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Traditional banks can spearhead the transformation of financial services.

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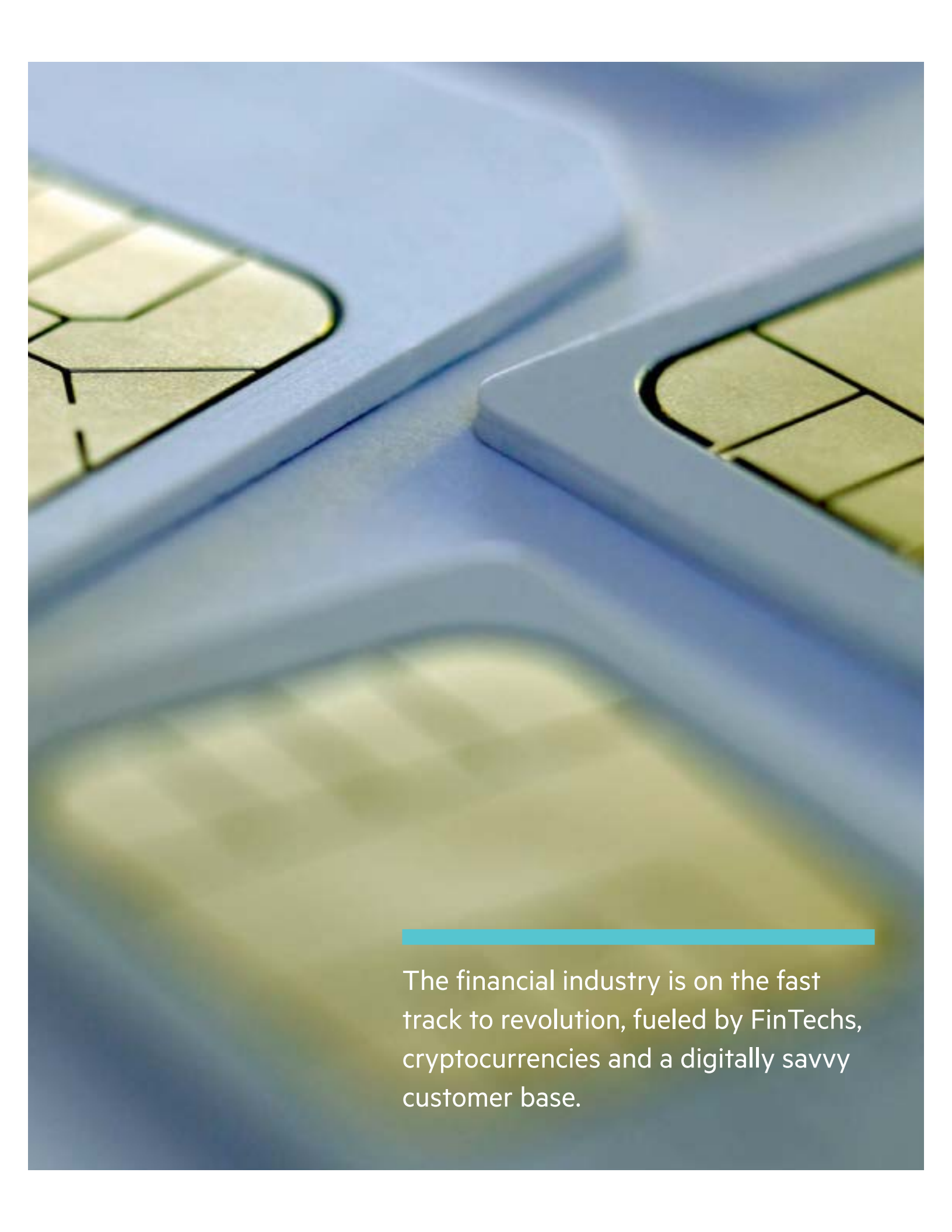
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Leave your legacy

A close-up, shallow depth-of-field photograph of a blue SIM card. The focus is on the gold-colored contact pad on the right side of the card, showing its intricate circuitry. The background is blurred, showing other SIM cards in a tray.

THE GREAT PROGRESSION



The financial industry is on the fast track to revolution, fueled by FinTechs, cryptocurrencies and a digitally savvy customer base.

Act first or fail fast

Historically, the financial industry has changed due to depressions, recessions, stock-market crashes and increased (or decreased) regulations. Despite the uneasiness around the repercussions that these events create, banks have generally retained their reputations for being trustworthy, steadfast and resilient. They've even maintained their customer base. Up until this point, the industry has been relatively immune to disruption. In the always-connected digital age, banking is being disrupted by the convergence of financial and technological innovation. Agile start-ups are invading the once-impenetrable industry and exploiting its shortcomings by offering all the things traditional banks don't: quick transactions, high interest rates for savers, peer-to-peer lending and frictionless cross-channel experiences. Consumers are taking note, leaving traditional banks behind in pursuit of the ease and customization offered by these digital-first companies.

Smart banks view new industry entrants as partners and acquisition targets rather than competitors, seeking business relationships that enable both parties to leverage their respective offerings and ultimately provide the secure, seamless experiences that customers are demanding. At the same time, innovative banks are embracing digital transformation and using technology to improve customer experiences, enhance products and services, and streamline core operations.

While some digital technologies are immediately accessible to improve banks' existing processes — think format-preserving encryption for sensitive data — others require a new understanding of how financial processes are fundamentally conducted and regulated. Blockchain and other distributed ledger technologies are a great example of this latter category. Banks have a powerful opportunity to commercialize blockchain, so much so that in a recent Federal Reserve annual meeting,

chairwoman Janet Yellen urged central bankers to study emerging technologies, and called out Bitcoin and blockchain by name. In the blockchain world, money isn't a physical object exchanged for goods and services. It's become a virtual currency that exists on the Internet, and it can change hands without government or regulatory oversight.

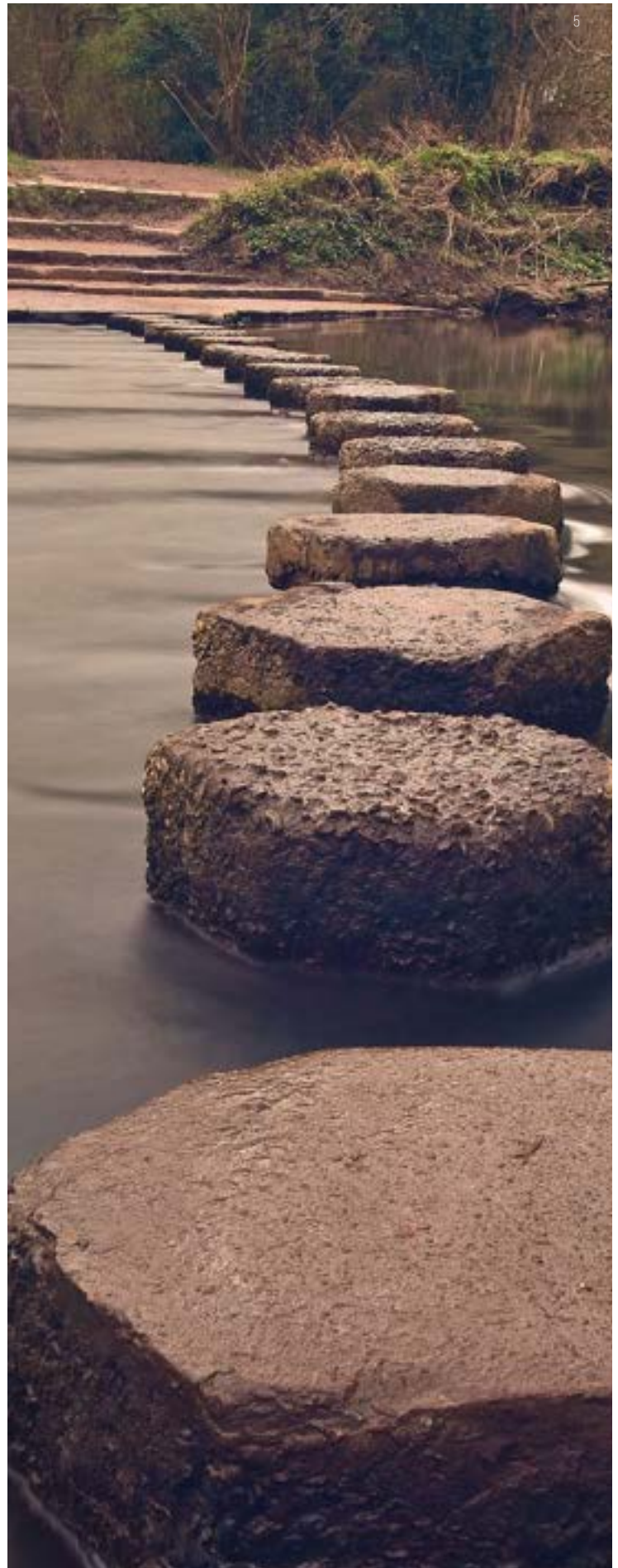
Financial transactions without regulatory guidelines beg the question: Who's in control? For now, users on the blockchain network police transactions, but that could change as banks become more involved — and bring with them regulatory agencies. Even with added regulation, distributed ledgers have implications far beyond banking, which could fundamentally change how e-commerce is conducted.

Today, the immediate implications for the banking industry are clear:

Customers come first. When it comes to digitization of the financial industry, all signs point directly to the customer. As their needs adapt to the digital era, banks must follow suit, while still offering the secure, trusted, reliable experiences consumers of all generations have come to expect.

Disruption represents unprecedented opportunity. Unlike the past drivers of change, digital disruption will fuel innovation and ingenuity, as proactive problem-solving replaces reactionary quick fixes. However, banks need to rethink their security measures, adopting a from-the-ground-up, holistic approach to protection, and reallocating funds and resources accordingly.

Data should inform decisions. Banks decide their own fates in this new digital landscape — if they accept the new way of conducting business. By analyzing data and using resulting insights to inform business decisions and customer offerings, banks are better positioned to partner with FinTechs. ■





01

ONE FOR ALL, ALL FOR FINTECHS



When FinTechs first emerged, traditional banks were skeptical. Now, they are realizing the potential opportunities these agile start-ups bring to a mature industry.

A new foundation for finance

If it's not broken, don't fix it. But the opportunities offered by digital disruption are prompting banks of all sizes to transform to meet the changing needs of new generations of consumers.



In 2011, a 5.8-magnitude earthquake shook the mideastern portion of the United States so strongly that the Washington Monument, standing tall in the nation's capital for more than 150 years, almost collapsed. It didn't, but numerous cracks tell the story of its shaky past.

Today, the ground under the banking industry is also trembling. Financial technology firms (FinTechs), largely unregulated and uninhibited, are swooping in, challenging traditional banks' structures and exposing cracks.

