WILLIAM MILLS AGENCY

2017 BANKERS AS BUYERS

A collection of research, observations and articles regarding technology solutions and services that U.S. bankers will buy in 2017 and the changing financial industry landscape.

Dear Readers,

If you believe change is good, well then, 2017 should be an exceptional year. As for the bright side: investment in financial technology and fintech companies remains strong; financial institutions continue to spend more year-over-year on IT; rising interest rates tend to help raise profits (at traditional financial institutions); and the inertia behind regulation has the potential to slow with this Congress.

Innovation in all things having to do with money, is helping to improve both front and back office operations, remodeling the customer experience (CX) and generally making things faster (such as payments).

In the early 2000s, routing people to the lowest-cost channels (Internet, IVR, etc.) was a priority, until we eventually realized it was harder to sell/cross-sell (ethically) those customers we no longer saw at the branch. So while we will continue to empower customers and drive technology and information into their hands, I believe that technology that enables employees to better serve customers is equally important, if not more so.

If there is a darker side, it is that decisions by established financial providers about IT made 5, 10 or even 15 years ago impact many decisions today. Contracts, system customizations, amortized technology and existing integrations can be roadblocks to rolling out new capabilities. I believe, however, that the key to any meaningful transformation starts by having the right people and business partners in place.

Bankers as Buyers™ straddles between what is possible and what is practical. We have interviewed a number of respected professionals in banking, payments and fintech about what they think is important, right now. This report is greatly enhanced by the contributions of:

ACH Alert – Deborah Peace
Arctura Technologies, Inc. – Mike Kelly
Aite Group
Baker Hill – Naseer Nassim
CardFree – Jon Squire
CBW Bank/Yantra Financial Technologies – Suresh Ramamurthi
Celent – Bob Meara
Cornerstone Advisors – Ron Shevlin

Crone Consulting LLC – Richard Crone and Heidi Liebenguth
D3 Banking – Jeffrey Hale
DefenseStorm – Sean Feeney
Econiq – Jim Callan
FI Navigator – Steve Cotton
GDS Advisors, LLC – Ginger Schmeltzer
Infusion – Tim Keith
Intuvo – Jeff Shood
Jack Henry & Assoc. – Mark Forbis, Susan Griffin
Futurion – James Van Dyke
Kasasa/author of Bankruption – John Waupsh
Malauzai Software, Inc. – Robb Gaynor
NTT Data – Sam Maule
Paragon – Steve Gilde
Safe Systems
Sawyers & Jacobs LLC – Jimmy Sawyers
Strategic Resource Management – Brad Downs
The Financial Brand
TTV Capital – Sean Banks
U.S. Bank – Bob Erickson, Dominic Venturo

I hope you and your company have an outstanding year.

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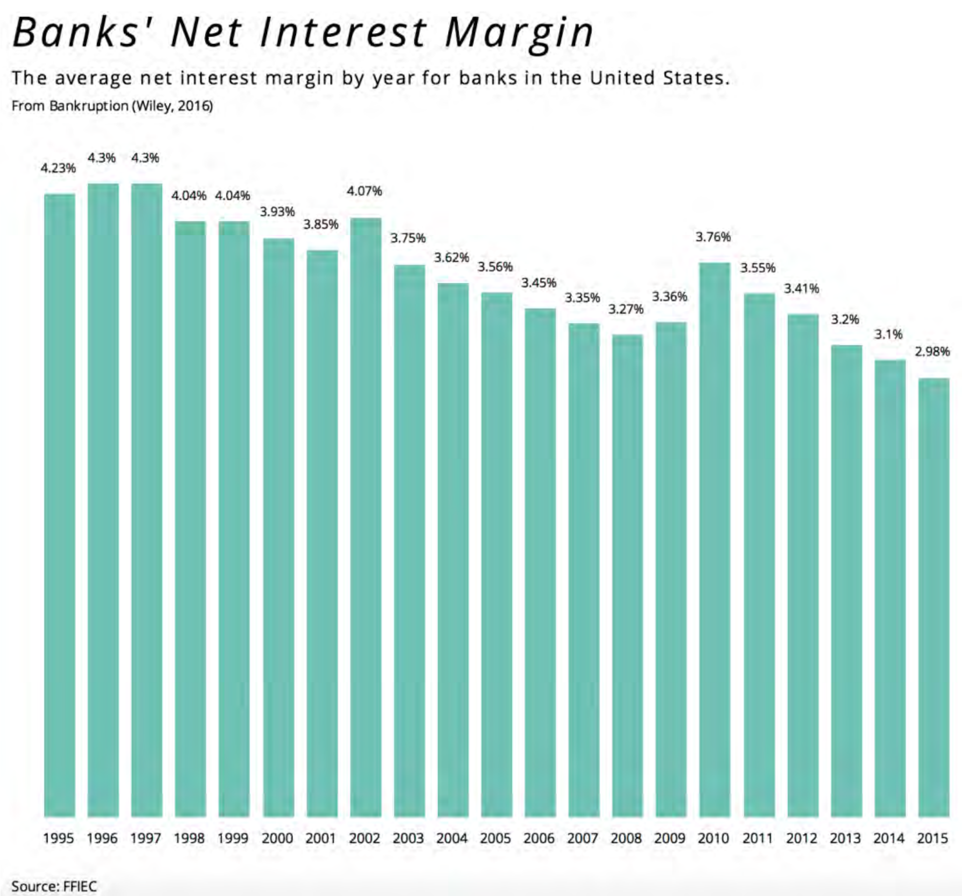
I. Introduction

Bankers will continue to feel the pressure in 2017 from non-traditional, fintech competitors; a move to a rising interest rate environment; regulation that may loosen a little; and the need to embrace technology to compete effectively.

As the high tech need goes higher, some FIs are implementing new strategies for addressing their needs. In addition to working with their mission-critical technology providers and developing applications in-house, banks are partnering with and or buying fintech companies; or participating in labs/incubators. A central theme is the development of products and services that attract, engage and retain customers. Smaller financial institutions are looking for partnerships for various aspects of regtech in order to keep up with the evolving regulatory, compliance and security challenges.

The rising interest rate environment should enable banks to earn more in net interest margin in 2017.



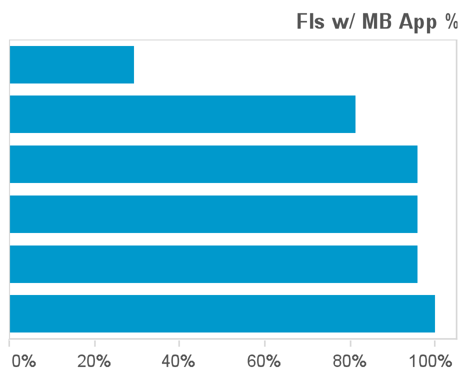
However, generating fee income is still a challenge. So enterprising financial institutions are fine-tuning their analytic capabilities in order to deliver better targeted products and services to customers who are predisposed to purchase them.

The ability to leverage analytics depends on the ability to securely capture customer information, including financial transactions, purchase history and social media insights from a variety of channels; and doing so with the necessary permissions.

According to Celent and FI Navigator, U.S. mobile banking still has room to grow – only 57 percent of all institutions have an app, with financial institutions under $100 million the laggards. Nearly nine in 10 (85.7 percent) of those with more than $100 million in assets have a mobile banking app.

Table 1: Current State: Mobile Adoption — All Financial Institutions

FI Asset Groups	FIs w/ MB App	FIs w/ MB App %	FIs w/ MB App Age
< $100M	1,801	29.3%	2.45
$100M - $500M	3,342	81.2%	3.12
$500M - $1B	847	95.9%	3.79
$1B - $10B	819	96.0%	4.14
$10B - $100B	70	95.9%	4.24
> $100B	20	100.0%	6.06
Grand Total	6,899	57.1%	3.17



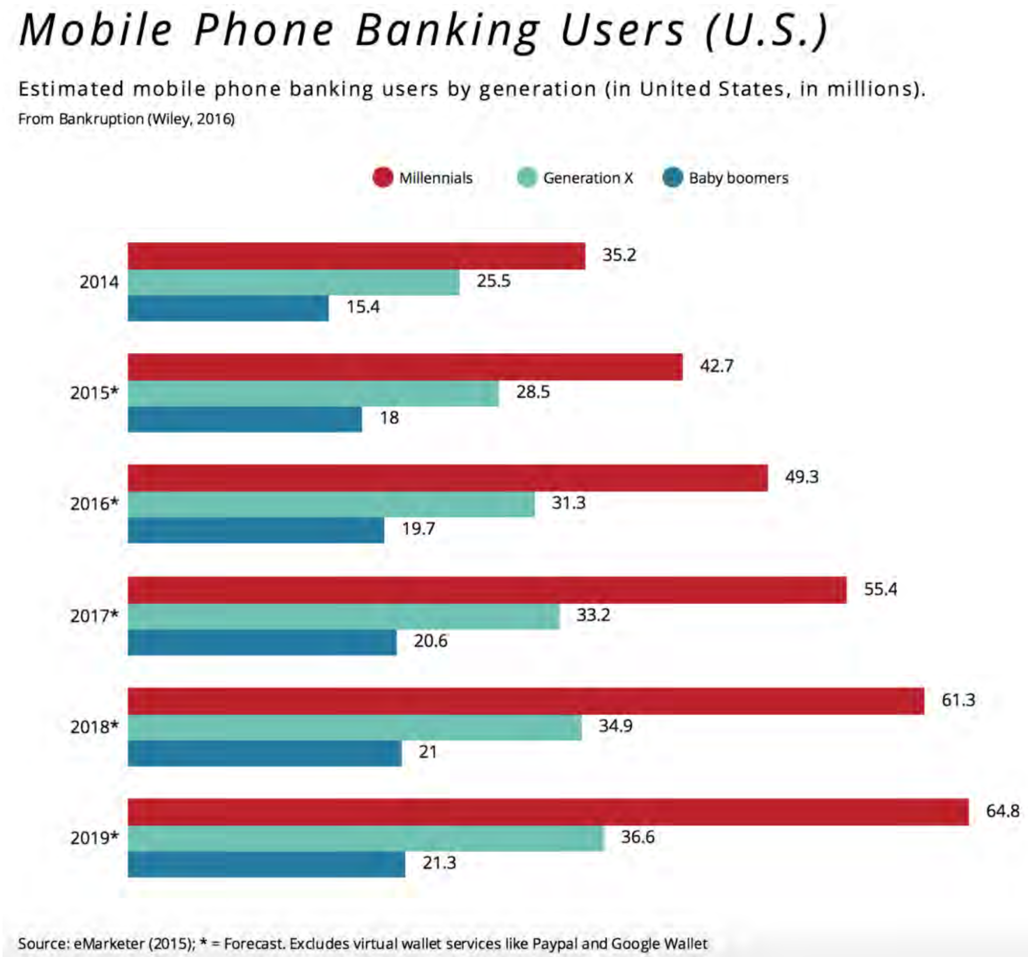
Source: FI Navigator Dataset; September 30, 2016; Celent analysis

The largest financial institutions, those with more than $100 billion in assets, typically have the most robust apps and often have half a dozen or more apps, depending on the audience and function (for example retail checking, business, credit card, wealth management and small business).

“Merely providing a mobile banking application is not enough. The definition of what constitutes mobile banking is changing rapidly with continual additions of functionality through new features,” said **Steve Cotton**, CEO & founder of FI Navigator. “There’s a strong correlation between the relative sophistication of an institution’s feature set and its mobile performance – as measured by enrollment or satisfaction.”

“Banking competition is so different and so much more advanced than the traditional models that banks were used to,” said **John Waupsh**, chief innovation officer for Kasasa and author of *Bankruption: How Community Banking Can Survive Fintech*. “So the question for banks is: ‘How do I hold on to my current customers and grow?’”

To compete in today’s environment, banks have to do things differently than they have for the last 40 years, according to Waupsh. That means changing as the consumer has changed. The consumer no longer responds to old marketing methods. Now they respond to social media and similar new media outreach.



"Facebook is how a consumer will buy a mortgage from you," said Waupsh. So banks need to use Facebook, mobile, their websites and other digital media to reach customers and prospects. Banks need more data-driven marketing, not billboards."

The answer lies in data, Waupsh says. "The platforms the winning financial institutions are investing in are technologies that take existing information; clean it and apply additional data sources in order to create more interesting correlations and actions needed for effective predictive modeling."

Banks will be refocusing on analytics to attempt to sharpen their appeal with targeted messaging to customers, with analytics driving the marketing frequency, delivery channel and message.

But with data analytics and other technologies, banks shouldn't attempt to fight the battle themselves – they don't have the expertise in-house and need to concentrate on the business of banking, Waupsh says. "Banks need to partner with service providers that will enable them to scale in ways that they couldn't 15 to 20 years ago. Technology allows you to scale your compliance team, schedule your workflow, marketing data and analytics."

However, not all fintech providers are the same, cautions **Sam Maule**, director of digital FSI at NTT Data Consulting. "The shine has come off a bit."

With an improving economy for the past few years and a more stable banking environment expected in the near future, bank purse strings are loosening a little for technology investments, says **Steve Gilde**, global director of product marketing for Paragon. "Banks will continue to focus on mobile and mobility; and on customer experience. A lot of banks are still struggling with customer experience. The legal and regulatory overhead may be loosening a little, but there will still be a burden there."

Changes in government could lead to some relaxation of regulations, though how much the Dodd-Frank Act might be unwound remains to be seen.

Some banks will continue to struggle with integration of modern and legacy technologies, looking to APIs to marry the two to deliver robust mobile functionality to customers.

Gilde also foresees quicker development, analysis and testing of bank technologies.

Bank technology spending in 2017 will be more than just fintech, with sub-classifications of martech, regtech and insurancetech starting to take hold, according to Maule. Data, particularly real-time data, will be the key to engaging customers.

