



While we can't always be certain which trends the new year will bring, we can offer predictions based on our conversations with industry executives and our customers, looking at what companies have accomplished in the past year, and the initiatives they already have in place for the future. In fact, that's exactly how we compiled this list of trends that we believe will take place in the financial services industry in 2017.

At the end of the day, no concept shared is new; chances are you've heard of them before. Instead, the level of importance and the level of innovation are increasing. Each day brings better technology, more use cases, and a clearer picture of what a better customer experience looks like.

Companies that have already embarked on related initiatives are likely leaders in the field. Those who haven't yet put together strategies to attack these specific areas of growth will need to evaluate these tactics to understand what's at stake. The industry is highly competitive and it's one in which customers aren't easy (or cheap) to come by.

It's worth noting that all the trends listed share a focus on three common themes: customer experience, trust, and efficiency. In one way or another, each prediction touches on all three.

Customer experience is about making it easy and enjoyable to do business with you. Trust is about a customer's ability to feel comfortable doing business with you. And efficiency is about getting rid of the road blocks that have the potential

to challenge your ability to provide great service and that instead encourage customers to look for another company with which to do business. While these are customer-facing benefits, you as a company also realize tremendous gains, which can be boiled down to reduced operating costs and more customers.

How companies approach initiatives that relate to these trends varies. However, it's safe to say that ideas are often generated and conceptualized in an innovation center or within teams that are dedicated to helping drive a seamless, integrated customer experience that enables customers to do business where, when, and how they want. Ideas can also be derived from contests, customers themselves, or even partnerships with other companies, such as those in the FinTech space that have solutions to meet the unique needs of your customers. Once ideas are generated, it's time to truly begin understanding their viability. Hackathon-type initiatives or proof-of-concepts are examples of ways in which some companies start turning ideas into reality.

Whether it's idea generation or prototyping, collaboration is critical to success. Working with other teams and divisions in your company, as well as externally, can help you improve the end product or service. After all, operating in silos limits your ability to develop thriving programs and great products. The more collaboration you take part in early on, the better your chance of achieving greater adoption of your products and services.

With that in mind, here are our top 15 trends in financial services in 2017.

### #1 FINANCIAL INSTITUTIONS WILL CONTINUE TO INCREASE THEIR **BUDGETS TO FIGHT CYBERCRIME**

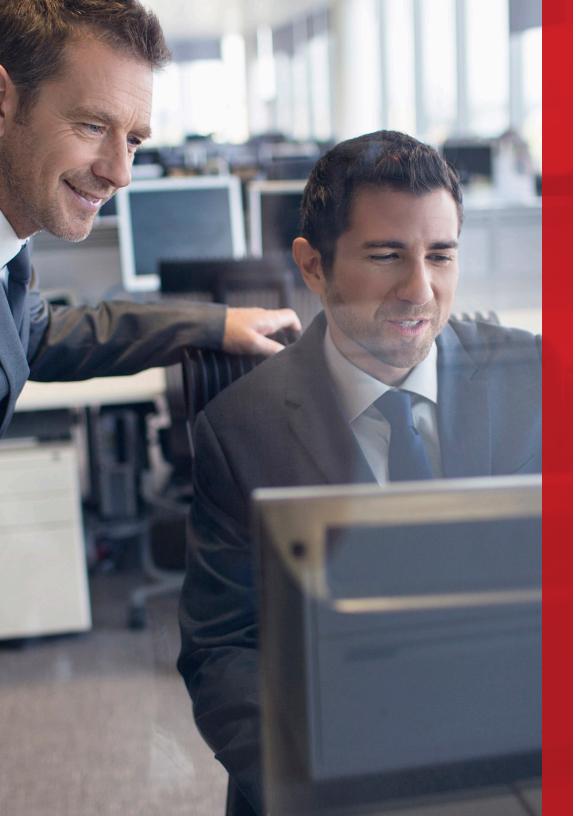
In a survey conducted by the Depository Trust & Clearing Corporation (DTCC), the premier post-trade market infrastructure for the global financial services industry, 56% of respondents rated cyber risk a topfive concern, while 22% indicated it was their biggest concern.

