

FEATURE

Accelerating digital transformation in banking and capital markets with industry clouds

While cloud adoption is on the rise in general, industry clouds could help realize the full potential of the banking industry's digital and business transformation efforts.

THE MARKET FOR industry clouds is expanding at a rapid clip. For the banking and capital markets (B&CM) industry, it's perhaps still just a buzzword, but may be a phenomenon worth considering since it can potentially unlock greater value from banks' digital transformation initiatives.

In this article, we discuss the definition and architectural principles of industry clouds, and potential risks and benefits of adoption. We also explore the existing cloud ecosystem in banking and how banks can approach their digital and business transformation strategies with industry cloud as a growing force. Our findings are based on in-depth interviews with industry specialists and an analysis of responses by 61 B&CM executives to the recent US Future of Cloud Survey.¹

The digital transformation gap in banking and capital markets

Most banks place cloud at the center of digital transformation.² Capital One, for instance, completely migrated to the cloud as a part of its modernization journey in 2020.³ In fact, banks' cloud spending is forecast to grow almost 2.8 times

faster than their overall IT budgets for the next four years.⁴

The survey of US B&CM executives reveals that the vast majority (95%) consider cloud as the cornerstone of their digital strategy and believe it is vital to driving revenue and maintaining a strong position in the marketplace. Further, an almost equal number of respondents view cloud as a combination of other technologies (AI, IoT, analytics) that serve as "force multipliers" to their digital strategy.⁵

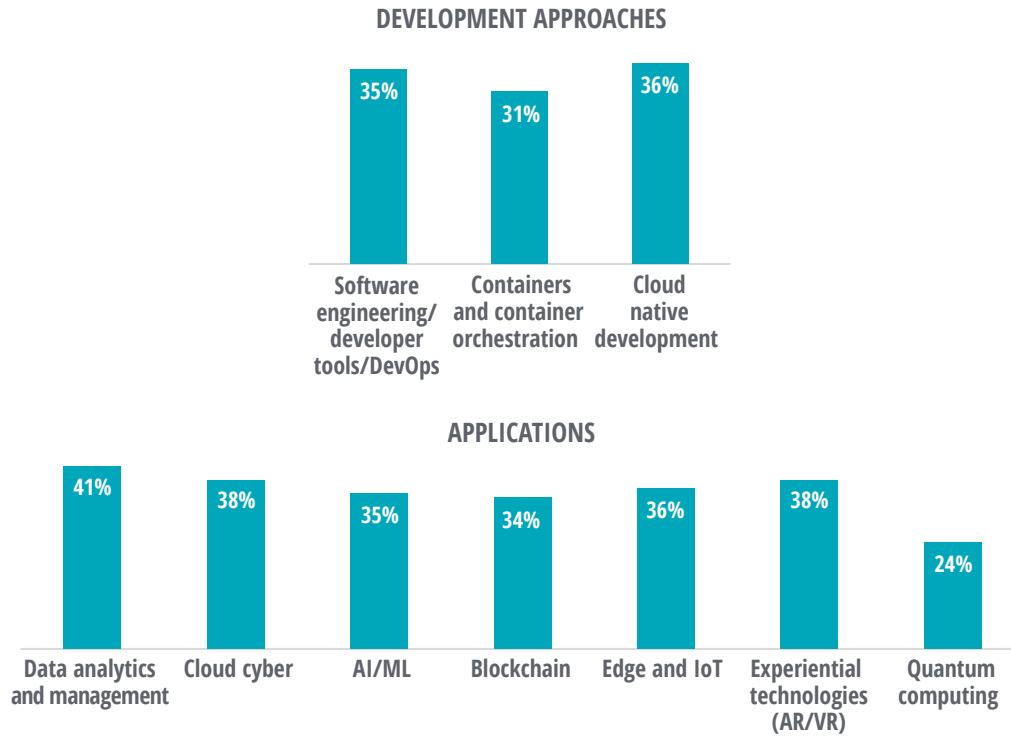
These beliefs, however, are yet to translate into ubiquitous, tangible actions at scale. Most banks have largely been using emerging technologies in silos. Only a third of executives surveyed cite having migrated more than 40% of their workloads and applications to the cloud. In addition, **seven out of 10 surveyed executives, on average, indicate using cloud-based development approaches and applications, but of these only 35% see very high value from their efforts** (figure 1). So, what should banks do to help address this digital transformation gap and harness the true potential of cloud and other technologies?



