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RESEARCH PAPER | FINANCIAL SERVICES & INSURANCE

Digital to the Core: Transforming Financial Services and Insurance in the New World of Digital Business Platforms and Ecosystems

NTT DATA global study finds the financial services and insurance industry is at an inflection point for profound change. Digital disruption is forcing 61% of financial services and insurance companies to move away from traditional business models.

JULY 2019

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Introducing the Digital Business Platform economy

In 2016, leaders in the financial services industry felt pretty good about their future.

While digital forces roiled other industries, life in financial services and insurance (FS&I) seemed well protected against the chaos. Incumbents had cemented relationships with large customers over decades, vertically integrated business models insulated them from external shocks, and banking regulations erected difficult-to-overcome barriers for new competitors. In a 2016 NTT DATA survey of bankers, only 7% saw fintechs as a definite threat, and just 15% thought they would invest in a modernization effort over the next three years.

Three years later, FS&I executives are no longer feeling comfortable, as the results of our new survey reveal. The digital tide they thought they were escaping is now rolling onto the beach in the form of rising customer expectations, unexpected competition and the evolution of the platform economy — all driven by digital technology.

This new level of industry competition hasn't been driven by established financial giants, but rather by retail and technology innovators like Amazon, Apple, Google, Netflix and Uber. Their strategic weapon of choice is the Digital Business Platform (DBP).

Inside a friction-free, easy-to-use, mobile-accessible environment, the DBP introduces consumers to a wide range of personalized goods and services, many of which are not even created by the platform owner. Platform businesses are anything but the traditional banking model of vertically integrated, full-service products sold through branch offices. Instead, platform participants operate in concert to provide consumers with unique value 24x7.

Can FS&Is respond with their own DBPs, or as participants in platforms created by others? Here's the good news from our survey: nine in 10 global FS&Is say the time is now for transformational digital change — fundamental change, not just investing in digital bits and pieces. But the less than good news is that these companies feel locked into legacy core technology that is not platform friendly.

There is a way forward for institutions that need to simultaneously keep their core systems beating even as they put down one foot after another on their digital journey. By creating DBPs and participating in digital partner ecosystems, FS&Is can work with fintechs and insurtechs to incorporate new digital technologies, leverage application programming interfaces (APIs) and share customer data.

DBPs can give FS&Is the ability to adapt and launch new products quickly, while also keeping up with customer demand for better service and customization. The best part is DBPs allow FS&Is to shift their business models without having to undergo risky, wholesale replacement of their legacy IT systems.

Time for digital transformation

85% New DBPs represent a significant opportunity for FS&Is to reposition themselves in the industry

82% Integration of core and distribution systems into a DBP is important for their company's competitive position in the next 3 to 5 years

78% The list of FS&I leaders will look very different in 5 years

Q37: Please rate your level of agreement with the following statements about the direction of the financial services and insurance markets.
Q63: Please rate your level of agreement with the following statements about the competitive environment.

To examine the future of FS&I companies related to creating a DBP and participating in a digital ecosystem, NTT DATA surveyed online 471 senior executives in banking, insurance, brokerage, wealth management, and cards and payments across the U.K., U.S., Germany, Spain, Italy and Japan.

The survey was well-timed: The global FS&I industry is at an inflection point for change.

The stakes have never been higher for traditional FS&Is to evolve their business models to engage customers and partners to maintain clients and generate new business.

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Key study findings

9 in 10 global FS&Is believe in the need for transformational digital change

61% of global FS&Is are shifting away from traditional business models in response to new digital technologies, new competition and new customer expectations

New technologies, such as AI and blockchain, are the top trends impacting FS&Is, as identified by 53% of respondents

84% of firms report that industries outside of FS&I are providing a significant influence on the direction of the market, and 83% believe new entrants could become major competitors in offering financial products

Partnerships with fintechs and insurtechs will be a dominant strategy to quickly integrate digital features into legacy core and distribution systems

Only 23% of FS&Is have a DBP working and providing business benefits; many FS&Is are in the early phases of planning to integrate digital capabilities into their legacy systems

Digital market forces are changing the way the financial industry must operate

The study asked, "Which trends will have the biggest impact on your company in the next one to three years?" and requested respondents to select their top three choices. The top three market forces they identified — new technologies, increasing competition and changing customer behavior — have a digital component, and each are impacting the way both the financial services and insurance industries must operate.

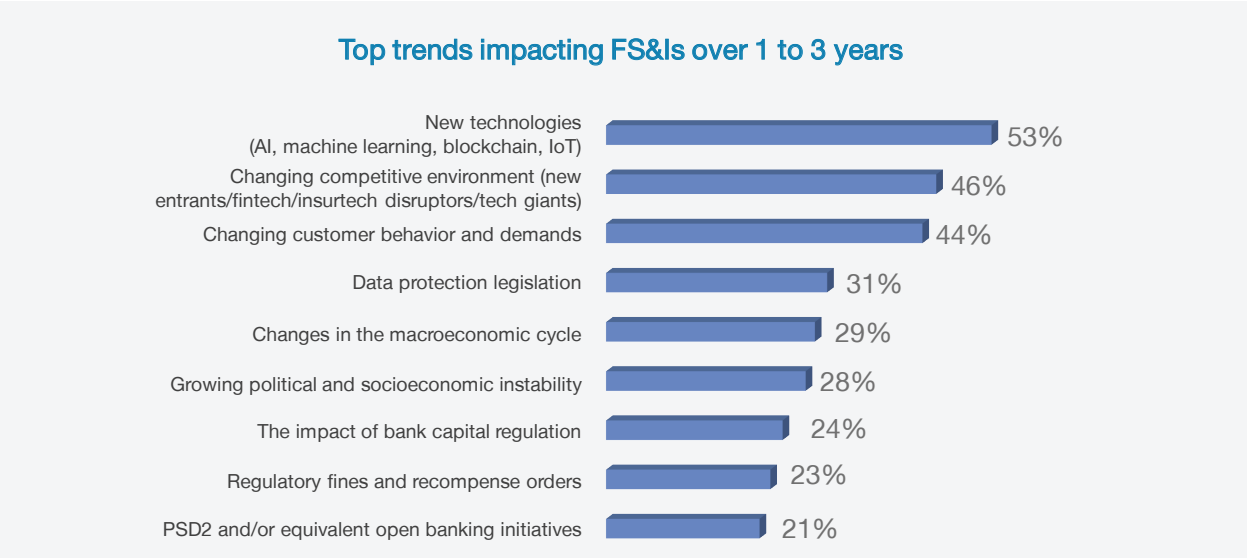
New technologies

To compete effectively in the changing market and keep up with rising customer expectations, 53% of survey-takers say they must better leverage new technology. Artificial intelligence (AI), machine learning, blockchain and the internet of things (IoT) are making new business models possible. FS&Is must adopt and integrate digital technologies within their legacy core systems in order to work with partners both inside and outside the financial industry.

These technologies also enable new business models, lower cost of prediction, more data-driven insights, quick hyper-segmentation and hyper-personalization, and inform a strategy around hyper-customization of products.

There were some unique differences in top trends by region. Every region except Japan viewed technology as the top trend, while the U.S. placed a much higher emphasis on the changing competitive environment and rising threat of new entrants such as fintechs and non-traditional players.

Japan also placed a much higher emphasis on the sensitivity to changes in the economic cycle and viewed open banking initiatives as a more important trend than most regions. The U.K. placed more emphasis on impending data protection legislation. The EU's results were consistent with the overall results, although they placed slightly more weight on the importance of technology and had less concern for the changing economic cycle.[1] Additionally, the spurt of recent regulations in the EU around open banking, including the Revised Payment Service Directive (PSD2), make it imperative for financial institutions to quickly explore and adopt new technologies.



Q36: Which trends will have the biggest impact on your company in the next 1 to 3 years (select top 3)?

Increasing competition

Of the executives surveyed, 46% of survey respondents are concerned about the competitive threat from new entrants: fintechs, insurtechs and technology giants.

