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Technology, Payments, & Cybersecurity

Instructor

Jimmy Sawyers

Chairman & Co-Founder, Sawyers & Jacobs LLC

Virginia Bankers School of Bank Management
2022 Session

*University of Virginia, Darden School of Business
Charlottesville, Virginia*

Today's Session

- Tech Trends
 - The Tech Kitchen
 - Fintech Update
- Digital Strategies (Mobile & Payments)
- Cybersecurity Threats

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Student Tech Topic Requests

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Tech Trends

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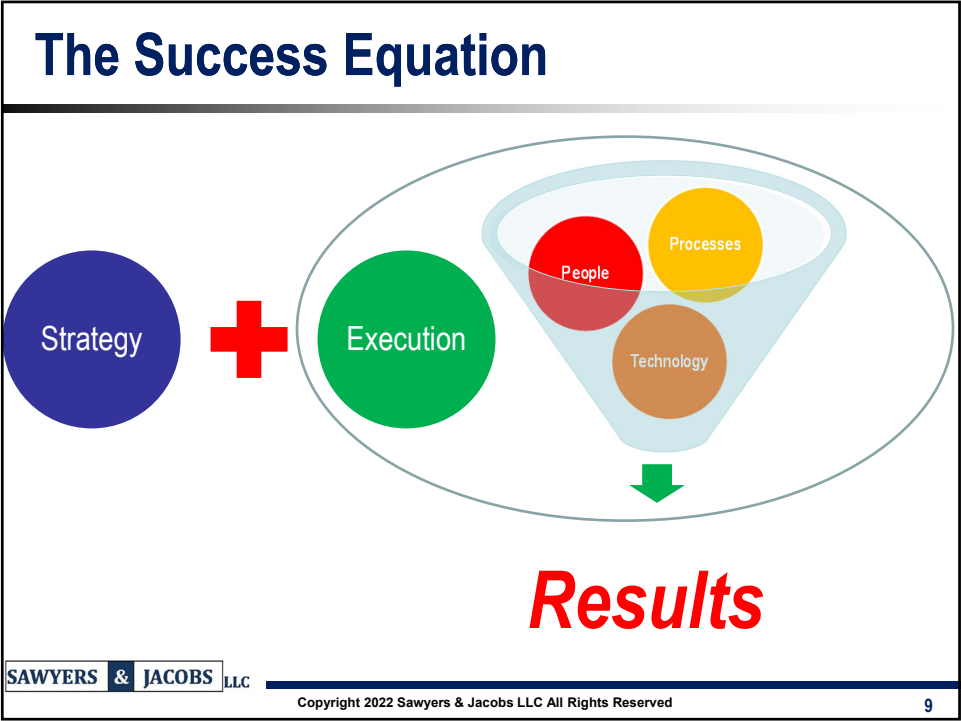
“The purpose of a business is to create and keep a customer.”

- Peter Drucker

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- **Strategy** is the most important function firms perform, as it is about the decisions their leadership must make regarding the business they want to be in and the business they want to be out of; the business opportunities they want to pursue and the business opportunities they want to forgo—choices that can make or break the firm for years to come.

Panos Mourdoukoutas, Forbes, Oct. 10, 2011



Bank Technology Strategy

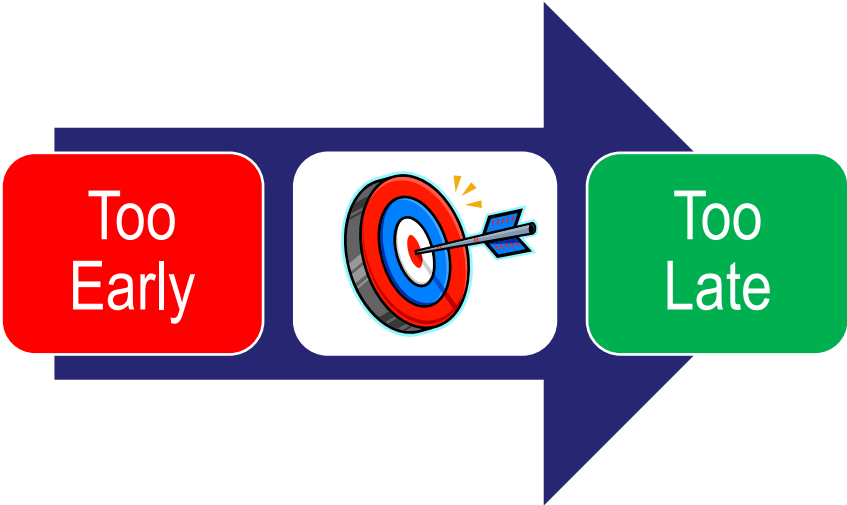
- How your bank employs technology as a means to an end in accomplishing its strategic business goals.
- Game plan; road map; blueprint.
- Allocating limited resources and picking one's battles.