FIGURE 1

Only about one-third of survey respondents derive very high value from cloud-based services

Respondents deriving very high value from cloud-based services (% based on respondents who said “yes” to using the service)



Source: Deloitte US Future of Cloud Survey, 2022.

Industry clouds: Say hello to transformation accelerators

Digital transformation is reaching the next phase of maturation. Over the past decade, most banks have gained maturity at consuming cloud-based infrastructure at scale. They then moved up the stack to increasingly consume higher-order services such as databases, AI, IoT, and other managed offerings by hyperscalers and other vendors.

Today, there’s growing verticalization of cloud-based offerings, resulting in a new set of products and services that enable business-specific capabilities such as customer onboarding, loan origination, anti-money laundering (AML), and digital financial adviser capabilities. These tailored

offerings continue to raise the level of abstraction by further concealing the inner workings of the technology stack to simplify developers’ experience.

THE INDUSTRY CLOUD IMPERATIVE

Industry clouds are highly composable cloud-based products and services built for delivering value in specific industries. They are near-turn-key solutions with capabilities delivered out-of-the-box for specific business problems. By combining benefits of existing cloud services with industry-specific processes, industry clouds can accelerate banks’ digital transformation efforts and minimize risks associated with it. Industry clouds are typically built on five architectural principles that set them apart (see sidebar, “The principles on which industry clouds are typically built”).

THE PRINCIPLES ON WHICH INDUSTRY CLOUDS ARE TYPICALLY BUILT

Business-oriented: Focused on alleviating banking problems such as business growth, customer experience, operational efficiency, and risk and regulatory compliance

Sectorwide applicability: Have broad applicability across banking segments (e.g., retail banking, wealth management, and consumer payments)

Cloud-based integrations: Typically embrace one or more advanced services enabled by cloud (AI, 5G, quantum, AR/VR, etc.)

Modular: Allow for integration of capabilities without significant programming. This makes them easier to deploy than traditional in-house software, thereby bringing the deployment timeline down from years to months

Customizable: Allow for customization, to a certain degree, based on banks' specific needs, while still being reusable at the core

TOP POTENTIAL BENEFITS B&CM INSTITUTIONS ARE LOOKING FOR FROM INDUSTRY CLOUDS

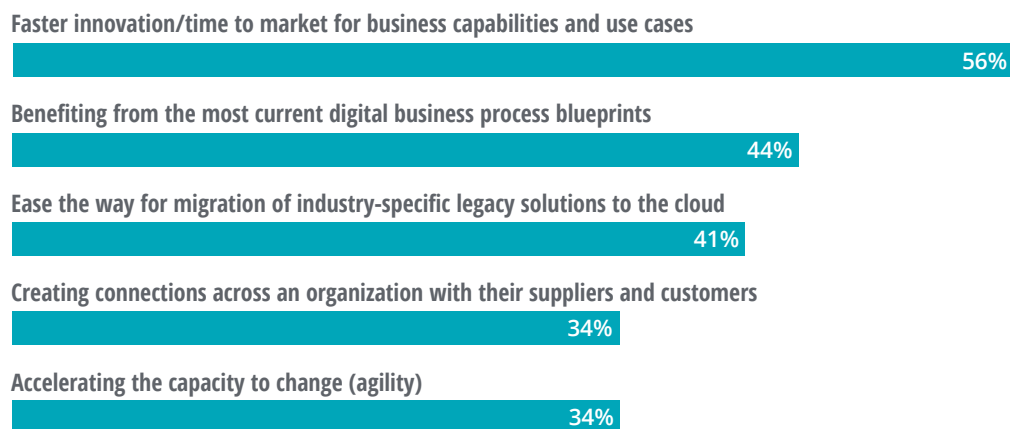
Ninety-two percent of B&CM respondents agree/strongly agree that industry clouds will be the enabler/catalyst for transformation and automation of industry-specific business

processes.⁶ When asked about the most compelling potential benefits of industry clouds, faster time to market, access to current digital business process blueprints, and ease of migration from legacy solutions ranked highest among respondents (figure 2). These survey results largely align with our interview findings.

FIGURE 2

Faster time to market is the most compelling benefit of industry cloud

The top five benefits of using an industry cloud cited by B&CM respondents



Note: n = 61.

Source: Deloitte US Future of Cloud Survey, 2022.