II. Analytics

A. Customer Engagement

Though financial institutions have had customer data for decades, customers themselves likely have only a relatively small amount of their business with any single financial services provider. Add to this the continuing availability of data from outside sources and the advancing capability and speed of analytics systems, and analytics is becoming more important for banks than ever before.

"Banks need to look at the data and how well they are using it to drive engagement," said Maule.

"Amazon, Google and Apple have shown that they understand their customers," said **Bob Erickson**, chief technology officer at U.S. Bank. "Banks need to be investing in data and analytics. They need to use the data to do a better job of meeting their customers' needs. Banks need to build products and services built on customers' spending behaviors and the activities that they have with their accounts."

The focus on analytics is catching up to the hype that has been there for a few years, adds Erickson, pointing to machine learning enhancing analytic capabilities and competitiveness pushing the urgency for banks to do more with analytics.

Additionally, consumers have seen what Amazon and Google can do with analytics in recommending targeted products and services, so they expect their financial institutions to have the same capabilities, Erickson says. "Banks are realizing that they need to step up their game and use the assets that they have. Customers expect you to know stuff about them."

"Data has its challenges," said Bankruption's Waupsh. "There are new techniques and new methods for the data warehouse. There are different tools and algorithms to find out who people are."

Banks, especially community banks, shouldn't be looking to add data scientists to their staffs, Waupsh cautions. "Banks should lean on firms that have database scientists and data security guys. They understand different data components that the banks don't have the staff for."

Erickson foresees financial institutions using more location-based marketing, with credit card issuers sending targeted offers to customers who have opted in for such messages to help drive purchases at nearby stores.

B. CRM Systems

Expect to see a renewed focus on CRM systems, which have been largely ignored over the last several years.

"There is a recognition that they have weak [CRM] capabilities," said **Ron Shevlin**, director of research at Cornerstone Advisors. "They have to do a better job using data analytics. They need to be sophisticated about their marketing."

Shevlin adds that while banks discuss knowing their customers, the reality is that they don't. Most customers have only one or two relationships with a specific financial institution. Banks can increase the number of relationships if they have more customer data from which to craft compelling offers. While a bank might have checking, savings and payment card information, different vendors likely handle the processing, so there's no data integration. Additionally, banks with these transaction accounts rarely have insight into a customer's investments, which may be with another financial institution, brokerage house or insurance company.

So Shevlin and other experts expect to see more mid-sized and smaller banks start offering personal financial management (PFM) tools, which enable customers to have account information pulled from other financial services firms, providing customers and banks offering the PFMs more insight into complete financial pictures. While some of the nation's largest banks have had PFM offerings for several years, the mid-size and smaller banks have largely ignored these services, according to Shevlin, adding that the newer PFM offerings are available via mobile. Integrating the PFM information into a CRM system will enable banks to make more targeted offers for credit and investment products.

Today's PFM offerings are more customer-friendly than legacy ones that required customers to painstakingly input their financial information from other accounts. Now these systems can pull that information as long as the customer provides the application with account access.

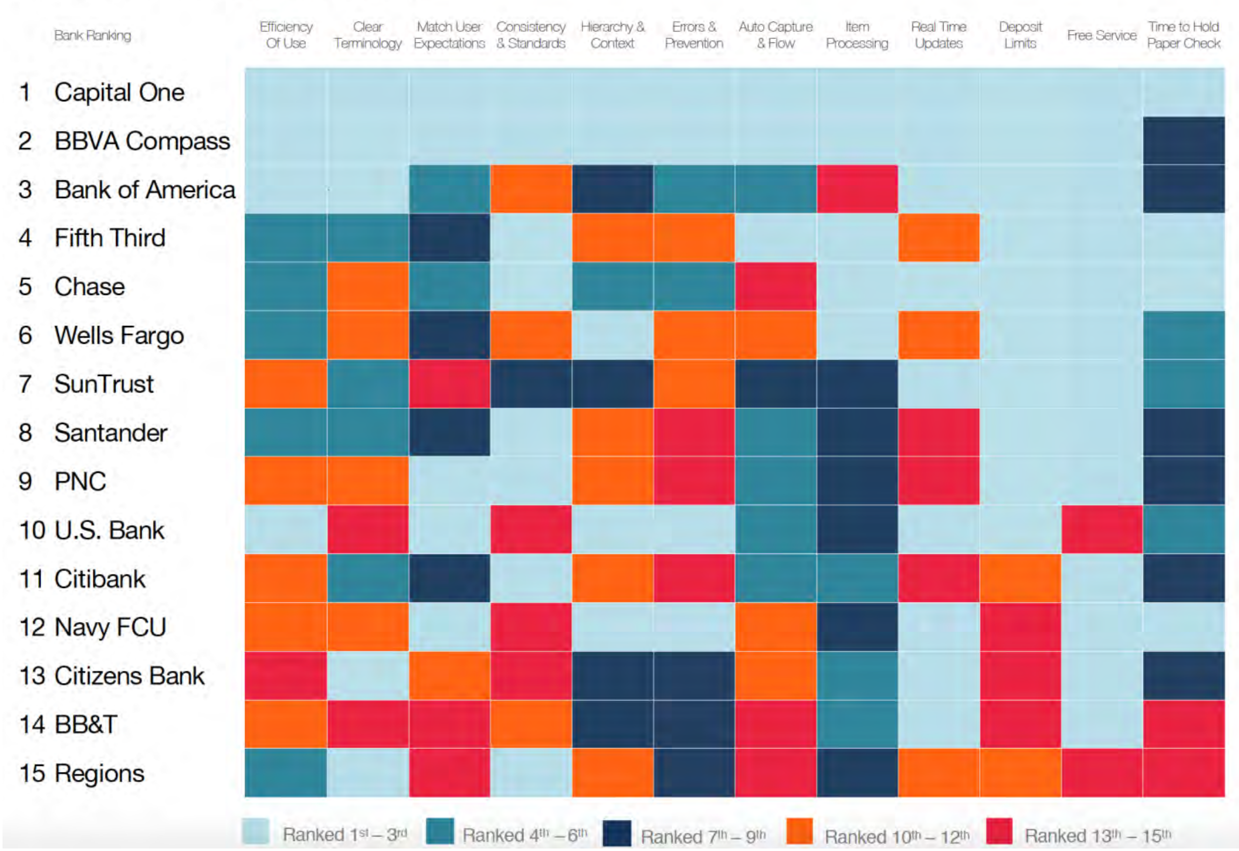
C. Customer Experience

Banks' successes with customer experience (CX) are closely correlated with the success they achieve in customer adoption, levels of activity and growth, says **James Van Dyke**, founder and CEO of Futurion. "CX quality predicts adoption to a very strong degree of accuracy."

The correlation between CX and customer adoption of mobile banking is an extremely strong (statistically a .72 relationship, with a 1.0 representing the highest-possible correlation), Van Dyke adds, pointing to a study his firm did looking at the mobile banking apps of the nation's largest banks. Among the mobile banking features triggering the most favorable customer experience are the ability to quickly find named features within the app; the ability to quickly and easily access help, locating and using the auto capture feature (typically for remote deposit capture).

"Banks are their own worst enemy; it's not the lack of features, it's the lack of a healthy customer experience that hurts adoption," said Van Dyke. "Banks think it's enough just to add features."

Fig 1.1 Customer Experience Ranking



SOURCE: Futurion

But some features, such as mobile deposit capture, are much easier to use with some banks than with others. For example, BBVA's app enables a customer to simply hold a smartphone over a check to capture the details. Others require snapping the photo of the check.

The mobile deposit category most in the need of attention is error and prevention, which enables customers to easily deposit a check. To improve this area, Van Dyke recommends tailored error messaging that helps customers understand and correct any issues that pop up.

Customers also demanded clear, comprehensive security information, according to Van Dyke, who cited real-time updates, like "deposit made" to help improve CX. "Customers have to have a great mobile experience."

Additionally, some banks should rethink their rules regarding mobile deposits, which are often different for depositing paper checks at an ATM or a branch, Van Dyke says. Some financial institutions charge for mobile deposits; some require customers to retain copies of paper checks and some have very low deposit limits. For example, Capital

One allows $10,000 in daily mobile deposits for new and returning mobile deposit users, while new BB&T customers can deposit only $500 per day. Most of the nation's largest banks fall in the middle of those two extremes.

"A few leaders will get it," said Van Dyke. However, he adds that too many community banks are behind the curve because they are waiting on their core vendors, and are behind similar-sized credit unions.

Fig 1.2 Adoption, Frequency of use and Growth

SOURCE: Futurion

III. Mobile Developments

Rather than "mobile first," which had become the strategy for many financial institutions, **Robb Gaynor**, founder and chief product officer for Malauzai Software, Inc., says the thinking should be focused on mobile only.

Many banks still have websites designed for desktops, not for mobile, which is a mistake, Gaynor says. Too often the financial institution's mobile site doesn't offer all of the functionality of the site designed for desktop, or the mobile site has a desktop "feel" that doesn't appeal to the mobile customer. He points to Wells Fargo, which redesigned its website in the second half of 2016 to have more of a mobile look and feel to better engage the customer.

Banks tend to be too conservative in rolling out new mobile app capabilities, in Gaynor's estimation. "You're better off trying something and then failing fast if it doesn't quite work."

He adds that often there is too much concern about how the app looks on the mobile screen, rather than on the user experience. Regardless how slick the display is, if the user experience is poor due to poor policies such as complex authorization procedures, the customer will leave the bank. Gaynor recommends that banks monitor social media to get input on whether they are providing their customers with outstanding mobile banking experiences.

However, despite all of the discussion of mobile, some financial institutions have utilization that is stalling due to poor user experience, says **Bob Meara**, senior analyst with Celent. Consumers want to be able to use mobile the same way that they use desktop applications, but mobile apps don't always have the same capabilities.

IV. Application Program Interface (APIs)

APIs are the lynchpins of today's mobile banking technologies. By integrating with backend systems, they enable banks to provide customers with simple access to a host of features and capabilities.

"Most people in today's day and age want an open integration approach with open APIs," said **Mark Forbis**, vice president and chief technology officer for Jack Henry & Associates. "APIs are the sweet spot for the digital channel. Many people in the industry will say that they have it, and some do have open APIs. But the table stakes have to get easier. There has to be tighter, more seamless integration."

To do that, banks need to move past user ID and password to have a secure, but relatively frictionless way of identifying the customer to expose backend system data for convenience without compromising system security, Forbis says. "Everyone wants to have us include more functions. We look to make it simple and to have all channels for digital interactions."

Though there have been notable advancements in APIs, Forbis estimates it will be a couple of years before they completely integrate all of the systems for all of the desired features and functionality while also maintaining security.

Open Banking Models

Source: Aite Group

Bank channel	App market	Distributor	Aggregator	Banking as a platform
• Use APIs as a channel for own bank products • Value: faster development, better UX • Business model: traditional • Examples: many banks as part of digital strategy	• Expose bank services through open APIs to third-party developers • Value: create ecosystem around bank services • Business model: charge API calls; or revenue share if third party brings clients • Examples: BBVA api_market, Credit Agricole API CA Store, Capital One Devexchange	• Integrate/bundle external financial services with own offerings • Value: deliver best-in-class products with partners • Business model: revenue share from service providers; new customers • Examples: N26	• Aggregate multiple APIs from financial service providers into a single API • Value: multibank offering; standard solution for third-party providers • Business model: service and transaction fees • Examples: Figo; many (nonbank) personal financial management (PFM) providers (Yodlee, Strands, Treefin)	• Offer open banking platform including APIs to other financial institutions • Value: enable banks to accelerate their digital strategy • Business model: license maintenance fees, revenue share • Examples: Fidor, CBW/Yantra, Open Banking Platform

"It's difficult to execute integration with back office technologies; too many different suppliers are trying to grab a hold of their own piece of the business," said **Mike Kelly**, CEO of Arctura Technologies, Inc., and former CEO of credit union service organization PSCU.

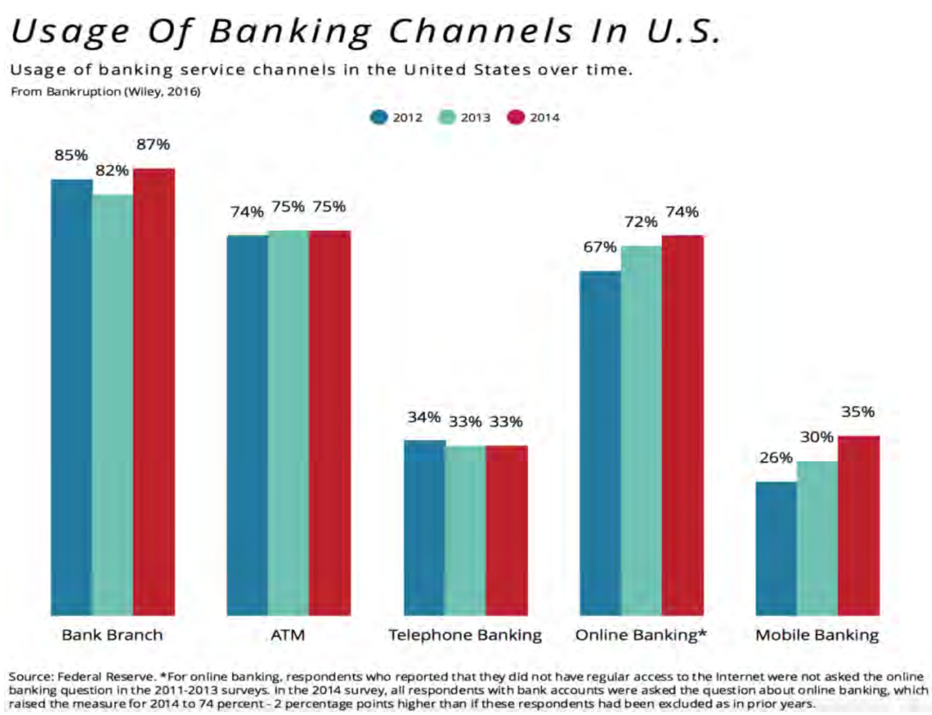
APIs help banks deliver via mobile the real-time or near real-time products, services and capabilities that customers expect, Kelly says. "Access to financial services is the name of the game. Banks need scale and efficiency."