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The Technology Target



Strategic Planning

- 1. Where you were.
- 2. Where you are now.
- 3. Where you are going.
- 4. How you get there.

*If you don't know where
you are going, any
road will get you
there.* - Lewis Carroll



Four Questions

1. Where were we?
2. Where are we?
3. Where do we want to go?
4. How do we get there?

The Strategic Application of Technology

- IT & Operations people must think strategically
- Strategic technology plans keep projects on course, allocate limited resources, and establish accountability
- Benchmark thyself
- Inward focus on productivity, efficiency, and decision-making ability
- *“Do not go where the path may lead, go instead where there is no path and leave a trail.”* – Ralph Waldo Emerson

Questions for Today's Session

- Which new tech solutions have found a market and which ones are tanking, or have tanked, and why?
- Which payments innovations are worth implementing?
- How have people become more critical to digital services?
- How can we practice cybersecurity preparedness without locking the bank down so tightly that no one wants to work there, and customers don't want to do business with you?

“Truth is like the sun. You can shut it out for a time, but it ain’t going away.”

- Elvis Presley

Top Ten Tech Predictions for 2022

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Top Ten Tech Predictions

1. Core Providers Become More Valued Yet More Scrutinized
2. Bankers Stop Obsessing Over Fintechs and Start Beating Them at Their Own Game
3. A Renewed Focus on Efficiency Drives Bankers
4. Bankers Learn to Balance Cybersecurity Controls as a Service Business Should
5. Banking in the Metaverse Emerges

Top Ten Tech Predictions

- 6. The Payments Franchise Is Protected at All Costs
- 7. Debit Card Programs Become More Effective
- 8. The Death of Brick and Mortar Proves Greatly Exaggerated
- 9. Bankers Learn the Power of Three as in the Three Phases of Digital Adoption
- 10. Customer Relationships Are Built Channel by Channel and Dollar by Dollar

What does
“technology”
mean to your
bank?

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The Tech Kitchen



The Tech Kitchen

- Plumbing
- Appliances
- Cabinets
- Food
- Recipes
- Cooks
- The Dinner Table

The Tech Kitchen

- Plumbing
 - Network infrastructure
 - Hardware
 - Circuits/Bandwidth
- Appliances
 - The application software that runs the bank (e.g., core, loan origination, mobile banking, online banking)
- Cabinets
 - Data storage

The Tech Kitchen

- Food
 - Customer and bank information
- Recipes
 - Business processes
- Cooks
 - Tech & Ops employees
- The Dinner Table
 - Customer experience
 - Service delivery
 - Financial performance

Changes in Attitude 2020-2022

- Less reluctance to deploy laptops
- More open to allow remote access to the bank's network
- More pressure applied to IT staff to support mobile employees instead of stifling productivity with unnecessary controls
- Willingness to embrace digital services and remove restrictions that made the customer experience difficult

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“Just because an application runs on a computer does not mean it should be controlled and/or supported by a bank’s IT staff .”
- Jimmy Sawyers

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Why?

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"It is important for the common good to foster individuality; for only the individual can produce the new ideas which the community needs for its continuous improvement and requirements – indeed, to avoid sterility and petrification."

- Albert Einstein

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Respecting a Traditional Brand While Embracing Progress and Change

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Pepsico

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Procter & Gamble

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Kellogg's



Anheuser-Busch InBev



Anheuser-Busch InBev



The Sawyers & Jacobs Brands



Lighting the Path to High Performance



Your Hero in Tech



Protect the Pack



Watch Risk Like a Hawk

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#1
Core Providers
Become More Valued
Yet More Scrutinized

The \$5 million golf match



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The \$5 million golf match

- Once every five years, would you play a round of golf with a professional golfer where the loser pays \$5 million to the winner?
- So, why do bankers do the equivalent with their core provider evaluations?
- Core providers play this game every day...and they play it well.
- Most bankers have not played the game in at least five years, most often 15 years.

New Cores, Sasquatch, and the Loch Ness Monster

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“Most men seem to live according to sense rather than reason.”

- Thomas Aquinas

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Documented Due Diligence

- Require a formal, structured, documented process for core evaluation
- Include representation from the key areas of the bank (i.e., don't leave this decision just to the IT staff)
- Ensure that the core evaluation team presents their documentation and recommendations to you, the directorate
- Ask the tough questions; project costs; negotiate favorable contract terms