For a long time, the industry believed tech startups couldn't challenge traditional financial institutions. The incumbents were too big, too entrenched with their customers and the industry too regulated. But over the last three years we have seen a major shift in attitude, as FS&Is have been forced to respond to the success of their new tech competitors.

Geography plays a strong role in determining how these competitive threats are perceived. Ninety-one percent of the FS&Is in the EU are more concerned about the competitive threat from new entrants than in the U.S. (81%) and much more than in the U.K. (72%). The EU banking system remains very fragmented. The euro area's banking markets are still national markets, with domestic lending accounting for about seven-eighths of the total market. European banks need to expand their business opportunities beyond their home countries in order to take advantage of economic opportunities of the region and remain competitive.

Respondents were asked to consider a group of non-traditional firms and choose which firm had the best chance of becoming a leading financial services institution. The list included tech firms, such as Alibaba, Facebook, Tencent and Apple, as well as retailers such as Walmart. Amazon was the runaway leader, with 62% of respondents, and Amazon's perceived threat was consistent across all regions, with the exception of Japan, where Facebook and Walmart had stronger positions.

Changing consumer behavior

While better leveraging new technologies and staying ahead of competitors is of high concern for executives, another 44% indicated shifting customer behaviors and demands are of paramount importance. Consumers are on the go more than ever — but they aren't going to bank branches or brokerage offices. Instead, they want to interact with financial services providers in the same way they do business with retailers and other businesses: via the internet and, increasingly, using smartphones.

When comparing results from the 2014 "Mobile Banking: The New American Addiction" study[2] with the 2018 "Digital Customer Experience in 2020: Cracking the Code on Data" research,[3] there was a 40% increase in consumers' daily use of mobile devices for banking, with two-thirds (67%) accessing their mobile banking accounts weekly and 36% accessing their mobile banking four or more times a week.

Consumers now expect the same level of ease of use, personalization and guidance they encounter from other platform-based businesses. They are already accustomed to using mobile apps to get a ride from Uber, book a flight through Expedia and order flowers for same-day delivery with ProFlowers. Popular mobile banking apps also allow people to send payments, adhere to budgets and split bills with friends.

Competitive threats loom large from new entrants, fintechs, insurtechs and technology giants

84% report that industries outside of FS&I are providing a significant influence on the direction of the market (that is Amazon and Apple)

83% say new entrants could become major competitors in offering financial products

65% think Amazon has the best chance to become a leading FS&I over Apple, Alibaba, Walmart, Facebook and Tencent

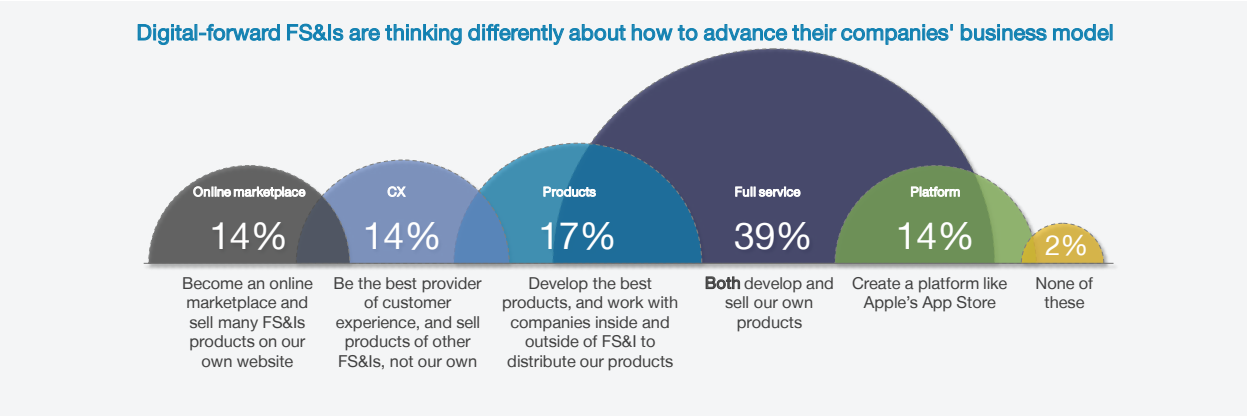
The single biggest threat Amazon poses is loss of young customers, followed by its ability to serve customers that don't have bank accounts, and its ability to own and sell customer data.

62% say Amazon poses a threat to traditional FS&Is

41% **view retail and technology companies** (Alibaba, Amazon, Apple and Walmart) as their biggest **competitor in the FS&I space (over traditional firms)**

Q37: Please rate your level of agreement with the following statements about the direction of the FS&I markets.
Q68: What do you believe is the single biggest threat that Amazon poses to traditional financial institutions?
Q70: From a global perspective, which of these retail and technology companies do you think has the best chance to become a leading financial services institution?
Q72: Who do you see as your biggest competitor in the financial services space?

Market forces are driving FS&Is to change business models



Q22. How do you see your company's current business model evolving? (select one)

These primary market forces — new technologies, new competition and new consumer demands — will continue to propel (or drag) the FS&I industry into the digital future, forever changing the way they operate. This shift pushes most financial industry executives outside their comfort zone.

Comfortable or not, FS&Is are beginning to respond to these disruptive forces from platform competitors, our survey demonstrates. A full 61% of respondents say their institution is moving away from the traditional business model of being a full-service provider that serves customers only their own products.

With the traditional business model, insurers and banks own and operate a vertically integrated value chain that includes manufacturing and distribution as well as sales and service, and holds a fixed cost structure.

Fintech and insurtech firms, on the other hand, have brand new business models that avoid the expenses associated with physical buildings and layers of technology infrastructure. This allows them to build financial products and services that cater to mobile-first customers who demand self-service offerings at competitive prices.

Capitalizing on this opportunity to serve mobile-first customers, the new business models of fintechs and insurtechs eliminate time-consuming and lengthy application processes and make the most of customer data. Fabric, for example, is a startup that allows people to purchase life insurance policies quickly and digitally via its browser-based application for digital devices, including desktop, mobile and tablet.[4] Like certain others in the insurance game, Fabric aims to ease some of the cost concerns by offering its Fabric Instant service, which allows users to pay US$6 per month for accidental death coverage of US$100,000.

Pursuing the advantages of partnering, a group of top global banks (including Goldman Sachs and HSBC) have invested US$20 million (£15.3m) in Bud, a London startup working on open banking technology that helps financial firms create better digital services for their clients.[5] The platform allows banks to integrate other company's products and services into their own apps and websites. Ed Maslaveckas, Bud's CEO and cofounder, explained to Yahoo Finance U.K. that Bud is similar to Apple's App Store in providing a service that allows customers to compare products from a variety of vendors.

Massachusetts Mutual Life Insurance Company is in part using a merger and acquisition strategy to acquire digital expertise and explore new markets. Its Haven Life online insurance subsidiary recently acquired startup online broker Quilt.[6] The deal allows Mass Mutual and Haven to pursue online opportunities in the annuity business using the Quilt team.

What's unique for each sector?