A recent quarterly Cybersecurity Market Report published by Cybersecurity Ventures projects that \$1 trillion will be spent on cybersecurity between 2017 and 2021. According to Steve Morgan, founder and editor-in-chief of Cybersecurity Ventures, the increase in cybercrime, such as ransomware and malware, and the large number of digital devices being rapidly deployed by organizations and consumers, are making it difficult for IT analysts to accurately project spending.

"Many corporations are hesitant to announce breaches they've suffered — and the amounts of their increased security budgets for fears of reputational damage and of antagonizing cybercriminals," Morgan said. "By 2020, we expect IT analysts covering cybersecurity will be predicting five-year spending forecasts (to 2025) at well over \$1 trillion."

One industry in particular that hasn't shied away from sharing its affinity for cybersecurity is financial services. In recent years, JPMorgan indicated it planned to increase its annual budget to battle cybersecurity from \$250 million to \$500 million, in order to enhance its defense capabilities.





Bank of America CEO Brian Moynihan also said that the company is not capping itself when it comes to fighting cybercrime. It's "the only place in the company that doesn't have a budget constraint...you've got to be willing to do what it takes."

In a recent newsletter, the Financial Services Information Sharing and Analysis Center (FS-ISAC) announced the creation of the Financial Systemic Analysis and Resilience Center (FSARC), whose mission is "to proactively identify, analyze, assess and coordinate activities to mitigate systemic risk to the U.S. financial system from current and emerging cyber security threats through focused operations and enhanced collaboration between participating firms, industry partners, and the U.S. Government, including the Department of Treasury, the Department of Homeland Security and the Federal Bureau of Investigation."

FSARC's founding members include Bank of America, BNY Mellon, Citigroup, Goldman Sachs, JPMorgan Chase, Morgan Stanley, State Street, and Wells Fargo, as well as various government agencies.

The financial services industry as a whole will continue to increase its budget to help prevent and fight cybercrime.



# #2 FINANCIAL INSTITUTIONS WILL DEVELOP MOBILE PAYMENT TECHNOLOGY THAT OFFERS CUSTOMERS MORE VALUE

A recent report published by Ipsos MORI, a market research company, and VocaLink, a global payments partner to financial institutions and governments, indicates that European millennials are struggling to adopt mobile payment technology.

While more than half of the approximately 4,000 millennials from Germany, Italy, the U.K., and the Netherlands who took part in the study exhibit deep interest and a strong desire to use mobile devices for making payments, the lack of features and benefits that today's technology offers is preventing them from changing their habits. In addition, poor awareness and understanding of the technology currently available contributes to the slow adoption.

Particularly interesting is the fact that the study found that millennials in the U.K. and the Netherlands would be more inclined to use new mobile payment services if such services were offered by their banks, followed by PayPal. In Germany and Italy, more people, by a small margin, would prefer to use PayPal, as opposed to their banks, for mobile payments.

The mobile payments picture in the U.S. isn't much different. While more and more Americans are using their mobile wallets and brand-specific apps to transact, we're far from mass adoption. Security, a shortage of stores that accept mobile payments, and a perceived lack of value are all reasons why consumers aren't flocking to pay or send money with their phones.

While research confirms that there's a long road ahead for mobile payment technology, data suggests that there is, in fact, an appetite for more innovative mobile services and that financial services companies should continue investing in the development of mobile payment solutions in order to meet customer expectations.

To that end, in 2017 we will see much better mobile payment technology (e.g., Zelle) that gets the attention of a wide swath of the population.



 $\pi$   $\cup$  financial institutions survive regulatory fation

Tim Lind, global head of financial regulatory solutions at Thomson Reuters, sat down with Finextra at Sibos, the annual conference organized by SWIFT, to discuss the challenges financial services companies face when it comes to regulatory change.

To put the regulatory climate into better perspective, Mr. Lind pointed out a few facts:

- Over the last four years, there has been a four-fold increase in the number of daily alerts from the global regulatory community.
- Seventy percent of compliance officers believe the pace of regulatory change will increase.

These figures, which can largely can be attributed to the new data requirements that regulators are seeking (e.g., historical data, data to prove liquidity and risk), in addition to the lack of dedicated compliance resources and the increasing personal liability that compliance officers carry, show just how much "regulatory fatigue" the industry is experiencing.

