

# Don't Fear Modernizing Your Core

NTT DATA Consulting study finds that banks should modernize aging core platforms to address rising consumer expectations and changing competition.

August 2016





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## Introduction

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As banking industry executives work to adapt to rising consumer expectations for digital, mobile and real-time products, they face chronic headaches with their core deposit banking systems. These platforms are the bedrock technologies upon which banks build the products — deposit accounts/checking accounts, savings accounts and certificate of deposits — and the Customer Information File (CIF) that ties them back to the customers. Some of these core platforms date back to the 1960s — the same decade that 8 track tapes were invented. These aging legacy systems, often rigid and unresponsive, impede a bank's ability to pursue growth opportunities, enhance the customer experience and mitigate operating risks.

Most of us have upgraded our music systems many times since the 1960s, moving from Sony Walkmans and CD's to iPods streaming music on our smart phones and wearable devices. But many banks are still using the same foundation to support core banking. For years, the industry consensus has been that the risk of upgrading these core platforms is greater than the risk of doing nothing.

According to NTT DATA Consulting's US Core Banking Modernization Study, 80% of US bankers would like to modernize their core deposit banking systems (CDBS) and they see a wide range of benefits in innovation, functionality and overall financial return. Yet, only 15% of bankers expect to start an installation of a new CDBS in the next three years.

NTT DATA Consulting surveyed more than 1,000 US consumers and 100-plus US bankers to investigate CDBS modernization efforts at leading US banks and the rising threat of consumers seeking banking alternatives.

The study revealed that there is a gap between what customers want from their banks and what banks are able to provide due to the limitations of their aging systems. For those who are willing to close the gap, the future holds great promise — and competitive advantage.





A close-up photograph of an ATM keypad and cash slot. A hand is visible on the left side, and a stack of US dollar bills is being dispensed from the slot. The word 'CASH' is printed on the slot. A semi-transparent blue rectangle is overlaid in the center, containing text.

**80%**

of US bankers would like to modernize their core deposit systems (CDBS) and they see a wide range of benefits in innovation, functionality and overall financial return.

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**BUT, ONLY**

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**15%**

of bankers expect to start an installation of a new CDBS in the next three years.



## Market Dynamics Driving Urgency to Modernize Banks' Cores

Most customers want an experience from their banks similar to what they already get from other online experiences — convenience, consistency and real-time transactions that are available on their mobile and online devices.

Millennials are the first completely digital generation, living almost entirely on their smartphones. They have high expectations for their customer experiences. While they don't currently have a great deal of disposable income and a strong need for banking services, they are raising the expectations of consumers who do have significant assets (e.g., their parents). And while most millennials don't want to go into a bank branch to take care of their financial needs, many in the older generations still want the in-person branch experience. Furthermore, their parents are taking these increased expectations to all their banking interaction channels. If banks are going to bring millennials and the people they influence into the fold, they're going to have to meet these new demands.

Yet existing core deposit systems were not architected to address the "any channel, any time" expectations of Millennials or their parents. While built using what were then the latest technologies, these systems were designed to serve the reality of how banks did business at the time they were created. For example, in the 1970s, these platforms associated a telephone with an address, but today newer systems associate a phone with a person. Back then, banks accounted for deposits and withdrawals in batches at the end of the day. Today they must operate in real-time.

### How Banking Has Evolved Since the 1960s Core Deposit Systems:



ATMs are pervasive



Ceilings on deposit rates no longer exist



Debit cards were introduced and are now mainstream



Interstate banking is the norm



Online bill pay has all but replaced paper checkbooks



Glass-Steagall was repealed, enabling the rise of mega-banks



Mobile wallets and P2P payment engines are on the rise



Mobile banking is part of our everyday lives



Internet of Things (IoT) is a broadly accepted concept

Given the rate of industry change and the state of these core systems, it's not surprising that banks' best customers are at risk. According to McKinsey & Company's 2015 Global Banking Annual Review, up to 40% of revenue could disappear by 2025 from five major retail banking businesses (consumer finance, mortgages, SME lending, retail payments and wealth management), and between 20% and 60% of banking profits are at risk from rising expectations.

Many innovative FinTech firms have core systems that were developed after the Internet reached the masses. These newer systems allow the companies to react quickly to changing demands. In contrast, 70% of US bankers do not feel their processes can quickly adapt to change.

Expectations in many Internet-based markets — music, travel, transportation, entertainment, etc. — are fueling the notion that banking and financial exchanges have to be on-demand, real-time, frictionless and very inexpensive. Replacing core systems now will enable banks to adapt to the changing environment and build the competitive advantage needed to lead in future banking environments.

