from people and systems that need analytics access. Organizations need to ingest, process, analyze, and act on massive amounts of data from an array of sources quickly and cost effectively.

Cloud services, on the other hand, offer massive scalability both in the cloud and in hybrid deployments, which can help you implement and capitalize on enhanced risk analysis.

When Societe Generale's corporate and investment banking business, SG CIB, set out to build a new financial simulation platform, it partnered with Parisbased Qarnot Computing, a leader in distributed cloud computing, and the Azure team. The result is a solution that exposes a simple REST API to client applications within Societe Generale, handles calculation jobs ranging from a few tasks to several thousands (from seconds to hours), provides caching of financial data for efficient dispatching of tasks, scales with the number of jobs and tasks, and is always available.

Hybrid deployments will continue to dominate the computing landscape in the near future. Organizations that have made significant investments in onpremises infrastructure do not need to go all-cloud. A consistent hybrid platform from the on-premises datacenter to the cloud makes it possible to

automatically add capacity for high demand workloads, paying only for what

you use.

Risk management platforms require massive scalability, integrated analytics, and real time access to compute resources—both cloud-native and in a hybrid deployment. Transforming on-premises legacy systems and applications into modern hybrid-cloud or fully public-cloud solutions might seem like a Herculean task. The good news is that organizations are finding a significant breadth of services and tools from Microsoft and its partners to assist them with their efforts.

In the past, creating a hybrid cloud computing solution, where significant and intermittent bursts of computing activity were redirected from on-premises to the cloud, was a complex and expensive proposition. There was little consistency between the on-premises and cloud development environments, which forced the use of multiple development tools and applications. Further complicating operations was the need to manage both environments simultaneously and ensure security and governance of the entire solution while it scaled.

Hybrid operations. Azure was designed to be hybrid from Day One and incorporates decades of enterprise experience. As a result, Azure offers true consistency across cloud and on-premises with the broadest available set of hybrid capabilities in applications, data, identity, security, and management. Microsoft is recognized as a global leader in hybrid solutions across a range of deployment options. For example, you can deploy hybrid solutions that allow for bursting of applications and data into Azure to take advantage of compute, storage, networking, and analytics resources only when needed. This "bursting" capability allows organizations to take advantage of cloud technologies while maximizing their on-premises investments.

Bursting. Azure enables bursting with the new CycleCloud offering. The tool helps you manage, operate, and optimize HPC and Big Compute clusters in Azure. With Azure CycleCloud, you can dynamically provision HPC Azure clusters and orchestrate data and jobs for hybrid and cloud workflows. It provides alerting, monitoring, and automatically scales HPC infrastructure to ensure jobs run efficiently at any scale. Azure CycleCloud offers advanced policy and governance features such as cost reporting and controls, usage reporting, AD/LDAP integration, monitoring and alerting, and audit/event logging to give users full control over who runs what where, and at what cost within Azure.

Data analytics services. Azure provides a wealth of services to support data modernization and analytics for risk management solutions. One common financial institution challenge is integrating multiple data stores in various data formats to make the data accessible and ready for use. To help resolve this challenge, use Azure Data Factory, a hybrid data integration service with more than 80 data connectors. Extract data from heterogenous data sources, transform it at cloud scale with the Mapping Data Flow feature (now in preview), publish it to any analytics engine or business intelligence tool, and monitor and manage your data pipelines. With Azure Data Factory, you can work with the data wherever it lives, in the cloud or on-premises, with enterprise-grade security.

The sheer volume of data required for risk analysis is daunting and storage requirements can limit the effectiveness of any risk analysis solution. One option is to use Azure Data Lake service, a massive data store in the cloud that

Adding artificial intelligence

Many companies are determining the best ways to integrate artificial intelligence (Al) services into apps and devices. Al and machine learning are supporting data analytics, user personalization, and authentication. To strengthen authentication into applications, some banks have integrated Azure Cognitive Services like Azure Speech.