Although FinTech accounts for just two percent of today's global market, its presence is mighty, and mounting. Nearly two-thirds of consumers say they are using products or services from FinTech firms. While Gen Y customers are currently driving the global demand for FinTechs (67.4 percent of this age group is using a FinTech financial product or service), the appeal is expected to increase

among all age groups. If there's any question whether consumers' loyalty to traditional banks is diminishing, the answer is a resounding "yes."

Advances in cloud, mobile platforms and app development are lowering or eliminating technological and cost barriers for these FinTech start-ups. They also have the advantage of not being saddled with the legacy technology and technical debt that impede the agility of traditional banks. More than \$25 billion has been invested in today's 4,000 active FinTech companies in the United States and U.K. alone. That number is expected to rise. By 2023, 17 percent of U.S. and Europe's forecasted \$1.2 trillion banking revenue is on track to be attributed to FinTech firms.

FinTech is a strong competitor that incumbent banks can't ignore.

But banks already know that. In his 2015 annual shareholder letter, Jamie

Dimon, CEO of JPMorgan Chase, warned that "Silicon Valley is coming. There are hundreds of start-ups with a lot of brains and money working on various alternatives to traditional banking. Competitors are coming in the payments area. You have all read about Bitcoin, merchants building their own networks, PayPal and PayPal look-alikes. . . . There is much for us to learn in terms of real-time systems, better encryption techniques and reduction of costs and pain points for customers."

Dimon is not alone in his prediction.

According to an HPE-sponsored survey of senior bankers and FinTech executives, conducted by the Economist Intelligence Unit, more than two-thirds of bankers perceive FinTech as a serious threat to their market position. However, nearly four out of five banks remain only in the planning or pre-operations phase of countering that threat.



RETAIL BANKING

indicated bank's inability to recruit and retain tech talent as a disadvantage

66%

identified legacy technology as a competitive disadvantage impacting banks

75%

reported bank's reputation for trust and stability is a competitive advantage

81%

FINTECH

stated lack of customer trust is a FinTech weakness

66%

cited FinTech's technology expertise as a competitive advantage

76%

noted that FinTechs benefit from their absence of legacy software systems

80%

YOU SAY STRENGTH; I SAY WEAKNESS

When asked to assess their own strengths and weaknesses, both banks and FinTechs realize each has characteristics the other side needs.

While banks are trying to adapt to customers' new digital demands, FinTechs have already figured out how to do so, and they're going after banks' traditional profit centers — payments and lending. More than 70 percent of FinTech investment is targeting these areas. As this primary touchpoint for customers transfers to FinTechs, incumbent banks risk being pushed to the back of the value chain, serving simply as custodians of accounts and money.

Banks need to figure out how to stake their claim by delivering more personalized, convenient customer experiences. Otherwise, they'll likely feel the pinch: Competition from non-banks could erode one-third of traditional bank revenues in North America by 2020.

The customer-centric culture that banks now strive for is at the core of FinTech operating models; the reason for their existence is to serve the customer. While banks deal with regulations and the continual upkeep of legacy systems, FinTechs surge ahead, thanks to a flexible infrastructure that enables them to bring new services to market as quickly as their employees invent them. "A lot of FinTech innovation programs are top-down," says Andrew Dare, chief technologist Financial Services, United Kingdom and Ireland, at HPE. "Banks say they want innovation, but that's very different from saying, 'This is what we need to be like.' Banks have a bottom-up, old-fashioned strategy. I'm not convinced it's the right approach."

Bank executives aren't sure of their approach, either. Less than one-quarter of banks say they have an advantage over FinTech firms in their ability to innovate or move quickly, due in large part to their aging systems: 75 percent of bankers cite existing technology as a constraint to both growth and competitiveness.

Clearly banks must revamp their processes to compete in the new digital ecosystem, but their established reputations will be key to their future success. ■



WHY HAVE ONE ADVISOR WHEN YOU CAN HAVE 350,000?

Beyond payments and lending, another type of competitor making waves is community/social media banks. Fidor, a German online bank, hosts a community of 350,000 people in Germany and the U.K. who are given incentives to provide and receive financial advice. Users are rewarded with cash and improved interest rates. They also have access to a wide selection of services provided by other FinTech partners. In fact, Fidor recently partnered with Spain's Telefonica to launch a mobile bank account service for customers of the telco operator. In July 2016, French lender BPCE acquired the online bank, a sign of the growing trend for traditional banks to identify opportunities and expand their digital services by purchasing FinTech firms.

BREAK THE BANK

A few FinTechs are pushing the boundaries of what “banking” and “financial services” mean. Expect more to follow suit.

Pocopay:

Standing apart from some of the bank-backed FinTechs, this Estonia-based FinTech allows customers to split bills, request money with email addresses or QR codes and make payments with a MasterCard contactless debit card that works only through mobile apps.

FinGenius:

This start-up provides artificial intelligence and natural-language processing to provide financial insights that are delivered either via cloud services or onsite. Backers include the city of London, Accenture, Barclays, Deutsche Bank, Morgan Stanley and other megabanks.

TransferWise:

Two Estonian expats in London wanted to explore a more efficient platform for foreign-currency exchange. They now claim to save their users more than \$34 million in bank fees each month. While rates vary, TransferWise charges 0.7 percent on U.S. transfers, whereas standard rates are more in the 2 percent to 3 percent range.

Kiva:

This nonprofit’s mission is to offer microlending to people in developing countries. Operating in 83 countries, Kiva currently connects 2.1 million borrowers with 1.5 million lenders. Kiva lenders crowdfund an average of \$2.5 million in loans each week, creating a renewable pool of financial services available to people around the world.

Cardlytics:

The proprietary native online and mobile banking channel from this start-up enables advertisers to deliver offers to bank customers based on their actual purchase behavior. Offers are securely distributed across a customer’s digital banking experience, helping to strengthen the role banks play within the flow of commerce. Since its 2008 debut, Cardlytics has partnered with financial institutions such as Bank of America, PNC Bank, Regions Bank and Fiserv.

Build, borrow, fund or buy

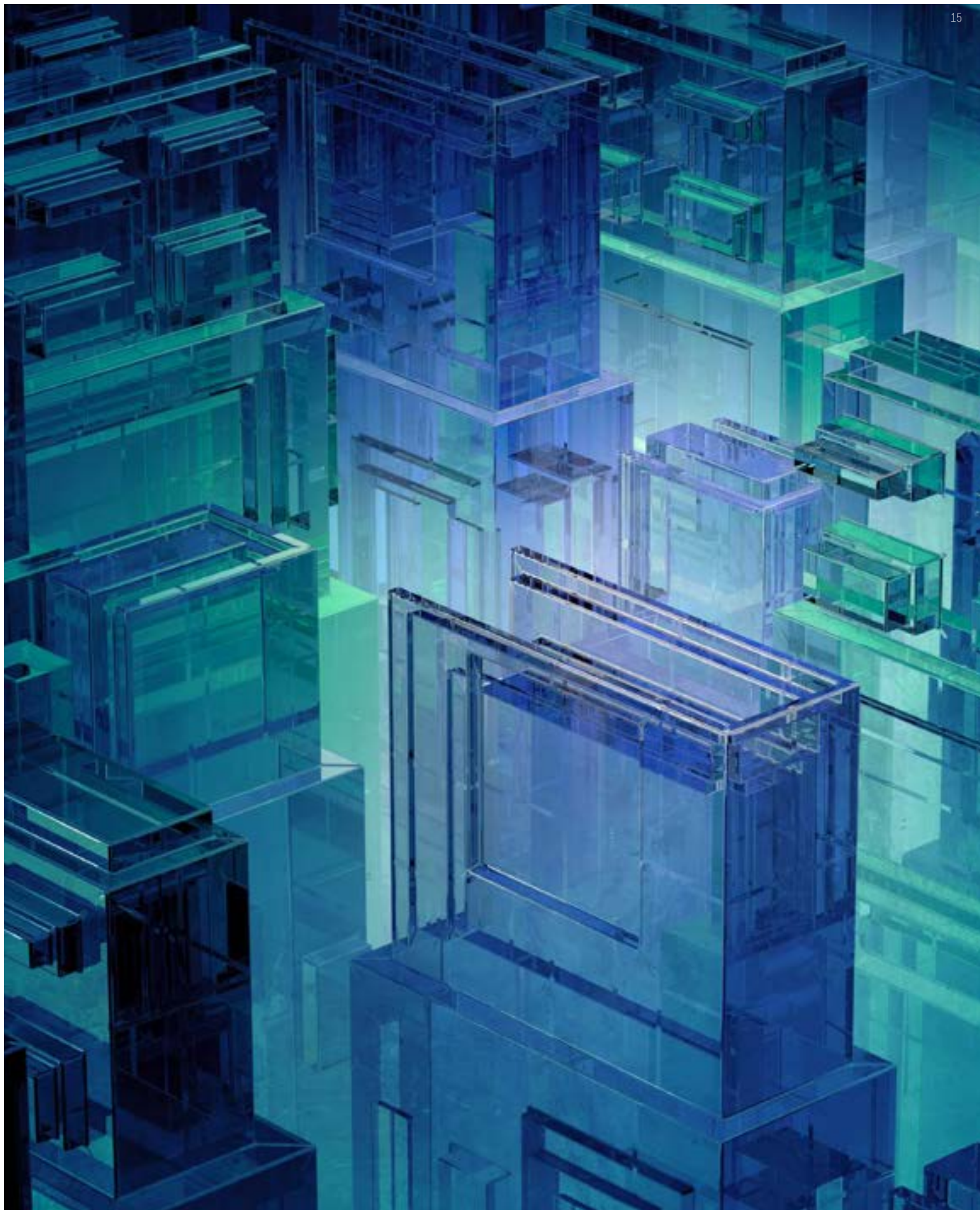
As banks navigate the FinTech territory, they are realizing that partnerships are the pragmatic approach.

All is not lost for banks operating in a FinTech world. Incumbent banks have clear advantages over start-ups when it comes to capital, customer acquisition, cross-sell opportunities and, most important, trust. In fact, 70 percent of banks view customer trust as their greatest strength. FinTechs agree: More than 80 percent of FinTech executives say they see banks' trust, stability, and regulatory and risk management expertise as enviable competitive advantages.

It's no surprise that banks envy FinTechs for their agile infrastructure. The majority of banks — 87 percent — believe their infrastructures cannot support the digital ecosystem FinTechs are helping to create. As a result, bank executives acknowledge that FinTechs have an open door to disrupt specific banking processes, including payments. It is now much easier and cheaper for a person to transfer money via TransferWise or another digital service than through a bank branch.

FinTechs will eventually hit roadblocks, however. For those that strive for a global presence, regulation may prove to be a significant barrier. This is especially true for those focused on the payments sector. Expanding services to include international money exchange can be daunting and expensive.