Mr. Lind believes that standards and collaboration initiatives, such as the regulatory sandboxes that regulators are developing, can help companies survive and thrive amid the litany of changes. Better standards and more collaboration with regulatory authorities will help financial services companies cope with everchanging regulations.

# #4 FINANCIAL INSTITUTIONS IN THE U.S. WILL CLOSELY MONITOR HOW COMPANIES IN EUROPE REACT TO OPEN BANKING AND PSD2

In an effort to create more competition in the financial services industry, give consumers more control over their data, and enhance consumer protection, new regulations, such as the revised Directive on Payment Services (PSD2), have been adopted in Europe.

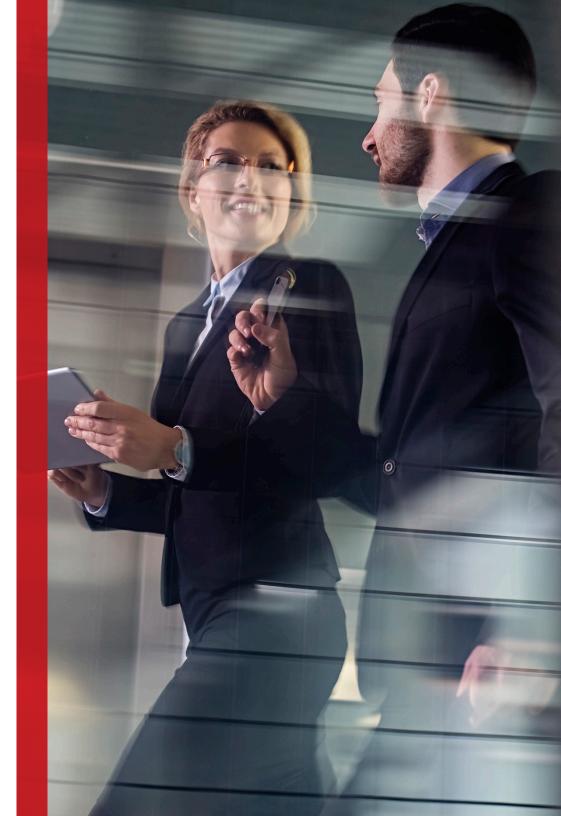
Some companies, such as BBVA, were early adopters of technology (e.g., APIs) that opened access to its platform and services (e.g., a customer's bank account information), enabling third parties to create new and disruptive solutions that revolve around payment initiation services and account information services.

In recent months, more firms have implemented new solutions stemming from PSD2. One example of a company already using the "open banking" concept to its advantage is ING. The company announced that it had launched Yolt, a free mobile app that allows UK consumers to manage their money across various banking institutions.

According to the app's website, Yolt aggregates a user's bank and credit card accounts and provides a dashboard that:

- Instantly shows you how much you have left to spend until next month's payday
- Predicts your balance based on your monthly salary, spending, and predicted direct debits
- Combines the transactions from your U.K. bank and credit card accounts into one view
- Offers snackable and actionable insights about your money

"We built the aggregator in the way that people think about money," said Ignacio Julia Vilar, chief innovation officer, ING.





# #5 FINANCIAL INSTITUTIONS WILL LEVERAGE MORE COMPLEX ARTIFICIAL INTELLIGENCE AND ROBOTIC PROCESS AUTOMATION CAPABILITIES

Money20/20, the world's largest conference geared towards the financial services industry, brought big announcements from heavy hitters at its 2016 event.

Bank of America's head of digital banking, Michelle Moore, introduced Erica (a play on the company's name), a digital assistant driven by artificial intelligence, predictive analytics, and cognitive messaging. The technology, which can also be referred to as a chatbot, will enable Bank of America's 21 million mobile app users to check and pay off their balances, save money based on personalized recommendations, and carry out other tasks. Erica is scheduled to be released to the public in 2017.

Other companies, like Thinking Capital, launched Lucy, a chatbot for Facebook Messenger which allows users to chat with customer support and see if they are eligible for a business loan.

RBS installed advanced "human" artificial intelligence to help staff answer customer queries.