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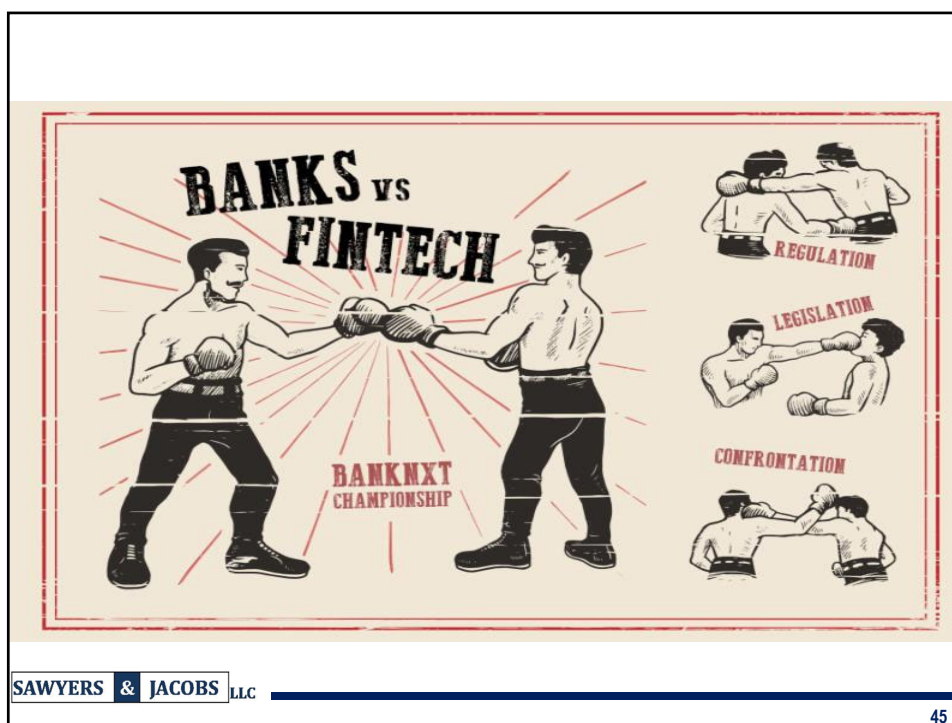
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#2
Bankers Stop Obsessing
Over Fintechs and Start
Beating Them at Their
Own Game

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Should bankers worry about
FinTech companies boasting
to reinvent banking with
disruptive technology?

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Bank Killers

- Losing the payments battle (e.g., not being the credit card of choice loaded in user profiles for online purchases)
- Erecting obstacles for customers (e.g., ridiculous overcompliance and misguided security measures)
- Not being responsive to customer requests (e.g., raising mobile deposit limits)
- Not planning for or adapting to technological change
- Not asking “Why not?”

Likely Reasons for Bank Survival

- You have...
 - CUSTOMERS!
 - Checking Accounts (the deposit relationship)
 - Experience
 - History
 - An understanding of the industry
 - The gift of speaking the language of banking
 - The ability to navigate and adapt to regulation
 - The trust of your community
 - The infrastructure (brick and mortar and tech)

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Fintech Fails

- The pandemic should have been a golden opportunity for fintechs to show their stuff
- Many were clearly unprepared
- Many have found this a good time to sell
- The pandemic has shone a bright light on high performance as well as low performance

The guy telling you how to run your American community bank the past eight years



Ahmed Alenazi, CEO of STC Pay, and Brett King, founder and CEO of Moven, sign their partnership agreement.

Shutting Down

Moven to wind down consumer unit as spin-off funding withdrawn

25 March 2020

 4

 4

 0



Moven is to shut down its direct-to-consumer PFM offering following the withdrawal of multi-year funding as a result of market conditions.

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“Moven” on!



SOLUTIONS

CUSTOMERS

COMPANY

NEWS

DEMO

CONTACT US

We’re working hard to bring a whole new digital experience to Moven.com.

Stay tuned for an exciting new website launching in September 2020.



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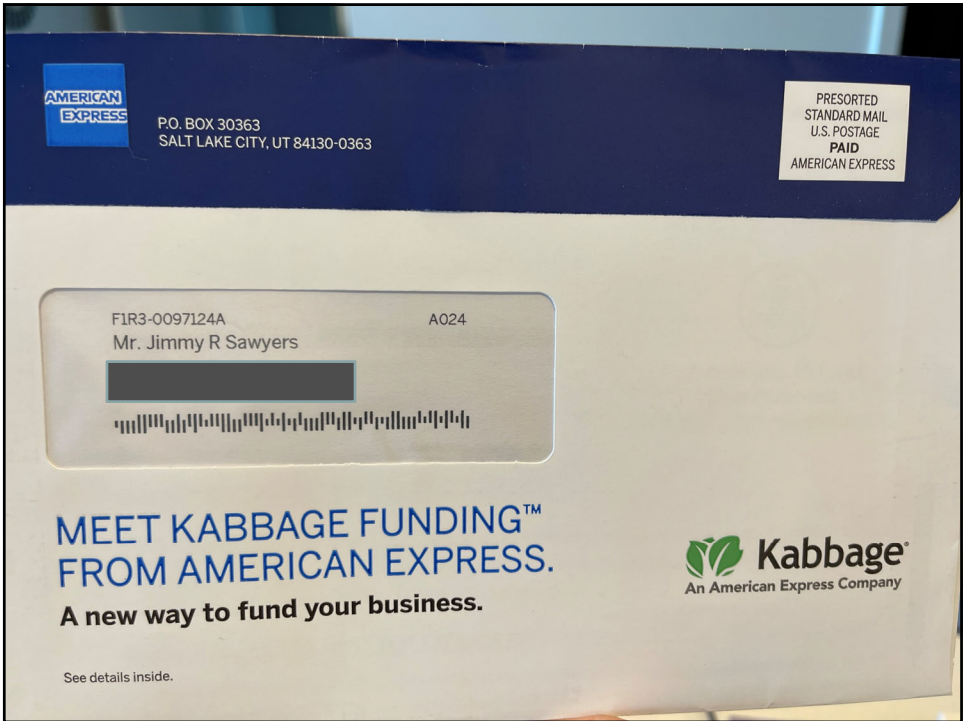
Amex-Kabbage Deal