But these barriers won't block FinTechs' long-term growth. Rather, banks need to determine how to leverage FinTechs' strengths and use them to their advantage. Fortunately, the opposite is also true. There is almost an exact match between the strengths of banks and the weaknesses of FinTechs, and vice versa. Each participant has what the other needs: While FinTechs possess the innovation, agility, speed, technological skills and entrepreneurial culture that banks struggle to replicate, traditional financial institutions have the customer base, capital, regulatory expertise and risk-management skills FinTechs strive to capture.



It's a partnership too good to pass up, especially for banks. Nearly two-thirds of financial service institutions view partnerships as the most effective way of responding to the growth of the FinTech industry.

As evidence, consider the numerous funds, incubators and accelerators that banks have launched to nurture FinTechs. Barclays is creating a global community for FinTech innovation, and RBS has opened Hatchery, a business accelerator hub. At its Edinburgh headquarters, a team works directly with FinTech companies to develop new ideas and pinpoint emerging trends. In a similar strategy, Eastern Bank, a Boston mutual institution, developed its own lab to incubate potential new solutions and to partner with FinTech companies. Other banks are looking to become even more involved in the movement, setting up venture capital funds to invest directly in emerging FinTechs. In the last five years, Citigroup has directly backed 13 start-ups, and Goldman Sachs has funded 10.

In Australia, Tyro, the country's only independent electronic funds transfer at point of sale (EFTPOS) provider, offers a hub for Sydney's FinTech thinkers to work together on bringing innovative products to market. Each quarter, Tyro selects one company to receive resources, banking access and expertise to co-develop open APIs. Investors are offered a chance to buy equity at stage-gates.

Open APIs represent a way for banks to retain a lasting role in the new digital ecosystem. By enabling the

data they owns to be securely accessed by mobile or Web application developers and used in innovative ways, banks are placed at the center of innovation and connected to well-received customer-focused apps. One example is Ukraine's PrivatBank, which offers hundreds of API-based services, including one that enables customers to simply tap their smartphone to an ATM to withdraw cash.

More banks will follow suit, especially in the U.K. In August 2016, the Competition and Markets Authority (CMA) required the country's largest banks to develop a set of core open APIs in an attempt to accelerate change in the U.K. retail banking sector. No matter the driving force behind banks' creation of open APIs, they should proceed with caution: By allowing greater access to their confidential consumer data, banks could create a potential tunnel for hackers to enter into their internal systems if such data is not properly secured.

Banks' proactive attempts to position themselves as a core component of the customer experience will be necessary to remain relevant to consumers. FinTechs, however, already think banks are. Ninety-five percent of banks and FinTechs agree that banks will remain in a strong position, even as FinTechs gain ground.

In the end, most FinTechs don't want to be banks. They aren't going after all of consumers' financial business at once, and for now, they are happy to leave the safe, and highly regulated, storing of money to banks. ■



RETURN ON COLLABORATION

Some banks are turning the tables by having FinTechs work for them. Platforms such as NerdWallet in the United States or BankBazaar.com in India aggregate the offerings of multiple banks in loans, credit cards, deposits, insurance and more, and receive payment from the banks for generating new business.

East meets West

China is quickly emerging as the leader in FinTech innovation. The rest of the financial world should take note.

Western banks only need to look East for a preview of what FinTechs could bring in the next five years. Today, China boasts the world's largest e-commerce ecosystem in terms of transaction volume. The country's high levels of Internet and mobile penetration, including many Internet companies already focused on payments, along with relatively unsophisticated incumbent consumer banks and looser regulations, make it a hot spot for expedited FinTech growth.

In fact, many of the country's top FinTech players have as many, if not more, clients than top banks.

Israel, home to one of the world's most vibrant entrepreneurial ecosystems, also contains one of the fastest-growing FinTech sectors. There are currently 430 Israeli FinTech companies, many of which have become leaders in their fields, including FundTech, a provider of financial software solutions for

clearance and processing of automatic payments, and Payoneer, a cross-border e-commerce payments platform. Their success is earning international attention. In 2015, international FinTech company D+H bought Fundtech for \$1.25 billion. Major banks, including Citibank and Barclays, along with other FinTech leaders such as PayPal and Intuit, are also making their presence known, building FinTech innovation labs and start-up accelerators in this digital innovation hub.

INDIA RISING

Banks and FinTechs around the world should keep their eyes on India's FinTech revolution. If it delivers as promised, these digital innovations could lead to global repercussions, affecting all publicly traded banks and payment companies by the end of the decade. With 21 percent of the world's unbanked adults, the Indian government is calling for companies to innovate, even implementing proactive policies to help these FinTechs deliver results. It's an open playing field for any FinTech to join; India is now the world's third largest market for smartphones, and by 2017, will be home to 314 million mobile Web users.

It's not just FinTechs that the Indian government is catering to. It has also granted a bevy of banking licenses to promote competition and faster deployment of digital services. Most of these licenses, however, have not been issued to traditional banks but to telco, software and IT services companies.

What's set to unleash disruption in India is the "India Tech Stack," a suite of API-based services that exposes every government-mandated customer service. A part of this suite is the Unified Payment Interface, which enables any person to transfer money to another person's bank account simply by knowing their mobile phone number.

The ramifications of this platform are huge, essentially democratizing all of the once-proprietary IP and infrastructure of the financial and government systems. It's PayPal on steroids, and if it succeeds, other countries, including the United States, may have to seriously consider adopting a similar approach.

FinTech Takes India

- Customers in India opened more bank accounts in 2015 than exist in total in the United States.
- More than 100 million new mobile wallets were created between mid-2015 to June 2016.
- More than 200 million bank accounts were opened in one year, and more than 300 million debit and credit cards were issued between 2012 and 2016.



Kenya, which also lacked a widespread banking system, was transformed by the launch of M-Pesa, a mobile-based system that allows users to send payments and accept deposits on regular mobile devices using PIN-secured text messages. It currently has more than 23 million active users in 11 countries, and represents the most successful mobile-based banking solution in the developing world.

Other emerging markets show similar FinTech penetration levels. In Latin America, nearly three-fourths (77 percent) of banking customers use FinTech products or services, followed by Central Europe at 69 percent and the Middle East and Africa at 64 percent.

If Kenya is at the emerging end of the FinTech spectrum, while China has already reached the established end, the United States and Europe sit somewhere in the middle, on

the cusp of what seems to be a massive FinTech disruption cycle. Currently, only one percent of North American consumers' banking revenue can be claimed by new digital business models, but this number is expected to increase to about 10 percent by 2020 and 17 percent by 2023.

FinTechs and banks alike are preparing to capitalize on these big opportunities. As new frontiers such as digital currencies, robotics and the Internet of Things erase boundaries on the global value both entities can provide, banks will need to decide whether to partner with FinTechs, protect their business by incubating the FinTech mentality, or purchase FinTechs to gain the needed advancements. ■

FINTECHS ARE WELL FUNDED

U.S. and Chinese FinTechs dominate the current digital ecosystem, although FinTechs in other countries are emerging rapidly.

TOP 10 FINTECH COMPANIES WORTH MORE THAN \$1 BILLION:

COMPANY NAME	BUSINESS AREA	CATEGORY	COUNTRY OF ORIGIN	VALUE
Ant Financial	Payment	Online payment	China	\$45-\$50 billion
Lufax	Lending	Peer-to-peer loan	China	\$19 billion
Stripe	Payment	Online payment	U.S.	\$5 billion
Credit Karma	Lending	Credit scoring	U.S.	\$3.5 billion
Adyen	Payment	Online payment processor	Netherlands	\$2.3 billion
Klarna	Payment	Online payment	Sweden	\$2.25 billion
One97	Lending	Peer-to-peer loan	India	\$2 billion
Prosper	Insurance	Online health insurance	U.S.	\$1.9 billion
Oscar Health	Payment	Subscription payment	U.S.	\$1.75 billion
Zuora			U.S.	\$1.5 billion

Source: Business Insider (Aug 21 2015), Financial Times; Crunch Base, CBInsights, Citi Research



01

NOW
TO
NEXT

One for All, All for FinTechs

The future of FinTechs is bright. So, too, can be banks', as long as they set their sights on realistically attainable goals. Traditional banks must recognize their vulnerabilities with respect to FinTechs, and either begin allocating resources toward addressing them to effectively compete, or figure out how to use what FinTech does better to their advantage. As the FinTech sector continues to mature and expand its global presence, we will likely see a blending of skill sets as FinTechs and banks collaborate for the greater good of both.

Next:

Bankers see FinTech as a serious threat to their business. Yet nearly four out of five banks are still figuring out what to do about it. Banks must start allocating funds to address their vulnerabilities, which include mobility and an omnichannel customer experience.

While banks try to compete with FinTech's agile business models, they need to use their strongholds — customer trust and data — to their advantage. Analyzing customer preferences, product usage, financial needs and behavior will enable banks to apply insights to enhance the user experience and sell existing customers up the product profit chain.

Banks and FinTechs each have what the other needs. Mutually beneficial partnerships, fueled by incubators and accelerators, will ensure both parties remain relevant for the long term.

Open APIs represent a way for banks to retain a lasting role in the new digital ecosystem. Banks need to collaborate with FinTechs to leverage new technologies that will enable them to deliver superior customer experiences.

Banks need to regularly survey the global FinTech scene to ensure they are prepared for what's coming next. India and China, where momentous movements are taking place, must be watched.