Liberty Mutual announced the first Amazon Alexa skill focused on insurance, granting users instant, voice-controlled access to getting a quote through Liberty Mutual or directing them to a Safeco-appointed independent agent.

While we've started to see financial services creating smarter apps, we will see additional financial services companies focus on developing solutions that leverage more complex artificial intelligence and robotic process automation capabilities.





Attendees at Money20/20 were given a sneak peek at Bank of America's future ATM, which was referred to as a "personal financial concierge." The new ATM will tightly connect with mobile phones in order to enable customers to pre-stage transactions. From their phones, users can begin the process of withdrawing and depositing funds, then complete the transaction by holding a phone over an ATM's NFC reader. With the bank's new ATM, customers will also be able to perform additional services, such as schedule appointments with specialists in the bank's financial centers.

ATMs remain critical in banking and provide an opportunity for firms to improve the customer experience and reduce costs. We will see more companies investing in revitalizing their ATMs by providing a more personalized and intuitive experience based on customer behavior and preferences.





### #7 OMNI-CHANNEL WILL REMAIN CRITICAL TO MANY FINANCIAL INSTITUTIONS

During WSJ's CFO Network conference, Bank of America chairman and CEO Brian Moynihan was asked the following: "If you were building a bank today from scratch, what would be the three attributes of this new bank?"

One of the key attributes of today's bank, Moynihan noted, was the need to focus on omni-channel

"You have to be able to meet every customer, everywhere they want, and no one channel wins," Moynihan said. Bank of America hosts 130 million consumer interactions every week, and while 123 million transactions don't take place in a branch, 7 million still do. He went on to say that, "Despite people saying 'I never go into a branch,' they all do." For example, 40% of Merrill Lynch customers go into a branch once a year. Bottom line, Bank of America's 4,600 brick-and-mortar branches are critical to customers.

While some financial services companies will be available only via mobile or the internet, most will continue to have a presence across a variety of channels. Firms will continue to improve the overall customer experience and strive to become more efficient, regardless of the channel.



# #8 EDUCATING CONSUMERS ABOUT FINANCES IS ESSENTIAL AND PRESENTS A GREAT OPPORTUNITY FOR FINANCIAL INSTITUTIONS

Results from the National Financial Capability Study (NFCS) were released in July, 2016 by the FINRA Investor Education Foundation (FINRA Foundation). The findings, which include data from more than 27,000 U.S. adults, reiterate the importance of providing people with financial education to help them better manage their money.

According to an infographic that depicts the study's results, "Absolute levels of financial literacy are low and financial literacy is slightly down since 2009." The term "absolute" refers to one's ability to answer four or five basic questions correctly on a five-question financial literacy quiz.

#### Significant findings:

- More than one in five Americans (21%) have unpaid medical debt.
- Women are more likely than men to put off medical services, such as seeing a doctor, filling prescriptions, or undergoing a medical procedure, due to cost.

- Nearly half (45%) of respondents with a high school education or less could not come up with \$2,000 in 30 days in the event of an emergency, whereas most respondents with a college degree (82%) could.
- Twenty-nine percent of 18-to-34-year-olds with a mortgage have been late with a mortgage payment, compared to just 7% in the 55+ age group.
- Hispanics and African-Americans are more likely to use high-cost forms of borrowing, like pawn shops and payday loans, compared to Caucasians 39% for African-Americans, 34% for Hispanics, and 21% for Caucasians.

Results from a Wells Fargo study also indicate that Americans aren't saving enough for retirement and are investing too conservatively.

There's no question that financial services organizations are doing a better job of educating consumers than ever before; however, more needs to be done. Arming consumers and investors with literature and other resources can help them become savvier with their money. For existing customers, more financial education can result in stronger relationships. As far as non-customers go, education can serve as a gateway to new business. This is why companies will strive to educate the public about managing their finances and growing their wealth, whether it's through an app, a website, or another channel.



### #9 DIGITAL TRANSFORMATION INITIATIVES WILL STAY TOP **OF MIND**

Lloyds Banking Group, a company with 30 million customers under several brands including Lloyds Bank, Bank of Scotland, and Halifax, has put forth additional cost-saving measures to help the company weather poor economic conditions and better meet customer expectations. On top of the 9,000 jobs and 200 retail branches the bank outlined to eliminate in 2014, Lloyds decided it was necessary to trim another 3,000 jobs and 200 branches.