- American Express acquires Kabbage
- Reported value of acquisition is \$850 million
- Kabbage had raised nearly \$990 million in debt and equity
- “Kabbage’s pre-existing loan portfolio is not included in the purchase agreement”



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Fintechs have a fraud problem with their Covid relief loans



By Matt Egan, CNN Business
Updated 8:18 PM ET, Tue August 17, 2021

“Nine of the top ten PPP lenders with the highest rate of suspicious loans are fintechs — and the remaining one acts like a fintech company, according to the study by researchers at the McCombs School of Business at the University of Texas at Austin.”

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CURRENT ALERTS FOR THIS BUSINESS

Pattern of Complaints:

BBB files indicate K-Servicing has a pattern of complaint concerning service issues.

Specifically, complaints allege K-Servicing is not processing PPP loan forgiveness applications on time. Since the due date for these application submissions is ...

[Read More](#)

Complaints

Not BBB Accredited

K Servicing

[View full profile >](#)

Need to file a complaint? BBB is here to help. We'll guide you through the process.

File a Complaint

925B Peachtree St NE PMB 383
Atlanta, GA 30309-3918
 <http://www.kabbage.com>
 [Email this Business](#)
 (855) 669-1549

2,156 Complaints

Show All Complaints

Sort By Most Recent

Simple Shuttered

- BBVA bought Simple but has discontinued the mobile bank
- In 2014, BBVA paid \$117 million for Simple
- Simple claimed to have 100,000 customers at the time but some estimate only around 33,000 were active
- PNC's acquisition of BBVA's US subsidiary drove the shutdown

Source: fintechfutures.com; Jan 11, 2021

LendingClub Acquires Boston Bank

FINANCIAL SERVICES & REAL ESTATE FEBRUARY 18, 2020 / 5:55 PM / UPDATED 8 MONTHS AGO

LendingClub to acquire Radius Bank for \$185 million

By Anna Irrera, Abhishek Manikandan

3 MIN READ



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The End of a Relationship

Varo Account Features

ATM

55,000+ fee-free Allpoint® ATMs

Fees

No banking fees ever

Payday

2

Payday up to 2 days early with direct deposit²


Automatic savings tools with a Varo Savings Account

Activate My Card

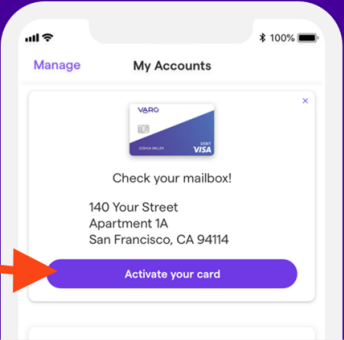
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Varo Reminders



Activate your debit card in the app.



James—if making a phone call has kept you from activating your Varo Visa® Debit Card, we have good news for you. Now, you can easily activate your card in the app.










Just open your Varo app and tap **Activate your card**. Once you do, you'll see what it's like to have a bank account that actually helps.