A1

A2

A3

A4

A5

02

THE CURRENCY EXCHANGE

B1

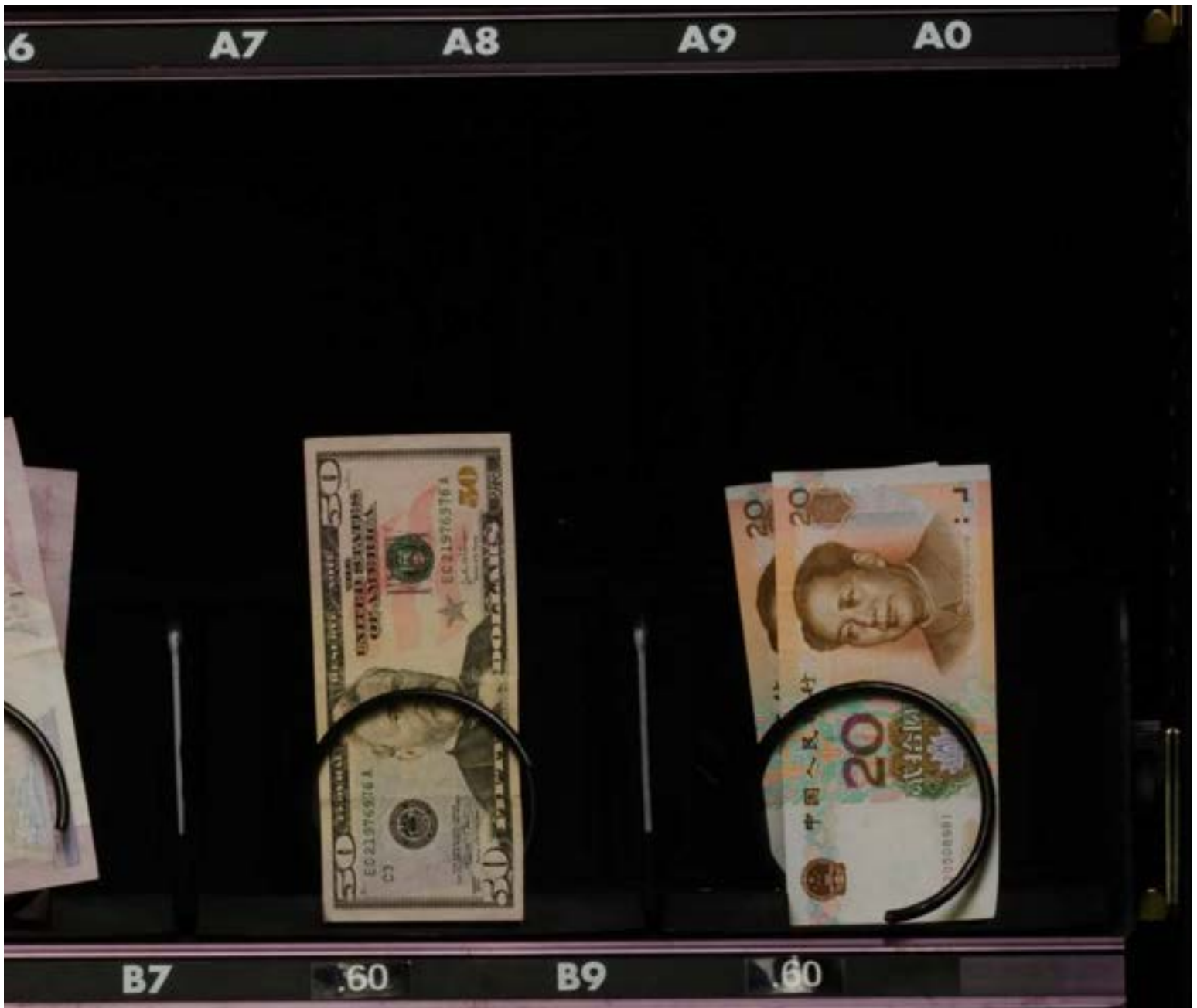
B2

B3

B4

B5





An always-connected populace has invented a new way to exchange money that requires zero input or oversight from financial institutions and governments. Is this the beginning of the end for fiat currency?



Blockchain: The next revolution

Banks have made the exchange of currency their business, but the digital age has brought with it a new way of banking, free of the very institutions that controlled the industry for hundreds of years.



Traditionally, people have exchanged physical objects of assigned value for goods and services. That currency, as it were, has come in all forms, from precious metals and beaver pelts to bank notes and coins — and now cryptocurrencies such as Dogecoins, Ethereum and Ripple.

Regardless of the form money takes, it's only as valuable as its transaction record. And for cryptocurrencies, that record is called blockchain. In simple terms, blockchain is about creating value over a distributed network. It's an online, technological implementation of a transactional ledger, spread across all users to ensure accuracy. It's open-source software that users can access and manipulate.

For example, a user can send a digital payment to another participant in a given blockchain network. As the online transaction originates, it's added to the larger, global ledger entry. All members of that blockchain network can then verify the accuracy and veracity of both the payer and the payee, as well as check the amounts that are in each account. In traditional banking, this function is performed and funds are guaranteed by clearinghouses, which add time and remove control from those participating in the transaction. After a transaction (the “block”) is verified, it is added to all the previous transactions that came before it (the “chain”). This distributed network can be ported to nearly any application, as it contains metadata about the individual transactions along with the transaction data. Therefore, blockchain becomes a continuous string of financial transactions, verified by the network and stored in the cloud in perpetuity.

PERMISSION GRANTED

There are “permissioned” and “permissionless” blockchain systems:

Permissioned:

Available only to a closed group of participants.

Permissionless:

Public and open to anyone.



In other words, it's the Internet of banking, originally developed by private citizens for private citizens. And while it's most commonly linked to Bitcoin, the cryptocurrency that currently boasts a value of around \$20 billion, the technology is quickly gaining credibility and influence in the financial industry. In fact, it's projected that by 2025, 10 percent of global gross domestic product will be stored on blockchain technology — that's trillions of digital dollars, euros, pesos, francs, etc., exchanged online instead of through traditional channels. While that projection alone is enough to make blockchain implementation a priority for banks, the technology also has several inherent advantages:

Central authority not required. The distributed ledger is decentralized and amended without input or approval from a controlling entity — for now — meaning only those who use the blockchain can establish and enforce the rules and approved behaviors.

Increased resiliency and security. A distributed network protects the blockchain against malicious attacks and ensures it can remain online should any single chain — or node — go offline.

Peer-to-peer validation. Entire networks determine the validity of blocks of transactions, rather than a trusted third party or intermediary.

Immutable transactions. What happens in blockchain stays in blockchain. Once transactions are approved, they are cryptographically bound and can't be altered.

Auditable activity trail. There's a record of every transaction, and that history is available for users to track all the way back to the "genesis block" — the first block in any given chain.

For now, blockchain is largely used to facilitate financial transactions between private parties. But as the technology evolves, it can be used for the secure transmission and validation of virtually any multiparty agreement, including insurance claims, asset registry and property titling, contracts, music royalty payments and energy commodities trading. Blockchain could eventually be used for anything that requires proof of identification, exchange of goods or digital currency, verification of contract terms and more than one party to execute. Basically, blockchain has the power to reinvent how business is conducted. ■

“Blockchain presents an opportunity to bring disparate things together and allow secure, nonrefutable records of transactions to be done anywhere you need them to be done — quickly, securely and with little chance of fraud. Therein lies the true value of the technology.”

ANDREW DARE, HPE CHIEF TECHNOLOGIST OF FINANCIAL SERVICES, UK&I

FOLLOWING THE PROVERBIAL PAPER TRAIL

At its most basic, blockchain is simply a way to conduct secure transactions online without banking oversight. Users in the blockchain network approve or deny each transaction, and every exchange is logged in a transparent record.



Distributed ledgers everywhere

Blockchain and cryptocurrencies will soon become more than a way for business to be conducted on the Internet — they represent the future of global commerce, and banks could lead the way.

Security, convenience and efficiency aside, blockchain's biggest contribution to the financial services industry could be the potential costs saved. Digital banking will both accelerate the need for digital infrastructure and reduce dependence on human capital. Let's use Bitcoin, the most well-known — and perhaps, soon to be replaced — digital currency as an example. In early 2016, there were approximately 120,000 Bitcoin transactions with a total value of \$75 million each day, adding to a register that's 38,000 blocks long and 45 gigabytes in size.

But here's the kicker: That 45 gigabytes of information cannot be changed or manipulated in any way without a majority of participants agreeing to do so. If someone tries to tamper with a ledger entry, the rest of the network will disagree on the integrity of that entry and will not incorporate it into the larger blockchain.

Banks, then, can use the same underlying blockchain technology to effectively replace regulations, such as those required by Know Your Customer, or KYC, guidelines and Anti-Money Laundering (AML) compliance. Those rules, set in place to combat money laundering, cost the industry nearly \$10 billion in 2014. KYC efforts also require considerable staff input, delaying transactions by as much as 50 days. A successful implementation of blockchain in effect pays for itself, because transaction metadata is stored in conjunction with the transaction data. Banks could see a significant drop in duplication of KYC checks, employee hours used to verify customer transactions and time delays — because the shared ledger would be available to all members in real time. This also has implications for the regulators themselves, as a reduction in the number of compliance checks means reduced time and resources expended.



THE RIPPLE EFFECT

The Royal Bank of Canada has tested proof-of-concept executions with the blockchain FinTech Ripple to see how it could better serve its 16 million clients across 40 countries. Ripple's technology aims to allow RBC to settle cross-border payments in seconds, not hours or days, by directly connecting banks. The bank is also taking blockchain a step further, using it to create a loyalty program that allows it to engage with customers instantly and identify what touchpoints customers are using.

Given that \$10 billion tab for KYC and AML compliance, the financial industry's estimated \$1 billion investment in blockchain in 2016 is a relatively small short-term expense that could yield long-term benefits, specifically a distributed ledger system that can fill cracks in the current market all over the globe. In short, the distributed ledger system presents a win-win opportunity for banks, customers and regulators.

For example, Honduras had a long-standing issue with corruption in its land-registry system. In 2011, the World Bank committed \$328 million to help digitize and modernize processes — and while the effort helped, it allowed unscrupulous players to digitally alter land records. In early 2015, blockchain FinTech Factom was employed to work directly with the Honduran government to create a tamper-proof, transparent record system.

In the United States, the NASDAQ exchange created Linq, a blockchain-based platform and ledger that helps manage the purchase and sale of private companies. The platform helps clients hold a digital ledger that improves security along every step, helping the audit process and increasing ownership transparency. And Deloitte is testing blockchain applications from Ethereum, Eris Industries and Ripple, diversifying its offerings to better align with clients' needs. It also deployed a proof-of-concept using an implementation called Rubix to facilitate simple tools for, and add value to, its audits. ■

The financial industry paid \$10 billion for Anti-Money Laundering and Know Your Customer compliance in 2014. Just two years later, banks are investing a comparatively nominal \$1 billion in blockchain technology, which could greatly reduce compliance costs.

DETERMINING THE TRUE VALUE OF BLOCKCHAIN

The R3 Consortium, founded in 2014 as a way for financial institutions to research and develop specific blockchain implementations, now has more than 50 members, including some of the largest banking institutions in the world. By creating new uses and applications for blockchain, the firms aim to communicate interbank transactions among members in a ledger that's visible to everyone in the consortium. By keeping records in a single repository, they're more easily verified and they're unchangeable.