#### TOP 8 THINGS CONSUMERS WANT FROM BANKS

**Ability to use my money immediately  
after making a deposit**

**Better customer service**

**Better benefits/cost of the relationship**

**Best tools for money management**

**Best online and mobile technology**

**Better/more convenient bill pay**

**More convenient locations**

**Recognition and personalization**

## The FinTech Threat is Real:

*28 million households are ready to move to a more innovative bank*

BANKS

VS.

CUSTOMERS



64%

of banks see FinTech as a threat



46%

of consumers already have an account with a FinTech provider

CAN BANKS REACT TO RISING EXPECTATIONS?



70%

of bankers do not feel their process can quickly adapt to change



22%

of consumers said innovative offerings from FinTechs "is how banking should be"

CONSUMERS ARE READY TO MAKE THE CHANGE.



15%

of banks expect to start a modernization effort in the next three years



1 out of 3

consumers would strongly consider switching primary banks for better online and mobile technology



**Banks will lose customers and revenues because they can't adapt to today's changing market."**

— PETER OLYNICK, SENIOR PRACTICE LEAD, RETAIL BANKING, NTT DATA CONSULTING, INC.



## How Banking Should Be in the Eyes of the Customer

Alternative providers and FinTech companies are gaining ground on traditional banks. More than half of survey respondents have heard of these alternative providers and 46% already have an account with one of them. Almost a quarter (22%) of consumers who have investigated or have an account with one of these alternative providers said, “This is how banking services should be.”

And if a leading retailer such as Target or Walmart considered offering a banking service, nearly half of all consumers surveyed – 47% – would consider using it.

Traditional banks, take notice.

## Major Challenges With Current Core Deposit Banking Systems

**2** / **3** of bankers identified at least one major challenge with their existing core deposit banking systems

What's holding banks' core deposit systems back from providing customers with the experience they want? A number of challenges drive home the impact legacy CDBS are having on financial institutions:

**Regulatory.** As banks struggle to adapt to an increasing set of regulatory demands, their CDBS make it difficult to react to these changes in two ways. First, the systems make it hard to modify. And second, they do not support the level of data and analytics reporting that is required by new regulations. The regulatory challenge is especially problematic for banks that manage their core systems internally (as opposed to outsourcing) and are not able to spread the cost of

regulatory changes across multiple institutions.

**Costs.** Currently, banks spend an average of 75%–80% of their systems budget on maintaining legacy cores. This does not leave much discretionary money to invest in new technologies and capabilities. Newer platforms are designed to be easier and less expensive to maintain, adding the benefit of reducing time-to-market and cost for new product development.

**Integration.** Many newer systems recognize the need to integrate with other systems. They are built from the ground up with the idea that new integration requirements will constantly be identified. Application Program Interfaces (APIs) establish standards to support this interconnectivity with significantly less time and expense than the “hard interfaces” used by many legacy platforms.

**Customer Experience.** It is more difficult to make older systems support many of the key tenets of the modern customer experience — real-time, frictionless, mobile, etc. NTT DATA Consulting's 2015 US Mobile Banking Lifestyle Study found that 52% of consumers are doing more mobile banking than two years ago and are conducting more transactions while they are logged in. A bank that doesn't offer cutting-edge products and services can easily be overlooked by potential new customers. They may also find existing customers leaving for competitors with more robust products and services enabled by the latest technologies.

### THE COST OF INACTION

Banks that do not address these challenges by upgrading their CDBS face a competitive disadvantage, according to financial research firm Aite Group. Aite Group estimates that **about 20% of US financial institutions have reached a high level of urgency in replacing their CDBS**, meaning that if they fail to replace these systems, they could lose business to more flexible competitors. **Additionally, another 56% of US banks and credit unions stand to benefit from a CDBS replacement or transformation.**