- 52% of insurers plan to maintain a traditional full-service model, while 21% indicated a shift toward developing the best products
- 16% of banks are much more inclined to consider creating platforms, and 20% plan to evolve to an online marketplace
- 20% of brokerage, capital markets and wealth management firms plan to focus on developing the best products, and another 20% on becoming the best provider of customer experience

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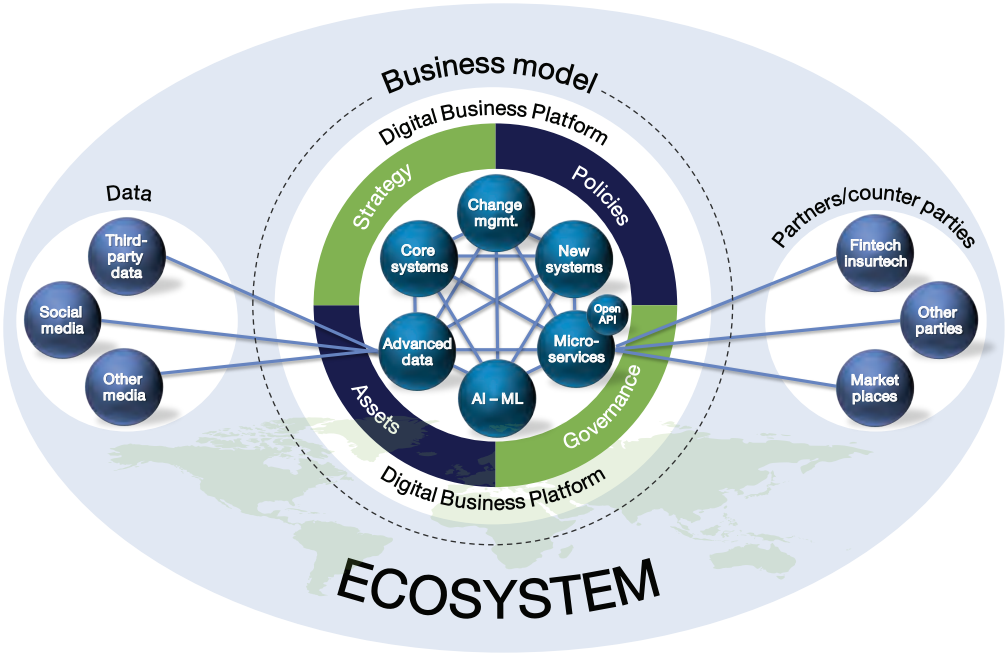
Digital Business Platforms are the “holy grail” to leverage core systems for success in a digital world



How can FS&Is compete effectively in this dynamic market and keep up with rising customer expectations? Enter DBPs and partner ecosystems.

For decades, banks and insurance companies have been wedded to complex, outdated legacy core systems. Replacing these systems is not only costly but high-risk for the business, much riskier than simply maintaining old iron.

That’s why many banks and carriers have not even considered wholesale replacement of core systems and policy administration systems. And as if they needed further encouragement to patch rather than replace, numerous case studies demonstrate lengthy replacement projects that failed to launch.

The Digital Business Platform is the holy grail — the solution to leverage core and distribution systems for success in a digital world. DBPs enable FS&Is to keep pace with how customers and partners want to interact, increasing business demand for newer products and services.

A Digital Business Platform (DBP) is a business framework that allows multiple business models to be built and supported on a single technical framework. A **digital partner ecosystem** is a set of businesses interacting in a shared market for products and/or services.

A bank or an insurance DBP might include unifying core systems, a digital front-end, and a data and analytics back-end, leveraged by cloud and supported by an open marketplace of fintech and insurtech partners that make up the company’s ecosystem.

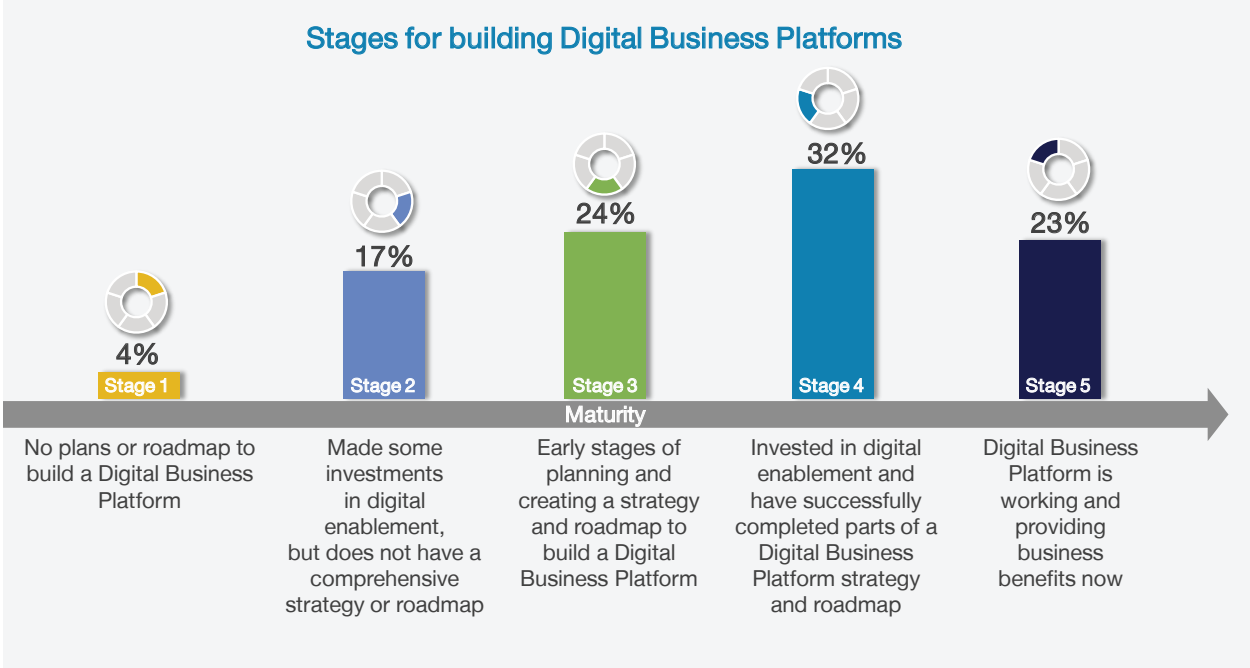
Maintaining the core functions of a customer information file or policy administration within their systems but making them part of a DBP offers a lower risk option towards digitization. A DBP approach allows FS&Is to couple, swap and assemble technology components to support any business model.

Additionally, the DBP infrastructure manages the secure exchange of customer data, oversees authentication and authorization, and ensures compliance with regulations. Overall governance of the DBP can be managed using defined standards across FS&Is, fintechs, insurtechs and other partners.

There are a number of large insurance carriers and banks leading the way in building DBPs. In insurance, Chubb partners with retailer Suning, Progressive with Zubie, and Nest with Liberty Mutual. In banking, JP Morgan Chase partners with On Deck Capital, Bank of America with Earthport for cross-border payments and German digital bank Fidor with telecommunication giant Telefonica.

Companies are in the early stages of maturity for Digital Business Platforms

Our study shows many companies are in the early stages of maturity for building DBPs. **Only 23% of FS&I companies have a DBP that is working and providing business benefits.** The remaining 77% of firms are in the early phases of planning to integrate digital capabilities into their core legacy systems, or have no plans at all.



Q27: Which of the following best describes your company's phase for becoming digitally-enabled and building its Digital Business Platform?

Not surprisingly, because a DBP allows firms to more easily share information, Europe is ahead of the game in building DBPs due to the PSD2 regulation. In the U.K., open banking has been law since August 2016. Regulators required the nine biggest banks — HSBC, Barclays, RBS, Santander, Bank of Ireland, Allied Irish Bank, Danske Bank, Lloyds and Nationwide — to grant licensed startups direct access to their customer data, including account transactions. Europe followed in January 2018, with PSD2 rules requiring European banks to share customer transaction data with third parties that request it, as long as customers give their consent.

As a result, Italy (43%) and Germany (38%) ranked as having the largest percentage of mature platforms, followed by Spain (23%), Japan (22%) and the U.K. (18%). The U.S. (8%) has the lowest percentage of mature DBPs.

As financial institutions move beyond the initial hurry of compliance and start benefitting and expanding their business, leveraging open systems, there will be a greater return on investment and adoption across the world.

Insurers are in the lead:
Insurers are ahead of other financial sectors, as 32% of carriers have already developed a DBP, compared with 23% of banks and 19% of brokerage, wealth management and capital market firms.