When large insurer Progressive wanted to take advantage of customers' increasing use of mobile channels, it used Microsoft Azure Bot Service and Cognitive Services to build the Flo Chatbot, named after the company's spokesperson. Available through Messenger on Flo's Facebook page, the chatbot provides a conversational interface through which customers can ask questions about insurance, get a quote, even pose personal queries. "One of the great things about [Azure] Bot Service is that, out of the box, we could use it to quickly put together the basic framework for our bot," says Matt White, a marketing manager at Progressive Insurance.

Raiffeisen, one of the largest financial institutions in Switzerland. also used Azure AI services to build its chatbot. The bot can calculate mortgages, find an advisor in a user's area, and answer top customer questions across housing, house buying, and mortgages. The company ran extensive internal tests to tune and train the bot, refining queries and building a flexible data structure, taking advantage of Cognitive Services and AI capabilities in Azure. The online mortgage calculator feature is designed to generate leads for Raiffeisen's mortgage division by providing Raiffeisen website visitors with quick mortgage loan estimates. "We see this as a mobile solution, something you can use while sitting on the couch at home," says Fabian Schmid, New Business Innovator at Raiffeisen.

scales to petabyte-sized files and trillions of objects. It includes capabilities for developers, data scientists, and analysts to store data of any shape and speed, and conduct processing and analytics across platforms and languages. It removes the complexities of ingesting and storing massive amounts of data and makes it faster to get up and running with batch, streaming, and interactive analytics. With Azure Data Lake, organizations can resolve the productivity and scalability challenges that keep them from maximizing the value of their data assets and are better positioned to meet needs around risk analytics.

Security and governance. Any discussion of risk analysis solutions must include security and governance of the solution itself, including Role-Based Access Control, data encryption with corporate keys, sophisticated DDoS infrastructure, anomaly and threat detection, and security analytics. These services are all part of Azure. Two new areas that take organizations into the future are Azure Policies and Blueprints.

Azure Policies allow administrators to enforce policies on specific resources and even create auto-remediation actions for violated policies—even across the CI/CD pipelines. This helps ensure that users don't do something they shouldn't by not allowing them to do it in the first place.

Azure Blueprints enables cloud architects and central information technology groups to define a repeatable set of Azure resources that implements and adheres to an organization's standards, patterns, and requirements. Blueprints help keep administrators and developers from making costly mistakes by creating roque, unsecure, and non-compliant solutions.

One organization that is taking advantage of a wide range of Azure services is UBS in Switzerland. UBS is using Azure to power its risk-management platform, technology that requires enormous computing power, to run millions of calculations daily on demand. The result—which speeds calculation time by 100 percent, saves 40 percent in infrastructure costs, and attains nearly infinite scale within minutes—means the firm can have more working capital on hand and employees can make quicker, more informed decisions for their clients.

"Increasing the agility and scalability of our technology infrastructure is crucial to the bank's strategy," said Paul McEwen, UBS Group Head of Technology Services, who is responsible for the entire Infrastructure Platforms Strategy and Support, driving the strategic planning for the bank's intersection of business and IT needs. "With Microsoft Azure, we are building on the industry's leading cloud platform in terms of innovation, technology, security and regulatory compliance, which is very important as a Swiss financial institution."

2. Driving real-time payments

Customers today expect a real-time, frictionless, omni-channel experience enriched by data and integrated into the ecosystem where they transact. To compete, financial institutions are examining and adjusting their computing infrastructures to enable a real-time organization.

Keeping pace with business needs

Real Time Payments (RTP) are entering the mainstream for financial institutions and consumers. Many people use services like Venmo and Zelle to speed person to person payments. HSBC, an international banking giant with 39 million customers in 66 countries, recently built a social payments app that it launched in Hong Kong to engage with millennial customers. Built on a highly scalable microservices architecture, the PayMe app serves 500 million transactions per day on the Azure Database for MySQL service and integrates with the Azure ecosystem to use Azure Databricks and the globally-distributed Azure Cosmos DB—for real-time, machine-learning-based predictive analytics. The app also generate insights for both consumers and merchants on the platform.

Real-time payments are viewed as a way to lower costs, with 77 percent of merchant respondents seeing the payment method ultimately replacing cards, according to a 2018 report from ACI Universal Payments and Ovum. In Europe, institutions have used RTP to create new value-added services such as request-to-pay, as well as to help business customers manage capital more efficiently, reports industry experts SmartPayments.