APIs increase efficiencies for customers and for financial institutions, adds **Suresh Ramamurthi**, CEO of Yantra Financial Technologies. Using open APIs to access bank data enables financial institutions to incorporate third-party products and services into the financial institution's own offerings, and enables faster speed-to-market so banks can respond quickly to changing customer demands.

Richard Crone, CEO of Crone Consulting LLC, says banks will continue to extend APIs to enhance what the customer can do with mobile. For example, Bank of America now enables its customers to schedule appointments via its mobile banking app. The customer can include the reason for the appointment, such as a mortgage or small business loan, so the bank can have the right specialist available at the customer's convenience.

"Banks dependent on core platforms alone have never been able to conduct a full service interaction analysis of all branch activity; now through the mobile banking app they can collect the data so that they can monitor and manage how customers actually use the branches; they can't do this without the data," said Crone. Similar APIs can integrate mobile into the contact center to connect a customer with a specialist, rather than becoming stuck in a lengthy IVR (Interactive Voice Response) tree. "Forward-looking banks are using APIs to enhance all their other channels. They're not building APIs just for the sake of building APIs."

V. Channel Integration



"Most mid-tier and larger banks are dealing with old multiple stacks to support multiple channels and to adapt to what the millennial generation wants," said **Jeffrey Hale**, senior vice president of sales and marketing for D3 Banking. "They're looking for a single digital platform that will support modern technology. A single platform makes it easier to support multiple channels. Consistent services are what most are looking for. Without a consistent look and feel, customers get confused."

A single platform also makes it easier to offer comprehensive PFM services, P2P services and simplified authentication. But while a single platform is a goal for most, bankers are all looking for something a little bit different so they don't have the same look and feel as their competitors' apps and online banking offerings, Hale says.

VI. Payments

A. Faster payments

Real-time and near real-time payments are starting to appear in pockets around the U.S., says **Dominic Venturo**, chief innovation officer with U.S. Bank, which launched P2P payments via Early Warning's ClearXChange network in March of 2016 (now called Zelle). The service enables U.S. Bank customers to send money to and request payment from anyone across the country in real time, using just an email address or mobile phone number via a mobile device or online.

In coming years, separate efforts by the Clearinghouse and others will advance real-time payments as well. "2017 will be a pivotal year for the faster payments infrastructure," said Venturo. "Same day ACH work is progressing, as are debit transactions. Financial institutions are working on and developing their own solutions."

The faster settlements in the real-time environment will lead to new rules and platforms for fraud prevention, according to Venturo. "Financial institutions have always been involved in fraud prevention and will continue to be as it evolves."

B. Mobile Payments

Mobile payments and mobile wallets will continue to evolve in 2017, with additional players entering the business, some likely dropping out and many tweaking their offerings.

U.S. Bank has been aggressively participating in the mobile pay arena, offering Apple Pay, Android Pay and Samsung Pay once their payment vehicles became available.

Venturo expects advancements in browser-based tokenization, which will help secure digital payments.

"We want to provide our customers with a suite of options so they can use payments how they want to," said Venturo.

He also expects some fintech providers to continue to nibble at the payments business, but points out that these firms don't have the depth and breadth of offerings of banks and credit unions. For example, U.S. Bank has significant merchant services and commercial payments businesses, as well as a full complement of debit and credit products in addition to the consumer-based payments service.

But to maintain their payments business, banks need to offer customers choices while still making any payments apps simple to use, Venturo adds. "Simplicity is better than complexity."

Banks will need to work with technology partners to continue to innovate and build payment solutions that address customer needs, Venturo says.

One of the payments solutions that consumers are turning to now is mobile wallets, but it's a very disjointed market.

"Mobile wallets are an interesting space right now," said **Ginger Schmeltzer**, owner and principal at GDS Advisors, LLC. "Walmart, Target and other retailers have (or soon will have) one. Banks are starting to come out with their own mobile wallets. Capital One has its own wallet. Bank of America is looking at its own wallet. You can use Chase Pay inside Walmart Pay."

Schmeltzer expects to see more blending of merchant and bank solutions to enable the offering of digital coupons, loyalty and other features.

But mobile wallet adoption faces some hurdles. While it's easy to use at some locations, others don't accept mobile payments, too often have glitches when trying to accept mobile payments or don't make it clear to consumers that mobile payment is an option.

"It's too much of a hassle at many places; paying with a credit or debit card is still the easy, ubiquitous and comfortable payment option for most consumers," said Schmeltzer.

Schmeltzer says banks should make sure their brand is prominent among a customer's mobile payment options.

Consumers are keener to adopt mobile wallets than many banks realize, according to the results of a late 2016 NTT Data, Inc. report. One-third of consumers expect mobile money to dominate payments with the decade. While 40% of executives across multiple industries think that people will pay for transactions much as they do today, only 27% of consumers expect the payments landscape to remain unchanged.

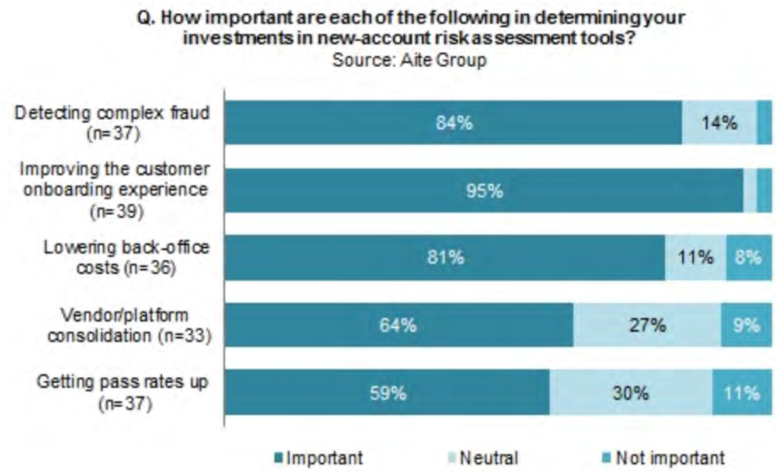
"While consumers' enthusiasm for a cashless, cardless future is encouraging, user adoption has not come close to the numbers that many of us in the industry predicted five, three or even two years ago," said NTT's Maule. Mobile will not make significant gains in terms of percentage of transactions until standards are adopted to improve consumer convenience and security.

NTT research found that nearly 80% of millennial business leaders believe that accepting mobile payments boosts or would boost sales, compared to 51% of business leaders over 50 years old. More than seven in 10 (71%) of millennial business leaders say failure to accept mobile payments puts them at a competitive disadvantage.

Banks need to remember "Crone's Rule: The One Who Enrolls is the One Who Controls," when it comes to mobile payments, said Crone. "Banks that provide their own branded mobile wallet – beyond the third party Apple Pay and Android Pay – will not only have better data on customer activity, but will have the opportunity to upsell, cross sell, and offer new value-added services, real time, in the context of their customers' financial lives. Depending solely on third party wallets limits the bank's ability to interact with customers in context, and thus risks diminishing the bank's brand and customer loyalty."

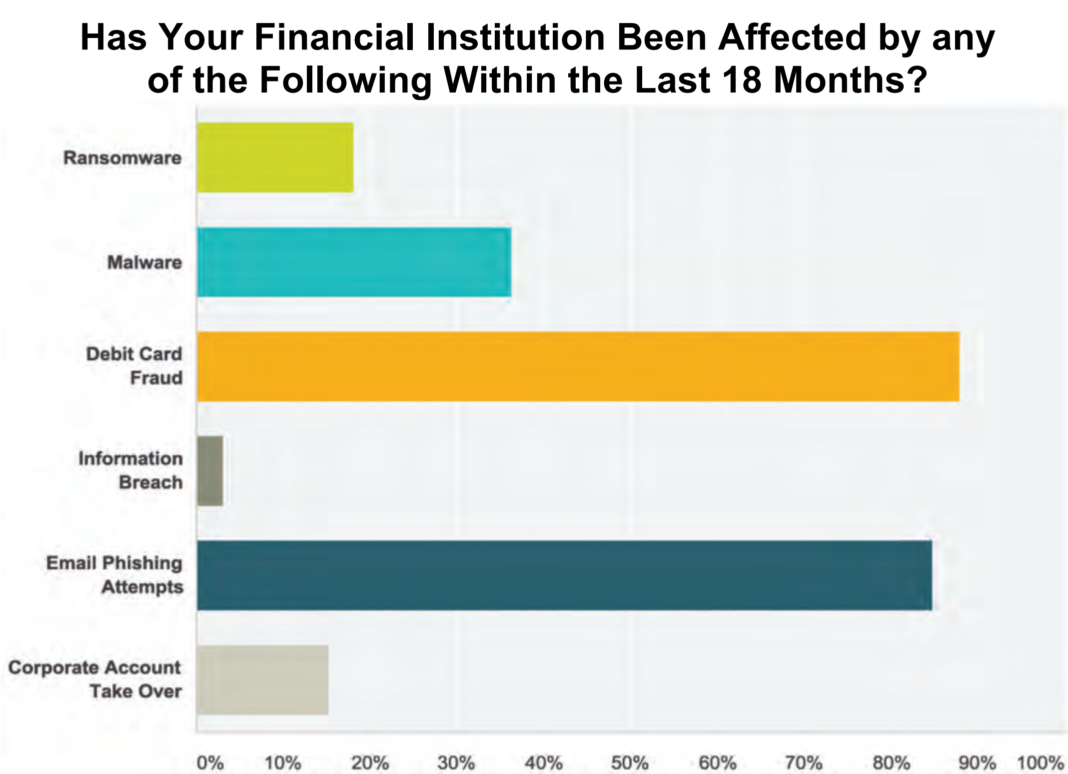
VII. Fraud Prevention

The battle against fraud continues to intensify as fraudsters continue to hone the technical aspects of their craft while still relying heavily on social engineering, which continues a theme that infamous former check kiter and current bank fraud consultant Frank Abagnale and others were using more than 50 years ago.



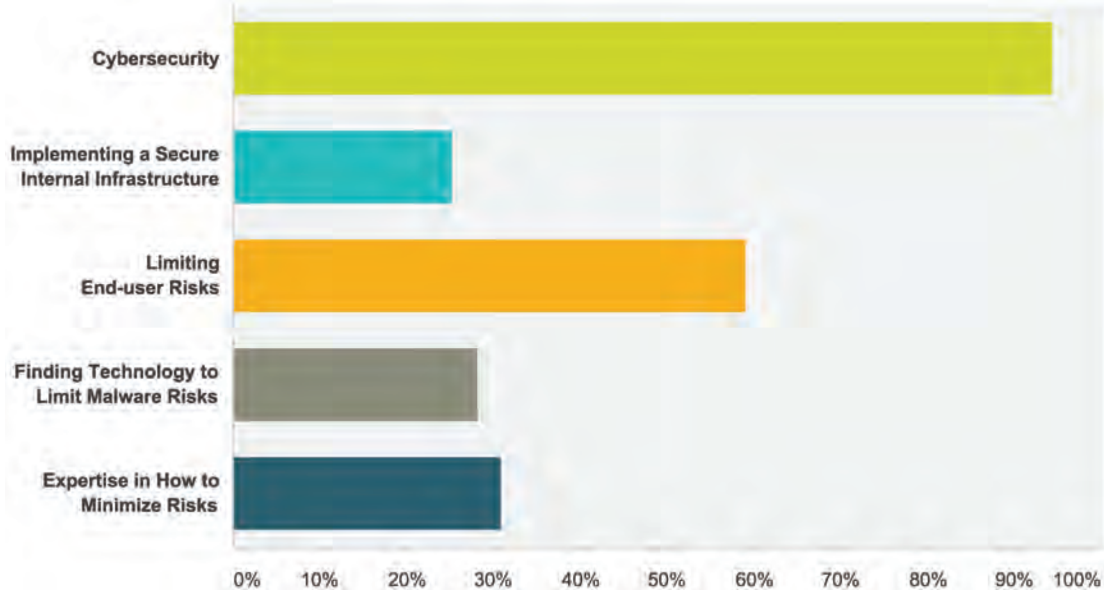
[*Safe Systems 2017 Community Bank Information Technology Outlook Study*]() found that financial institutions cite information security as their top challenge today, followed closely by budget constraints and changing regulations. Among other survey findings:

- *Ninety-four percent cite cybersecurity as the greatest security challenge in the next year.*
- *Sixty-nine percent of respondents have completed the FFIEC Cybersecurity Assessment Tool form, reviewed it and have implemented changes.*
- *Nearly 88% of respondents said they suffered a debit card-related fraud incident in the last 18 months. Other threats came from email phishing (cited by 85%), malware, ransomware, corporate account takeovers and information breaches.*



SOURCE: Safe Systems 2017 Community Bank Information Technology Outlook Study

What do you Foresee as Your Greatest Security Challenge in 2017?



SOURCE: Safe Systems 2017 Community Bank Information Technology Outlook Study

Due to these threats, respondents said that IT security is a primary budget item. More than 77% of survey respondents increased their IT security spending in the last 18 months. More than a third (35%) spent between $25,000 and $55,000 on IT security in the last year; 32% spent between $15,000 and $25,000; and 18% spent more than $55,000.

An increasing number of financial institutions are adding biometric identification, using voice or facial recognition in addition to a password.

In mid-December, Nuance Communications, Inc. unveiled Nina ID 2.0, which adds integrated multi-factor authentication to the Nina Virtual Assistant for customer service. Among the financial services firms using the virtual assistant with voice capabilities are USAA and ING NL.

Several experts see voice biometrics becoming more important in the continuing battle against fraud, particularly as mobile becomes more prevalent in the payments arena.