1. Faster time to market

Industry clouds can simplify the execution and integration process for banks. In addition, they are designed to be extensible to allow rapid deployment of new features and functionalities, thereby accelerating the time to market. Mambu, for example, helped ABN AMRO launch its lending startup proposition in the market in 10 months.⁷ Recently, Western Union was able to launch a digital bank in Europe within 11 months using modular components and cloud-based architecture.⁸ In another example, a large global bank cocreated an industry cloud solution to ascertain customer and product-level profitability. The bank was able to directly leverage almost two-thirds of the solution for a similar effort in another market.

2. Focus on true differentiation

By not having to recreate common applications supporting contact center agents or processes like customer onboarding and digital advice platforms, industry clouds can free up resources, including talent, to innovate and focus on competitive differentiation. For instance, cleareye.ai digitizes banks' trade financing operations. A similar effort in-house may entail dealing with multiple providers and hours spent on developing algorithms.⁹ Demica is another provider of a cloud-based trade financing solution.¹⁰

3. Ecosystem curation

The industry cloud providers' integrated approach typically enables access to an ecosystem of fintechs, independent software vendors (ISVs), and SaaS providers, alleviating major pain points for banks, including vendor due diligence and contracting.

For instance, third-party AI-enabled lending capabilities are available through industry clouds.¹¹ Such access can help B&CM institutions deliver new solutions and services and create additional revenue streams faster.

4. Continuous innovation

Industry clouds undergo constant improvements based on inputs from users across the industry, allowing banks to leverage features suggested by others, including their competitors.¹² Further, it enables B&CM institutions to leverage innovation at all levels: infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS).

5. Industry-specific data

Banking-specific data models and workflows can be preconfigured to power analytics and insights. For instance, Amazon FinSpace enables financial institutions to find, compile, and analyze internal (e.g., portfolio, actuarial, and risk management systems) and third-party (e.g., historical securities prices from stock exchanges) data.¹³ Goldman Sachs financial cloud is another example.¹⁴

RISKS AND REGULATORY CONSIDERATIONS WHEN USING INDUSTRY CLOUDS

Data security and regulatory risks are among the top concerns for surveyed B&CM executives when using industry clouds, with fear of control over data and insights (41%) most often cited (figure 3).

FIGURE 3

Banks are most concerned about control over data and insights when using industry cloud

The top five concerns cited by B&CM respondents in relation to using an industry cloud



Note: n = 61.

Source: Deloitte US Future of Cloud Survey, 2022.

Vendor lock-in is another significant challenge. Globally, many central banks and industry watchdogs have expressed concerns about concentration risks and vendor lock-ins.¹⁵ Industry clouds may further exacerbate these risks as end-to-end processes and workflows for a specific business issue could be provided by a single vendor. Moreover, institutions may be more inclined to choose an industry cloud solution among the cloud service providers (CSPs) they are already using, adding to the concentration risk.

That said, technically, industry clouds can support interoperability between different cloud platforms, which could better align to banks' multicloud strategy. This can help mitigate the risk of vendor lock-in. Nevertheless, banks should assess all risks from industry clouds against their benefits, as well as in comparison to generic cloud solutions.

Navigating an evolving and diverse cloud network

The industry cloud provider network is still evolving. Key players in the network—hyperscalers, enterprise software providers, core banking providers, emerging SaaS providers, and system integrators—are rapidly developing new offerings. In fact, our interviews with providers revealed a highly varied approach to industry cloud strategies, capabilities, and codevelopment models.

Hyperscalers tend to see industry clouds as a strategic shift. Their approach, largely, is to bundle existing products and customize advance features on their platforms using an industry-specific lens. One of the hyperscalers we spoke to plans to shift focus away from being product-centric to customer-centric. Its current industry cloud portfolio, for instance, pieces together existing capabilities in different combinations to solve specific business use cases, including customer onboarding, financial crime, and regulatory compliance.

Meanwhile, Google is big on using advanced technologies (e.g., AI, ML) to extract data from traditional “line-of-business” applications such as customer relationship management (CRM) to help optimize outcomes to address industry-specific challenges.¹⁶

AWS is trying to bolster its sector expertise through strategic hires and market focus but is relying on its network partners to build industry clouds using its platform as the backbone.¹⁷ IBM, too, has launched a cloud for financial services.¹⁸

Enterprise software providers consider industry clouds as the next phase in their evolution. They are typically creating industry-specific customizations on top of existing horizontal applications. SAP’s industry cloud is integral to S/4HANA and is considered a growth driver for

the company. SAP and its ecosystem are building deep industry-specific capabilities on SAP Business Technology Platform (BTP), which enables access to SAP’s core business applications, including S/4HANA.¹⁹ For instance, SAP leveraged SAP BTP to launch embedded finance as a service recently.²⁰ Salesforce too is seeing significant uptake of industry clouds.²¹ Salesforce’s acquisition of Vlocity allows it to add industry-specific workflows to its existing products.²²