Bank payments have been run the same way for more than 100 years—customers walked into bank branches, filled out an order to pay, and the bank would process the payment the next day by debiting the client's account and forwarding the money to a named beneficiary. SmartPayments reports that 51 percent of B2B payments are still facilitated through high-cost, cumbersome, paper-intensive, and increasingly less secure check-based payments.

For many, data silos limit RTP capability. Over the last two decades, a flurry of mergers and acquisitions drove financial industry consolidation even as new players entered the market. Many of the acquirers found themselves with siloed, incompatible systems of transactions and data. As a result, transactions pulling from multiple systems suffered from high latency, exacerbated by batch processes run at various intervals to complete transactions.

Time to rethink the transactional core of business

Real-time payments have evolved partly to solve the problems associated with excessive delays required to finalize complex transactions. Yet RTP benefits go well beyond speed. RTP can help you unlock value in the data that travels through bank payment systems in real-time, day-in and day-out. Embedded in this data are valuable insights for banks and clients to support cash flow forecasts, sources of liquidity, and counterparty risks. Understanding the

New regulations, standards

Changing regulations and new payments standards continue to spur interest in Real-Time Payments.

The Second Payment Services
Directive (PSD2) requires banks to
open their payments infrastructure
and customer data assets to third
parties that can develop payments
and information services for end
users. PSD2 regulation mandates a
base API level for compliance across
all banks. Read more in this 2017
whitepaper.

New standards, including the ISO 2022 global messaging standard for financial business transactions, can help financial institutions reduce integration costs and improve operational efficiency as they launch initiatives like Real-Time Payments.

behavior of these financial flows can help financial institutions more accurately manage the working capital cycle.

Supply chains, for example, represent a complex mixture of real-time logistics and payment flows that minimize risk and maximize liquidity management. Banks play a central role in these flows, but historically have done little to understand the data, its context, and how clients could use these insights to improve their businesses.

Until now, the use of this RTP data pipeline was limited to static reports on client activity such as Swift MT940 treasury dashboard displays and reconciliation services. Today, cloud-based tools interpret data in real-time—something that is impossible for humans given data volumes and velocity—making artificial intelligence, machine learning, and contextual services indispensable tools. By understanding the relationships between data points, you can use historical patterns to predict upcoming events and interpret the context of payment flows. Banks are also gearing up for the potential new business models and products that the data flows could unlock.

New banking and payment APIs built as part of the Open Banking movement are evidence of the shift to a more open economy where payments are integrated into wider "one-to-many" ecosystems. Keeping pace with these challenges is forcing banks to improve agility and significantly lower the cost of managing old systems. These new systems—modern data centers and cloud-based technologies—empower banks to meet customer expectations for fast, anytime, anywhere service, while enabling banks to future-proof themselves to accommodate the increasing velocity of new requirements.

The industry has taken note of this real-time potential. ClearBank, the first new clearing bank in the UK in the past 250 years, delivers flexibility, speed, and security to their customers.

Free from the constraints of legacy technology, and built on Azure, ClearBank delivers open access to payment, current account, and transactional clearing services. ClearBank's technology platform has been built on a combination of public and private cloud infrastructure—and is specifically designed to handle core banking, clearing, and settlement services, through a ground-breaking collaboration with Microsoft.

ClearBank partnered with Microsoft to enable RTP, providing customers with instant access to transactions—while enhancing security as a result of Microsoft's deep investment in cloud security. With an integration period of only eight weeks, ClearBank offers customers instant service hosted on a platform with maximum security.

Blockchain technology

Blockchain technology enables digital information to be distributed but not copied, with ramifications for any transactional environment.

J.P. Morgan is partnering with Microsoft to accelerate the adoption of enterprise blockchain. Through this partnership, Quorum, developed by J.P. Morgan, will become the first distributed ledger platform available through Azure Blockchain Service, enabling J.P. Morgan and Microsoft customers to build and scale blockchain networks in the cloud.

The financial industry includes a multitude of use cases for the technology. Marine insurance, for example, involves a complex premium-setting process, which makes it a great prospect for a blockchain-based overhaul. A consortium of companies teamed up to create Insurwave, the world's first blockchain platform for marine insurance, which runs in Azure.