Founding Members:

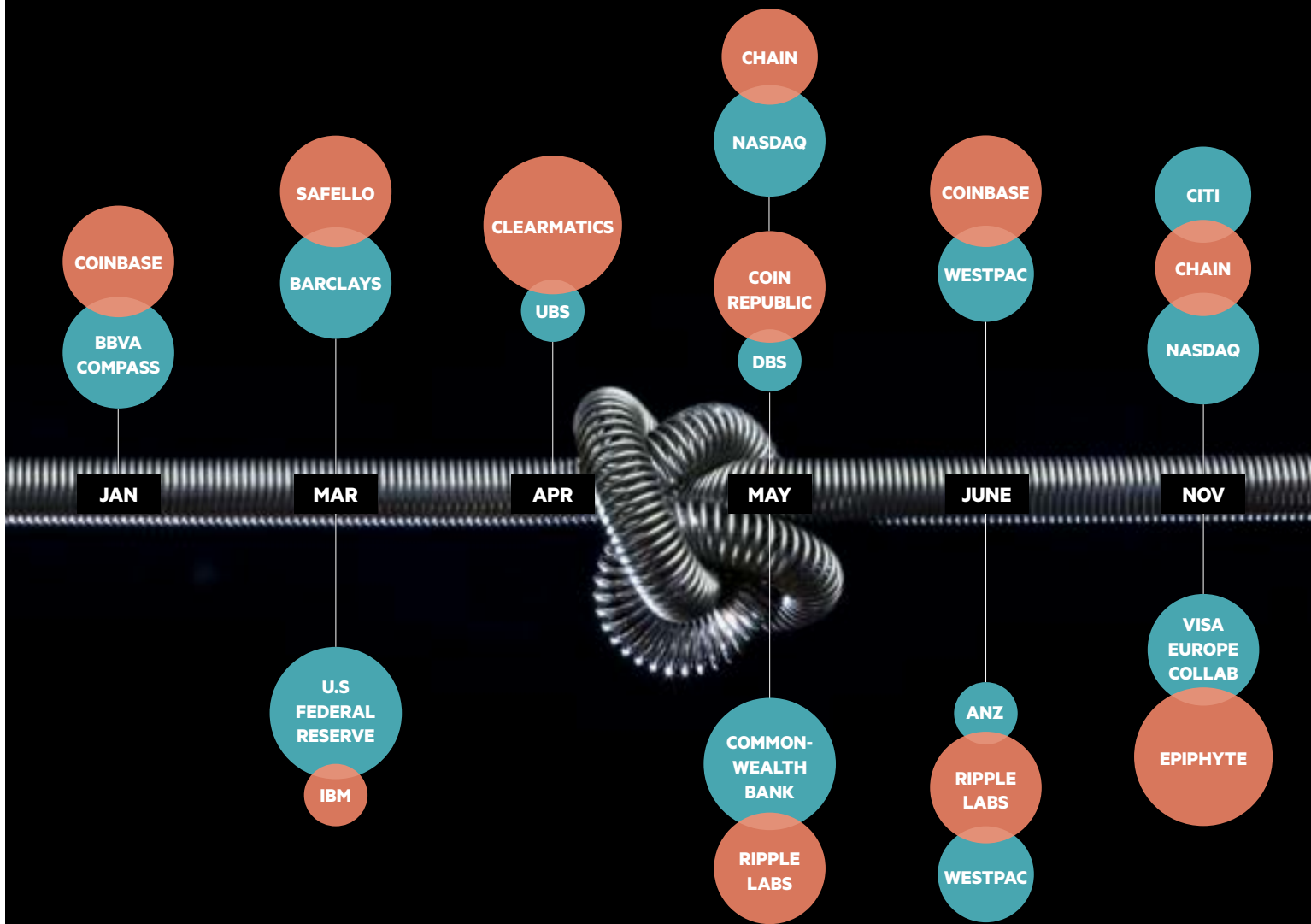
Barclays, BBVA, Commonwealth Bank of Australia, Credit Suisse, Goldman Sachs, JPMorgan Chase, Royal Bank of Scotland, State Street and UBS.

Additional Members:

Banco Santander, Bank of America, BMO Financial Group, BNP Paribas, BNY Mellon, Citi, Commerzbank, Deutsche Bank, HSBC, ING, Mitsubishi UFJ Financial Group, Mizuho Bank, Morgan Stanley, National Australia Bank, Nordea, Royal Bank of Canada, Scotiabank, Skandinaviska Enskilda Banken, Société Générale, Toronto-Dominion Bank, UniCredit and Wells Fargo. *List is not comprehensive.*

HISTORY IN THE MAKING

Banks aren't viewing blockchain as competition — they're actively developing implementation strategies to claim the technology as their own. Those on the profitable side of history will keep pace with an increasingly mobile-minded consumer base. Laggards will fall behind, losing market share in the process as digital currencies propel the financial industry into uncharted transactional territory.



BANK

FINTECH

The overlapping circles in this diagram represent partnerships among FinTechs and traditional banks in 2015.

Unconventional lending draws interest

There's a reason banks are paying attention to Apple Pay and other digital wallet services — they open the door to the cash cow of the financial industry: lending.

CHINA IS AHEAD OF THE CURVE

Peer-to-peer (P2P) lending has surpassed the tipping point in China, reaching \$66.9 billion in 2015.

COUNTRY	P2P (USD)
CHINA	\$66.9 BILLION
UNITED STATES	\$16.6 BILLION
UNITED KINGDOM	\$5.4 BILLION

While blockchain grabs most of the headlines when it comes to new ways of banking, peer-to-peer (P2P) lending has the potential to be more disruptive to the financial industry because it competes directly with banks' primary source of revenue. What's more, there's little to no opportunity for banks to integrate P2P or marketplace lending into their business models, as they're funded by private investors and venture capitalists.

P2P lending is growing in popularity as consumers suffer under the weight of increased debt, clunky loan-approval processes and double-digit interest rates, while savers are looking for better returns on their capital. With P2P loans, like those offered through Lending Club

and Prosper, borrowers bypass a majority of the restrictive red tape and receive decisions in minutes via online portals. Lower interest rates — think 4 percent instead of 17 percent — also make P2P loans that much more appealing to borrowers.

Even with the increase in P2P lending in countries like the United States, some remain skeptical about its solvency. Twenty-six U.S. states don't allow P2P lending, despite the fact that such loans are subject to securities and banking rules. That restriction could be part of the reason for the relatively small market share — just 0.7 percent of all loans issued in the country. In fact, banks report being less concerned about encroaching

competition in the areas of loans (59 percent), accounts and investments (46 percent), financial advice (43 percent) and mortgages (21 percent).

Outside the United States, however, the P2P market is booming. In China, where the banking system is dominated by state-run banks that often underserve small and medium businesses, the P2P market saw \$66.9 billion in lending in 2015. And therein lies the strategy behind many FinTechs — identify a consumer need and satisfy it with a seamless experience. ■

GLOBAL POWER OF PEER-TO-PEER LENDING

As it gains traction in scope and appeal, P2P lending is set to reach \$1 trillion in loans by 2025.

YEAR	AMOUNT (USD)
2012	\$1.2 BILLION
2013	\$3.5 BILLION
2014	\$9 BILLION
2015	\$64 BILLION
2025	\$1 TRILLION

02

NOW
TO
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The Currency Exchange

Digital currencies, and the distributed ledgers that record transactions, represent more opportunities than challenges for the financial industry. The key to adapting to this new way of doing business is investing the time, resources and funds necessary to identify how best to implement these technologies into banks' current offerings so they can become the institutions that customers want them to be.

Read more about data security and blockchain in the "Security, Privacy and Ethics" section of our [Technology.nxt report](#).

Next:

Blockchain has the potential to reinvent the banking industry. Get involved with some of the consortiums, such as R3, to understand blockchain use cases and gain access to the results of testing currently underway.

Invest in the necessary updates to your current infrastructure to support and fully integrate blockchain systems. Identify a pilot program to execute in the near future. A successful implementation of blockchain could pay for itself, as banks could see significant drops in duplication of Know Your Customer checks, employee hours and time delays.

As peer-to-peer lending grows in popularity, banks will implement processes to secure their primary source of revenue. Speeding up back-end processes while strengthening their advisory role will enable banks to deliver an enhanced customer experience.



03

MIND OVER MONEY



As banks identify ways to become more digitally minded, they can't afford to forget their key differentiator — a solid customer base.

Face-to-face yields to frictionless

No interaction is immune to digitization, and consumers of all ages are expecting banks to meet them in the middle.

Transforming a banking system that dates back several millennia is no easy feat. Retail banks are steeped in legacy technology, processes and thinking. But if banks want their legacy to carry on, they need to figure out how to break those bonds and evolve with their changing environment.

It's a new frontier, built around digital services, digital currencies and digitally savvy customers, and survival depends on adaptation to all of it.

As more digital disruptors offer convenient services in the form of transportation, entertainment and payments, consumers of all ages will look to their banks to offer the same. They expect easier access to and use of bank accounts and services, more personalized advice and guidance, increased transparency with no surprises surrounding fees, all delivered simply and seamlessly. Banks must now cater to an increasingly digital mindset found in old and new generations alike:

- More than one-fifth of Millennials have never written a physical check.

- More than 60 percent of Millennials don't have a credit card.
- Nearly 40 percent of the U.S. Generation Z population rank mobile banking as a top banking feature.
- Only 36 percent of consumers 55 and older prefer in-person banking.
- 2.5 billion of the world's adults don't use formal banking at all.

Banks are struggling to respond fast enough. As a result, loyalty to traditional banks is quickly dwindling. Globally, customers are now more likely to refer their FinTech service provider to another person over their bank (55 percent versus 38 percent).

The new legacy of banking will depend on the experiences that banks deliver. Long-term success depends on their ability to rebuild their organizations around the customer, with sales and services integrated across all channels and processes redesigned from a customer point of view. An intuitive customer experience will differentiate banks that are transforming digitally from banks that are not. ■



“People used to talk about banks just being the rails — helping money move around, not really addressing customers’ problems. Now, banks might not even maintain that role. Even their traditional strengths are being eroded.”

DAVID RIMMER, HPE DIRECTOR FOR THE FINANCIAL SERVICES INDUSTRY

It's not fate; it's analytics

Behind banks' omnichannel strategies are countless processes connecting in real time. What appears on the surface are convenient services offered across a variety of channels.

When a bank is working for the customer, it delivers the right product at the right time through the right channel. This requires knowing who the customer is, what he or she wants and where he or she is at all times. Yes, personalization becomes slightly invasive.

A better understanding of consumer preferences and behaviors, manifested from customer and business analytics, will boost banks' ability to predict needs and enable the proactive, personalized engagements that consumers seek. This is an opportunity banks need to take advantage of quickly. The amount of customer data that banks already own is staggering. Unlocking the insights this information holds could be the key to long-term success.

As banks realize the value in the data they own, the need for more robust, connected digital IT systems will rise in

importance. The challenge facing banks is their matrix of operational units and product lines that are not only managed and measured independently, but also focused on their respective business units. Still too prevalent is the need to first select the product line before logging into a bank's website, spotlighting the challenges many banks have to bridge with their own system silos. As a result, business process owners are blocked from the big-picture view of how their function needs to evolve or be oriented toward customer objectives.