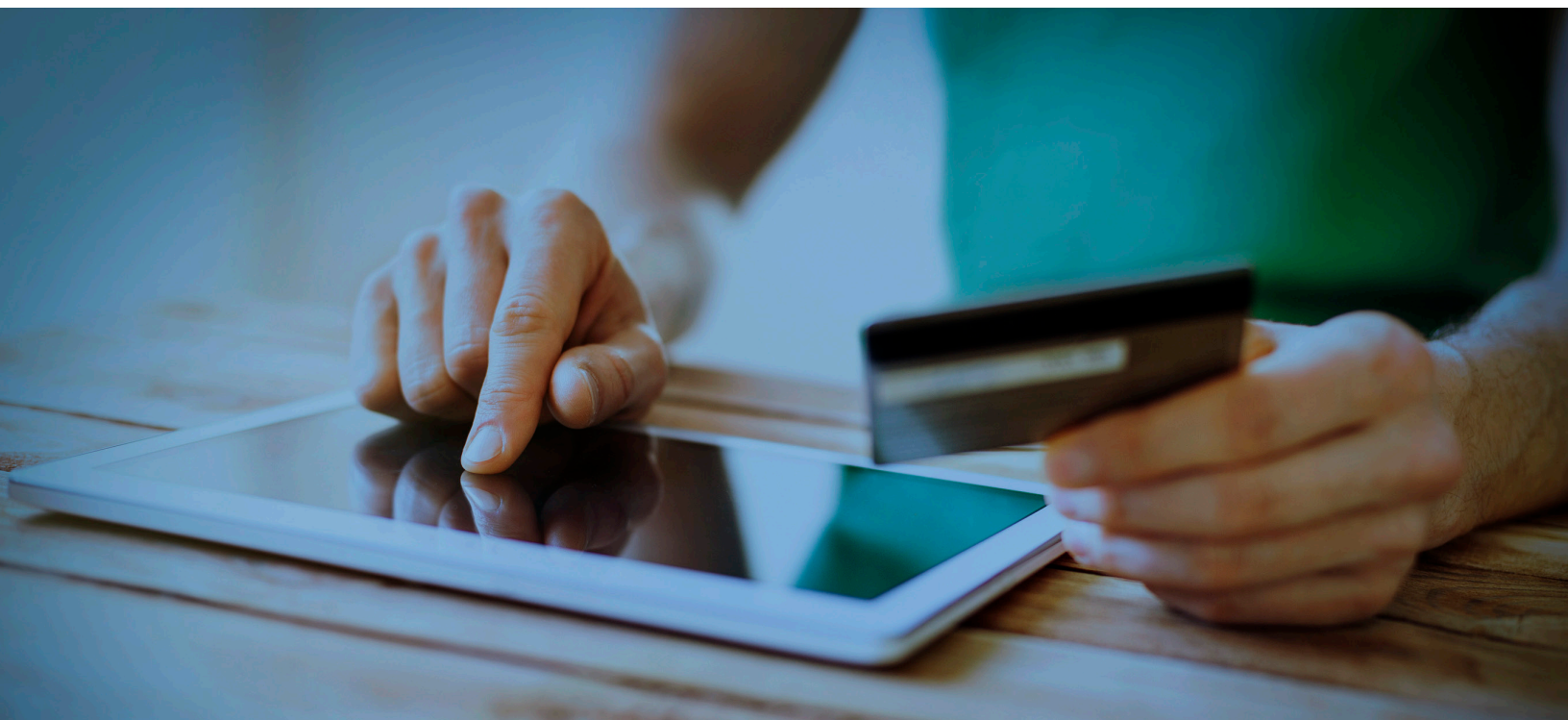
## Major Business Benefits of a Modern Core Deposit Banking System

**More than 50% of bankers expect that a new CDBS will enable faster response to customer expectations.**

A more agile, up-to-date CDBS can enable a wide range of short- and long-term benefits for banks, as shown in the chart below. Perhaps most importantly, a new CDBS can enable the bank to shift investment dollars towards growth opportunities. For example, a new core platform, which reduces maintenance by half, frees up enough budget to double or triple investments for other capabilities (e.g., mobile, data).

MAJOR BUSINESS BENEFITS OF A CORE DEPOSIT SYSTEM:	
New products/innovation	53%
Improvements in processes within the business	49%
Increase the customer experience	48%
Improved agility to respond to business needs	48%
Ongoing cost and maintenance	46%
Overall financial return on investment	46%
Improved functionality	45%

Q24: On a scale of 1 to 10, please weigh each of the following business benefits that would result from investing in a modern core deposit system