Likewise, supply chain financing involves multiple entities. Without end-to-end visibility, opportunities for misunderstandings regarding contract performance can expose lenders to high risk. In Nigeria, midsized financial technology company Interswitch used Azure Blockchain Workbench to streamline supply chain financing, track supply chain performance, and reduce risk. The goal, as Interswitch head of innovation Eghosa Ojoat explained to Microsoft, is "a single version of the truth across the supply chain."

How it starts: Modernizing the bank

Modernizing outdated operations requires funding and commitment. Featurerich apps and modern back-end systems can simplify processes for both customers and employees and enable business leaders to take full advantage of business data and innovative cloud services

Short cuts to an improved customer experience

Many financial institutions have focused initial investments on customer-facing apps. Sleek, easy-to-use apps have helped financial institutions keep existing customers, win new ones, and reduce transaction costs. Modern apps become especially critical to serve an increasing number of platforms and touch points, including PCs, laptops and tablets, mobile devices, intelligent ATMs, in-home digital assistants, autos, and smart televisions. That's why financial institutions have added appealing web-based front ends built for multiple client form factors, including the all-important mobile view.

As a result of this largely cosmetic strategy, a financial institution can present an updated appearance and improve the user experience. There's a lot to like: New user interfaces can aggregate data from multiple systems of record to present a single view of the customer. Cleaner user interfaces can improve employee productivity on internal systems for less-skilled frontline workers.

Beyond the modern user interface

Real digital transformation requires deeper changes. Outmoded operations and monolithic architectures limit the business value that companies gain with only a modern front end. On-demand scalability and agility remain out of reach without a wholesale transformation of aging back-end infrastructure that IT teams must otherwise struggle to maintain and adapt.

App modernization infrastructure services. Azure enables organizations to create entirely new infrastructure solutions for seamless integration with any system anywhere using scalable compute, storage, data integration tools, and global networks of data repositories and analytics. Tools and services support an array of options: Run in a hybrid cloud model, lift and shift the applications and data to Azure, or create completely new solutions with unique environment requirements. Along the way, you can use familiar tools like Visual Studio and Visual Studio Team Services, and GitHub.

Moving apps and workloads to the cloud enables you to benefit from new features and functionality without starting from scratch. Some workloads and apps will be more appropriate than others for cloud migration. Choose the right modernization option for each app and workload based on business impact and complexity. (See sidebar on this page.)

Use Azure tools to modernize existing apps or build new feature-rich apps on Microsoft's intelligent data platform—on-premises and in Azure. Tools include:

 Azure App Service, which enables companies to build and host web apps, mobile back ends, and RESTful APIs in their programming language of choice without the need to manage infrastructure. Azure App Service offers autoscaling and high availability, supports both

App modernization options

Choose the right modernization option for each app and workload based on business impact and complexity:

- 1. Lift and shift with no code changes. Rehost the workload on Azure, using Azure Virtual Machines. This approach works well for self-contained workloads running on Windows Server. Use Azure Site Recovery or other commercial tools to migrate the machine images from physical or virtual machines to Azure Virtual Machines and gain proximity to secure, innovative Azure services. Use Azure networking services to tie instances back to on-premises datacenters.
- Lift and shift to containers with minimal code changes. Refactor applications by placing apps in containers and moving the containers to Azure.
- Modernize to Platform as a Service is a viable option for simple .NET applications, which can be quickly and easily rehosted on Azure PaaS services like the Azure App Service for Web Apps.
- 4. Rearchitect or rebuild applications to take full advantage of advanced managed services in Azure. This approach requires more time and a larger investment than rehosting or refactoring, but it can deliver improved agility, performance, and resilience at a lower total cost of ownership.
- 5. **Go serverless.** Serverless computing prioritizes business logic over infrastructure management. Developers focus on individual pieces of logic that are repeatable and stateless, require no infrastructure management, and consume resources only for the seconds, or milliseconds, they run.

Windows and Linux, and enables automated deployments from GitHub, Azure DevOps, or any Git repo.