Meanwhile, **core banking software providers** have or are transitioning to an open architecture and, in some cases, a “cloud-like” operating model, which entails an “as-a-service” approach,²³ elastic infrastructure, and possibly new pricing models including consumption/subscription billing. For example, Fiserv’s acquisition of Finxact, a cloud-native core banking software provider, enables third-party integrations through open APIs.²⁴ Further, core providers are leveraging partnerships with hyperscalers. For example, FIS launched its Modern Banking Platform with one of the hyperscalers.²⁵

Niche **emerging SaaS providers**, on the other hand, seem to have varied views on industry cloud. Some consider themselves to be industry clouds because they’ve been exclusively focused on banking and capital markets since inception. Meanwhile, others are indifferent to the concept but hope that industry clouds will shift the conversation away from industry-agnostic products.

That said, they are likely to leverage a “cloudfirst” approach and emerging technologies to address *singular* use cases. Further, their deep sector specialization is likely to keep them ahead of the curve, allowing them to build market capabilities faster than providers in other categories. However, since they are often small-scale players, they may look to align with larger players, especially hyperscalers, to expand their reach. These providers can also be attractive acquisition targets.

System integrators are actively moving into this space, too. They bring sector expertise along with technology acumen and work across technology providers. Overall, industry cloud is a partner play. Despite different verticalization strategies, vendors from different categories are likely to codevelop industry cloud solutions, in collaboration with system integrators, and in some cases, leading banks, providing monetization opportunities to all.

A deeper dive into industry clouds for banking and capital markets

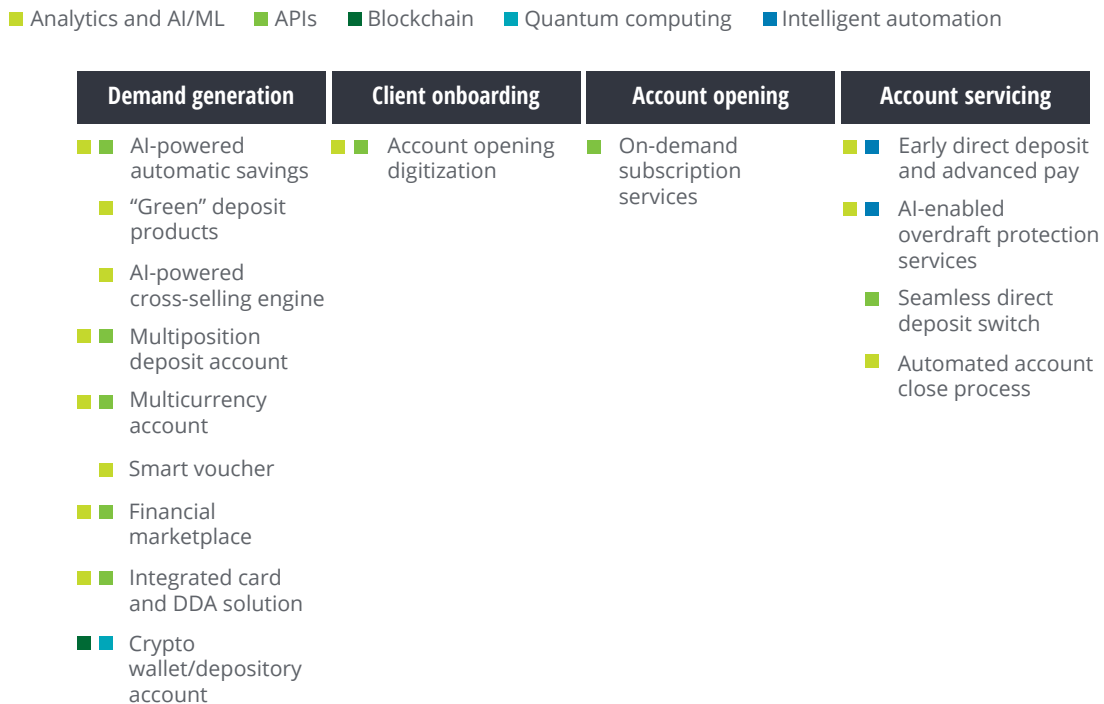
Putting a futuristic lens to the value chain and business issues across B&CM segments can highlight several disruptive industry cloud use

cases. Key Bank, for example, uses industry cloud for loan origination. HSBC codeveloped a new risk advisory tool that allows it to run complex simulations 16 times faster than before. The capability was built in less than five months.²⁶ And Goldman Sachs set up a new transaction banking-as-a-service platform in collaboration with AWS.²⁷