While most banks continue operating through an omni-channel strategy, it's no secret that the number of consumers who walk into a brick and mortar establishment is dwindling thanks to the convenience of digital channels. According to an article in Financial Times, Lloyds indicated that bank transactions went down 15% year over year.

Cost-saving initiatives and the move towards mobile remain at the top of the list of priorities for financial services institutions.

Similarly, ING issued an update on its strategy, which focuses on the ongoing transformation of the large global financial institution. Between 2016 and 2021, the company intends to spend close to \$900 million to enhance the customer experience, boost innovation, and become more efficient, all while reducing costs for years to come.



### #10 ROBO-ADVISORS WILL GAIN MORE TRACTION WITH INVESTORS

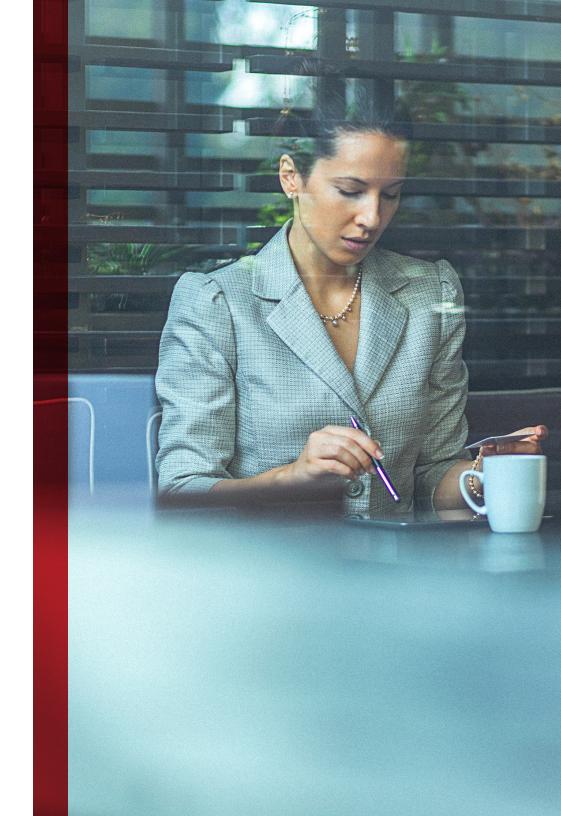
The benefits of robo-advisors are clear: trustworthy and affordable financial advice for everyone, regardless of net worth. Although some may debate what role robo-advising will play in wealth management, it's hard to imagine a world without it.

Ever since the evolution of the internet and the widespread adoption of digital devices, customer expectations have changed and continue to do so at a rapid pace. Today, convenience is a top priority among customers. Many people either don't want or are unable to spend time visiting a physical location or to talk on the phone to manage their daily lives – including their wealth. Instead, they prefer to manage everything from the convenience of their homes or offices.

For financial institutions to remain relevant in wealth management, they must adapt to the new digital times by transforming the way they operate. This digital transformation is taking place now. Wealth management firms are partnering with, acquiring, and even building their own technology solutions to meet the increasing demand for a better customer experience that robo-advisors offer.

Ally Financial's acquisition of TradeKing, Blackrock's purchase of FutureAdvisor, and U.S. Bank's partnership with FutureAdvisor show just how critical robo-advising has become when it comes to wealth management. Other financial institutions, such as Vanguard, Bank of America, and E\*TRADE, have also poured a tremendous amount of money into developing their own robo-advising solutions.

While the vast majority of assets are still with traditional financial institutions, this is changing. More and more, individuals are leveraging robo-advisors due to their convenience, ease of use, affordability, and transparency. As people learn about their options with robo-advising, we will likely see that portion of the market grow in 2017.



#### #11 FINANCIAL INSTITUTIONS WILL INCREASINGLY CHOOSE THE CLOUD FOR DEPLOYING **APPLICATIONS**

Gartner recently put out a press release that is quite memorable. It begins with: "By 2020, a corporate 'no-cloud' policy will be as rare as a 'no-internet' policy is today."