Other financial institutions are using these and fingerprint scans on mobile phones to help secure access to accounts.

Account takeover is one of the biggest threats, according to U.S. Bank's Venturo. The takeovers often happen when a fraudster convinces an authorized user to divulge account information, usually through some form of social engineering.

Account takeover usually occurs when a business has opened an email attachment or clicked a link from a fraudster that results in malware being installed on the customer's computer. The fraudster is then able to monitor the sites the customer goes to and the login credentials the customer uses to gain access to those sites. Once they have those credentials, they are able to access online banking and initiate transactions. If these transactions go undetected by the bank or the customer, the funds are transferred. These fraud attempts are extending to wire transfers as well, with fraudsters using email and phone calls in attempts to convince a banker to authorize what turns out to be a fraudulent wire payment, says **Deborah Peace**, CEO of ACH Alert. Fraudsters are also attempting to make microdeposits to accounts to verify the existence of a valid account and confirm account credentials. If a microdeposit is not returned, the fraudster knows they have a live account and from there, may sell account information or attempt to originate ACH entries. If the fraudster gets approved to originate ACH entries, they may initiate debits to those accounts and when the financial institution settles the account, the fraudster will withdraw the money and close the account, while the institution is stuck with the returns for fraudulent activity.

"Banks have to think ahead about all of the ways that fraudsters might try," said Peace. "Banks will continue to get targeted. They need alerting capabilities."

Customers can be alerted about suspicious transactions via SMS codes, text alerts or other options they choose, Peace says, recommending that bank customers should be able to choose how they are contacted and other preferences, such as transaction levels.

The fraud attempts are expected to continue to accelerate as faster payments start taking hold.

Settlement of credit-based ACH payments moved to a same-day basis earlier this year, down from a few days previously. Others in the industry are pursuing similar real-time or near real-time payment options, meaning that the fraud monitoring and warning systems need to respond quickly to prevent account compromises, Peace says.

While most of the focus on payments center around consumer or ACH payments, there's a tremendous opportunity for financial institutions to capitalize on electronic business-to-business transactions, says **Sean Banks**, partner with TTV Capital. Banks that can help businesses manage their accounts receivables can gain business by lending against those receivables at rates that are profitable for the financial institutions, yet below the rates charged by factoring or some fintech companies.

"Banks have the cheapest form of capital out there; as you see interest rates go up, banks will become even more attractive. Alternative lending is much more expensive," said Banks.

VIII. Community Banks

Community banks will prioritize cybersecurity with their technology dollars in 2017, says **Jimmy Sawyers**, co-founder of Sawyers & Jacobs, LLC.

Vetting of vendors will be important because as cybersecurity becomes more of a need and a focus of the industry, the media and consumers, there will be more providers of the service. While some will be very competent, others will have no track record.

"Community banks will be bombarded with new entrants into the cybersecurity market. It takes more than marketing and a slick YouTube video to be a viable company," said Sawyers.

Beyond cybersecurity, Sawyers expects regulatory and compliance to be an area consuming much of the community bank budget, despite the discussions of the Administration and legislators about rolling back some of the Dodd-Frank rules.

One burden was lightened on the last business day of 2016 when the Federal Reserve announced that it would cut the amount of information that small banks must provide on their condition, performance and risks each quarter.

Banks that do not have foreign offices and hold less than $1 billion in total assets, the bulk of the country's financial institutions, will be able to file streamlined versions of quarterly call reports that give the major banking regulators, including the Fed and the Federal Deposit Insurance Corporation, inside views of their current states.

They will only have to provide roughly 60% of the data that larger institutions report, according to the Fed, and can start using the leaner version on March 1.

But Sawyers expects many of the other regulatory burdens to remain for community banks. "In 32 years in the business, I've never really seen the regulatory burden decline. Community bankers need to adapt to it. They need to be intelligent about how they comply and use technology solutions where they can."

So Sawyers recommends that they look to shared compliance resources to limit the cost.

Other areas where community banks will be investing their technology dollars, according to Sawyers, will be branch technologies that complement digital technologies and on collaborative technology relationships that enable community banks to increase revenues.

Bankruption's Waupsh says that community banks need to rely on technology to compete with larger financial institutions. But, with smaller budgets than their larger competitors, community banks will need to look at technologies that produce incremental improvements. "Some of the smallest guys have the biggest challenges."

However, Sawyers cautions that just as with cybersecurity, there will be fintech companies that should be properly vetted to determine stability and the ability to deliver, so banks need to ensure the tech offerings perform as promised and offer banks good benefits.

IX. Branch Technologies

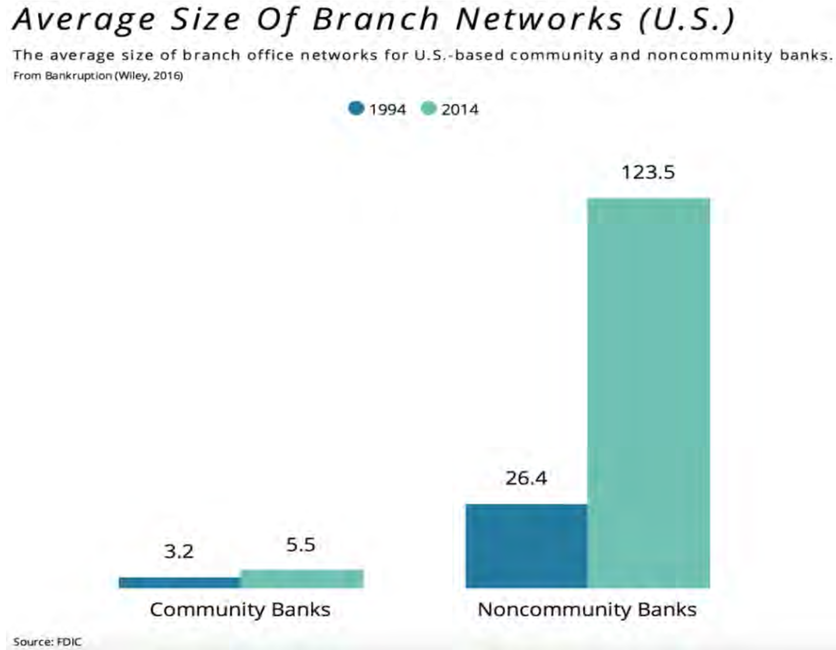
As foot traffic in branches continues to decline, banks are looking for technologies that will enable them to enhance sales and service interactions in the locations they will keep open, says Celent's Meara. "They need to engage customers to make the most of every opportunity. This is showing up both in technology and human capital. The idea is to automate as many of what were once teller transactions, while engaging customers in-person whenever possible. So roles are evolving towards universal bankers rather than on separate tellers and sales personnel," said Meara.

First Tennessee Bank embraced this concept when it opened a new branch in Arlington, Tenn., featuring customized background music (other First Tennessee branches have their own customized mixes), and new names for different areas of the branch: attract zone (exterior), receive zone (vestibule), solve zone (teller area), connect zone (the circular checking stand) and understand zone (an area where a customer can meet with a universal banker).

Competitors Regions Financial and SunTrust are relying increasingly on video teller machines at their branches.

While some banks have looked at some self-service for the branches, Meara sees these technologies as having only limited usefulness since most financial self-service can already be conducted remotely.

"They're not done closing branches; so banks need to decide how to equip the ones they keep open despite the diminishing returns," added Meara.



Despite rapidly declining traffic, banks have closed only a small percentage of their branches, NTT's Maule says. A close look at data showing branch usage and productivity will show banks which branches to close and which ones to keep. However, the data analysis is not a simple one. According to Maule, even though most millennials rarely use a branch, branch proximity is often one of the prime considerations in where to have a banking relationship.

Banks need to rationalize the branches by using data to market advisory, retirement and other services – services that usually involve face-to-face meetings. Using branches for those meetings and services is the role the branches should play today, rather than the role of a place for transactions, experts agree.

X. Lending/Risk Technologies

Rising interest rates mean better net interest margins for banks. While rising rates at a rapid pace could put a damper on lending, normally, the Fed raises interest rates when there is a high confidence in the economy. The Fed's decision to raise interest rates in December of 2016 sigals such confidence which could mean that the economy is doing well, people are spending money, banks can lend at a higher interest rate, and reasonably increase risk, says Baker Hill CEO **Naseer Nasim**.

"Banks are in the business of measuring and managing risk. It should be a common bank practice to manage risk both short and long-term," Nasim cautioned. "They need to know what their portfolio looks like and how interest rate changes impact their balance sheet and income statement. Therefore, they need the right technology that provide them deep insights into their business with tools for predictive risk modeling and for prescriptive analytics."

Yet, some banks still rely too much on gut feelings, which can be dangerous, particularly if the economy goes in an unexpected direction, Nasim cautions, "Sound lending practices are a bank's bread and better. Effective use of smart data analytics could minimize their risk and provide them clear view of their future opportunities."

Lending and risk analytics need to incorporate data from the bank's system of records, general ledger, and third-party data sources that provides insight into a customer's credit history, assets and total financial picture, according to Nasim.

"Banks' decisions need to be data driven, timely, and intentional."

XI. Compliance

Though there is some relaxation of compliance as a result of the Federal Reserve's changes to (some) reporting rules, compliance will continue to be a significant portion of a financial institution's technology budget.

In order to manage this cost, some banks are turning to the idea of "CISO (Chief Information Security Officer) in a box," the concept of using a third party, rather than full-time employee(s) to manage much of the compliance, says TTV Capital's Banks. "This enables them to have someone technical in the bank for compliance and security."

However, banks have to be careful that they don't skimp on security solutions, Banks cautions. "They can't afford to lose a client's money. The reputational damage will kill them faster than non-compliance will."

XII. Future Innovation

Financial institutions are just at the start of incorporating advanced voice features, with a growing number enabling customers to check balances and perform some other rudimentary banking functions with voice commands.

Some financial institutions, like USAA and ING NL, already enable customers to use voice commands within their banking apps to check balances, recent transactions and for other basics.

Capital One has gone a step further, working with Amazon to incorporate the bank's app into the Echo voice commands. So the customer can tell Amazon's virtual assistant to look up transactions, balances, etc., without the need to open up the banking app first.

Gaynor sees other banks adding such capabilities as virtual assistant as well as voice applications advancing significantly by the end of the year. The voice applications will evolve with banks not only permitting the basic information gathering commands, but also "Star Trek-type" transactions, incorporating not only the voice activation people have become increasingly comfortable with since the introduction of Siri, Amazon's Alexa, Microsoft Cortana and Google Voice, but also other technologies. Rather than just asking for the last five transactions, for example, customers will be able to ask for the last five transactions via voice and then ask for them to be displayed on the screen, Gaynor says.

XIV. Contributed Articles

XV.

Taking a Sustainable, Scalable Approach to Cybersecurity in 2017
By Sean Feeney, CEO of DefenseStorm

The average data breach costs today's organization $4 million, a 29 percent increase from 2013, according to the Ponemon Institute's 2016 Cost of a Data Breach Study. Naturally, the financial industry is at an exceptionally high risk for data breaches because a successful attack reaps huge benefits for the attacker. In fact, the 2016 Verizon Data Breach Report revealed that the financial industry has suffered the most security incidents with confirmed data losses over any other industry. Therefore, cybersecurity must become a priority, not just for IT, but also for every stakeholder in the financial services industry, including investors, consumers, regulators and employees – all the way up to the board of directors.

As long as financial institutions continue to accept and manage deposits, the frequency and sophistication of cyberattacks will continue to escalate. However, due to the diversity and multitude of these cyber threats, an arms race has developed. In other words, there is no shortage of point solutions designed to combat cyber criminals. While many security firms sell such targeted solutions, there is not a solution that helps financial institutions connect the security-related dots between risk management, IT systems and Big Data. As a result, many financial institutions have cybersecurity defenses that have become unmanageable, which inevitably, can lead to gaping holes in their security programs.

Still, since there are so many existing and emerging attack vectors, the number of tools that IT teams must use to keep customers safe continues to increase. With each new threat, a resourceful cybersecurity firm creates a new product to combat the threat, within months or even weeks, adding to a long queue of cybersecurity products. Each of these tools generates massive amounts of data that is often unstructured and requires time-sensitive, manual intervention to extract actionable intelligence. Compounding these problems is the fact that demand for experienced security personnel continues to skyrocket. The limited number of qualified candidates, coupled with minimal hiring budgets, means that today's financial institutions must generate internal efficiencies in how they use cybersecurity-related technology.

For a more streamlined and proactive approach to cybersecurity, the gap must be bridged between detecting and responding to suspicious activity while linking financial institutions' cybersecurity policies with the numerous cybersecurity systems employed throughout the enterprise. This boils down, in part, to a smarter, more centralized security alerting system. A central command and control system takes input from all of a financial institution's security solutions, applications and network solutions – including IDS, firewalls and spam firewalls – to produce alerts that are relevant, while identifying false positives. This helps to reduce alert fatigue for the institution's security team. As a result, they spend more time improving security rather than plowing through thousands of alerts.

Additionally, a centralized system unifies detection, investigation, reporting and compliance to provide institutions with the critical intelligence and support needed to optimize their cybersecurity defenses. By aggregating all of an institution's security data, it becomes easier to quickly provide management-level reporting and demonstrate to the board, auditors and regulators to show that the institution is actively managing and enforcing its cybersecurity policies. Rather than requiring hours of sifting through data to build reports, executive reporting should provide a high-level view of the financial institution's cybersecurity health through the use of only relevant, real-time information.

Beyond reporting, a strong cybersecurity strategy also requires real-time intelligence about the latest cybercrime tools and tactics. Cybercriminals do not limit their activities to one financial institution. Instead, they target any institution that presents vulnerabilities. Sharing cyber threat data among other institutions, regulators and infrastructure providers plays a vital role in reducing the frequency, magnitude and consequences of an attack. Today's financial institutions are under constant pressure to prevent and respond to cyber attacks quickly. By leveraging superior risk management capabilities, subscribing to multiple threat intelligence feeds and regularly sharing cyber threat data with peers, security professionals will have the resources and actionable intelligence they need to protect their institution.