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Email Marketing by Varo

Varo	 more way to stay on top of your money	Sun 7/28/2019 2:51 PM
Varo	Updates to the Varo Bank Account Agreement <https://appboy-images.com/appboy/communication/assets/image_assets/images/5ce8528a7dea0d72fe7c3a71/original.png?1558729354>	Thu 7/25/2019 4:31 PM
Varo	We made activating your card really easy It's best to read this email on your phone.	Thu 7/18/2019 7:30 PM
Varo	Spread the love of a faster payday 	Wed 7/17/2019 1:45 PM
Varo	Refer a friend and earn \$100  Learn how <https://appboy-images.com/appboy/communication/assets/image_assets/images/5ce8528a7dea0d72fe7c3a71/original.png?1558729354>	Wed 7/3/2019 5:36 PM
Varo	Don't miss out on extra cash!  Learn how to earn <https://appboy-images.com/appboy/communication/assets/image_assets/images/5ce8528a7dea0d72fe7c3a71/original.png?1558729354>	Tue 7/2/2019 1:45 PM
Varo	About the bank holiday on July 4th <https://appboy-images.com/appboy/communication/assets/image_assets/images/5ce8528a7dea0d72fe7c3a71/original.png?1558729354>	Mon 7/1/2019 7:31 PM
Varo	 more way to stay on top of your money	Thu 6/27/2019 8:55 AM
Varo	 Earn up to \$500 for sharing Varo  Learn how! <https://appboy-images.com/appboy/communication/assets/image_assets/images/5ca503a6d5b6820eac1f2686/original.png?1554318246>	Wed 6/19/2019 4:24 PM
Varo	 Earn extra cash  Learn how <https://appboy-images.com/appboy/communication/assets/image_assets/images/5ce8528a7dea0d72fe7c3a71/original.png?1558729354>	Tue 6/18/2019 1:45 PM


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Varo Incentives

Share Varo. Earn \$100.
Save a friend from bank fees.



Step 1: Copy this link to share Varo

<http://refer.varomoney.com/qcvHC>



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Varo

Hey James,

Thanks for being a member of the Varo community.

We noticed you haven't used your Varo Bank Account and/or Savings Account lately. If you'd like to keep your account(s) open, please [make a deposit](#) into either account by August 13, 2020.

Otherwise, we'll be closing your account(s) on August 14, 2020. No need to call—we'll take care of it. If you have a balance, we'll mail you a refund check at no charge. You can make sure your mailing address is up to date in the Varo app by tapping **Settings > Personal info**.

Thanks,
The Varo Team

See our account agreements [here](#).

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Varo

Hi James,

We sent you an email on July 13, 2020 asking you to make a deposit into your account by August 12, 2020 to keep it open. Since you didn't make a deposit, your account is now closed.

You joined the Varo community early on, and we'd love to stay in touch. When the new Varo Bank app is ready, you'll be the first to know (early access!) and it'll be free for you to apply.

We'll be here to serve you even better.

See you then,
The Varo Team

Varo Money, Inc. sent you this email.

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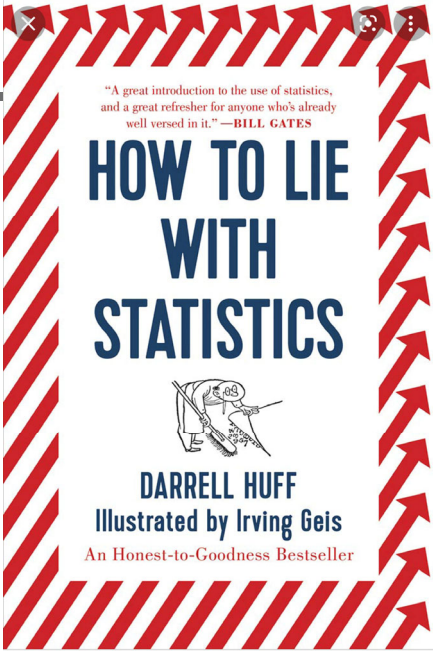
Neobank Chime

- Chime is not a bank
- The California Department of Financial Protection and Innovation required Chime to stop calling itself a “bank”
- Now calls itself a “consumer software company”
- The Bancorp Bank and Stride Bank provide Chime’s core processing and debit card capabilities
- Claims to have 12 million customers

chime


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"A great introduction to the use of statistics,
and a great refresher for anyone who's already
well versed in it." —BILL GATES

HOW TO LIE WITH STATISTICS



DARRELL HUFF
Illustrated by Irving Geis
An Honest-to-Goodness Bestseller

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***“There is nothing a fintech is
doing that a community bank
can’t do with the right people,
processes, and technology in
place.”***

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#3

A Renewed Focus on Efficiency Drives Bankers

Three Little Pigs to Slaughter

- 1. P2P (Person-to-Person) Payments
- 2. PFM (Personal Financial Management) Applications
- 3. Automated Vendor Management Systems

The P2P Payment Leaders

- Square Cash App
- PayPal's Venmo
- Both have amassed roughly 60 million users
- Should your bank fight this battle with a lesser P2P payment solution?
- Or, should your bank just be Square CashApp- and Venmo-friendly?

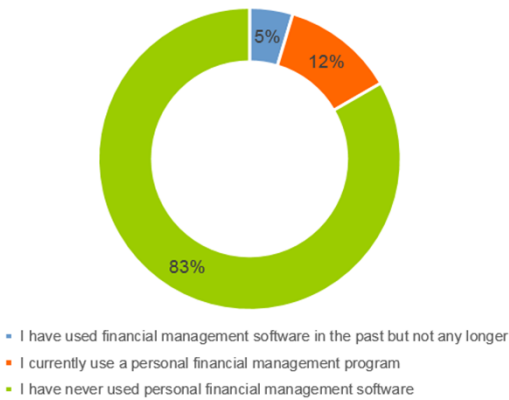


P2P Payments: DIY or Partner?