Successful banks will be willing to tackle challenges by developing an IT strategy that is customer-centric. This hinges on having the right tools, technologies and real-time access to customer data, and the merging of legacy systems with new systems of engagement to deliver the seamless, flawless, secure, connected delivery that consumers demand. ■



Time to branch out

The bank branch is likely to have a place well into the future. Depending on where you look, however, its size and purpose may change.

The bank branch will remain an important channel for financial services institutions, though it will play a diminishing role as consumers navigate to more digital means of banking.

As noted by Jonathan Larsen, global head of retail and mortgages at Citi, the real value of consumer banking in the future will be in connectivity, not physical assets. By 2020, 2 billion people — 37 percent of the global population — will use their mobile device for banking purposes. Mobile initiatives are now a must for banks' survival as well as their bottom line: The cost of processing a transaction on a mobile device can be as much as 10 times cheaper than via an ATM and as much as 50 times less than in a branch.

“We’ll probably be the last generation to use the term ‘credit card’ and ‘debit card.’ It will probably be debit access and credit access, and it will be likely loaded onto a mobile device.”

JOHN STUMPF, CEO, WELLS FARGO

Although the inevitable future of the bank branch is fading, it won't be completely forgotten. People will still prefer face-to-face contact when more complex products and services are involved, such as mortgages and personal loans.

Banks are experimenting with this physical/digital presence by reorganizing their branches into a tiered network of advisory-focused banking shops that serve as a physical extension of the Web: A flagship branch, located in a high-value spot, would become a hub of financial advice and education. Smaller sub-locations would be more focused on community efforts, such as providing tips on wealth management and connecting with customers on social media. Standard banking functions would be handled by digital kiosks that function as an expansion of today's ATM.

Other innovations include U.K. bank Virgin Money that is testing out the coffee-shop approach, providing a place where customers can sit, relax and talk with advisors. U.S. banks, including PNC Bank, Bank of America and Wells Fargo, have attempted "pop-up banks," traveling to where customers congregate to offer their services for a limited time.

These innovations are one way to stem the tide that Antony Jenkins, former CEO of Barclays, predicted when he forecasted that the number of bank branches and employees may decline by 20 to 50 percent over the next decade. ■

RETAIL BANKING'S UNEVEN FUTURE

Industry analysts project an overall drop-off in the number of commercial bank branches per 100,000 adults. By 2025, the following countries could see a reduction by significant percentages:

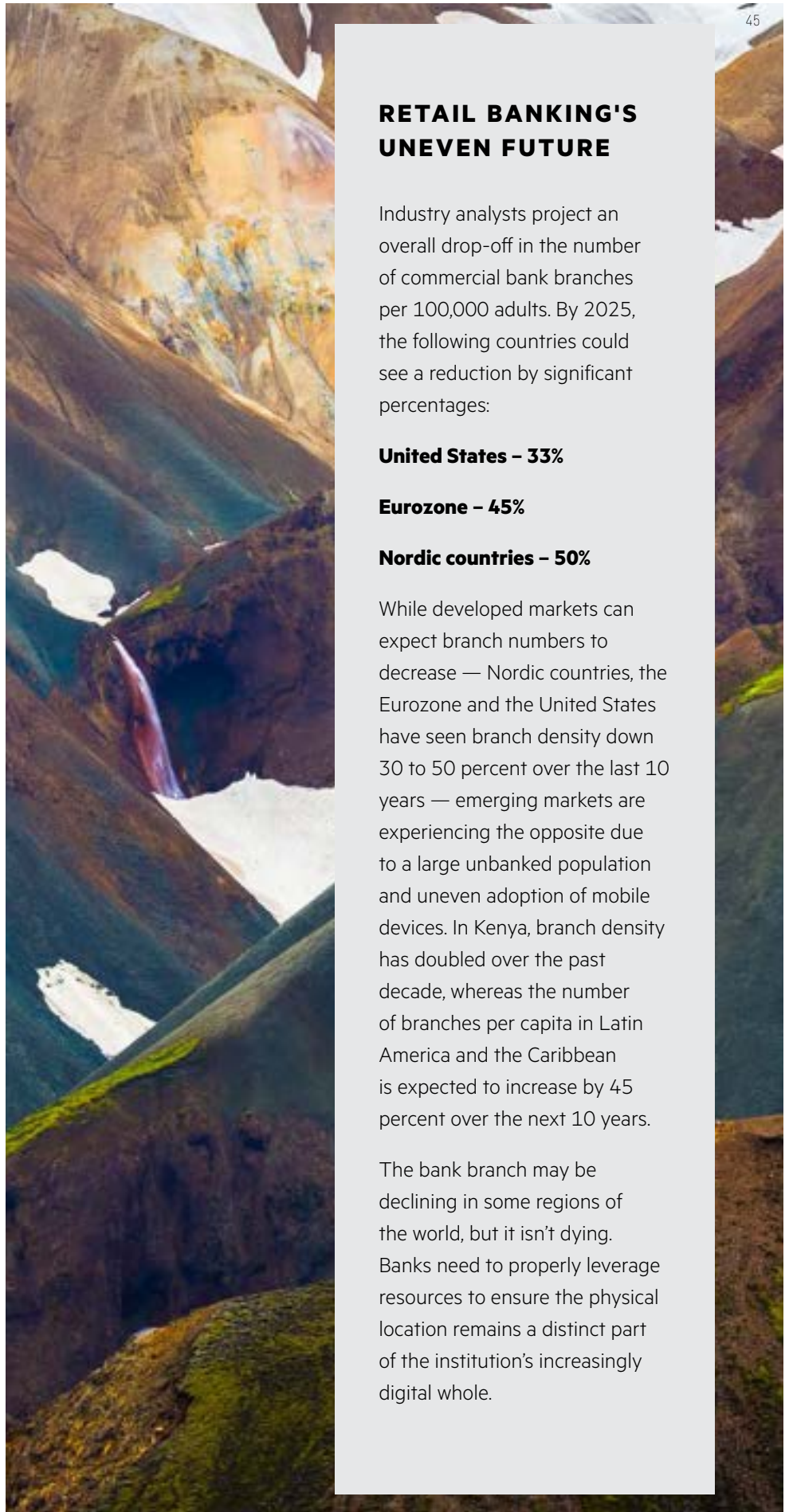
United States – 33%

Eurozone – 45%

Nordic countries – 50%

While developed markets can expect branch numbers to decrease — Nordic countries, the Eurozone and the United States have seen branch density down 30 to 50 percent over the last 10 years — emerging markets are experiencing the opposite due to a large unbanked population and uneven adoption of mobile devices. In Kenya, branch density has doubled over the past decade, whereas the number of branches per capita in Latin America and the Caribbean is expected to increase by 45 percent over the next 10 years.

The bank branch may be declining in some regions of the world, but it isn't dying. Banks need to properly leverage resources to ensure the physical location remains a distinct part of the institution's increasingly digital whole.



NOTHING LIKE A DIGITAL TOUCH

When asked how they interact with their bank every week, customers cite more digital channels versus the traditional branch. Banks take note: Around the world, consumers' preferred method of banking increasingly does not involve another human.

CUSTOMER CHANNEL USAGE AT LEAST WEEKLY

	Internet	Mobile	Branch	Social Media
Spain	54%	26.3%	12.5%	13.1%
Australia	66.2%	32%	11.4%	6.8%
France	67.7%	19.6%	7.9%	6.3%
U.K.	65%	30.8%	15.7%	5.2%
Italy	59.2%	33.8%	12.2%	10%
Germany	57.9%	26.5%	23%	5.2%
U.S.	65.4%	43.4%	25.3%	13.1%
Brazil	59.4%	49.4%	23.5%	13.1%
Japan	26.9%	13.1%	11.4%	3%
Hong Kong	50.2%	25.5%	14.4%	14.4%
India	59.8%	45.6%	21.5%	21.7%

03

NOW
TO
NEXT

Mind Over Money

Banks need to transform legacy processes and technology. The change won't happen overnight, but incremental advancements, spurred by the merging of current systems with new systems of engagement, will enable banks to pull actionable insights from customer data and use that knowledge to inform new services.

To find out more about the importance of creating a frictionless customer experience, read the "Sea Change" section of our [Enterprise.nxt report](#).

Next:

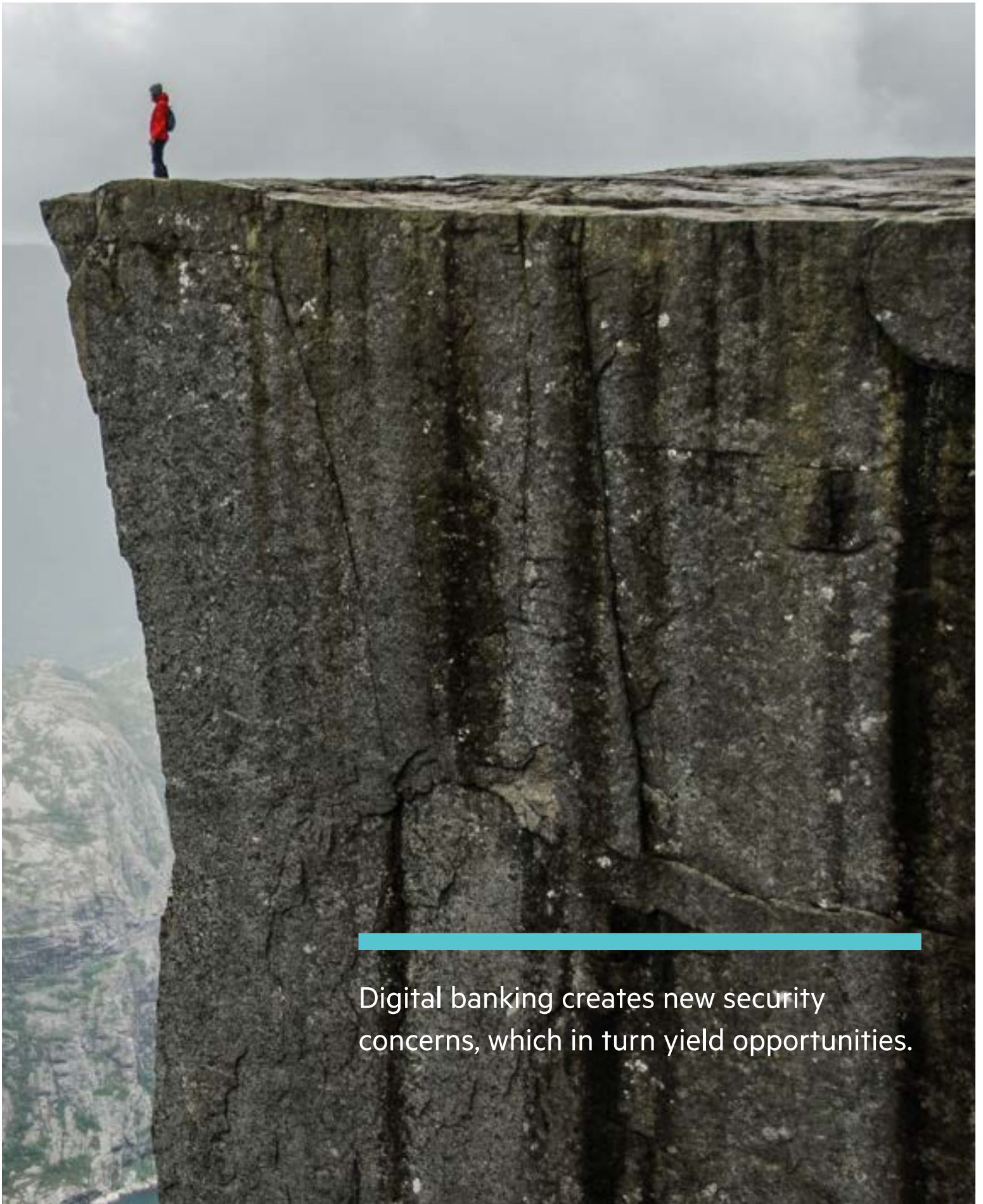
The future of banks depends on the type of customer experience they deliver. They need to rebuild their organizations around the customer, with sales and services integrated across all channels and processes redesigned from a customer point of view.