As new cybersecurity tools are thrown into the mix, financial institutions risk overburdening their security team with a growing, disconnected portfolio of labor-intensive solutions. To overcome an attack, organizations must deploy a security data platform that unifies data across all cybersecurity solutions and network devices. This level of defense allows institutions to organize, align and enhance their cybersecurity program with their cybersecurity policies without overstretching the institution's resources or capabilities. The financial industry is long overdue for a sustainable, scalable approach to cybersecurity that equips today's financial institutions with the necessary tools to combat the latest threats from cyber criminals.

DefenseStorm is a security data platform that watches everything on a financial institution's network and matches it to its policies. For more information, please visit http://www.DefenseStorm.com

How to be a Savvy Buyer
By Brad Downs, CEO, Strategic Resource Management

Bankers as buyers fuel the fintech economy. But how does a banker know if too much funding is being poured into fintech? How does one know if any vendor agreement is fair and competitive? Fintech purchases are inherently complicated and often involve details that are either negotiable, unique to the buyer or both. No matter how good of a deal a banker might have received, there's no Kelly Blue Book to defend bragging rights.

Too many financial institutions fall short of their goal of ensuring the contracts they sign offer competitive pricing. This is not because bankers are poor negotiators, but rather because most negotiate a limited number of contracts throughout their career. Consider the process of obtaining a mortgage before the age of the Internet. It was difficult to compare rates across multiple institutions in a single city, and impossible to do so at a national level for the most part. The local bank or credit union held all the cards. Now, through a variety of online mortgage options such as Lending Tree and Rocket Mortgage (Quicken Loans), the future homeowner can compare rates and other details for the mortgages offered by scores of organizations. Having this broad view of the available data has turned the table, empowering consumers to be assured they are getting the best mortgage available to them.

When negotiating fintech contracts, the same applies. The more you know, the more power you have to negotiate an "at market" agreement. Having this baseline of data means you can often reduce vendor costs without switching providers or impacting service. It begins with developing a process. Vendor price monitoring and cost analysis should be an ingrained and repeatable exercise built into an institution's vendor management philosophy. Regularly monitor contracts to ensure cost structures and pricing models remain competitive. If market factors or bank volumes make existing pricing obsolete, or if an institution discovers it's overpaying, the contract can often be renegotiated.

However, two recurring obstacles prevent institutions from obtaining an "at market" deal:

1) Adverse pricing, or pricing that is unfavorable to an institution, is unfortunately a common practice. Sometimes it's obvious, such as when quotes for a new system are much higher than other bids. But other times it's not nearly as obvious. Consider core platform upgrades. Institutions often find themselves upgrading or converting

core platforms with products, services and features that the institution might not require but add to the overall cost. A few examples include online bill pay, remote deposit capture and risk assessment software. Other times institutions negotiate a contract while focused on one big ticket item, such as the reissuance of new EMV cards. If they aren't careful or get distracted by the high-profile expense, they may find that costs in ancillary sub-contracts have increased or contract terms have been extended. Also, be wary of contracts that are updated and renewed with bonus incentives, but include more restrictive language and devastating cancellation fees.

2) Lack of information is another major obstacle. In many ways, expense management is a lot like preventing cyberattacks. An institution does its best to know all it can about current threats while following best practices, but in the end, there are limitations to the intelligence an institution can collect. Banks and credit unions want to believe that third-party providers' pricing structure is competitive with what peer institutions pay, but it's nearly impossible to be certain. Even with raw data from peers or a large group of competitors, each vendor's terminology and nuances differ drastically. It is always challenging to compare offers and look for hidden opportunities that can maximize bottom line performance. It's a time consuming and complicated task.

These obstacles can be overcome with research, resources and analysis. Contracts can be renegotiated and designed to prevent overspending for current products and services if institutions carefully review every detail of every contract and know how to identify overlooked opportunities for improvement. Regardless of how financial institutions choose to solve these problems—either going it alone or bringing in expert advisers—they must be addressed.

The benefits are more than just cost savings. Financial institutions can also boost their bottom lines with new revenue potential, such as bonuses and incentives received from payment providers. Furthermore, regulators expect that financial institutions seek out reasonable contract terms and pricing comparable to what peer institutions pay. Institutions that don't know their costs or understand the impact on efficiency, margins and performance ratios have seen significant regulatory commentary.

Take the time to consult experts before any contract negotiations or renewals. In fact, consider negotiating options 24 months before the end of a contract, and 36 months before core agreements expire. Whatever you do, start at least 18 months before the contract expires or you will be rushed into something simply to maintain services.

Overspending on products and services directly impacts the bottom line and cuts into an institution's competitive positioning. Savvy buyers will make the effort to turn contracts and negotiations into a favorable occasion to boost profits and contain costs. When institutions align their third-party expenses with industry benchmarks, they typically find unrealized opportunities for growth or savings. Take the time to understand exactly how much fintech should cost your institution.

Brad Downs *is the chief executive officer for SRM (Strategic Resource Management), an independent advisory firm that helps financial institutions identify cost savings and new revenue potential in their contractual relationships. SRM's 25 years of contract negotiation experience provides financial institutions with the benchmarks and processes necessary to improve their bottom line, with more than 500 banks and credit unions having received savings above $3 million for every $1 billion in asset size. The firm's expertise spans multiple business areas including cards, payments, core processing, and more. Brad can be reached at bdowns@srmcorp.com.*

Fintech Lenders: Friend or Foe?
By Susan Griffin, strategic initiatives analyst at Jack Henry & Associates

Banks and credit unions have been challenged by new entrants into the lending market from as far back as the early 1900s when finance companies, like Household Finance, introduced an alternative way for consumers to borrow money. Fast forward a hundred years and financial institutions are still challenged by disruptors looking to serve both consumer and business markets by fundamentally changing the way borrowers seek out and apply for a loan. Whether you call them fintechs or marketplace lenders, they are a new disruption to traditional lending.

How the Marketplace Lenders Evolved
The new fintechs focused on lending developed technologies that expedite and enhance the credit analysis and fulfillment processes related to lending and offer their services via the internet. With little experience as lenders, the companies started out using a peer-to-peer (P2P) business model, acting as an intermediary that linked investors to borrowers. The timing was good for new lending sources to emerge as banks had all but stopped lending in order to reduce further risk during the 2008 financial crisis. As the economy started to stabilize and investors' interest began to waver, some marketplace lenders revised their business structure by utilizing a balance sheet model, or hybrid of both balance sheet and P2P lending, to better ensure a sound capital position. This included seeking funds from institutional investors which were more dependable sources of capital. Thus began the efforts of the marketplace lenders to partner with banks and credit unions. Financial institutions valued the innovative technologies the fintechs possessed, and the fintechs received access to the FI's customer base and an additional source of capital.

Changing Market Dynamics
Traditional banks and credit unions still maintain a majority of the market share related to both consumer and commercial lending, but the marketplace lenders have experienced rapid growth over the past few years and continue to grow at a fast pace. With that said, the growth and ability to maintain an established position in the market doesn't come without challenges. Besides the struggle to maintain a healthy balance sheet, many fintechs have

limited knowledge of the underlying fundamentals of finance and general accounting structure of financial institutions. They have yet to experience a full economic cycle, which typically ranges anywhere between seven to nine years. There is also chatter of regulatory scrutiny beginning to surface and research investigations are being established in government agencies such as the Office of the Comptroller of the Currency (OCC) and Department of the Treasury.

Many industry pundits are comparing the saturated marketplace of online lenders to the dot-com era of the late 90's. It is predicted that only those with a sound business model and strong capital backing, exercising best practices in credit risk management will survive. Many smaller, less stable fintech businesses will be subject to failure within the next couple of years.

This doesn't diminish the struggles that traditional lenders are facing. Financial institutions still need innovative and proficient solutions in order to provide a desirable customer experience and maintain a dominant position in the market. And, there is an increasingly substantial number of validated lenders competing for borrowers' business.

Recent political changes are likely to impact the lending environment. The new administration occupying the White House, along with a Republican dominance in the legislative segments of the federal government will have an impact. Based on the campaign messages, we should see a focus on small businesses and promotion of industry in the U.S. over the next four years. This will intensify the requirement for better commercial lending processes and technologies to support businesses' need for capital and growth.

The Technology Solution

Lending platforms, especially in commercial lending where loans require much more complex practices, have needed improvement for a very long time. Vendors have attempted to automate various phases of the process, such as onboarding, decisioning, and fulfillment. But few have provided a true end-to-end process that didn't require manual intervention. One thing that many vendors overlook is the continued relationship between a financial institution and its customer. This relationship and the trust factor that banks and credit unions enjoy, are the most significant advantages they have over the marketplace lenders or fintech providers. Winning technologies will be built on a strategy encompassing technology with a complete relationship between the financial institution and its business customers.

Find a Partner or Go It Alone?

Large banks have already ventured out and engaged in partnerships with several of the marketplace lenders to take advantage of their technologies and/or ability to support a segment of loan portfolios that are not profitable for the bank to support internally. This, in turn, provides marketplace lenders the funding and the access to customers they need.

The question of a financial institution going into a partnership with a third-party entity should never be entered into lightly or without a huge degree of due diligence. A financial institution should be assured that the company they partner with holds the same standards of service and stability that matches their own. Otherwise, it presents another level of risk which can't be afforded.

Community banks and credit unions do not have the economies of scale to apportion an entire segment of their loans out to another vendor. Nor do they particularly want or need to do so. They are also mindful of the need to retain the customer relationships they've worked so hard to acquire. However, they can't always meet a customer's loan request when it exceeds their credit boundaries. There are lending technology providers that have established a network, or marketplace, of alternative lending solutions that should be considered. Many smaller banks and credit unions are establishing a relationship with a network provider as a trusted source that has vetted and validated non-bank lenders. Through a network provider, the financial institution may distribute loan requests they are unable to fulfill to a network of alternative lenders. This alternative lending resource allows financial institutions to keep and maintain the customer relationship by being the vehicle in which their borrowing needs are accomplished…quickly and simply.

So, traditional lenders should not ignore the emerging marketplace lenders. They have found their niche in the market and are here to stay. If marketplace lenders aren't included as a partner, then one can be sure they will be encountered as a competitor.

Susan Griffin *is a strategic initiatives analyst at Jack Henry & Associates, a leading provider of technology solutions and payment processing services primarily for the financial services industry. Its solutions serve approximately 10,500 customers nationwide, and are marketed and supported through three primary brands. Jack Henry Banking® supports banks ranging from community banks to multi-billion dollar institutions with information processing solutions. Symitar® is a leading provider of information processing solutions for credit unions of all sizes. ProfitStars® provides highly specialized products and services that enable financial institutions of every asset size and charter, and diverse corporate entities to mitigate and control risks, optimize revenue and growth opportunities, and contain costs. Additional information is available at www.jackhenry.com*

Capitalizing on the Opportunity in Mobile Banking
By Steve Cotton CEO and co-founder for FI Navigator

Just over half of all U.S. financial institutions offer a mobile app (57 percent as of September 2016), but if we exclude banks and credit unions with less than $100 million in assets, that number becomes 85.7 percent. Still, overall enrollment to deposit accounts is just over 27 percent, which shows that there is a great deal of opportunity on the customer acquisition front.

The vast majority of retail banking strategies today prioritize a mobile approach, which is great for business, but as the ubiquity of these tools increases, so does the competition. Greater market saturation means that the ability to differentiate by providing a highly personalized experience is an essential component of success. This is as important for financial institutions as it is for the vendors that are providing them with these tools.

Feature Adoption

Through its maturation, mobile banking is demonstrating a similar trajectory that other groundbreaking or "first-ever" services followed. Early adopters have helped lay the groundwork for the industry – for instance, the average app age across all U.S. financial institutions is slightly more than three years; however, banks and credit unions with more than $100 billion in assets have offered an app for nearly twice as long. Today, we're somewhere between the early majority and late majority stage, which means it is no longer enough to simply provide mobile banking. The breakdown of the type of features illustrates how, as mobile banking has evolved, so has its functionality.

The first generation of features includes basic functions, such as view account balance, transaction history and intrabank transfers. As a result, virtually every mobile banking app allows users to view account balance and intrabank transfer is not far behind, available on 98.7 percent of all apps. Next, there are enhanced, second-generation tools that allow customers to do more – search transaction history, view e-statements and manage personal finances and rewards. There is a lot of opportunity in these features, evidenced by the fact that less than 22 percent of mobile banking apps offer the ability to search transaction history, while 13.3 percent offer the ability to view check images. The third set of features allow for streamlined interactivity (i.e., quick balance, fingerprint authentication and cardless cash). Adoption of these features is still in the early stages and varies greatly. For instance, excluding financial institutions with more than $100 billion in assets, quick balance is available in less than 30 percent of mobile banking apps. Meanwhile, cardless cash is available in less than 0.1 percent of mobile banking apps. Despite these features having the same intent (to reduce friction), they are being adopted very differently.

Driving Enrollment and Utilization

There's no shortage in the features that a bank or credit union can offer through mobile banking (assuming the vendor provides said features), but there should be more consideration given to the comprehensiveness of the feature set because that is what will drive enrollment and utilization. In other words, certain features can have a greater impact on whether or not a customer or member will use your mobile banking app.

Take bill pay, which is available in 87.7 percent of mobile banking apps. For banks and credit unions that offer this feature, enrollment, as a percentage of accounts, is 28.1 percent. Those that do *not* offer bill pay see enrollment of just 10.3 percent. Some other great examples can be seen in person-to-person (P2P) payments, which increases mobile banking enrollment by 96 percent and in fingerprint authentication, which increases enrollment by 132 percent. On the other side of the coin, there are a handful of features that are considered to be "must-haves," but that do not drive enrollment as much as the industry thinks. How your mobile banking app is constructed will influence the level to which customers and members will use it and whether or not they will be satisfied doing so.