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FS&Is expect meaningful business benefits from Digital Business Platforms

Investments in Digital Business Platforms are paying off

	Working platform	Less mature/ no platform
Increasing revenue	✓	
Better customer experience	✓	✓
Increase in customer retention		
Faster response to market needs	✓	✓
Product improvement		
Expand the number of partners	✓	
Maintaining relevance		✓
Lower technology costs		
Lower labor costs		

Q55: What are the top business benefits your company expects from investing in a Digital Business Platform? (rank top 3)
Benefit results are sorted by highest to lowest for the working platform. Increasing revenue was chosen by 42% of working platform responses as a top 3 priority [X- higher emphasis (%) as a top 3 priority]

DBPs will unlock the potential value of digital technology and the platform economy, benefitting all participants of digital partner ecosystems: FS&Is, fintechs, insurtechs and other partners, as well as customers.

Both FS&Is and fintech/insurtech firms will benefit from a larger pool of customers, enabling them to grow their product and service offerings faster through partnerships. Also, by working through a DBP rather than independently, ecosystem partners can depend on quality of service guarantees with banks, carriers and other partners. This will enable innovative FS&Is to combine data from multiple sources to achieve higher levels of personalization than would be possible outside of a DBP.

Our study data demonstrates that investments in DBPs are paying off. The 23% of companies that have already created DBPs are reaping early rewards:

- 46% provide a better customer experience
- 44% respond faster to market needs
- 44% grew revenue
- 41% increase customer retention
- 24% are able to expand the number of partners in their ecosystems

When asked what benefits companies expected from investing in a DBP, nearly half of FS&Is anticipated these same rewards.

Bolstering customer relationships is one of the best ways to increase both loyalty and revenue, as well as reduce churn, and FS&Is recognize the customer relationship is increasingly digital. Customers of all ages are moving away from traditional touch points such as face-to-face interactions at a branch or phone calls to the contact center. To keep customers engaged, FS&Is need to provide effective digital touch points, regardless of the channel or device, that feel just as personal. This drives the commitment to creating highly personalized digital customer experiences.

Firms with no plans and those in the early phases of planning to build a DBP, selected maintaining relevance as one of their top three priorities — an indication of a much weaker market position.

FS&Is are taking a building block approach to advancing their capabilities

NTT DATA believes there are 10 key capabilities needed to build DBPs. They're listed in the left-hand column of the chart below. We asked FS&Is, "How would you rate your ability to build and expand a Digital Business Platform in each of the following areas?"

Our study shows FS&Is are taking an incremental or a building block approach to advancing their capabilities as they advance in their stage of maturity from intent to execution of business processes and technology to fundamental business model changes in building DBPs.

Firms at the first stage of maturity — those without plans to build a DBP — are primarily working on retaining customers and fixing problems with customer privacy, preferences and permissions. At the second stage of maturity, FS&Is have intent to build a DBP and have started planning; their first step is implementing business processes and technology to onboard new digital partners.

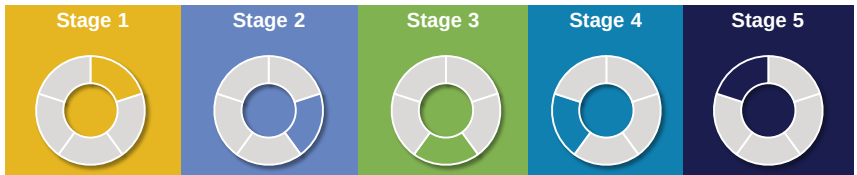
At the third stage, the focus progresses to accessing customer data and ensuring data security. While in the fourth stage, FS&Is focus on integration with internal core and distribution systems and adding new distribution channels.

Upon entering the fifth stage of maturity, FS&Is have implemented the business processes and technology to launch new products, apply big data and analytics to target the best customers and integrate with third-party products, and they set their sights on broader, more strategic business model change.

As FS&Is travel farther along their journey to move beyond aggregating products or providing products and services differently, they exit from a traditional business model and enter into new value streams. At this juncture, firms undergo a fundamental business model change, not merely a technology platform change. They are behaving less like banks and more like technology companies.

Take BBVA, Spain's second-largest bank, as the poster child for banks making a transition to digital. It started from the top in 2015, with Honorary Chairman of BBVA Foundation Francisco Gonzalez declaring, "BBVA will be a software company in the future." BBVA floored the gas

FS&Is are taking a building block approach to advancing their capabilities



Top 5 priorities	Intent	Execution of processes & technology		Business change	
Integrating third-party products					■
Applying big data and analytics to target the best customers					■
Launching new products					■
Adding new distribution channels				■	
Integration with internal systems (core, distribution and so on)				■	
Accessing customer data and ensuring data security			■		
Onboarding new partners		■			
Incorporating emerging technologies (IoT, blockchain, AI and robotics)		■			
Managing customer privacy, preferences and permissions	■				
Maintaining customer relationships	■				

Q51: On a scale of 1 (no ability) to 10 (high ability), how would you rate your ability to build and expand a Digital Business Platform in each of following areas? (results in table reflect % selecting 9 or 10)

pedal in its digital transformation process with the launch of BBVA Next Technologies. Today, BBVA employs more than 1,200 technology experts as the result of the merger of BEEVA, specializing in cloud computing and big data, with i4S, which focuses on cybersecurity.

BBVA aims to drive its technological transformation by leveraging BBVA Next Technologies' software engineering prowess in some of the most potentially disruptive technologies, including big data, AI, blockchain and cybersecurity. In addition, with partnerships with AWS, Google Cloud Platform and Microsoft Azure, and over 100 certified employees in these platforms, the company has made a move into cloud computing, where BBVA Next Technologys' expertise stands out the most.

BBVA tech innovations

A customer-centric platform was one of the first priorities and technology investments for BBVA. The platform is scalable, modular and operates in real time to provide mobile customers the service they demand. Also, this platform allows BBVA to offer services, such as BBVA Wallet, a mobile payments app that makes the bank competitive against new startups and digital companies.

BBVA plans and develops products with a framework similar to the approach taken by fintech startups. This rapid-fire ideation and prototyping process makes the company agile to market demand, more productive and able to deliver innovation on a timetable similar to digital giants. Gonzalez believes BBVA's biggest competitors will eventually be tech platform providers like Google and Amazon, so he is focused on proactively transforming his bank well before they enter the industry. BBVA's knowledge of its customers and what they want should be key to helping the company stay competitive even if tech titans decide to step into banking.

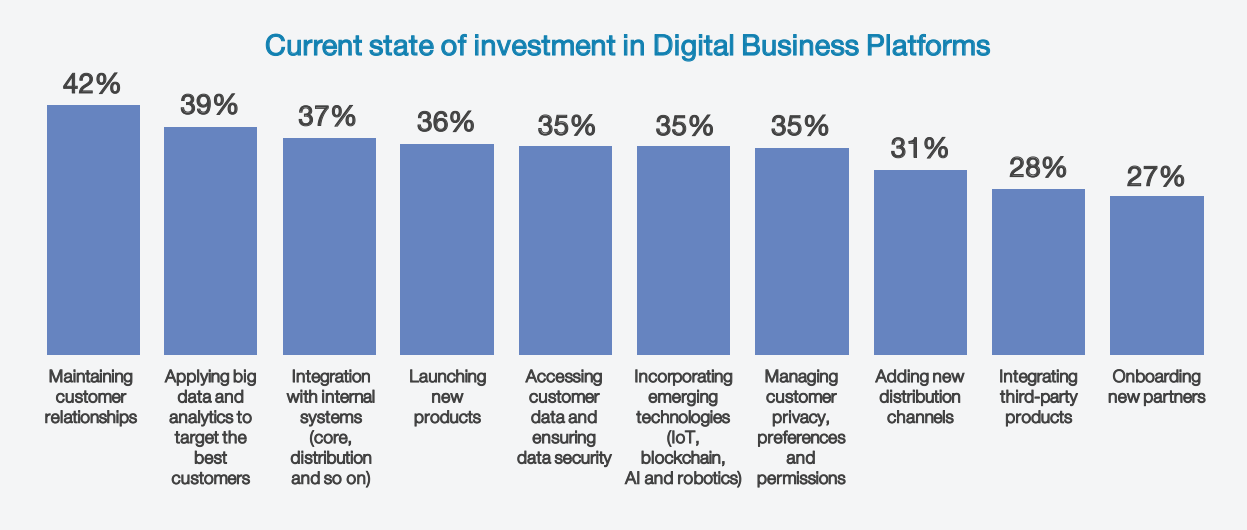
A focus on improving capabilities varies across industry sectors

The study highlights the unique situations of each industry sector as they build and expand key capabilities into their DBP. Customer experience is one area where there are differences. Banks place more emphasis on targeting new customers and less on maintaining customer relationships compared to the insurance, brokerage, wealth management and capital market sectors, where customer acquisition costs are very high. However, banks highly rate the ability to apply big data and analytics to target the best customers for product development and marketing.