Figure 4 illustrates a sample of workflows for potential industry cloud adoption across the retail banking deposits value chain. These industry cloud use cases can bring together emerging technologies to offer a near-ready-to-deploy solution. For instance, banks can use industry clouds to enable automated savings—the ability to sweep spare change into an investment account—built by overlaying AI/ML technologies and API functionality.

FIGURE 4

Several disruptive opportunities exist across retail banking deposits value chain



Note: This list of use cases is not exhaustive.
Source: Deloitte analysis.

Similarly, industry cloud can enable a multiposition deposit account (i.e., savings position, transaction position, and line of credit all under one account), which uses analytics and AI/ML, and APIs to move funds in and out of positions depending upon payment sources and customer limits. Other potential industry cloud use cases include digital account opening, on-demand subscription services, and AI-enabled overdraft protection.

How to move forward with industry cloud

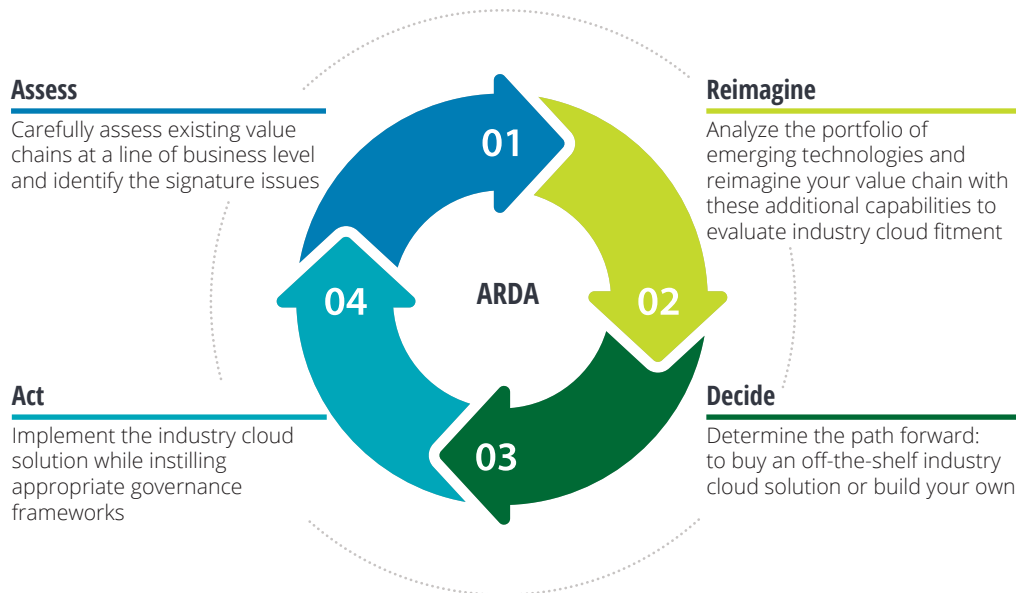
Selecting an industry cloud is by no means straightforward. Firstly, industry clouds can be more expensive than general cloud capabilities due

to a potential higher degree of abstraction and specialization. Further, there are already plenty to choose from: some solutions focus on regulatory compliance, some provide segment-specific data and tools, while others focus on adding analytical and AI capabilities on top of existing or third-party functionalities.

On a spectrum of horizontal and vertical business processes, industry clouds generally sit right in the middle. Extremely vertical processes usually demand significant, time-consuming application customization. Industry clouds, however, are meant to fast-track transformation and optimize existing workflows. The ARDA model, which is a series of sequential steps—assess, reimagine, decide, and act (figure 5)—can guide banks in implementing industry cloud solutions.

FIGURE 5

The ARDA model can help banks determine where to invest



Source: Deloitte analysis.

To begin with, and perhaps most importantly, B&CM institutions should **assess** their existing value chains and identify specific business issues that need to be addressed. This may be done best at a line of business (LOB) level (retail banking, wealth management, capital markets, etc.).