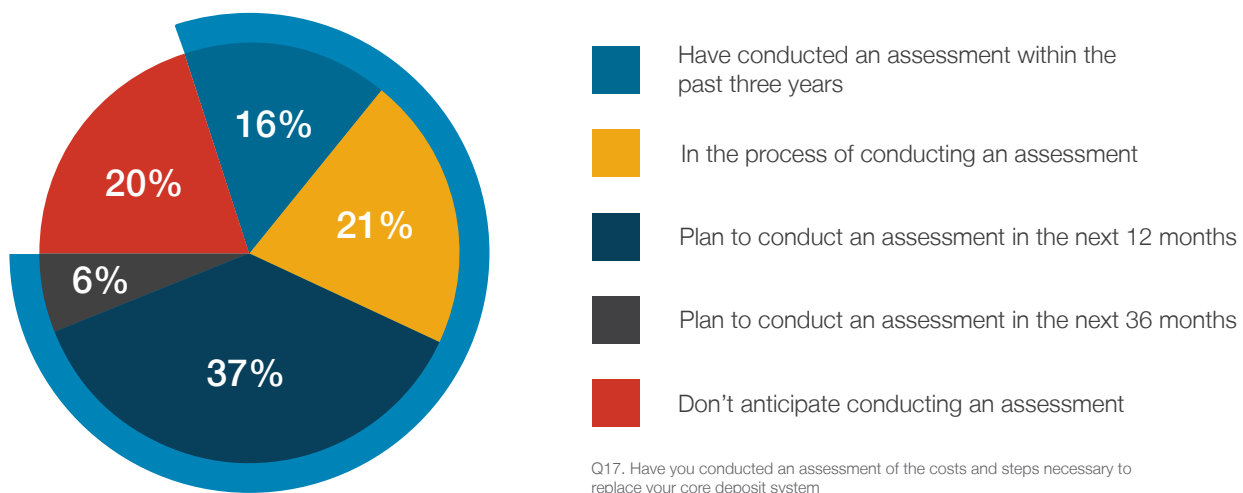


## Banks Want to Change Their Core Deposit Banking Systems...

**80%**

of banks will assess their core deposit banking system within the next three years

Plans to Assess Core Deposit Banking Systems



## ... But Struggle to See the Path to Modernization

Although many bankers understand the challenges and recognize the business benefits of modernizing their CDBS, they struggle to see the path forward.

When survey respondents were asked to rank factors hindering their decision to invest in a new CDBS, **49% cited cost as the number one reason, followed by executive support (44%) and impacts**

**to other major initiatives (38%).** Their top fears of a modernization effort were information security and catastrophic failure.

Despite the obstacles — both real and perceived — there are examples of banks that have successfully completed a core modernization effort.

### TOP FIVE MODERNIZATION FEARS:

1. Information security risk
2. Catastrophic failure
3. Implementation and integration
4. Public image
5. Dependence on specialized vendor resources

ONLY 1 IN 10 BANKS ARE MAKING FUNDAMENTAL CHANGES



## Current State of Investment in Core Deposit Banking Systems

**15%** of banks expect to start a CDBS modernization effort

**4%** of banks expect to actually replace their CDBS over the next three years

**More than 50%** of banks recognize that they will need to increase investments in current environment to maintain parity

Despite the limitations of legacy core systems — and the expected benefits from modernization — banks continue to invest heavily in overcoming system challenges rather than pursuing transformational initiatives.

Mark Hurd, president of Oracle, told a group of financial services executives at a February 2016 presentation in New York an anecdote about a large bank that required 9,000 applications to keep its old CDBS running. “Most of those applications are old and homegrown, and most of the people who developed them are gone,” Hurd said. This is a cautionary tale about the efforts banks are currently making to maintain their legacy systems.

In the past, the complexity of these systems reinforced the idea that the risk of upgrading was larger than the risk of maintaining the status quo. However, with the increasing business demands for newer products and services and the need to shift investment dollars to digital priorities, the balance of risk has clearly shifted.

### PROOF THAT A CDBS MODERNIZATION CAN BE DONE

In 2011, BBVA Compass invested \$360 million and more than three years in implementing a new, real-time processing CDBS. It is the first large US bank in more than 15 years to fully modernize its core systems.

The bank now has the ability to deliver real-time payments and the potential to offer a user experience similar to Airbnb’s, providing simple tools that let customers handle transactions instantly and easily.