Emerging technology is another area where differences between sectors are evident. P&C insurers focus on emerging technologies, where their initiatives leverage IoT and sensors to collect data and monitor environments. These are critical areas of expansion for policy customization and risk management. However, using these types of technologies is less prevalent in banks, brokerage, capital markets and wealth management firms.

Current state of investment in Digital Business Platforms

Our study shows that despite the limitations of legacy systems — and expected benefits from a DBP — most FS&Is continue to play defense by investing heavily in overcoming legacy system challenges rather than pursuing transformational initiatives.



Q53: For each capability area, please indicate the level of investment activity at this time. What is the current level of investment activity? (results in the chart reflect percentage selecting high option)

Companies concede they have a lot of work to do to digitally enable their businesses, but they also realize they have to keep moving ahead with investments in their DBPs. Over the past 10 years, FS&Is have invested heavily in overcoming legacy system challenges — focused on optimization and cost reduction rather than pursuing digital transformation initiatives.

But that stuck-in-neutral stance is starting to change, with new investment activity seeding digital transformation endeavors. Going forward, optimization of existing systems will continue, but FS&Is are also investing to launch new products, build better customer relationships and improve the digital customer experience.

In short, FS&Is are taking the first steps toward transitioning from vertically integrated, internally focused organizations to those that keep careful watch on both the core and external threats and opportunities — a valuable capability that management scholars term organizational ambidexterity.

FS&Is plan to invest in digital transformation endeavors. These companies will spend on functionality both inside and outside the core system as a way to integrate digital features and functions with their core systems.

Outside the core, investments are being made in big data and analytics to sharpen targeting on their best customers. Also receiving attention are emerging technologies seen as engines of digital transformation, such as IoT, blockchain, AI, machine learning and robotics.

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Partnering with fintechs and insurtechs will be a dominant strategy to adopt modern, agile software and technology-driven product offerings

Large FS&Is are now focused on rolling out digital-first products. That's a far cry from what they were doing even five years ago. So how does an FS&I with relatively little digital experience or depth kick-start completely new, digital-first products? How do FS&Is with limited resources develop offerings that can keep pace with the digital offerings from banks, insurers and other retailers?

The answer sounds counterintuitive, but it is through forming partnerships with fintechs and insurtechs. In fact, 83% of firms agree they will need to work with fintechs and insurtechs in the future. And, 78% report they will look to external partners to quickly integrate an extensive (80% or more) set of digital features and capabilities into their DBP to meet consumer digital expectations.

FS&Is have a history of being internally focused organizations with a do-it-yourself mentality. In the new world of DBPs and digital partner ecosystems, leading firms will turn their gaze further outward to use third-party partners much more than they have in the past. The challenge Amazon poses to traditional FS&Is has been a wake-up call to the industry, according to 62% of survey respondents. The single biggest threat Amazon poses is attracting young customers, followed by Amazon's ability to serve unbanked households, and its ability to own and sell customer data. To compete in this new environment, FS&Is must partner to distribute their products through other parties as well as sell other parties' products on their own channels.

One of the most popular approaches for FS&Is to integrate digital features and functions into their core and distribution systems is through partnerships with fintechs and insurtechs. With no or minimal upfront investment, FS&Is can make the most of fintechs' and insurtechs' modern, agile software and technology-driven product offerings to quickly go to market with their own digital solutions.

When entering into a relationship with a fintech or insurtech, FS&Is must apply sound risk management practices (as they are fully responsible for third-party vendor actions). Next, they should perform product due diligence to ensure the partner's technology will integrate with their core systems, comply with legal and regulatory

FS&Is report:	
Fintechs/insurtechs will become more relevant, allowing for the creation of many new partnerships	84%
Distribution partners for FS&Is will be fintechs/insurtechs, financial services startups, non-traditional firms/entrants (Amazon)	66%
Fintechs/insurtechs are the top choice as distribution partners in the digital ecosystem	42%
They expect to expand the integration of third-party products into their DBP	53%
They expect to expand the integration of third-party distributors into their DBP	51%

Q41: Please rate your level of agreement with the following statements about your company's priorities for the next 1 to 3 years.
Q32: In the next 1 to 3 years, which companies do you plan to partner with to distribute your products on their platform?
Q31: How does your [company] expect your emphasis on integrating both third-party products and distributors to change over the next two years?

requirements, map to their operational procedures, reflect their branding strategy and provide superior customer experience.

Partnering will be a major strategy for not only developing and selling products and services but filling the gaps with services that are not core to the businesses of large FS&Is. Property and casualty (P&C) insurers, for example, use camera-equipped drones to capture still photos or videos of damaged property during the claims process. However, insurers do not need to own the drones; they can partner with drone companies instead.

That said, there is a conscious effort among many FS&I executives to gain the critical capability of starting, stopping and changing relationships relatively quickly and being nimble enough to leverage partners effectively. Digital partnerships are different than those established in the physical world. For one, DBPs introduce automation into the process of tracking projects and relationships — it's a simpler way to interact with partners. Having a data provider in your ecosystem, for example, allows you to connect and exchange data via services in ways that are a lot easier than performing data extracts, file transfers and file loading.

APIs and DBPs provide the lingua franca that partners can use to embed their products with value-creating services developed by other companies and speed up time to value.

As ecosystems become more advanced at adapting to customer needs, it will become increasingly difficult for FS&Is that don't have open APIs to compete with just their own apps. Only the largest FS&Is that have made huge investments and possess deep research and development capabilities can go it alone. For most, the only way to succeed in this new world will be through partnering. The smaller the company, the more it will need to partner.

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Top strategic priorities change as FS&Is progress through the stages of maturity

Reflected in the responses to our survey is the dawning realization by executives that the FS&I industry is facing a once in a generation shift that will change the way companies operate.

To take one example of the many disruptive currents affecting established players, open banking is now a regulatory mandate across Europe. So it's no surprise that 39% of all respondents are making it a priority to improve product agility — the ability to quickly customize products for individual customers as well as the capability to design, test, launch and improve products at speed.

Mastering digital marketing and engagement was selected as the number one strategic priority by 54% of respondents, followed by improving product agility. These top two strategic priorities complement each other in terms of the desires of bankers' and insurers' to hyper-personalize products and market to the segment of one.

What would customers like to see in terms of digital marketing and engagement? Consumers want to have the experience of a capable assistant to help them — the way Alexa helps them do things at home.

Citizens Bank, for example, created a step-by-step guide for student loan applicants.[7] The system works like a personalized Twitter feed, sending applicants customized reminders of what steps remain. The bank decided to explore this option when it began to see steep drop-offs in its student loan application process. The results show a 10% increase in completed applications and applications completed in 40% less time. The bank says it has maintained a digital connection with 88% of applicants, establishing a relationship that can be used to sell additional services.

As DBPs mature, the top strategic priorities will shift from mastering digital marketing and engagement to improving

Q40: What are the top strategic priorities for your company in the next 1 to 3 years?

product agility. Product agility was the number two strategic priority in both the U.S. and the U.K. However, it ranked lower in both Japan and the EU, where launching API-based and open banking strategies ranked much higher.

Lemonade Insurance Company, a U.S.-based home and renters insurance provider for urbanites, is an example of the power of technology to transform a traditional industry, inspire new business models, participate in the platform economy and even improve society.