- Comparing PayPal, Venmo, Square Cash App, and Zelle (and now, Chuck)
- Customer expectations
- Opportunity or threat to the checking relationship?
- Fraud concerns
- Risk-Reward of implementing a problematic solution

PFM Penetration

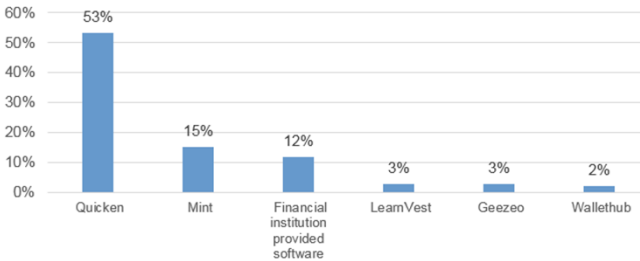
PERSONAL FINANCIAL MANAGEMENT (PFM) USAGE



Source: Raddon Research Insights

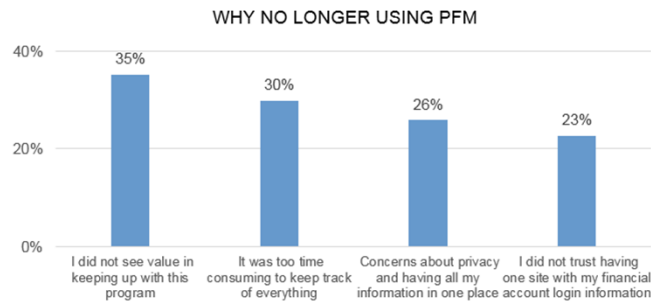
Beating Intuit

CURRENT PFM SOFTWARE IN USE



Source: Raddon Research Insights

PFM Sustainability



Source: Raddon Research Insights

Vendor Management

- In our work with banks on client engagements, in banking schools, and at CEO and CIO forums, we hear a consistent message regarding banks' vendor management challenges.
- Bankers are fed up with costly systems that require constant administration yet yielded weak results.
- "Vendor Management" is out of control at many banks, often requiring a full FTE or more.
- If your bank is spending more than 40 labor hours on Vendor Management annually, you are doing it wrong.

Banker Frustration with Their Current Programs

- “We were sold an automated system that was supposed to make this easier and it just made it harder.”
- “We had to hire a full-time person just to feed the new automated system, so it has actually increased our overhead and made the process inefficient.”
- “The vendor is contacting our CPA firm and law firm directly to harass them for financials and proof of insurance.”
- “We get no exam support or consultation from the vendor.”
- “Our employees are doing all the work. The system is just an empty bucket on the internet that we have to fill.”

Banker Frustration with Their Current Programs

- “Ownership changed and we no longer hear from the vendor’s people.”
- “The system interface changed, and we don’t like it.”
- “The vendor has no expertise in evaluating technology and advising on pricing and contract negotiations.”
- “We now appear to be paying them to do our own work.”
- “We just don’t have confidence in the system or the people who sold it to us.”

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#4

**Bankers Learn to
Balance Cybersecurity
Controls as a Service
Business Should**

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“We cannot lock down the bank so tightly that our employees don’t want to work for us...and customers don’t want to do business with us. There must be a balance of the risk-reward proposition that is the very foundation of banking.”

- Jimmy Sawyers

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Bank or Nuclear Facility?



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Service Business or Military Installation?



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**But we're getting
great IT exam
ratings from the
regulators!**

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So What?!

That is a low bar.

**Some bankers are playing
tee-ball while hackers are
playing at the MLB level.**

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“Because innovation always outpaces regulation by at least two years, waiting on a piece of paper from the government to tell your bank what to do regarding cybersecurity is a surefire recipe for disaster.”

- Jimmy Sawyers

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Board Responsibilities

“The board and management should understand and support information security and provide appropriate resources for developing, implementing, and maintaining the information security program. The result of this understanding and support is a program in which management and employees are committed to integrating the program into the institution’s lines of business, support functions, and third-party management program.”

Source: FFIEC InfoSec Handbook-9/16

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Seven Questions to Ask Your Bank

Seven Questions

1. Who, at my bank, is getting the fraud alerts this weekend for:

– Debit cards?

– Credit cards?

– ATM activity?

– Online banking?

– Mobile banking?

– Bill pay?

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Seven Questions

2. If we have an intruder on our internal network, how would we know, who is watching that activity, who would get that alert, and what action would be taken?
3. Can our core banking system be accessed by our users outside of normal banking hours and can debits and credits be entered? Note: This does not include real-time interfaces such as online banking and ATMs which must poll the core.