Working Together

Bankers build their reputations by recognizing the needs of account holders and then providing services and solutions that address those needs, but Fintech companies are also part of this ecosystem and their reputations are as much as stake as the banks and credit unions. The good news is that this is now a data-driven industry and the ability to develop strategies around consumers' behaviors and preferences is now more possible than ever.

In order to drive banking's continued mobile and digital transformation, financial institutions and their partner vendors should seek to understand the current market dynamic and different channel performances and then analyze the patterns to deliver innovative tools now and in the future.

Cotton *is CEO and co-founder for Atlanta-based FI Navigator, a provider of web-based bank data and analytics. He can be reached at steve.cotton@fi-navigator.com.*

Using Relationship and Data –Driven Direct Marketing as a Strategic Tool for Growth
By Tim Keith, Chief Strategy Officer, Infusion

Data-driven direct marketing offers a uniquely effective promotional tool to drive a relationship-based growth strategy at community and regional financial institutions. Unlike traditional marketing, data-driven direct marketing can leverage customer data to communicate specific products and rates to strategically defined audiences at particular points in time. In other words, the right information is sent to the right person at the right time. This is in contrast with how the term "cross-sell" has been thrown around during the recent Wells Fargo scandal. Data driven marketing makes it easy for customers who are in market to **self-identify** through established sales channels rather than driving cross-sell through high pressure sales tactics. Effective data-driven direct marketing campaigns for banks and credit unions produces predictable deposit and loan growth at predictable costs.

Over the coming year, we expect more regional and community banks and credit unions to move their marketing budgets towards campaigns informed by core data analysis. This is in part as a reaction to bankers finding less accountability than anticipated as they have thrown budget dollars into digital marketing channels. Small- and medium-sized regional and community financial institutions pride themselves on their relationships with their customers and members making the appeal of personalized marketing obvious. Data driven marketing allows these institutions to uniquely leverage the investment they have made in building customer relationships. Rather than viewing predictive analytics as an unknown process for small and medium financial institutions, it should be viewed as a natural extension of a service focused relationship driven strategy.

Realizing the margin expansion potential of the current rising rate environment is not going to be automatic. I think it is fair to say that many bankers are underestimating the challenge of managing deposit volumes and cost of funds at the same time as rates continue to normalize higher. The first step to success is to recognize that deposit dollars are attached to real customers with diverse financial needs and that every portfolio is characterized by deposit concentration. Typically one-third of depositors control more than 90% of deposits. Given that deposit growth requires retention of existing balances, the value of targeted outreach becomes obvious. Add to that equation two key truths: the most efficient source of new deposits is existing customers and the more deposits they have with you, the more they have somewhere else and these factors become foundational targeting criteria for deposit growth campaigns. In this context data driven marketing really becomes an offshoot of portfolio management.

In targeting these households it is critical to then ask for the customer's primary financial relationship so that you don't end up with only a secondary account instead. Acquiring a relationship instead of just an account presents a new opportunity to segregate rate sensitive from non-rate sensitive funds within the household and price them accordingly. Many banks lack the discipline to vary their deposit marketing messages based on the diverse range of needs and capacity levels within their trade area.

Data-driven direct marketing can more effective than traditional marketing because it puts the ball in the hands of the customer or member. Rate sensitive customers may raise their hands in response to rate offers while "sleepers" can continue sleeping. In this way, direct marketing can be very useful in proactively managing a primary portfolio risk – silent balance attrition. Direct marketing can also be effectively used to attract new depositors with higher deposit rates by segregating target audiences and customizing marketing message based on the distinct characteristics of each population.

Embracing a relational approach to retail banking starts with acknowledging that consumers have a variety of financial needs that ebb and flow over time. Correspondingly, the bank or credit union has different lines of business designed to meet the range of those needs. Consumer banking is a constant exercise in which the bank attempts to address changing needs where the customer perceives value, and the bank makes money at the same time. In some environments this is easier than in others, but using core data enables financial institutions to most effectively place the right information in front of their existing customers. This leads to better served customers and more profits for the financial institution.

One final thought – digital marketing is not a silver bullet. To be effective it still requires effective targeting and measurement that connects back to a strategy. Digital is merely another channel to deliver a message but can't help you sell a CD to a customer who doesn't have any money.

Tim Keith co-founded Infusion, a Little Rock, Ark.-based provider of data-driven direct marketing campaigns that generate strategic growth for community and regional financial institutions, and works as the company's strategy leader. Tim can be reached by email at tim@infusionmarketinggroup.com

Valuing the Ads and Offer Revenue of a Mobile Wallet
By Richard Crone and Heidi Liebenguth, Crone Consulting, LLC

The mobile wallet is a unique platform for delivering advertisements, offers, loyalty and other incentives. When the mobile wallet user registers a payment instrument, the mobile wallet platform provider must fulfill Know Your Customer (KYC) requirements by law, thus providing a known, validated and authenticated user, something that nearly all other advertising media do not possess today. Because the mobile wallet issuer now has an online connected registered user, the interaction can now be Customer Relationship Management (CRM) driven by specified, historical or predictive preferencing, meaning the exposure to ads and offers is on an opt-in basis tailored and profiled by the users themselves, thus eliminating spam and irrelevant promotional content.

Thus, we expect that mobile wallets will command the highest rates for ads and offers, even higher than those in the marketplace today that are geographically triggered at the point of sale, such as on a receipt by Catalina Marketing or Instream Media.

Because a mobile wallet is an interactive, geographically sensitive platform, new value-added services can be injected into it, making it relevant not just for payment, but at each trigger point before, during and after payment. We define **Crone Consulting LLC's Five Mobile Trigger Points™** as:

1. Discovery, locating & navigating
2. Presence Detection, check-in & data-driven personalized offers
3. In-Store enhanced customer self-service
4. Mobile Payment & check-out
5. eReceipts, post-sale promotions & social sharing

Each value-added offering can be evaluated across Crone Consulting LLC's Five Mobile Trigger Points™ for determining the revenue potential to the mobile wallet issuer, because each of the five trigger points represents a new customer service and merchandising touchpoint not just for the issuer, but for marketers relevant to that wallet user. Keep in mind that the majority of ads and offers revenue is generated from Consumer Packaged Goods (CPGs) and product manufacturers which typically lack a known, CRM relationship with their customers; thus the mobile wallet opens up a whole new interaction point for promotions. As in payments, The One who Enrolls is the One who Controls…in this case, the ads and offer revenue generated from each of these Five Mobile Trigger Points™: financial institution vs. retailer vs. 3rd party intermediary mobile wallet.

Advertising and promotional rates are driven by the amount, quality and results generated from using the profiled, opt-in preference-driven data across the Five Mobile Trigger Points™ with ads and offers inventory being sold to advertisers on three levels.

The mobile wallet can confirm impressions and sell the advertising inventory on a traditional Cost Per Thousand (CPM) basis. Because the mobile wallet is interactive, the activated offers and interactions can be sold on a Cost Per Click (CPC) basis, in the same way that Google, Yahoo and other Internet advertisers do today. Additionally, offers viewed and activated in a mobile wallet can be used to prove a net new sale for a retailer or CPG and thus command a Cost Per Acquisition (CPA) promotional premium from the advertiser.

When you add up all the potential CPAs, CPCs and CPMs that might occur in a year across all Five Mobile Trigger Points from an active mobile wallet user, we estimate the mobile wallet issuer could potentially gain $300 per active mobile wallet user.

What is important to keep in mind is this represents a net new revenue stream generated outside the financial institution's current revenue base, from CPGs, product manufacturers and retailers. The revenue potential is roughly double what a typical financial institution generates in gross revenue per year from a demand deposit account (DDA) or approximately equal to the gross revenue per credit card account.

You can see why this is so attractive to the 3rd party intermediaries and new entrants such as Facebook and Amazon, as a mobile wallet with compelling offers would dramatically increase their revenue per existing customer, providing additional value without charging additional fees. This is what a financial institution is walking away from if they do not activate mobile payment within their mobile banking app, with the added risk of being further commoditized and disenfranchised from their customers.

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Top Ten Trends Impacting Bank Technology for 2017
By Jimmy Sawyers, Sawyers & Jacobs LLC

Common sense is as rare as genius…is the basis of genius. Ralph Waldo Emerson

A new year marks the return of common sense. Bankers and technologists will embrace the notion that innovation and common sense can be compatible concepts. Together, we will seek common sense that is compatible with a sense of change that, as humans, we often avoid.

Common sense does not mean the absence of enthusiasm. Instead, it means enthusiasm that is worthy. In an industry often susceptible to hero worship instead of a reverence for heroic traits, bankers will employ healthy skepticism and evaluate new technology on its merits not its marketing. We will see the assessment of true risk not hyperbole and sensation. Investments will flow to the pursuit of attainable rewards, not fantasy or snake oil. In 2017, successful bankers will learn that the will of the people, their customers, is what truly matters.

To help bankers gain a healthy dose of enthusiasm based in common sense, we look ahead to what promises to be a groundbreaking year:

Prediction #1 – Cybersecurity Focus Gets Intense

Bankers who have been whistling past the graveyard of cybersecurity threats will face some stark realities in 2017. First, FDIC-examined banks' next IT examinations will apply the new InTREx program which places new emphasis on cybersecurity and audit coverage. InTREx is short for Information Technology Risk Examination.

The new questions and examination procedures will require expert management of the examination process by key people in the bank. Vague answers to general questions without providing the proper context or documentation will land bankers in a quagmire of board resolutions and regulatory enforcement.

The regulatory agencies are forced to deploy more tech-savvy yet inexperienced examiners to address cybersecurity issues. This will rock the boat as bankers must learn to communicate more effectively with examiners regarding IT matters. Often a translator is needed. Otherwise, miscommunication can lead to misunderstandings and perhaps misapplied regulatory enforcement.

As fear and misinformation is spread about cybersecurity risk, bankers will turn to trusted parties and will continue to invest in practical cybersecurity testing and solutions designed to reduce risk in this critical area. *Challenge Question: How prepared is your bank for the cybersecurity challenges ahead (and your next IT exam)?*

Prediction #2 – The Hybrid Bank Becomes the Winning Business Model

Despite digital channel growth, the branch is not dead. However, if bankers want to keep branches alive they must find creative ways to drive traffic to their physical locations. Figure out where people gather and why, then offer that service in conjunction with the bank. Such a strategy will increase branch traffic and customer loyalty. Expect more banks to partner with pharmacies, coffee shops, and mailing facilities to give people a reason to visit the bank.

BBVA Compass is partnering with Amazon to offer lockers for Amazon shoppers to pick up their purchases. The Amazon Locker service is being piloted at 11 branches in the Austin, Texas area. Accessible 24 hours a day, the lockers offer consumers an alternative to having the packages shipped to their homes.

Branches will become education hubs introducing customers to digital channels and providing on-premises training to increase customer engagement and loyalty.

We will see a renewed focus on re-engineering fundamental processes. If Sears can email my transaction receipt but my bank cannot, my bank has some work to do.

When technology is the same from bank to bank, customer loyalty is the difference. *Challenge Question: What is your bank doing to drive more traffic to the branch while increasing customer loyalty?*

Prediction #3 – Regulatory Reform Starts But Stalls

Efforts to eliminate the Consumer Financial Protection Bureau (CFPB) will begin in 2017 and succeed by 2020 with certain responsibilities reassigned to other existing regulatory agencies, allowing these agencies to enforce the laws already on the books.

In a classic "I'm from the government and I'm here to help you" move, the OCC issued "Exploring Special Purpose National Bank Charters for Fintech Companies" in December 2016. This issuance has been met with opposition from state regulators who believe such charters are fraught with danger and could lead to unfair competition.

Fintech companies have faced little to no supervision while competing with traditional banks thus far, so they might give a big “no thanks” to the OCC considering the strings attached that will make fintech companies comply with laws and regulations such as the Bank Secrecy Act (BSA) and Dodd-Frank.

We shall see how this evolves but I suggest a stipulation that prohibits regulators from going to work for fintech companies. This reduces the risk of self-dealing and will help regulators practice what they preach, free of potential conflicts.

Hopeful but not certain we are that Americans with Disabilities Act (ADA) compliance trolls currently suing banks for website accessibility issues will be soundly defeated. The Department of Justice will come out with reasonable rulings on website accessibility and banks will comply with modest upgrades and simple disclosures highlighting the many service channels banks already offer. Web Content Accessibility Guidelines (WCAG 2.0) will remain just that, “guidelines” and will not be treated as law.

Bank websites aside, this compliance could extend to mobile devices, e-statements, and other products and services resulting in a slippery slope of ADA compliance issues, many of which might be impossible to remedy depending on a bank’s vendor capabilities and coding.

Bankers should not panic but should continue to monitor this situation under the new administration and be prepared to engage qualified legal counsel. On January 5, 2017, the United States Access Board approved a final rule to update Section 508 of the Rehabilitation Act of 1973. The final rule was published in the Federal Register on January 18, 2016, with the effective date of March 20, 2017, and requiring compliance with the new rule and setting WCAG 2.0 AA as the standard for federal government websites by January 18, 2018. But, stay tuned as this develops throughout 2017. Beware of opportunistic web developers or attorneys in the meantime. *Challenge Question: Is your bank prepared for a new regulatory environment?*

Prediction #4 – Banks Get Real-Time, All the Time, Real Fast

We are a real-time 24/7 world. Teenagers get their news from one of the many app feeds on their phones, not the TV evening news and certainly not newspapers. If your bank doesn’t get real-time, real fast, it will not survive to serve this next generation of customers.

Consumers of all ages will no longer tolerate delays in funds transfers, the lack of same-day banking, or archaic bill payment processes. To truly become the bank of the future, banks must extend service hours to a minimum of 7AM-11PM, six days a week, in the short-term, and preferably 24/7 in the long-term. Today's time-stretched consumer will demand it. Interactive tellers will help as a stop-gap measure but banks must continue to invest in the mobile channel.