Lemonade uses AI, machine learning and behavioral psychology to rethink how it analyzes risk, allowing it to compete with extremely low prices — albeit with no-frills coverages. The quote and signup process on a mobile app takes less than two minutes, according to the company, and claims can be resolved in about three. Its business model, which relies on monthly fees, is also appealing to its millennial clientele: Lemonade donates unused premiums to each client's favorite social cause.

Lemonade's ultimate strategy is to acquire young customers as they rent, but then follow them to home ownership. This builds a strong bond and makes add-on products and coverages easier to introduce, all thanks to Lemonade's deftness with product agility. Lemonade is an example of a company that doesn't operate its own platform but rather makes its products available on other platforms via the Lemonade API, introduced in 2017.

Banks and carriers no longer need to be weighed down by their legacy systems. By creating DBPs they can leverage a partner ecosystem with fintechs and insurtechs to incorporate new digital technologies, use APIs and share customer data, giving FS&Is the ability to adapt quickly, launch new products, and keep up with customer demands for better service and customization.

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Open APIs allow banks to compete globally in the digital partner ecosystem

With a growing mandate to integrate digital features and capabilities into their core and distribution systems, banks are turning to APIs to make it happen. Many newer systems are built from the ground up with the idea that new integration requirements will constantly be identified.

APIs establish standards to support this interconnectivity with significantly less time and expense than hardwired interfaces used by many legacy platforms. They're flexible and dynamic, enabling banks to add new services, products, and capabilities over time without making major changes to their integration architecture.

The arrival of open banking, which is now more common in Europe, worries many financial industry executives in the U.S. and elsewhere. And why not? The prospect of making hard won and fiercely protected proprietary customer data accessible to other parties via APIs is enough to induce night sweats. But customer demands have changed, so failing to take on open banking will ultimately lead to disintermediation. Whether by business model choice or by regulation, banks simply have to engage and change.

Open banking is forcing banks to move away from being a vertically integrated business, where the financial institution is closed and controls mainly everything from front-end customer management to product development and beyond. The new business world is operating with horizontal layers that connect with each other and exchange data easily.

Open banking and PSD2 is striving to eliminate the screen-scraping model. In the past, screen scraping allowed third parties to access financial data by logging into digital portals on behalf of a financial institutions' customers. Financial institutions are generally opposed to screen scraping, due to security and customer control concerns, but open banking does away with the need for screen scraping because third parties must meet security requirements to qualify for access. With APIs, customers can use digital tools to make the process easier and faster, while also maintaining control over who can access their data.

Account aggregation is one example of how open APIs enable banks to add capabilities to their Digital Business Platform and business model. In Europe, HSBC's Connected Money app allows customers to see all their current accounts in one place, regardless of provider.[8] Open banking and APIs make account integration on an app possible, and is a curated service likely to build customer trust and loyalty for the ecosystem, much like they supported single, fully integrated brands in the past.

Despite their initial reluctance, banks are starting to understand the potential of open APIs and see a path to becoming truly digital. Using common APIs to create nimble products and services with partners, no matter where they are located, is a clever way to create competitive advantage in new geographic markets and places where regulators are not forcing open banking. When looked at this way, the potential of using open APIs to create partnerships to create unique value for customers really begins to outweigh the threat of losing proprietary banking relationships that are threatened anyway.

The insurance community may also want to pay attention to the open banking model. Although there are no regulatory mandates in the insurance industry, watching how banks use open banking API frameworks as a tremendously powerful tool to become truly digital should not be ignored. The Open Insurance initiative (OPIN) is one such project, promoting the concept of free and open APIs in insurance and the creation of a detailed framework for an Open API Standard in insurance. Although early, the advantages seen in open banking could be realized by insurance providers in a similar way.

Several big traditional U.K. banks are moving closer to the "platform-driven Amazon approach"

Deutsche Bank is working with the International Air Transport Association to build a system where airline ticket purchases don't go through traditional card networks and are instead handled as direct bank-to-bank payments using PSD2 mechanisms.[10] American banks should watch and learn from this. Several other big traditional U.K. banks, including HSBC and Royal Bank of Scotland, have embraced open banking rules to move closer to the "platform-driven Amazon approach" to business. They are beginning to offer third-party products and services alongside — or even in lieu of — their own.

Greatest advantages from open banking API frameworks

#1

Ability to provide valuable efficiencies and solutions for customers

#2

Ability to improve the customer experience

#3

Seamless data flows between financial and insurance companies and fintech/insurtech companies

#4

Opportunities for new ideas and businesses to emerge and grow

#5

Standardization of data-sharing technologies and liability for control of data

#6

Opportunity to retain the primary customer relationship

Q60A: Please rank in priority order the greatest advantages for global financial services and insurance companies from open banking API frameworks.

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APIs shift from compliance to monetization as Digital Business Platforms mature

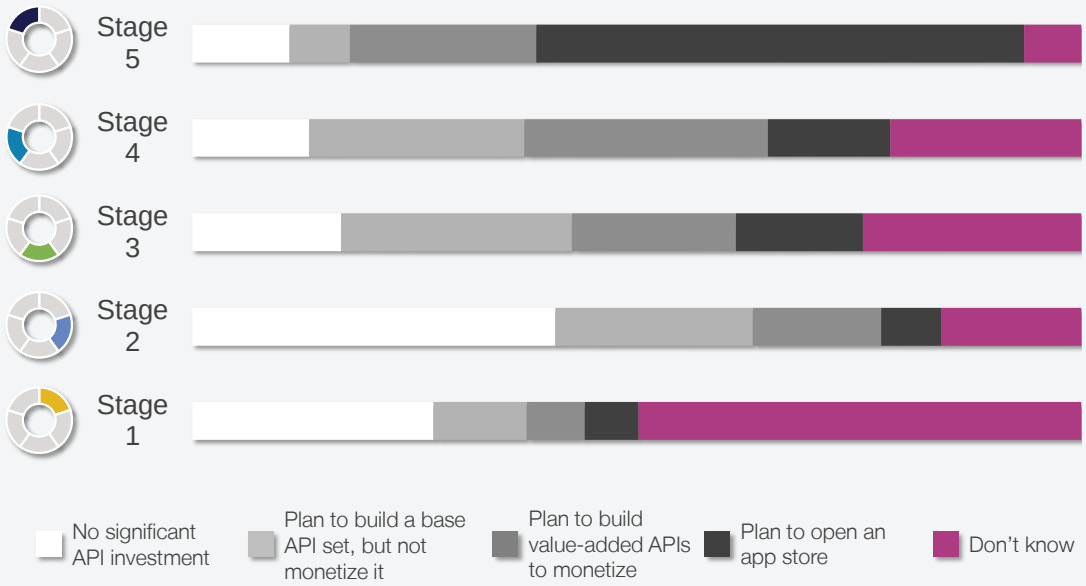
Monetizing APIs is one opportunity where global banks are starting to capitalize and grow their balance sheets. But starting down the monetization road requires a different mindset than how the industry has traditionally viewed APIs — as something of a technology interface or service. Now, executives must look at APIs as potential products that can deliver cost efficiencies and generate incremental revenue.

Data-access fees in an open banking model can help offset diminishing payment transaction fees. BBVA is already charging micropayments for data access with the launch of its BBVA API Market, which was designed to optimize how open API service would be delivered.[9] **BBVA has become one of the first major banks in the world to deliver open banking.** Through the BBVA API Market, companies, startups and developers are able to build new offerings by integrating the customers' banking data — with their permission — into their applications. The first technical step for banks is to establish an API strategy focused initially on complying with regulation requirements. Once an API architecture is in place and digital functions are integrated into core systems, banks can start focusing on innovation and generating non-interest income. Ultimately, the vision is to advance beyond base APIs and into a more dynamic, agile digital business model and ecosystem with value-added APIs and app stores.

So far, banks are not far down the road to API monetization. Our study shows institutions are more likely to have no investment in APIs or are focusing only on a base API set to comply with regulation requirements during the early stages of building DBPs. As more parts of the DBP become operational, strategies for value-added APIs and an app store accelerate. In fact, 74% of companies with mature DBPs (at stage 5) are planning to build value-added APIs to monetize or launch an app store.