Unlocking insights from the large amount of customer data that banks already own could be the key to long-term success. This hinges on having the right tools, technologies and real-time data access to boost banks' ability to predict needs and deliver the personalized engagements that customers seek.

Consumers will still prefer face-to-face contact for some financial services. Banks can use their physical presence as an advantage, designing digital solutions that work in tandem with branch services. No FinTech can create this same cross-channel experience.

04

**OPPORTUNITY
MEANS
RISK**



Digital banking creates new security concerns, which in turn yield opportunities.

The bigger they are, the harder they fall

As banks grow more reliant on connectivity and networking, they become an even bigger target for cybercriminals.

The traditional financial institution is in a precarious position. While innovation and digitization are reshaping conventional processes, expectations and consumer experiences, they are also creating a more interdependent network — and that presents a wide attack surface for cybercriminals. Every new application and every new touchpoint brings more potential vulnerabilities. And in those vulnerabilities, criminals see opportunities.

In a race to win the trust and wallet share of customers, it's critical to deliver not only convenience and value, but also security and privacy. A reactive security strategy, wherein patches are added to fix problems and breaches as they arise, leaves banks exposed to significant economic and reputational risk. Security can't just be a bolt-on, set-it-and-forget-it exercise. The impact of breaches is huge, as 61 percent of customers say they would stop using a company's products or services if an attack resulted in a known data breach. And the industry is fully aware of this problem: 71 percent of banking CEOs see digital security as the No. 1 threat to their business, a number higher than any other industry. Considering the average cost of a single breach nears \$6 million, those fears are justified.

For good reason, banks are at the forefront of thinking about security. Banking and financial services are now the fastest-growing nongovernmental cybersecurity market, with expenditures projected to hit \$77 billion between 2015 and 2020.

In the future of online banking, security needs to be embedded into every component of the business and IT fabric from the onset. Information-security specialists need to be an integral part of each business unit. Security operations need to transcend the complexities of organizational structure, and each potential point of vulnerability — fraud, bad checks and identity theft among them — needs to have smart, embedded sensors enabled by machine learning, advanced data analytics and human monitoring.

The days of layering on security to applications and the underlying infrastructure have proven time and again to be costly, rigid, fragmented and largely ineffective. Banks need a holistic, cognitive approach, including best-in-class data encryption and tokenization, intelligent threat and fraud detection, and compliance management. ■

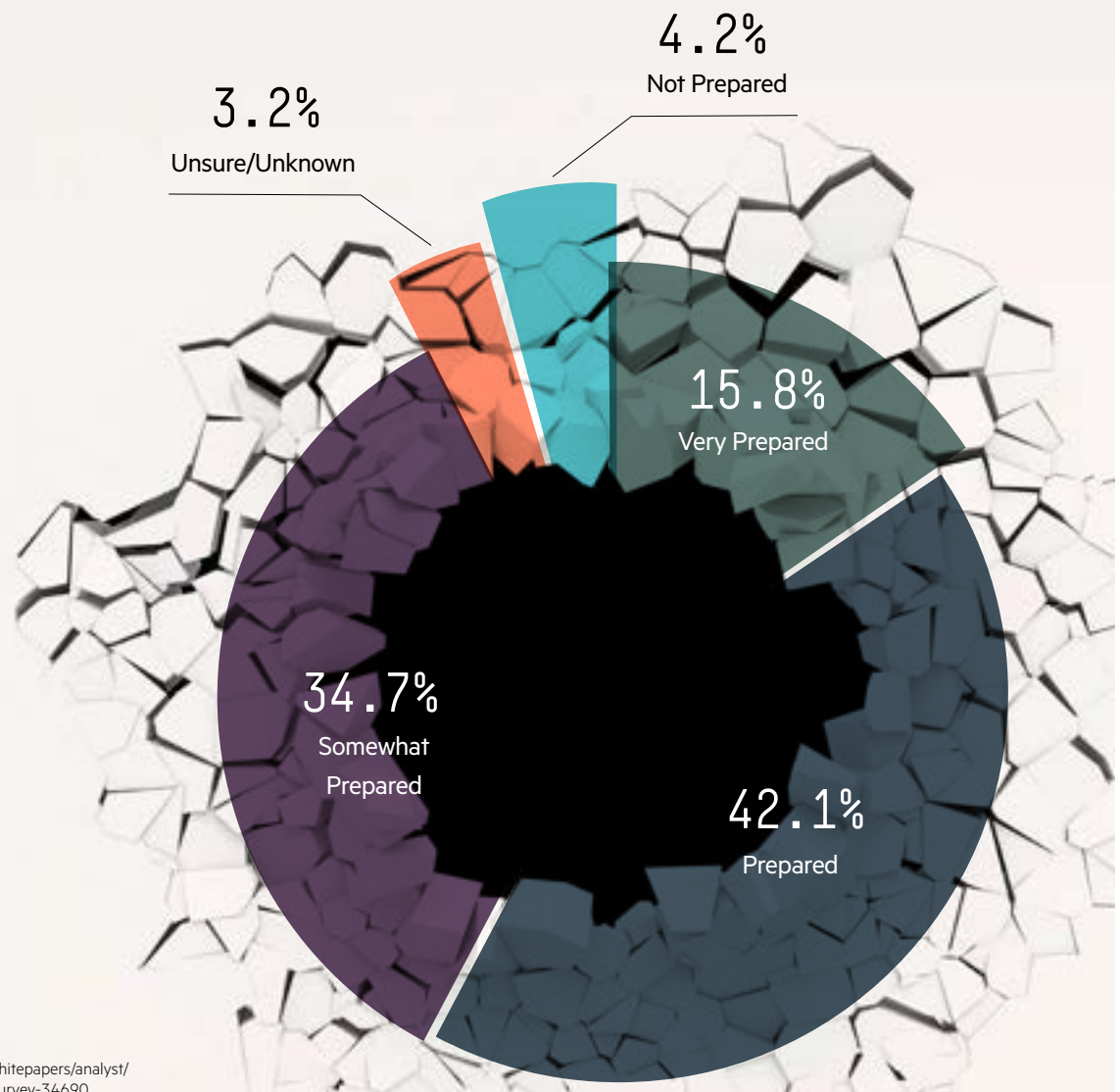
CONSUMERS OVER COMPLIANCE

Regulatory compliance fuels much of the investment in security solutions, with protection against data breaches and risk reduction rounding out the top three expenses. As banks adapt to a customer-centric model, security priorities could shift from compliance to enabling frictionless customer experiences.

1	DEMONSTRATE REGULATORY COMPLIANCE
2	AVOID DATA BREACHES
3	REDUCE RISK
4	IMPROVE RISK POSTURE OVERALL
5	PROTECT INSTITUTIONAL/BRAND REPUTATION
6	SATISFY LEGAL MANDATES
7	AVOID FINANCIAL REPERCUSSIONS DUE TO BREACH
8	REDUCE FRAUD
9	ENABLE ONLINE, MOBILE AND OTHER NEW FORMS OF CUSTOMER SERVICE

PREPARATION IS KEY TO PROTECTION

The financial industry has a reputation for applying patch fixes where security is concerned. As legacy systems continue to age and more ad hoc patches are applied, banks will have to decide whether this traditional approach is worth the risk, as fewer than 20 percent report being very prepared to fend off attacks on their systems and accounts.



Out with the old, in with the new

Banks need to recoup the capital expenditures required for a customer-first digital strategy while still maintaining legacy systems and necessary back ends.

Banks are poised to capitalize on the current wave of digital innovation in financial services. One obstacle is legacy systems that are 20, 30 or even 40 years old.

Many banks are in the process of offloading legacy systems to the cloud — be it private, public or a combination of the two. In fact, [cloud](#) usage for the financial services industry is projected to double by 2017. Hybrid infrastructures that blend public cloud services with in-house capabilities have proven to be an effective working model for many workloads, including customer intelligence, customer relationship management and even [security analysis](#). The Financial Industry Regulatory Authority (FINRA), one of the largest independent securities regulators in the United States, has now moved about 75 percent of its operations to the cloud. It estimates it will save up to \$20 million annually by using Amazon Web Services instead of a physical data-center infrastructure.

The costs saved will be increasingly important as digital offerings continue to scale. The banking IT services market is expected to grow at a 4.9 percent compound annual growth rate (CAGR) through 2019, reaching a spend of \$151.9 billion. Plus, total assets managed by cloud-delivery models are projected to grow at nine percent through 2019, when compared to the five percent growth rate of traditional models.

The value proposition is straightforward: By incrementally closing down components of legacy systems and migrating them to the cloud, banks are simultaneously removing support for outmoded databases, outsourcing the cost of maintaining those systems and freeing employee resources that can be reallocated to push forward digital initiatives. ■



Regulation can ignite revolution

The very guidelines that restrict the financial industry could also inspire innovation.

After the meltdown of 2008 that spurred the Great Recession, regulation of the financial services industry grew exponentially as policymakers sought to prevent another global financial crisis. The Dodd-Frank Wall Street Reform and Consumer Protection Act was the most comprehensive financial regulatory reform since the Great Depression in the early 20th century. FINRA adopted new regulations. Basel III aimed to give the banking industry the ability to absorb systemic shocks.