The chances are low that many companies maintain such successhindering policies, but there are plenty of companies out there that are slow adopters, especially in heavily regulated industries.

Gartner supports the belief that companies will continue deploying software in a mixed fashion, but will increasingly choose the cloud as the first option. A hybrid use of the cloud, which leverages the public cloud, private cloud, and/or dedicated servers, will be most common in the coming years.

The research and advisory company also made a few other bold predictions about the cloud:

- By 2019, more than 30% of the 100 largest vendors' new software investments will have shifted from cloud-first to cloud-only.
- By 2020, more compute power will have been sold by Infrastucture-as-a-Service (laaS) and Platform-as-a-Service (PaaS) cloud providers than that sold and deployed into enterprise data centers.



As financial institutions continue their efforts to become more efficient at a time when regulatory demands and low interest rates dominate the news cycle, the cloud remains an area that provides real hope.

Headlines, such as "J.P. Morgan Creates Executive Role to Lead Cloud Services," stress what's important to a financial services company and reinforce that the focus area is real. JPMorgan's hiring of Harish Grama as the chief information officer for cloud services testifies to this

According to JPMorgan's chief information officer, Dana Deasy, "the successful adoption of cloud technology is essential." The company's "evolving hybrid cloud model will help its technologists grow innovation, standardization and productivity in a secure and stable environment, plus have more efficiencies through shared platforms."

JPMorgan is no stranger to the cloud. It currently benefits from the use of an internal private cloud; however, an ongoing initiative is considering leveraging a public cloud provider, such as Amazon Web Services (AWS) or Google. Moving forward, the bank has said it's even interested in developing its own original applications in the cloud.

Expect to see cloud become even more ubiquitous in 2017.





Financial services executives are likely tossing and turning at night, thinking about the shift to digital, stringent regulations. As the *Financial Times* reported: "Bank bosses perhaps are worried most about not being publically humiliated by a failing grade."

We at Perficient know this first-hand, as we regularly advise financial institutions on how to better measure and manage risk as well as allocate capital. Our program oversight and subject matter expertise helps banks effectively anticipate, evaluate, and mitigate the risks they face.

Stress tests, namely Comprehensive Capital Analysis and Review (CCAR) and Dodd-Frank Act Stress Testing (DFAST), which are intended to assess whether

the largest bank holding companies operating in the U.S., have sufficient capital to continue operations throughout times of economic and financial stress, will continue to be an area in which companies will need to invest throughout 2017.

At the same time, firms will closely watch industry regulations to see if anything changes as a new president takes office. Although we are not sure what Donald Trump as President means to financial services companies, many headlines suggest that he will, in fact, be very good to them. In particular, pundits believe it's possible that a significant amount of deregulation could result from his presidency. However, only time will tell.

#### #13 FINANCIAL INSTITUTIONS WILL CONTINUE TO SPEND MONEY ON DOL FIDUCIARY RULE **COMPLIANCE INITIATIVES**

The new U.S. Department of Labor (DOL) fiduciary rule is quickly revealing itself to be the most impactful regulation in the financial services industry in a long time. The investments that companies must make to comply with the rule, which focuses on conflict of interest, are making the impact painfully clear.

InvestmentNews cited several examples of what companies have publically shared about their fiduciary rule compliance investments.

Primerica, a leading distributor of financial products, believes it will spend between four and five million dollars every year to keep compliant with the rule. That's in addition to the eight million dollars it expects to spend between now and the end of 2017.

"We expect to incur substantial implementation costs for consulting, legal guidance, sales force training and technology platforms over the course of the implementation period," said Alison Rand, Primerica's chief financial officer.

Ameriprise Financial, a financial services firm with a network of 10,000 financial advisors and extensive wealth management and asset management capabilities, spent \$11 million on DOL-related compliance activities during the first half of 2016.





Principal Financial Group, a company with retirement, insurance, and asset management solutions, not to mention \$572.2 billion in assets under management, commented that it will likely spend between \$18 million and \$24 million over a two-year period, and then an additional \$5 million to \$10 million once the rule is fully in effect.

Cambridge Investment Research, an independent, privately owned broker-dealer with more than 2,000 independent registered representatives and over \$40 billion in assets under management, believes it will spend \$10 million by April 2017, when companies are expected to comply with portions of the rule.