- Azure services built on Docker and Kubernetes help organizations standardize on container technology and integrate with DevOps and serverless offerings like Azure Logic Apps. Use these services to elastically scale out containers on demand. Implementers that want to improve security and host their own container applications in a private manner can use the Azure Container Registry. This allows organizations to store images for all types of container deployments, including DC/OS, Docker Swarm, Kubernetes, and Azure services such as App Service, Batch, and Service Fabric. The DevOps team can manage the app configuration separately from the hosting environment for improved performance and security.
- Azure Red Hat Openshift managed service, which is jointly operated and supported by Microsoft and Red Hat, helps simplify container management. Microsoft and Red Hat are long-time partners.

Ultimately, to take advantage of valuable business data and become a modern, data-driven organization requires addressing data integration issues. Many financial institutions operate with geographically dispersed systems of record, many of them 20 to 35 years old. New data integration services like Azure Data Factory enable you to bring in data from older siloed systems to power new solutions that add data from telemetry, third-parties, and end users. This helps speed the response time of the entire application.

Data platform modernization services. By moving your data platform to the cloud, you can focus on innovation and rapid app development, accelerating its time to market. Fully managed Azure data services automate administration, reduce costs and downtime, and replace disaster recovery solutions. Azure services also provide business-changing scale and advanced business intelligence.

Azure offers a comprehensive set of data and analytics solutions, both Microsoft solutions and third-party solutions in the Azure Marketplace. Choose from fully managed and highly scalable RDBMS and NoSQL offerings to individual virtual machines running the solution of choice.

Traditional financial institutions can benefit from advanced analytics for risk modeling, plus business intelligence capabilities to create stunning and informative dashboards and powerful mapping visualizations. As a result, you can respond faster to customer requests and create and present cross-sell and up-sell offers to the customer in real time.

Where to start. With external support and guidance, financial institutions can develop a plan to update operations on their terms. Microsoft and its technology partners can help banks and others understand the cloud journey, provide customers and regulators with transparency in how they manage and operate their cloud services, and ensure financial institutions have the control and security of their data to meet compliance obligations.

Open source and big data

Many organizations using open source software to support data modernization efforts want to continue along that path. Some companies are building big data and analytics solutions using Apache Foundation projects software. One popular option uses Hadoop as the data store with Apache Kafka, Storm, and Spark for streaming and processing. Azure supports all these technologies while using the Azure Data Lake store and HDInsight— Microsoft's Hadoop offering in Azure —to create streaming and batch processing solutions at massive scale. Organizations use this product combination to create and run Fundamental Review of the Trading Book (FRTB) models to estimate regulatory risk.

Finally, any big data and analytics solution requires the ability to query and visualize data easily. Microsoft Power BI enables end users to create dashboards of significant sophistication with relative ease. Because Power BI is included in the Enterprise versions of Office 365 and Microsoft 365, the power to visualize massive amounts of data often already exists in the organization.

Summary

Cloud innovation enables financial services to fast track digital transformation initiatives and create new opportunities. The two initiatives discussed in this document offer a glimpse into large motions underway among Microsoft customers around the world, and the Azure services that are helping these organizations redefine themselves.

Financial institutions can continue to evolve themselves with the help of technology from trusted platforms. As other technology companies move deeper into the banking sphere, Microsoft remains focused on empowering its customers—instead of competing with them.

"We create technology so that others can create more technology. When I think about our fundamental role in the Financial Services sector, we want to be that trusted platform provider that's commoditizing technology so that you can really add value in Financial Services."

 — Satya Nadella on Microsoft's History and Mission, Sibos 2017

Financial institutions stand to gain massive value from Azure services:

Rely on a trusted platform. Ongoing investment in security helps you meet evolving threats and the most comprehensive compliance portfolio in the industry. You get the tools and resources you need to meet regulatory requirements more easily.

Drive business with AI and machine learning. Cloud-based analytics give you the insight you need to optimize everything from back-end operations to the customer experience.

Extend capacity with on-demand cloud resources. A consistent hybrid platform from the on-premises datacenter to the cloud lets you add capacity for high demand workloads, paying only for what you use.

> Learn more about Azure in financial services.

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Learn more about Azure.

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Explore intelligent banking solutions.

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