Open banking is accelerating product and service digital innovation in geographies where it has been implemented: Europe, the U.K. and Japan. These results are evident in API strategies: The EU leads the way with 52% of respondents planning to build value-added APIs, while only 23% of respondents in Japan have this strategy.

Open API investments by DBP maturity



Q49: How is your company looking to monetize its open API investments?

Major obstacles with building Digital Business Platforms

More companies could advance their efforts building DBPs if they address several common obstacles. The survey identifies eight barriers that stand in the way: technology architecture, integration, overall business strategy, organizing cross-functional teams, goals and cost sharing, attractive business case, organizational stovepipes and executive sponsorship. Winners will be the companies that overcome these obstacles and proactively begin to implement a digital strategy.

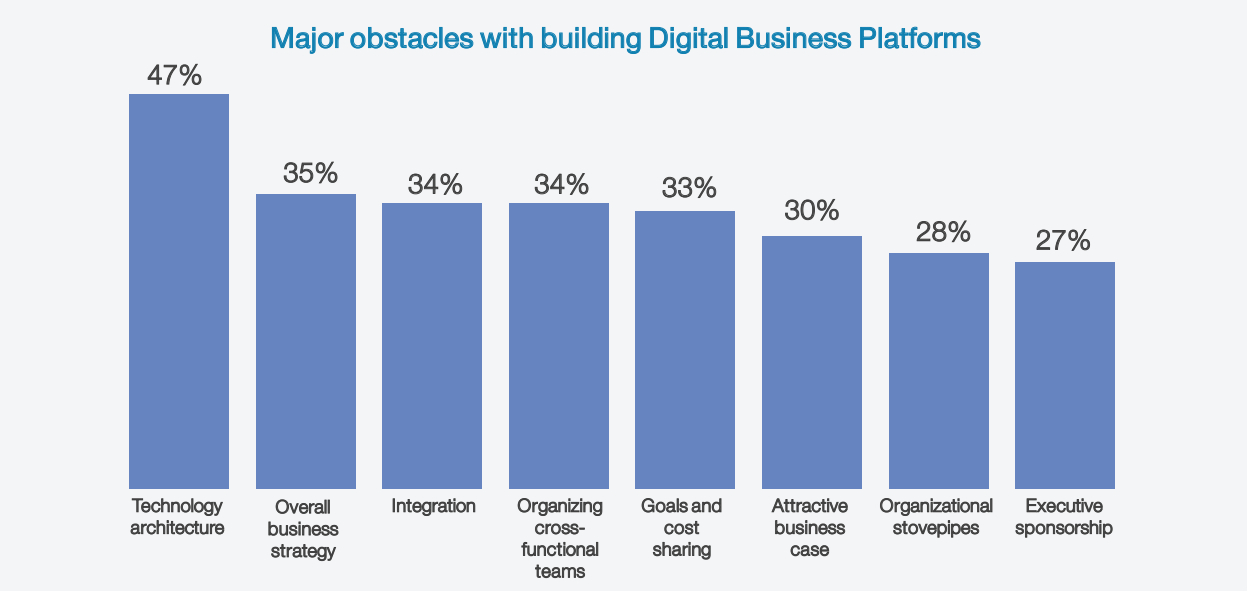
Moving to a DBP and evolving your business model is a major undertaking. Besides convincing senior executives and boards, it requires the kind of modern technology that most traditional FS&Is don't have. The vast majority continue to operate using older versions of core systems, so legacy technology continues to be a big anchor slowing progress. Lacking capabilities, such as software as a service, where feature upgrades, fixes and maintenance are delivered at regular intervals, legacy systems hinder the kind of agility and innovation needed to implement DBPs.

Besides, implementing enabling technology, organizational mindset and stereotypes seem to be the biggest hurdles to transforming to a DBP. The debate on how gains, losses and liabilities will be shared in a collaborative digital ecosystem and the somewhat unstated threats of losing competitive positioning are pushing organizations to postpone DBP decisions until they are absolutely sure. Most organizations prefer to be followers rather than be at the forefront of transformation with evolving technologies. Additionally, quite a few are still unsure of the governance and monitoring mechanisms in the new digital ecosystem.

Technology architecture is the dominant challenge for building the DBP and it ranked as the top obstacle for FS&Is across all phases of maturity. Interestingly, a number of other obstacles were also consistent across all phases of maturity, including organizational stovepipes, executive sponsorship and evolving the business strategy. Even as companies proceed further down the path with building the DBP, issues such as organization stovepipes and executive sponsorship continue to be a challenge.

The one major shift through the transformation process is integration, from both a business model and a technical perspective. This is a clear indication that the complexity of integration requirements for the DBP are under-appreciated earlier in the process. As the most mature organizations strived for more functionality and developed microservices, the challenges of aligning partners, data and core platform requirements became significant.

Despite the challenges, FS&Is recognize the value to be gained. Identifying an attractive business case is among the top six challenges but may well hold the key to adoption. Close study of the models being pursued by the incumbent disruptors, fintechs and insurtechs offer a glimpse at how the first appealing business case can be developed.



Q60: What are the major obstacles with executing on this strategy?

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Seizing the platform economy opportunity: Recommendations for FS&Is

As FS&Is confront the digital future, NTT DATA has five baseline recommendations for driving your organization forward.

1. **Create a digital culture.** The key to driving digital transformation is culture. When Adobe committed to a digital business model in 2012, Adobe CEO Shantanu Narayen called for a "burn the boats" mentality — signaling there was no turning back once committed to digital.[11] Messaging and actions start at the top, with the Board, CEO and the C-suite fully embracing digital and driving it through the organization. The time is now to burn the boats.

   Define your organization's digital values and develop a change management program focused on embedding your digital culture in every corner of the company, starting at the top. Digital is far more than technology or a process; it's a state of mind, a way of doing things, a belief system. A digital culture is a belief that by being more collaborative, connected, adaptive, flexible, data-driven, transparent and open, we can create more positive futures with employees, customers and partners.

   Key to building an effective digital culture is agreeing on your organization's core digital values. Your company may already have a set of values or beliefs. These should be considered and matched against fundamental digital qualities, like being collaborative and connected. This shouldn't be purely a management exercise. Include the views of your employees and wider stakeholders to create a holistic and inclusive set of values of which everyone can have a sense of ownership.

   This digital culture mind shift also requires organizational charts to become flatter, responsibility decentralized and customer experience at the center of all you do. New capabilities will be required in every department, necessitating skill upgrades and aggressive recruiting of top talent. IT leaders, who have largely been implementers, now have a seat at the strategy table. Employees and executives not comfortable with change need to be replaced.

2. **Embrace the cloud and new technology.** A digital culture is not all about technology, but technology is a critical component for the digital journey. Even though traditional FS&Is have access to the same cloud-based technology stacks and rapid-development methodologies as fintechs and insurtechs, they have been slower to adopt these approaches.

   To be agile, FS&Is must be able to customize and launch products at a rapid rate and integrate partners quickly. Harnessing the power of new technologies, such as AI, IoT and blockchain, is an essential step to ensure compatibility with advanced services by deploying a flexible IT infrastructure that enables open collaboration with partners, customers and employees. Moving applications, data and infrastructure to the cloud and service-enabling legacy systems with APIs are also necessary.

   We recommend using technology stacks and development methodologies similar to those used by fintechs and insurtechs as a way to achieve significant business benefits from a DBP initiative. Train development teams in agile methodology, microservices and DevOps to synchronize with the capabilities of fintechs, insurtechs and new innovative entrants.

   Service and technology partnerships available in the cloud create rapid ecosystem expansion to take advantage of opportunities that can't be addressed otherwise. Many of these same service and technology partners can also assume responsibility for commodity functions and enable you to focus on true digital innovation to bring new technology solutions into your Digital Business Platform.