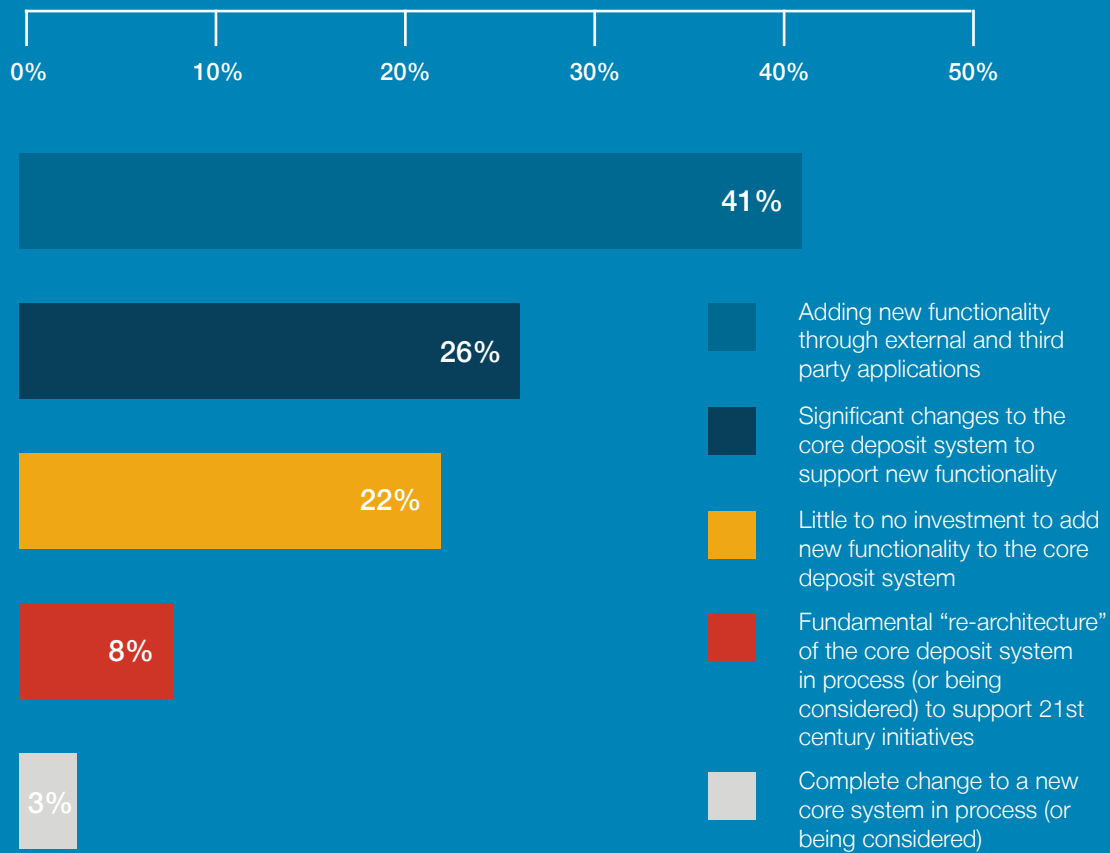
BBVA Compass set specific targets for cost savings and productivity improvements from a baseline comprised of all units in operations and teller initiatives in the bank’s retail organization. Within the first year, the bank achieved a 13% reduction in these expenses and expected to achieve approximately another 10% by 2015.

BBVA Compass has also reported other benefits of the project. The bank has reduced the time for opening a new deposit account from 45 minutes to as little as five, and has reduced the time for new product introduction by 75%. And the cross-sell ratio improved from 2.4 to 3.6 products.

Another strong example of a bank making fundamental changes to its CDBS is Associated Banc-Corp, a US regional bank headquartered in Green Bay, Wisconsin. When Associated Banc-Corp acquired State Financial Bank in 2006 and First National Bank of Hudson in 2007, it took advantage of the situation to upgrade its CDBS. The bank consolidated its storage resources and brought all of its core transaction processing systems in house. With its online banking portal, Associated Banc-Corp has the ability to perform instant file transfers, and the bank continues to upgrade devices such as their ATMs. Now, for example, check image transfers at ATMs are much faster than they were on the bank’s old centralized image-capture system.



## Core Deposit Banking System Architecture and Product Strategy: Where Banks Stand Today



Q15. Which of the following best describes the current state of investing in your core deposit systems? (Above and beyond what is required to maintain current capabilities)

### Big Banks vs. Smaller Institutions:

While most bankers' responses were similar regardless of the size of their organization, there were a few notable exceptions:

- The large national banks are the most concerned about getting to real-time processing for their customers. Almost 60% of these banks are more likely to identify real-time processing as a major concern for their CDBS
- Credit unions identified getting to a "single view of the customer" as a key concern
- The biggest banks were slightly more likely to identify the benefits of a CDBS replacement as a major benefit





## A Fresh Approach to Core Banking Modernization

NTT DATA Consulting calls on banks to not only acknowledge the need to modernize their core banking systems, but to take concrete steps toward real action. Here are our prescriptive recommendations for moving forward with confidence.

### Build the Business Case.

The first step in constructing a compelling case for modernization is to identify stakeholder needs and develop a vision for the bank's future direction. You'll need to uncover risks and ways to mitigate them such as avoidance and responsiveness, aggressively quantify tangible benefits and get comfortable with intangible benefits. This initiative should enable the transformation of the enterprise, not just the technology. Thinking through revenue generation opportunities, including product design, cross-selling and speed-to-market — as well as efficiency gains from operations, mergers and acquisitions, and reduced system costs — will prove useful. Consider working with an outside advisor that can help you determine industry benchmarks and provide core banking insights. This relationship may also prove helpful with the crucial next step: performing a readiness assessment to determine if your organization is prepared for a successful modernization effort.