The money is being spent in many areas of the business, but Primerica chief executive Glenn Williams provided one example: a "detailed matrix of the various points in our clients' investment decision process.

"This matrix will be used to develop operational processes and sales force training materials as well as point-of-sale technology added to the front end of our investment execution process to capture a client's decision points during the sales process and support necessary disclosures," he continued.

While most firms are in the process of becoming compliant with the DOL Fiduciary Rule, almost all companies will need to spend money to remain compliant, from process reengineering to employee training.

# #14 FINANCIAL INSTITUTIONS WILL INCORPORATE MORE GAMIFICATION INTO THEIR ONLINE AND MOBILE SOLUTIONS

Financial services organizations such as banks, insurance organizations, and credit card issuers, are creating mobile applications that are not just focused on the products or services they're selling. Instead, they're using mobile as a way to get in front of customers and non-customers alike. At the end of the day, their belief, and rightly so, is that everyone is a potential customer...someday.

In an *American Banker* article, Oliwia Berdak, senior analyst at Forrester, said, "Maybe, if you can create a more frequent, deeper engagement with [a] noncustomer, then it might be a more cost-effective way of marketing." The idea is to generate new customers over time. A company's mainstay mobile application isn't going to do that. That's simply a supportive offering for existing customers.

In addition to Capital One's CreditWise and Ally Financial's Splurge Alert, which are mentioned in *American Banker*, there are many more examples of mobile applications, from the likes of Citibank, State Farm Insurance, T. Rowe Price, Visa,

and Zurich Insurance Group, that have been developed over the years to draw more attention to their brands

While some companies will develop mobile applications for branding purposes in 2017, many financial services firms will seek to specifically deploy a variety of gamification techniques that focus on educating users and encouraging them to save money and invest.

Barclays' Financial Wings, an online personal finance hub designed to give people the knowledge and confidence to take control of their money and build the skills required to bolster their financial health, is a good example of what we can expect. Barclaycard Ring, which gives cardmembers the opportunity to discuss financial strategies, track their financial health, and vote on product enhancements, is another example of a financial institution leveraging gamification features to build stronger relationships with customers as well as to educate them about better managing their finances.

The financial services industry will continue using gamification techniques to win over existing customers, cultivate new ones, and become more efficient in its business operations.



### #15 BLOCKCHAIN AND CRYPTOCURRENCY WILL CONTINUE TO EVOLVE

At last year's Milken Institute Global Conference, an annual event that attracts some of the world's most extraordinary people to explore solutions to today's most pressing challenges, a group of experts gathered for a discussion on the future of blockchain. Brian Forde, who is now a senior lecturer at the MIT Sloan School of Management, opened up the session with an overview of the new technology.

To explain blockchain in layman's terms, Mr. Forde provided several examples as a comparison. He said that when you send an email to someone, you don't ask what phone they're using or what email provider they have. Instead, the only information you need from that person is their email address. And, once you send that person an email, they receive it almost instantly. It's also free.

However, if you want to send someone \$20, you would likely play a game of 20 questions. You might ask them if they are on PayPal or Venmo. You may ask for their first and last names, bank name, routing number, or account number. Once you send them money, it could take several days for them to receive it. Plus, there could be a fee associated with it.





With blockchain, and in particular cryptocurrency (e.g., Bitcoin), which leverages blockchain, you can send money back and forth seamlessly. It doesn't matter which application you use. Since blockchain is open and interoperable, the amount of friction is reduced and the number of transactions increases exponentially. A decentralized, public ledger that a corporation doesn't own is simply very powerful.

Although the scalability of and regulations for blockchain aren't well understood, the speed and cost savings it can create are tremendous. An IBM report published in August, 2016 indicates that 15% of the 200 global banks surveyed are expected to implement blockchain technology by the end of 2017. Another report mentions that 90% of the major banks in the U.S., Canada, and Europe are seriously exploring blockchain for payments.

Whether it's for payments, smart contracts, securities clearing and settlement, asset management, insurance, or compliance, in 2017 we'll begin to see more comprehensive and concrete examples of how blockchain is and can be used in financial services.





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