The pace of these regulations will continue to increase as the future becomes more digital. The number of global regulatory alerts issued by the end of the third quarter

of 2014 was more than 27,000. Basel's capital-restriction rules inhibit banks from spending. The Common Reporting Standard is proving to be a burden on many balance sheets. As a result, giants such as BNP Paribas, Credit Suisse, Deutsche Bank and Barclays are shifting away from investment banking in an attempt to cut costs.

For banks, the problem is compounded because FinTechs are not legally classified as banking institutions, and most are exempt from these requirements. While blockchain is a bright spot that could potentially save costs, it's still years from being fully viable.

But are financial institutions using the high costs of regulation as an excuse to be less innovative?

“I think the banks are fearful, and they’re using regulation as an excuse,” says David Rimmer, HPE director for the financial services industry. “The start-ups have less to lose and are inherently more agile. But if banks go through the effort of building something and they’re on the wrong side of new regulations, they have to fix what they’ve done. That creates a cost.”

Banks and FinTechs also have radically different capital requirements. But this short-term disparity could be leveraged into a long-term strength. According to one industry analyst, there’s an unaddressed need for regulation-focused FinTechs that could help traditional banks shoulder the compliance burden.

However, banks need to be sure FinTechs don’t use forthcoming new regulations to their own advantage: As regulators increasingly turn their attention to FinTechs, driving broader customer protections and addressing security and privacy concerns, FinTech firms will likely earn even higher levels of consumer trust. This may threaten what banks see as their greatest strength. ■



THE HIGH COST OF NONCOMPLIANCE

Since the 2008 financial crisis, banks have been hit with record fines, underscoring the need for a revamped business model.

- Five major banks were hit with \$5.7 billion in fines in 2015 for rigging foreign exchange markets.
- Twenty global banks have paid more than \$235 billion in fines for breaching a variety of regulations, with the two main offenders paying \$80 billion and nearly \$40 billion, respectively.

04

NOW
TO
NEXT

Opportunity Means Risk

Recognizing gaps in protection is the first step to formulating a comprehensive security plan that will thwart data breaches and cyberattacks. At a minimum, patch fixes must yield to from-the-ground-up solutions that are embedded into systems. A more comprehensive approach applies machine learning and data analytics to identify credible potential threats and determine the appropriate action before catastrophic events occur.

To find out more about the topic of security and technology, read the “Security, Privacy and Ethics” section of our [Technology.nxt report](#).

Next:

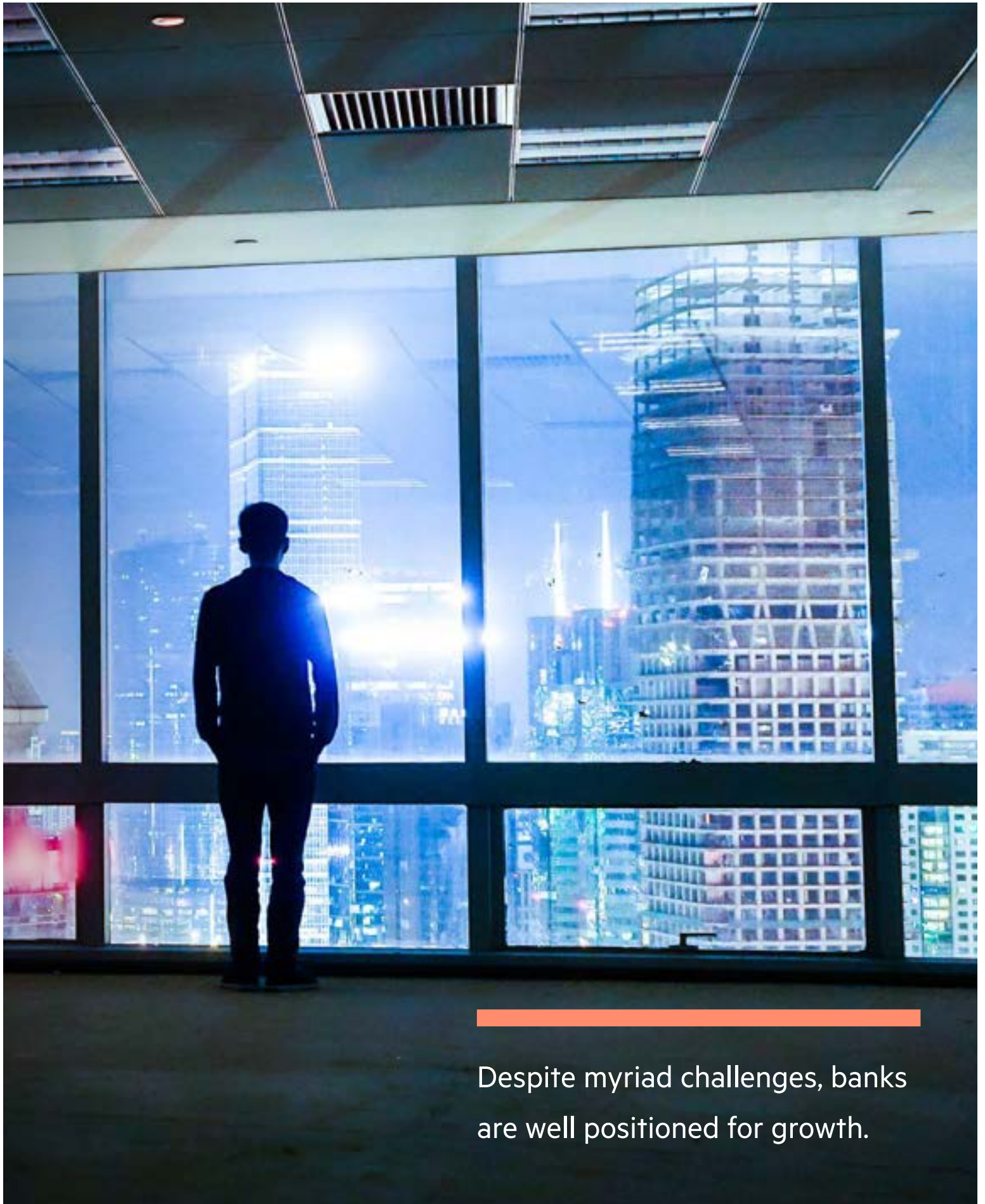
Every new app and touchpoint brings more potential vulnerabilities. Banks must rethink their approach to security and embed protective measures into every component from the onset.

The days of layering on security to apps and underlying infrastructure are gone. A holistic, cognitive approach, including best-in-class data encryption and tokenization, intelligent threat and fraud detection, and compliance management, needs to be part of the plan for security from the ground up.

Cloud usage by the financial services industry is projected to double by 2017. By incrementally closing down components of their legacy systems and migrating them to the private and/or public cloud, banks will remove support for outmoded databases, outsource the cost of maintaining those systems and free up resources that can be reallocated to pursue digital initiatives.



**LEAVE YOUR
LEGACY**



Despite myriad challenges, banks are well positioned for growth.

Trust funds

Banks can survive digitization by continuing to do what they do best — foster relationships built on trust.

Business as usual no longer exists for banks. The convergence of finance and technology has disrupted nearly all aspects of the banking process and has compelled consumers to rethink who should handle their money, and how.

Understanding customers and their needs, along with how best to serve them, is at the core of the disruption that we are seeing in the industry today. Pairing this with the latest technology and capital investment in the FinTech movement is sparking choice and competition like never before in the industry.

We see this as a good thing. Digital disruption is breathing new life into financial institutions. Transformed processes and innovative offerings are creating more personalized customer experiences and more efficient means of delivering them. Banks that undergo this transformation can compete and collaborate with FinTech start-ups and retain their market position. The good news for banks is that they possess the

rich customer information they need to deliver such experiences. By running advanced analytics on robust data sets, they can quickly extract actionable insights about their customers. This approach will enable banks to better serve their clients, be they Millennials applying for car loans or baby boomers entering retirement.

When customer interactions become digitized, banks can build an even more comprehensive profile of each customer. Digitization enables banks to better upsell, cross-sell and repeat-sell, but it also positions banks as a resource throughout the entire customer journey.

This customer-driven approach will require IT to invest in streamlining its core infrastructure to become more stable and efficient; moving apps and workloads to private cloud, public cloud or hybrid environments; considering security at all levels from the infrastructure to the application level; and developing new processes or approaches to fundamentally change how financial business is conducted.

Innovative banks that are able to do this and successfully leverage the likes of blockchain and open APIs could see growth rates that exceed 60 percent in the next five years, as opposed to a market average of 33 percent growth in the same time frame. Additionally, digital transactions and sales have the potential to account for more than 40 percent of an institution's revenue.

As banks begin to realize this potential, they are cashing in. Financial services companies are making significant investments in IT, hiring new talent, upgrading legacy technology and building efficient, secure infrastructures. It is predicted that in the next six years, IT decision-makers in the financial services industry will transition 26 percent of their spend to off-premise private cloud, as well as invest more than other industries in industry-specific applications and predictive analytics.

Transforming a centuries-old institution steeped in tradition will take time. Incremental changes to improve business processes and services, as well as revamp the way data is stored and secured, will help ensure that banks' legacies last. The banks and financial service companies that succeed will be the ones that use technology to transform disruption into opportunity. ■



DIGITAL TRANSFORMATION BENCHMARK: RETAIL BANKING INDUSTRY

HPE surveyed leading enterprises about their path to digital transformation. The results show that when compared to most other industries, financial services is a leader in terms of understanding the importance of digital transformation and what priorities to focus on to ensure it happens.

How does your enterprise compare?

Learn more about where you are in your transformation journey compared to others in the banking industry.

VISIT [HPE.COM/DTI](https://www.hpe.com/dti)

A donut chart with an orange border and a white center, showing 91% of the circle filled with orange. The number '91%' is written in white in the center.

91%

of financial services enterprises are undertaking some form of digital transformation.

A donut chart with an orange border and a white center, showing 32% of the circle filled with orange. The number '32%' is written in white in the center.

32%

of these enterprises are showing the most success. We call these companies “assertive leaders.”

A donut chart with an orange border and a white center, showing 88% of the circle filled with orange. The number '88%' is written in white in the center.

88%

of assertive leaders are undergoing efforts to transform their operations, products and services, and customer experiences.

THE SPECIFIC PRIORITIES THESE LEADERS ARE FOCUSED ON TO SOLVE CHALLENGES AND HELP THEM BEST COMPETE IN THEIR MARKET:

- 1 Deliver net-new digital customer experiences never before seen in the industry.
- 2 Create net-new products or services intended to disrupt the banking industry.
- 3 Streamline business functions.
- 4 Move apps and workloads to private cloud, public cloud or hybrid environments.
- 5 Develop innovative processes or approaches to fundamentally change how business is conducted.
- 6 Reformulate corporate strategy or restructure the organization to introduce a new industry paradigm.
- 7 Gain a better understanding of customers.

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