### Find the Core That's Right for You.

Assemble a diverse committee to perform a comprehensive selection process that will find the right vendor for your organization. Develop a systematic approach in the RFP process to ensure vendor and technology selection aligns with current business requirements and future strategic responses.

*If possible, bring in an outside perspective to provide an objective view of business needs and technology alignment.*

Recent success stories are minimal, and there are only a few vendors that provide all the functionality you'll need. Your options likely boil down to one of these six:

1. Choose one of the vendors that has proven themselves
2. Partner with a current CDBS vendor to grow its product in concert
3. Build it yourself
4. Upgrade to a US platform
5. Partner with a non-US vendor
6. Partner with a non-US bank

### OUTSOURCING VS. IN HOUSE In Which Direction Are Banks Leaning?

While in-house CDBS are the still the norm, many bankers are open to considering an outsourced solution

77%

of banks' respondents indicated that their current CDBS was either totally or partially in-house

60%

of banks believe their next CDBS will simply be an upgrade of their current in-house or outsourced solution

29.5% of banks with in-house CDBS are looking for an outsourced solution

Only 11.5% of banks with outsourced CDBS are looking for an in-house solution

## Isolate, Then Modernize

THE QUESTION THAT REMAINS:

### Is it possible to replace the CDBS without touching it?

NTT DATA Consulting has been helping our clients with a new approach that accomplishes their modernization goals while decreasing the implementation risk:

#### Isolate yourself from the core:

While working through business case and vendor selection, make a conscious effort to insert an isolation or middleware layer between the bank's channels and the CDBS. Other than your general ledger system, not many of your systems of record will have as many integration points as your CDBS. By implementing a middleware layer between the CDBS and the upstream and downstream systems, you've effectively isolated yourself from the main issue.

#### Communicate using industry and business terminology:

When isolating, ensure that all messaging takes place using industry vernacular. Use an industry model (e.g., IFX, Swift, MISMO, BIAN) as the base, and add elements and values to customize for your organization. This is as important as the isolation layer because you currently communicate with the CDBS through its series of codes and configurations. Consider this your Rosetta Stone.

#### Choose your replacement strategy:

Now that you're isolated, you have options as to how you want to replace the CDBS. There are many ways to do this, but here are the three approaches we've been recommending:

01

**Big bang.** While this may work for smaller financial institutions, we wouldn't recommend this for larger banks. Once the new CDBS has been implemented, the middleware layer swings all integration points from the old CDBS to the new one.

02

**M&A.** This model reduces some risk by allowing you to stand up both CDBS and letting the middleware layer decide which system to utilize based on your implementation approach. You can shift by location, segment or any other cut of clientele you may choose. Once all waves have moved to the new CDBS, shutting down the old CDBS is simpler and the middleware all points to the new CDBS.

03

**Shadow.** In our experience, this option has the most upside in terms of supporting your alignment to business strategy and facing the competitive challenges of the disruptors and innovators. Work with a vendor to create the CDBS that best meets your business' capabilities and strategies. All new clients are transitioned to the new CDBS while the old CDBS is still running. This may include new products and features available through APIs to share the customer data with third parties (think Connect with Facebook or Amazon Web Services). Customers of the old CDBS can be moved over in a more methodical fashion, while certain segments or products can be left behind on the old CDBS (should the cost not warrant converting to the new). Though the downside of this approach is maintaining two CDBS for a very long time, the old CDBS has been minimized and the new CDBS has the advanced features you need to compete in the modern marketplace.



## Conclusion

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Many in the industry would agree that we are at an inflection point in the life of our legacy core deposit systems. Created in the 1960s and 1970s, these systems are now being asked to fulfill the requirements of an increasingly mobile and diverse client base, all while repelling the intruders at the gates — the FinTechs, innovators and disruptors.