Seven Questions

4. Are we following our wire transfer and ACH origination policies, procedures, and insurance requirements to mitigate the risk of fraud, today and every day?
5. Have we implemented multifactor authentication for key applications (including our email systems to mitigate the risk of Business Email Compromise (BEC) incidents)?

Seven Questions

- 6. Do we have cybersecurity insurance coverage and if so, do we have ransomware coverage, and if so, does that ransomware coverage cover a ransomware payment, and if so, how much is the maximum it covers?
- 7. Have we performed a cybersecurity incident tabletop test to consider the most likely and high impact cybersecurity threats?

Ransomware threats have escalated in the past year. What type of ransomware insurance coverage is appropriate?

#5 Banking in the Metaverse Emerges

What is the Metaverse?

“The metaverse is a digital reality that combines aspects of social media, online gaming, augmented reality (AR), virtual reality (VR), and cryptocurrencies to allow users to interact virtually. Augmented reality overlays visual elements, sound, and other sensory input onto real-world settings to enhance the user experience. In contrast, virtual reality is entirely virtual and enhances fictional realities.”

Source: Investopedia

What does the Metaverse do?



Image Source: Facebook (Meta) Horizon

See Me or Be Me?

- Video banking is unlikely to achieve critical mass, in my opinion
- See the now scrapped Amazon Mayday Service as an example
- Note how most people now turn off their video on videoconferences (e.g., Zoom, Teams)
- Customers might have privacy concerns
- Interacting via avatars in the Metaverse might be preferable for some
- Will be more about how we interact via tech than the tech itself

Mercobank Enters the Metaverse

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*Let us not look back in
anger, nor forward in
fear, but around in
awareness.*

- James Thurber

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#6 The Payments Franchise Is Protected at All Costs

Scan and Pay with Toast



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Proximity Payments Evolve

2005



Exxon SpeedPass Watch

2022



Apple Watch

How do you ensure
your card (debit or
credit) is the card
loaded in an online
profile or digital
wallet?

And you call this a “currency”?

- Odell Beckham Jr. requested his salary be paid in Bitcoin when he joined the LA Rams in November
- Bitcoin was priced at \$64,158 (Source: Coindesk) when he struck his deal
- Bitcoin is down 63.38% since that time (as of May 25, 2022)
- \$750,000 now worth about \$348,768
- ...but there's more!
- He will be taxed on the full \$750,000

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Bitcoin Questions

- Can this be a “currency” if not backed by a central government?
- Can a “currency” move up or down in value 5% a day and be legitimate?
- Is this a “currency” or simply an asset class?
- Is this a Ponzi scheme?
- *“It’s a beautifully set up cryptographic system. It’s well made but there’s absolutely no reason it should be linked to anything economic.” -- Nassim Nicholas Taleb*