Traditional banking jobs will continue to shift from the front-line to the back-office as the physical infrastructure transforms and becomes more digital. However, advances in automation will require more contact center workers equipped with the latest tech and people skills to serve customers. Often held up as the standard for digital banking, the United Services Automobile Association (you know them as USAA), has the largest single-occupancy office building in the world, larger than the Pentagon and occupying 286 acres in San Antonio, and an efficiency ratio hovering around 63 percent (based on 9/30/16 Call Report data). All institutions will face the same challenges of reducing overhead while continuing to serve more customers remotely via digital channels…profitably. *Challenge Question: How Real-Time is Your Bank?*

Prediction #5 – Social Media Becomes Commoditized as Twitter Peaks Then Dies

After years of experimentation and attempting to define social media's true value, bankers will step back and take a fresh look at what has worked and what has not, tossing some long-held beliefs and refining banks' strategies.

Ask your younger employees and they will tell you, "Few care about your hashtag. It's so 2009." Search algorithms are more advanced now and don't need the direction/reference/index of a hashtag. Cool kids don't do hashtags. To use the millennial vernacular, "hashtags are just thirsty, bro."

Its blessing and its curse, the open nature of social media, makes it difficult to separate the wheat from the chaff. So much content is written for shock and lacks credibility, much like the trends we see in journalism. As a friend recently lamented, "Vine is gone but Mommy Bloggers are still around. Go figure."

LinkedIn remains the uncool brother of Facebook, trying hard to dress itself like its hipper sibling who suffers from its own challenges. Posting on LinkedIn is the corporate equivalent of the bathroom mirror selfie; a limited audience might like it but it fails the mass appeal test. In my opinion, LinkedIn has been 20% a business networking site and 80% a job recruiting site, and for most banks, simply a site where your customers can go to see where your former employees are working now. The value just hasn't been there.

Microsoft completed its acquisition of LinkedIn in December 2016. Expect Microsoft to turn it into a “Facebook for Business” model and an extension of Microsoft Office (just as Microsoft turned Lync and Skype into Skype for Business). The user interface will be streamlined and improved from its current mess of tiles and pop-ups.

Politics and popularity withstanding, Twitter will continue to be an unprofitable company in 2017, will fail to turn its activity into advertising revenue, and will be gone by 2020, supplanted by another app much like Facebook replaced MySpace. Twitter users grew by just 5% in 2016 compared to over 40% in 2013, a negative trend worth watching. Innovation and profitability do not always go hand in hand. Twitter will continue to be plagued by botnets creating fake users and followers producing spam. The microblog’s best hope is to find a purchaser before it’s too late.

YouTube will prosper and more banks will develop their YouTube channels to better educate their customer base and promote the bank’s brand.

What about Instagram, Google Plus, Pinterest, and Snapchat? Should bankers ignore social media? Not at all. Instead, recognize these channels for what they are and understand the fickle nature of their user bases and the fragility of their business models. Leverage social media to improve customer loyalty and engagement. Communicate with the customer via his/her channel of choice. Concentrate on a holistic digital marketing program that incorporates the digital channels that are significant and impactful. Focus on the brand, not the technology. Focus on the message, not the medium. Focus on the customer, not the gimmick. *Challenge Question: Does your bank have a Digital Marketing Plan?*

Prediction #6 – Mobile Will Get Worse Before It Gets Better

Online dating hasn’t necessarily improved the quality of relationships or reduced the divorce rate but it has made meeting people more efficient. Same with mobile banking services, oftentimes the service and features are still bad but the process is quicker. Fast but disappointing is still not the winning formula we seek.

Like many innovations that start out with a clean user interface, many mobile banking apps are now suffering from bloat. Jamming more features into an app causes it to eventually collapse from its own weight. Such is the case with many mobile banking apps where bankers are trying to shove PFM (Personal Financial Management) apps down the throats of consumers who just want a fast mobile transaction.

Much like their predecessor, Wesabe, we will see many PFM-only plays fail in 2017. PFM apps will give way to FGM (Financial Goal Management) apps as consumers seek a simpler solution that will track progress to paying off loans, saving for a down payment on a home, or establishing an emergency fund. No longer relegated to balance or fraud alerts, an SMS alert or push notification will provide positive affirmation to the customer that he or she is one step closer to goal attainment. The psychology of reward not the drudgery of accounting will be the sweet spot for PFM/FGM apps.

To track spending effectively, one needs to be able to flag the purchase and categorize the expense. Debits flagged as “Amazon” or “Target” are not very helpful as they don’t offer the granularity of the actual item purchased and its proper category. New apps will provide this detail.

As an iPhone user, may I use TouchID for mobile banking? Do I have to press a button to snap an image of a check or does your mobile deposit app support hovering over the check with no need to press? Banks must keep up with new device features expected by consumers or risk losing business to competition that keeps their apps updated.

As I predicted in 2015, wearables continue to disappoint and are more about fitness than finance. My Apple Watch lies currently uncharged and dormant in the depths of my laptop case. The “cool factor” is not enough to drive usage. As it competes with smartphone screen time, a wearable device must offer utility. *Challenge Question: Is Your Bank’s Mobile Offering Fresh or Stale?*

Prediction #7 – Artificial Intelligence (AI) Will Be the Next Big Thing

As if we needed more proof that Amazon is taking over the world, I was struck by two Amazonian items during a recent trip to Seattle. While visiting Pike Place Market, I watched a bright green “Amazon Fresh” delivery truck puttering through the neighborhood delivering products ranging from apples to office products. Later that day while having dinner near the University of Washington, I saw the first Amazon Books brick-and-mortar store. Amazon gets it. They do an incredible job of delivering outstanding service leveraging the digital and physical worlds.

Further proof, as predicted last year, is my assertion that personal digital assistants would continue their march into our households and offices and become permanent, revered fixtures in our lives. Artificial Intelligence (AI) in the form of robo-advisors, chatbots, and devices using Natural Language Processing (NLP) will assist customers and help streamline bank operations.

Amazon Echo sales doubled from 2015 to 2016. Known as "Alexa" by those of us who have this beautifully functional device, the number of "skills" that developers are building for this platform has risen by the thousands (1,000 in Q216 to 5,100 in Q416 according to Consumer Intelligence Research Partners, Statista DMO, Amazon.com, and NPD Group).

The addition of the Echo Dot has extended Alexa's reach into our homes and has expanded her functionality to additional rooms.

Wise bankers will pay attention to this trend and offer voice banking via the Amazon Echo and its handy brethren of personal digital assistants. *Challenge Question: "Alexa, why doesn't my bank offer its services through you?"*

Prediction #8 – FinTech Gets Dissected

While the number of true successes in fintech are few and far between, it behooves bankers to watch and learn from these innovators who may have more bravado than business savvy but are challenging the traditional banking model.

Despite the hype of disruption, the reality will be no different than what we've seen traditionally as most fintech companies will white-label their services for banks in a collaborative, not a disruptive, effort.

Bankers should delineate fintech as it relates to dozens of diversified financial services from Wealth Management to payments to traditional banking. Determine what fintech means to your bank, both as an opportunity and a threat.

Many banks have the technology to dazzle their customers but do not deploy it correctly. Other banks are limited by technology providers that are in harvest mode and have stopped innovating.

Just as online banking has evolved over the past 20 years, fintech progress will not be an overnight event. The fundamentals of strategic business planning still apply.

One of the darlings of the fintech movement, Moven has suffered from poor reviews (as of this writing, a 3.5 rating in the Apple App Store and a 3.8 in Google Play; compare that to 4.5 and 4.0, respectively, for Simple). A June 1, 2016 review by NerdWallet gave Moven lackluster ratings (3,5) for its checking account and customer experience, not exactly revolutionary reviews for what some cite as a harbinger for the fintech movement.

According to a Fortune/CB Insights study of 101 failed startup founders, the number one reason for failure was lack of a market need for the product. Stunning to me, many fintech players that fail often cite their lack of understanding that banking is a heavily regulated industry.

Wise bankers will enter fintech partnerships with clear goals and rock-solid agreements involving Intellectual Property (IP). These bankers will focus on the business case not the allure of easily replicated apps.

Beware the naked man who offers you the shirt off his back. Currently, most banks have something most fintechs do not…customers and profits. *Challenge Question: Will Your Bank Partner with FinTech Firms in 2017?*

Prediction #9 – Due Diligence Shines Light on Technology Service Providers

Bankers should turn their BS detectors on the highest setting for 2017 as providers are pressured to sell more services to a pool of increasingly fewer customers.

For banks to get leaner, more efficient business models, their providers must do the same. How can traditional technology providers continue to increase revenues in a shrinking market? Must Wall Street be satisfied on the backs of community bankers? This is an unsustainable business model. The solution? Expect major consolidation and downsizing at some of the largest technology service providers. Acquired systems will be sunset, data centers will be closed, divisions will be merged, and their related employees will be terminated. Those that have avoided this "nature of the acquisition beast" will succumb to reality in 2017.

Now is the time to review your bank's vendor contracts and plan strategically for the shifts that are bound to occur from consolidation. *Challenge Question: Does your bank require extensive documented due diligence for major technology decisions and purchases?*

Prediction #10 – Bankers Break in to Rescue Their Data from Data Center Dungeons

Cutting through the hype of fintech, bankers will demand better access to their data and require core processors to provide open APIs (Application Program Interfaces). This will allow bankers to hire developers who can access bank and customer data to present it in a manner that is efficient for the bank and convenient for the customer, most often through the mobile channel.

Banks that outsourced core processing may find such access more difficult than those at in-house banks where access can be local and more flexible. “Free and clear access to bank and customer data” is the new joint custody agreement all banks should have with their processors. *Challenge Question: How Easily and Effectively Can Your Bank Access its Critical Data and Turn it into Useful Information?*

Summary

In a world of flashy YouTube videos, conference showcases, and endless hype, I’m reminded of another Emerson quote: “Nothing astonishes men so much as common sense and plain dealing.” In 2017, bankers will slice through the many layers of marketing and take a common-sense approach to technology endeavors while not losing the spirit of innovation. Such plain dealing will be refreshing and good for the banking industry and in turn, the banking consumer.

Here’s to an exciting 2017 filled with challenges overcome and battles won through the application of common sense and American ingenuity.

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Launching A Mobile App: Keys to Success
By Jon Squire, CEO and founder of CardFree

Today's environment is very different from when Starbucks Mobile first launched many years ago. Most merchants now have some mobile presence and are probably in the process of evaluating or updating their mobile strategy to include new features such as order-ahead and mobile payments. Consumers are starting to expect merchants of all sizes to enable them to skip lines and order and pay wherever, whenever and with any form factor.

However, there are many considerations in developing a mobile commerce application. In addition to the significant investment of both time and money, the strategic question of whether your company needs an app must be answered.

Does My Company Need An App?

Stand-alone apps aren't for everyone, particularly highly-customized apps with higher development costs. Sometimes being part of an aggregate app (whether it's a community app, a "wallet" app or service-oriented app like "Order Ahead") is the logical choice for merchants. Consumers obviously have a limit to the number of apps they'll keep and there are lots of discouraging stats about app abandonment. To determine whether your organization should invest in a stand-alone app, first do a cost-benefit analysis.

Cost is easy to understand. Benefit (i.e., ROI) can be a bit murkier, particularly the adoption part of the equation. It's no secret consumers will not keep an app on their phone for every merchant they visit. At the end of the day it comes down to loyalty, frequency, and value proposition to the customer. If someone visits your shop often, whether in absolute or relative terms, and there is a compelling reason to use the app, then consumers will download it. The key to success is to ensure your app is solving a problem (skip the line, pay at table, e.g.) or providing measurable value (rewards, offers, e.g.) for your customers.

If after looking at the cost-benefit analysis, you're still unsure which path makes sense for your organization, consider the following factors:

- Brand: Your brand will be secondary in an aggregate app. If promoting your unique brand is critical to your growth, an aggregate app will not support this strategy.

- Data: The types of data made available via an aggregate app will be limited. Consider the data you need to grow your business, and ensure an aggregate app will provide access to that information. Data obtained from stand-alone apps is often used to help merchants better understand their customers and their spending habits.
- Consumer Experience: Finally, it is important to evaluate the end-user's experience when considering an aggregate app. This will be key in determining whether consumers ultimately use the app.

For many merchants, leveraging both strategies will be the ideal strategy. Launching a stand-alone app does not preclude an organization from also participating in valuable aggregate apps. Many companies will benefit from having a presence in community, aggregate apps, as well as maintaining a self-branded, stand-alone app. Aggregator apps are great for low frequency customers and exposing your brand to new customers; a branded app is a great way to engage with your customers and control the experience.

Separate App for Loyalty and Payments?

Once an organization determines launching a stand-alone app is the best strategy, surprisingly, many organizations consider doing separate apps for loyalty and payments. This is NEVER good, but is a common mistake. Having more than one app for your brand does nothing but confuse the consumer. Instead, focus on supporting one app to ensure a superior customer experience.

Two successful examples of merchant apps are Starbucks and Dunkin' Donuts. Both of these have combined offers, ordering, payments and loyalty into one app. As a result, they have tens of millions of users that regularly rely on the app. This is also the reason that merchant apps continue to be more successful than other "wallet" apps that only offer the consumer payment options. Wallets are not solving a consumer problem.

Remember the demise of the Square Wallet? Square thought making payments easier would be enough. It wasn't. They even had Starbucks as a partner in their wallet but payment wasn't integrated with offers and rewards so consumers had no reason to stop using the Starbucks Mobile app. Most consumers want offers and rewards at their favorite merchants, even millennials.