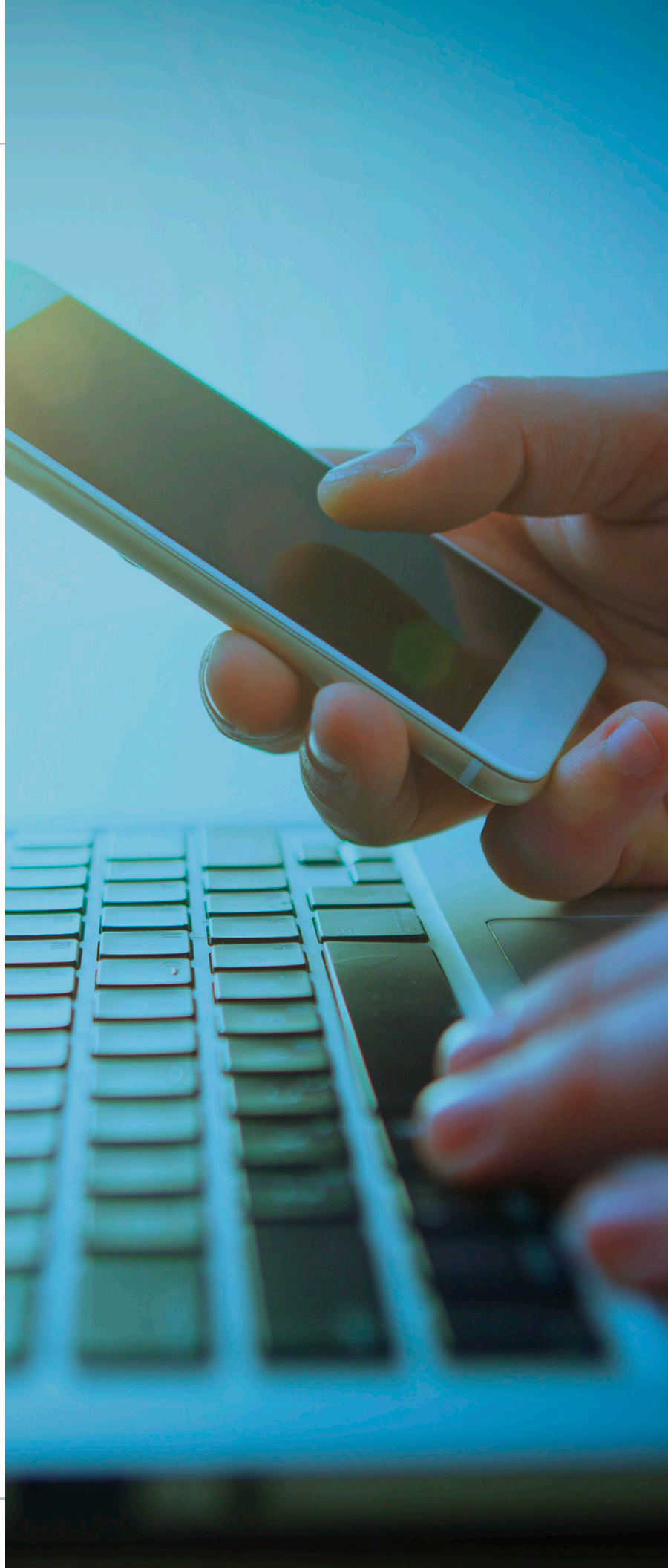
There is great promise for banks that can close the gap between what customers want from their banks and what the banks, with their decades-old legacy systems, are able to provide. NTT DATA Consulting's study shows that modernizing core deposit systems will enable banks to satisfy rising consumer expectations, achieve myriad operational efficiencies and improve time to market for new and innovative products.

Just as we've upgraded our music systems over the last 40-plus years from 8 track tapes to streaming music, the time has come to upgrade our core deposit systems. If banks hope to keep customers close and thwart the competition on both traditional and unexpected fronts, they must make modernizing core deposit banking systems a top and immediate priority.

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*"If you have a system implemented before 1984 you really are dead meat. C'mon guys. It's like saying you have systems that were built before the American Civil War. It's so past, it's gone. Get with it, guys and renovate, replace, reform, and rebuild. If you don't, then you're going to be a lovable Dodo. What does that mean?  
Dead but not forgotten."*

— CHRIS SKINNER, AMERICAN BANKER



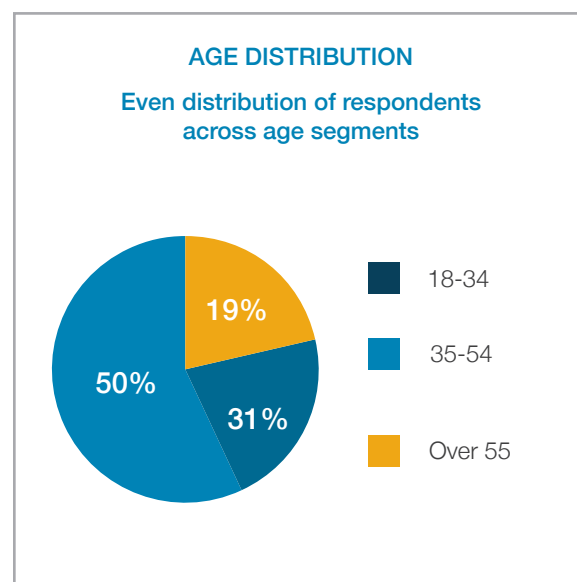
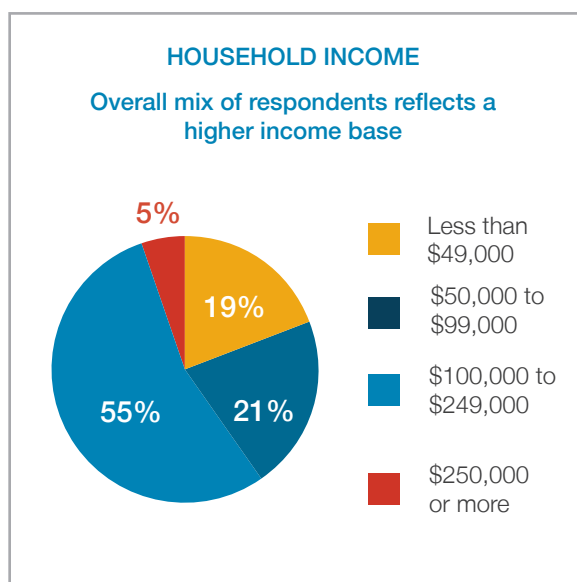
## Research Methodology and Demographics