They should then analyze the portfolio of emerging technologies and **reimagine** the existing operating models with these additional capabilities. In doing so, banks should consider questions such as “Would an industry cloud solution be the best way to address the business problem at hand?”; “How does the total cost of ownership for industry cloud compare with that of bespoke development?”; and “Does this approach align with my overall strategic goals for cloud?” They should think of industry cloud as introducing new, enhanced capabilities without having to rip and replace an entire system.

Next is **deciding** their deployment approach (i.e., whether to purchase an off-the-shelf solution or build one from ground up). Ready-to-run industry clouds are typically best suited for standardized applications that require minimal configurations. Meanwhile, some banks are creating a dedicated industry cloud platform, often in partnership with leading CSPs.²⁸

That said, while evaluating different market offerings, banks should assess their competitive landscape, CSPs’ vision, current industry-specific

features, and the breadth of ecosystem partners. In addition, they should assess potential vendor lock-in risks.

Finally, banks should **act** on the chosen industry cloud, the starting point being a minimum viable product that could evolve with nimble software engineering capabilities and continuous feedback. In addition, banks should put in place a robust governance framework and set up a review process that entails regular communication with solution providers about their plans, including upcoming innovations and industry cloud ecosystems they plan to support in the future.

Redefining the future of digital transformation with industry clouds

Banks risk being left behind if they don’t accelerate their digital transformation. Industry clouds hold enormous promise in helping banks achieve this goal by unifying disparate technologies, minimizing banks’ legwork, bolstering innovation, and allowing them to focus on their unique value proposition. Industry clouds have other benefits as well. They can enable banks to access a broader ecosystem of fintechs and software vendors more seamlessly. In addition, industry clouds should empower business and technology executives with more robust and expansive innovation capabilities.

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About the authors

Nicholas Merizzi | nmerizzi@deloitte.com

A principal in the Deloitte Consulting LLP Cloud Strategy offering, Nicholas Merizzi works with global organizations to help them achieve their cloud strategies at enterprise scale. He is skilled at helping clients map a path for transformation, modernize complex distributed systems, and explore emerging technologies that enable business strategies. Merizzi brings more than 15 years of experience in technology across the financial services industry to his position. Before joining Deloitte, he held technical leadership positions at a global technology company and worked as an engineer for a major bank. He holds both an undergraduate and graduate degree in computer science, as well as an MBA focused on strategy and finance. Merizzi now leverages this combined experience with cloud at the epicenter to help clients push through new frontiers and reimagine business opportunities.

Pinaki Dhal | pdhal@deloitte.com

Pinaki Dhal is a senior manager with Deloitte Consulting focused on digital and core banking transformations in the United States. For the last 15 years, Dhal has advised global and US financial institutions on how to build a new digital bank using emerging technologies, as well as transform, scale, and optimize their corporate and institutional banking businesses.

Val Srinivas | vsrinivas@deloitte.com

Val Srinivas is the banking and capital markets research leader at the Deloitte Center for Financial Services. He leads the development of our thought leadership initiatives in the industry, coordinating our various research efforts and helping to differentiate Deloitte in the marketplace. He has more than 20 years of experience in research and marketing strategy.

Samia Hazuria | shazuria@deloitte.com

Samia Hazuria is a manager at the Deloitte Center for Financial Services, where she contributes to research initiatives that differentiate the center as a thought leader in the financial services industry.

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Industry leadership

Monica O'Reilly

US financial services industry leader
Principal | Deloitte and Touche LLP
+1 415 783 5780 | monoreilly@deloitte.com

Deron Weston

US consulting banking and capital markets leader
Principal | Deloitte Consulting LLP
+1 404 631 3519 | dweston@deloitte.com

Nicholas Merizzi

Principal | Deloitte Consulting LLP
+1 404 631 2105 | nmerizzi@deloitte.com

Pinaki Dhal

Senior manager | Deloitte Consulting LLP
+1 312 486 0912 | pdhal@deloitte.com

Matthew Carlson

Senior manager | Deloitte Consulting LLP
+1 571 213 0016 | mcarlson@deloitte.com

Deloitte Center for Financial Services

Jim Eckenrode

Deloitte Center for Financial Services
Managing director | Deloitte Services LP
+1 617 585 4877 | jeckenrode@deloitte.com

Val Srinivas, PhD

Deloitte Center for Financial Services
Research leader | Deloitte Services LP
+1 212 436 3384 | vsrinivas@deloitte.com

Samia Hazuria

Deloitte Center for Financial Services
Senior research specialist | Deloitte SVCS India Pvt L
+1 678 299 8084 | shazuria@deloitte.com

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