In addition to integrating payments with loyalty into one app, streamlining everything into one seamless transaction is paramount to providing your customers with a truly unmatched experience. This is an area most organizations overlook; however, it is very important to increasing consumer adoption. For example, consider a consumer who has a coupon and wants to receive loyalty points for their transaction. In many cases, this requires two to three scans including the offer, the loyalty card and the payment card. This is a hassle for the consumer, and it slows down lines, which can affect business in peak hours.

In summary, whether your organization decides to launch a stand-alone app, or simply join an aggregate app, the customer experience will ultimately dictate future success. Being open to customer feedback, keeping the design simple and streamlining the transaction process will be important to ensuring customers not only download your app, but continue to also use it on a regular basis.

CARDFREE was founded in 2012 to fill the gap in the marketplace for an integrated commerce platform for large merchants. Our founding members are the team that created the original Starbucks Mobile application including the product manager and tech lead from Starbucks as well as the business leads from the vendor that developed the application for Starbucks. Our team was also responsible for Dunkin' Donuts Mobile and Taco Bell's mobile ordering application. Together, these three merchant apps have over 32 million downloads and account for millions of transactions every week.

Mortgage Lending Goes Digital
By Jeff Shood, CEO, Intuvo

Financial institutions are facing rising competition from outside the traditional banking industry. Coupled with this consumers are looking for the best experience across the entire digital playing field, whether it's with a social media channel or their mobile banking app. While mortgage lending has been moving toward an electronic experience for decades, in 2017 there will be a major shift in the way people engage in the home buying process as loans are taken off paper and moved into the digital space.

Hybrid Digital

Unlike other industries and markets, home buyers do not want an entirely digital experience. Buying a house is one of the biggest financial decisions most people make. As such, they are not looking for a completely hands off experience, and are seeking a more hybrid experience, moving between a digital and personalized experience at the times most convenient to them. All parts of the origination process can dramatically benefit from being digitized. The overarching theme, however, is integration between online access, an informed loan advisor and back office technologies in order to create a seamless and efficient borrower experience.

This is a very different model than most people used even five years ago as well as the first visions of an e-mortgage. The entire e-mortgage trend has moved from an end-to-end approach to a flexible and integrated methodology. Consumers expect to be able to start the process online by educating themselves about the home buying process and then ideally apply for a loan and manage it from that point forward from a smart phone device. Interaction and engagement throughout the process are crucial components to achieving success. The loan origination system should not only be synced with the mobile app platform, but with every piece of communication that originates from the financial institution. This way, when a homebuyer calls a loan officer with questions or concerns, that loan officer will have the most complete and useful information in order to guide the process.

Communication is Key

Part of making this approach lasting and successful is being able to stay in touch with borrowers in a very timely and personal way. One way to tackle this is automated loan status updates at milestones throughout the mortgage process. Most importantly, the financial institution must continue to educate the borrower on the process so they can easily move through the different stages. Credit unions have been able to increase their net promoter scores by more than 20 percent when they implement these types of automated communications, while simultaneously reducing staff costs because borrowers and key partners such as Realtors are more informed.

With this digital communication avenue comes the need for a new, more personal kind of marketing. With interest rates on the rise, lenders will have to focus on the shifting purchase market in order to sustain growth. A very important segment of this purchase market will be younger, first-time homebuyers, many of whom have been delaying a home purchase due to evolving lifestyle choices.

The Trusted Advisor

In order for millennials to want work with you, financial institutions will need to build a lot of trust and a strong online presence. Only then are these first-time, tech savvy homebuyers going to contact you. Financial institutions that are used to a standard or traditional way of communicating are being completely upended because today's consumer wants to conduct business when, where and how they want to. Financial institutions need to insert themselves earlier into the home buying process by focusing on educating borrowers on the benefits of homeownership and helping them understand the risks, benefits and timing of the market.

The abrupt aggressive sales tactic is dying, and in its place is an informative and educational long-term method that looks more like a content marketing strategy than traditional sales culture. With the availability of micro-data, such as specific demographic and transactional information, financial institutions can leverage data to provide consumers with a customized experience at the right time. The key is to provide value and exceptional service in a responsible way.

With the shift toward a purchase market, homes are so in demand, especially on the West Coast, that most homes receive three to four offers. On average, it now takes six to nine months from pre-approval to the borrower's actual closing. This means is the average loan officer now has a sales funnel to manage that is more than double that of just a few years ago. Consequently, it takes longer to close those deals and more work to nurture and sustain the relationship.

Investments in customer relationship management technologies, social media communications platforms and automated communications are all on the rise in order to help loan officers maintain relationships throughout this lengthy process. Five years ago it took 30 days from start to finish. Now, it may take two to three years to cultivate a relationship because it's not just about rates anymore. Therefore, building a trusted relationship through long-term marketing is now the standard to achieving success.

All of these areas point to the effective use of digital technology for success. Financial institutions would do well to reevaluate their processes including marketing, communication and sales culture in order to generate a consistent, trusted message early in the home buying process. These efforts will allow institutions to remain competitive and create a more seamless experience.

Intuvo, a CU Direct company, provides financial institutions with the tools they need to increase loan volume by combining marketing automation, data analytics, content and client relationship management (CRM) into one platform. This web-based marketing and lead management system syncs to a loan origination system (LOS) to identify offers based on real-time activity, then uses event triggers to executive more than 40 fully customizable campaigns. Unlike traditional CRM and marketing automation platforms, Intuvo is customized and deployed in as little as 30 days. For more information about the company, contact Jeff Shood at jeff@intuvo.com.

Human Conversations Drive Value in Branches and Contact Centers
Empowering and supporting your frontline staff to have better conversations quickly transforms customer relationships and delivers sustainable value.
By Jim Callan, CEO of Econiq

Whether reading your online newsfeed or simply just watching fellow commuters on your morning ride to work, you might be forgiven for thinking that everyone – and everything – has gone digital.

If you believe the hype, human-to-machine channels such as IVR, chatbots and AI-powered systems have fundamentally changed the way customers want to communicate with their banks. But industry research supported by our own experience shows that nothing could be further from the truth. In fact, human-to-human conversations in branches and contact centers are more important than ever. What's more, banks are empowering their frontline staff to hold better conversations – quickly transforming customer relationships and in turn, realizing the business benefits of having meaningful conversations with their customers.

It's Better to Talk

Accenture's 2016 Annual Global Consumer Pulse Survey[i], reveals that 83% of U.S. consumers prefer dealing with human beings over digital channels to solve customer service issues; and 53% of consumers have switched providers because of customer service issues.

Gallup's ground-breaking 2013 research [ii](see table below) into customer banking preferences discovered that for each of the following services, customers overwhelmingly prefer human-to-human channels (both branches and speaking over the phone to contact center staff) to:

- **Open or close an account** – Branch 81%, Contact Center 7%;
- **Apply for a loan** – Branch 83%, Contact Center 7%;
- **Seek financial advice** – Branch 79%, Contact Center 11%;
- **Report a problem or annoyance** – Branch 50%, Contact Center 39%; and
- **Inquire about a fee or service charge** – Branch 46%, Contact Center 41%.

Unsurprisingly, the Gallup survey also found that most customers prefer digital channels such as online and mobile banking for more routine services such as receiving statements, paying bills and receiving alerts.

Gallup's more recent 2016 research [iii]extends this theme and reveals that for bank customers, positive channel experiences are a prerequisite for high customer engagement. Gallup concluded that engaging banking customers through a compelling brand, world-class products and effective problem resolution requires placing talented staff members in human channels where ***customers want to have personal conversations around complex and emotional banking needs***, i.e., seeking financial advice, opening accounts, and/or purchasing new products.

Gallup's research also details transformational benefits for banks who engage effectively across human channels. Highly-engaged customers, compared with customers who are not "very satisfied" with all channels they use:

- Put seven percentage points more of their total share of deposits and investments in the bank;
- Are more than *nine times* more likely to say they are extremely likely to use their primary bank the next time they need additional financial services; and
- Are 65% more likely to have opened new bank accounts or signed up for new bank services based on their conversations with a bank employee.

And it's not just true for 'Baby-Boomers' or 'Gen-X'. Millennials, long assumed to be digitally focused, show strong preferences for human conversations when it comes to financial discussions and decisions. Research from TD Bank[iv] found that more than half of responding millennials are visiting their bank branch for information. Similarly, an Aite Group report [v], shows that almost three quarters of Millennials applied for a checking account in a branch, instead of using digital channels. This was higher than any other generation except for seniors.

And of course, the paradox is that highly engaged banking customers who seek quality human conversations will be the first to defect to alternative banks if their needs are not met

Key Conversation Behaviours that Transform Customer Relationships

Lauri Giesen's recent article in *BAI Banking Strategies:* 'Futuristic branches depend on the future skills of employees[vi]' echoes Gallup's findings around empowering branch and contact center employees to have better conversations with their customers. Giesen believes that “branch employees must transform from traditional tellers to ‘universal bankers’ who help customers plan their financial futures—and direct them to bank products that fit their individual needs.”

To go one step further, we advise banks to support their employees to have better customer conversations. Banks need to seamlessly add a conversation layer using “sense and respond” technology to any core system or desktop environment. A conversation layer that will streamline processes, highlight and captures revenue opportunities, reinforce compliance, and build customer loyalty.

Econiq’s approach of using colors to simplify and guide complex conversations and help employees focus on the key conversation behaviors that result in success. Observers should not be surprised if the following conversation behaviors seem familiar as they are likely the very behaviors exhibited by your best frontline performers. ***The problem, as our research has shown, is that less than 20% of frontline staff consistently exhibit these behaviors.*** The question then becomes, how to get everyone behaving as well as you best performer *all the time*.

Color	Key Conversation Behaviors	Description
	Active Listening	Fulfil the service and make time for the conversation – eliminate system hopping, duplicate data entry and manual processes that are time killers and conversation distractions. Generate time for the frontline staff member to actively engage with the customer and focus on their needs
	Keeping the Conversation Safe	Reinforce compliance and system adherence – protect the customer, the brand and the employee throughout the conversation
	Building Rapport	This is where the best performers display real ‘sales smarts’. Consistently build rapport with the customer and spot revenue generating opportunities. Seamlessly execute customer specific marketing campaigns.
	Understanding the Customer	Provide a superior customer experience by recognizing and responding to strategically important customer information revealed by the customer during the conversation or previously captured on different systems. Then share that information across other channels and conversations so that it enhances the customer journey and supports your brand.

A conversation layer approach also includes capturing a colour Conversation Behavior Transcript for every conversation. This is an audit trail of the sequence, timing, events, behaviors and outcomes of every customer conversation. Individually and collectively these transcripts are sent to a central location where they can be used by operations management and coaches to craft conversations and coach behaviors so that every staff member can now perform to the same high standards as the best performer. Similarly, the Conversation Behavior Transcripts deliver executive visibility into every frontline conversation delivering at-a-glance actionable intelligence on customers, competitors, products and markets as well as a precise picture in color of the value generated from every conversation.

The Channels that Banking Customers Prefer

	Human-to Human Channels		Mixed Channels			
	In Person at a Branch	Over the Phone	ATM	Mail	Chat	Automated Voice Response
Percentage of Customer who prefer using channel to:						
Open or close an account	81%	7%	–	1%	–	–
Apply for a loan	83%	7%	–	–	–	–
Seek financial advice	79%	11%	–	2%	–	–
Report a problem or annoyance	50%	39%	–	–	–	1%
Inquire about a fee or service charge	46%	41%	–	–	–	1%
Make a deposit	64%	1%	19%	2%	–	1%
Withdraw money	47%	1%	47%	1%	–	–
Learn about products and services	37%	10%	–	13%	–	–
Request a loan payoff amount	27%	24%	–	6%	–	2%
Receive statements	4%	1%	–	56%	–	–
Balance inquiry, transaction history, etc.	30%	17%	2%	3%	–	3%
Transfer funds between accounts	32%	9%	5%	–	–	2%
Pay bills	16%	3%	1%	17%	–	2%
Receive alerts	5%	7%	–	29%	–	1%

Channel preferred by >50% of customers

Source: Gallup - How Customers Interact With Their Banks. 2013

Jim Callan can be reached at jcallan@econiq.com or by visiting www.econiq.com for more information on empowering and supporting your frontline staff to have better conversations quickly transforming customer relationships and delivering sustainable value.

About Econiq (www.econiq.com)

The Conversation Hub from Econiq transforms the relationship with your customer through quality human-to-human conversations.

The Conversation Hub adds a conversation layer to any desktop environment, enabling every frontline user to consistently deliver the benefits of having great conversations and experiences with customers.

Using award willing sense and respond technology The Conversation Hub streamlines processes, highlights and captures revenue opportunities, reinforces compliance, and builds customer loyalty.

Econiq's innovative approach of using colors to simplify and guide complex conversations, while at the same time capturing in color a record of every conversation, delivers unique conversation behavior intelligence.

Working with an elite group of management consultancies Econiq is already live and delivering significant value from human to human customer conversations in branches and contact centers for several American and European Banks and Insurance companies.

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[i] Accenture - Digital Disconnect in Customer Engagement - https://www.accenture.com/ie-en/insight-digital-disconnect-customer-engagement

[ii] Gallup - How Customers Interact with their Banks - http://www.gallup.com/businessjournal/162107/customers-interact-banks.aspx

[iii] Gallup - Bank Channel Experiences Make or Break Customer Engagement - http://www.gallup.com/businessjournal/197363/bank-channel-experiences-break-customer-engagement.aspx

[iv] TD Bank Financial Education Survey Finds Millennials are Cautious Banking Customers - http://www.prnewswire.com/news-releases/td-bank-financial-education-survey-finds-millennials-are-cautious-banking-customers-249275741.html

[v] Aite Group - U.S. Trends in Checking Account Opening - http://aitegroup.com/report/us-trends-checking-account-opening

[vivi] BAI Banking Strategies - Futuristic branches depend on the future skills of employees - https://www.bai.org/banking-strategies/article-detail/futuristic-branches-depend-on-the-future-skills-of-employees