3. **Think beyond the four walls — look to partnerships.** Vertically integrated business models are dead. Partnerships are now at the center of business strategies. FS&Is need the capabilities to develop a partner strategy, recruit those partners, and embrace and integrate each partner's business model into their own.

The business model integration is what drives and increases value for both parties (FS&Is and partners). FS&Is must apply sound risk management practices when entering a relationship with a fintech or insurtech. Perform product due diligence to ensure that the partner's technology will integrate with their core systems, comply with legal and regulatory requirements, map to their operational procedures, reflect their branding strategy and provide superior customer experience.

4. **Commit to digital customer experience.** Create new customer adventures that fit with their digital lifestyle. Digital products and distribution channels are rapidly becoming favored by customers, and adoption is accelerating. Digital cannot be viewed as just another channel, or you risk making the same mistakes made by so many organizations that viewed the internet as just another channel.

   Customer experience for digital companies requires redesign from the bottom up. Customers and their entire lifecycle of engagement with your company must inform the development of products and services, as well as the systems that support them. The DBP and partner ecosystem represent a significant opportunity to reposition your firm with customers and improve your competitive position in the industry.

   Access to customer data and using big data and analytics are key elements of the DBP that in turn provide opportunities for the best customer experience. However, customer expectations around privacy, preferences and permissions have changed in the digital age, and FS&Is need to build a data management strategy that enables them to get value by providing data while ensuring security and privacy. Digital customer experience is a two-way street.

5. **Create an organization of transformation and innovation.** In some ways, this is the largest challenge to confront. A digital organization is not just a bolt-on to the old ways of doing business. The move to digital won't work with a vertically integrated business strategy.

   We recommend creating an agile business model and rethinking your firm's business processes and operating model to be more responsive. An agile model supports an FS&I's capability to create products on the fly and customize them to the needs of individual customers. Time to market, always important, is now critical to satisfying demanding consumers. Properly aligned with your business strategy, digital will help drive out cost and create much better connections with employees and customers.

Conclusion

The industry recognizes it is at an inflection point for fundamental digital change. The results of our survey suggest a powerful opportunity for FS&Is to improve their business strategy in the face of intensifying competition and ever-increasing customer expectations. But the opportunity for incumbents to go on offense and commit to profound and powerful transformation has a limited window before technology giants choose to enter the financial services and insurance industry.

Investing in building Digital Business Platforms allows FS&Is to build and support multiple business models on a single technical framework while reducing their dependence on legacy technology that was built to support vertically integrated business models. The transition to the new digital world empowers FS&Is to operate with a modern, agile and secure DBP.

DBPs also allow FS&Is to own the end-to-end experience of traditional service points, such as bill pay and peer-to-peer payment. FS&Is would contribute to the DBP their expertise in security, authentication and compliance, while fintechs and insurtechs would provide the customer-focused capabilities they've been investing in for years.

The results would benefit all stakeholders: fintechs and insurtechs would gain better access to the mass market; customers would enjoy a transformed, personalized experience under the protection of the regulated industry; and traditional FS&Is would have access to new revenue streams while maintaining their relevance in this era of digital disruption.

The alternative scenario of FS&Is attempting to maintain their vertically integrated businesses on aging technology in this dynamic environment is less appealing, and less profitable, by the day. We believe when we repeat this survey in a few years, answers will reflect a dramatically changed banking and insurance sector. Leaders of the past who would not change will be in decline, new leaders will be on the upswing and the strongest brands of all will be those with the strongest partners. Which side will you be on?

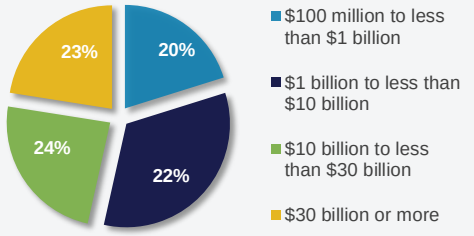
Research methodology and demographics

Global survey snapshot

- A total of 471 surveys were collected online in U.K., U.S., Germany, Spain, Italy and Japan
- The survey targeted the financial services and insurance industry
- All respondents are decision-makers, influencers or aware of budgets for Digital Business Platforms
- The majority of participants were EVP and C-level executives
- Respondents represented a wide range of functions, including business unit leadership, technology, operations, finance, customer service, product management and strategy

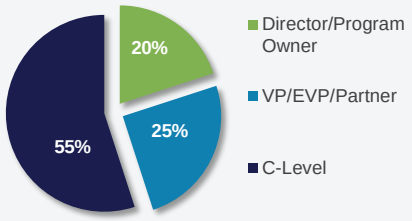
Company revenue

47% of companies in the survey have more than $10 billion in revenue



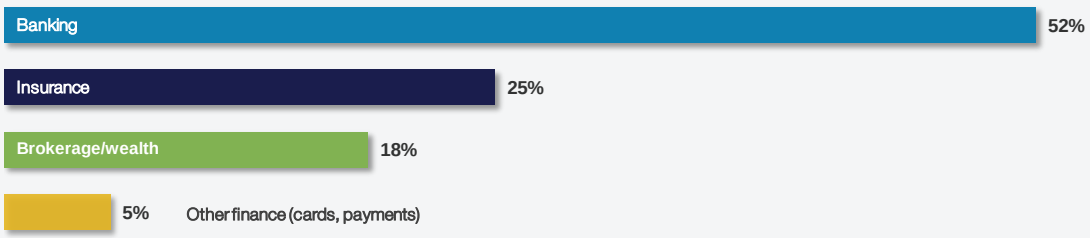
Respondent job title

The majority of respondents were C-level executives



Industry segment summary

The majority of respondents represented retail banking and wholesale banking, and insurance property and casualty carriers



Sources

1 European Union for the purposes of this study refers to Spain, Italy and Germany. Study data from the United Kingdom is called out separately.

2 "Mobile Banking: The New American Addiction," an NTT DATA study, January 2015. https://mx.nttdata.com/es/-/media/assets/white-paper/digital-mobile-banking-addiction-whitepaper.pdf

3 "Digital Customer Experience in 2020: Cracking the Code on Data," an NTT DATA study, February 2018. http://go.pardot.com/l/60932/2017-11-27/fj6sst?_ga=2.62271013.824866375.1559059300-1644116693.1552607972

4 Grace Noto. "5 Insurtech Startups to Watch (That Aren't Lemonade)." Bank Innovation. April 14, 2017. https://bankinnovation.net/2017/04/5-insurtech-startups-to-watch-that-arent-lemonade/

5 Oscar Williams-Grut. "Goldman Sachs and HSBC invest $20m in startup trying to make banks more like Apple." Yahoo! Finance. February 4, 2019. https://finance.yahoo.com/news/goldman-sachs-hsbc-invest-20m-startup-trying-make-banks-like-apple-050043150.html

6 Katherine Chiglinsky and Julie Verhage. "MassMutual Acquires Quilt." Think Advisor. August 8, 2018. https://www.thinkadvisor.com/2018/08/08/massmutual-acquires-quilt/?slreturn=20190518173646

7 "How Citizens Bank Found Their Digital Groove With Millennials." The Financial Brand. March 29, 2017. https://thefinancialbrand.com/64383/citizens-bank-digital-millennial-chatbot-strategy/

8 HSBC's Connect Money app. https://www.hsbc.co.uk/connected-money/

9 Chris Semple and Luz Fernández Espinosa. "BBVA is kickstarting the launch of it open banking program by making eight of its APIs commercially available for the first time." BBVA Science and Technology. May 24, 2017. https://www.bbva.com/en/bbva-launches-open-banking-business/

10 Bill Streeter. "Will 'Open Banking' Sizzle or Fizzle in the U.S.?" The Financial Brand. February 27, 2019. https://thefinancialbrand.com/80561/open-banking-united-states/

11 Murad Hemmadi. "Sometimes the only way to drive change is to 'burn the boats.'" Canadian Business. May 3, 2016. https://www.canadianbusiness.com/innovation/burn-the-boats/

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