### Consumer:

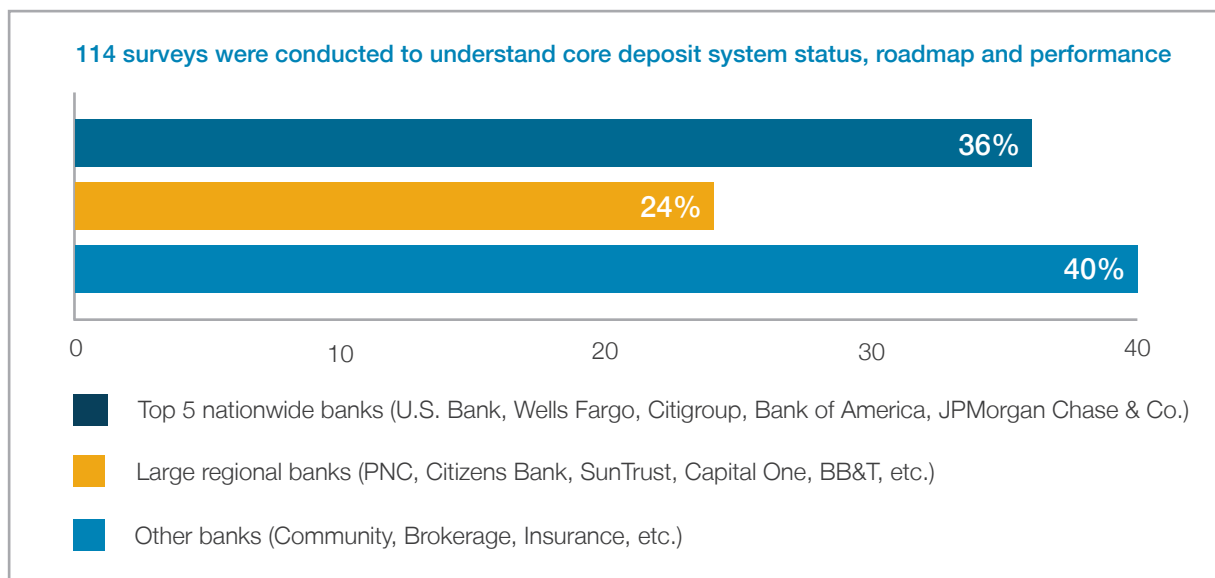
- 1,010 consumer survey responses
- Online survey
- US-based
- Reflect higher income
- Required to be 18-plus

### Banker:

- 114 banker surveys conducted with core deposit executives
- Director-level bankers and above
- Distributed between small, regional and national banks



### BANK INTERVIEW SUMMARY:





## Let's Get Started

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## About NTT DATA Consulting

NTT DATA Consulting takes an industry-centric approach to business and technology consulting. We seamlessly integrate business strategies and enabling technology to help clients accelerate business-driven transformation and compete in the digital world. NTT DATA Consulting has the unique ability to create end-to-end solutions by tapping the entirety of NTT DATA's global technology and business process capabilities. In financial services, our 1,000-plus business consultants and 4,000 technology experts work with 25 of the leading financial institutions in North America. Visit [www.nttdata.com/USconsulting](http://www.nttdata.com/USconsulting) to learn more.

## About NTT DATA

NTT DATA is a leading business and IT services provider and global innovation partner with 80,000 professionals based in over 40 countries. NTT DATA emphasizes long-term commitment and combines global reach and local intimacy to provide premier professional services, including consulting, digital, managed services, and industry solutions. We're part of NTT Group, one of the world's largest technology services companies, generating more than \$100 billion in annual revenues and partner to 80% of the Fortune 100. Visit [www.nttdata.com/americas](http://www.nttdata.com/americas) to learn more.

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