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#7

Debit Card Programs
Become More Effective

Debit Card

Fraud Losses

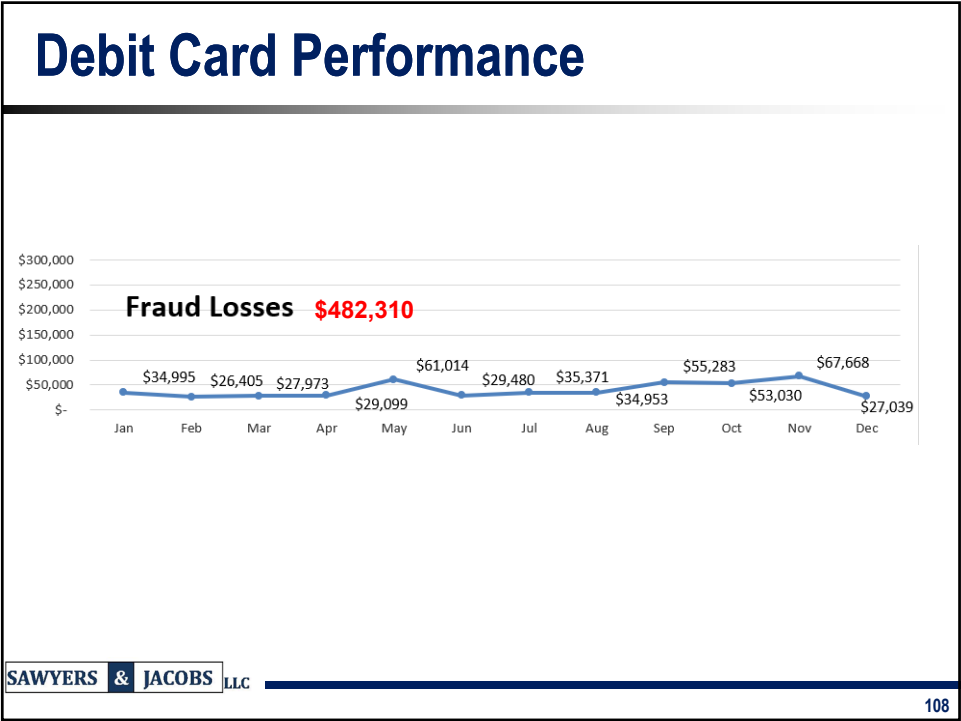
Versus

Interchange Revenue

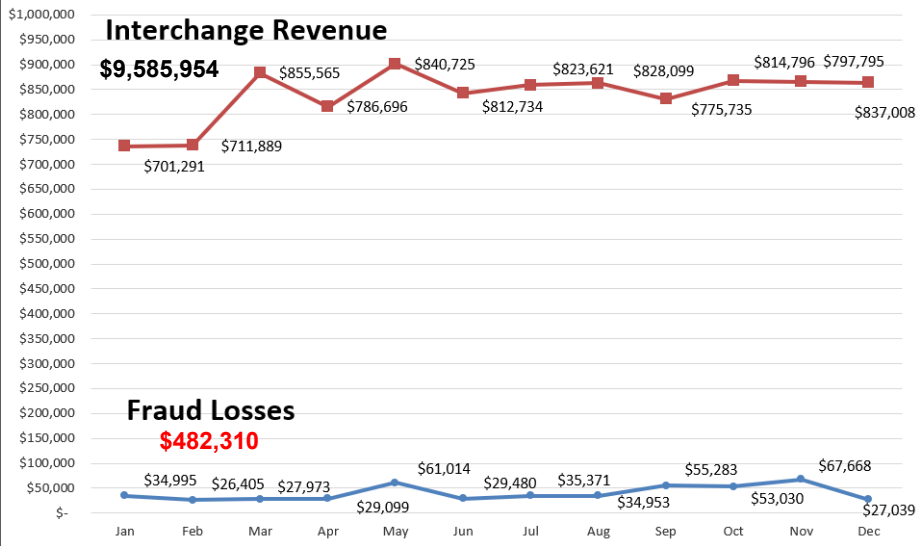
THE CLASSIC RISK-REWARD PROPOSITION

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Debit Card Performance



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Dollar for a Dime Equation



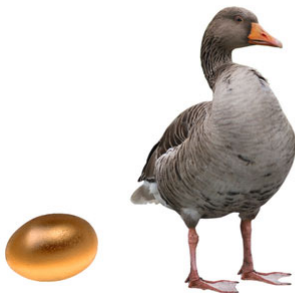
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Don't Kill Your FI's Golden Goose



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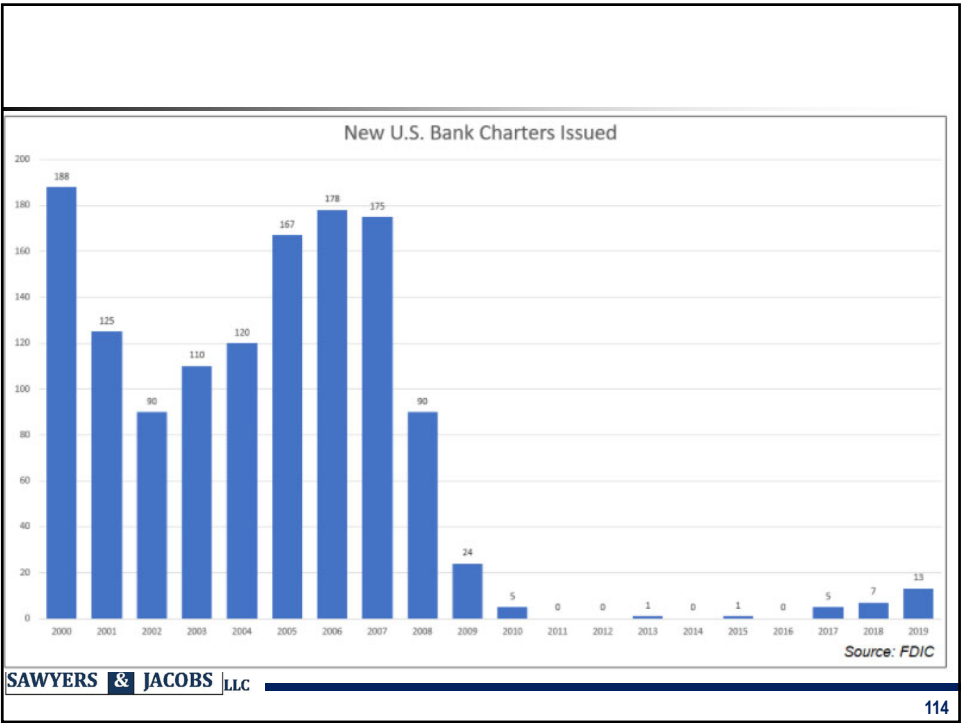
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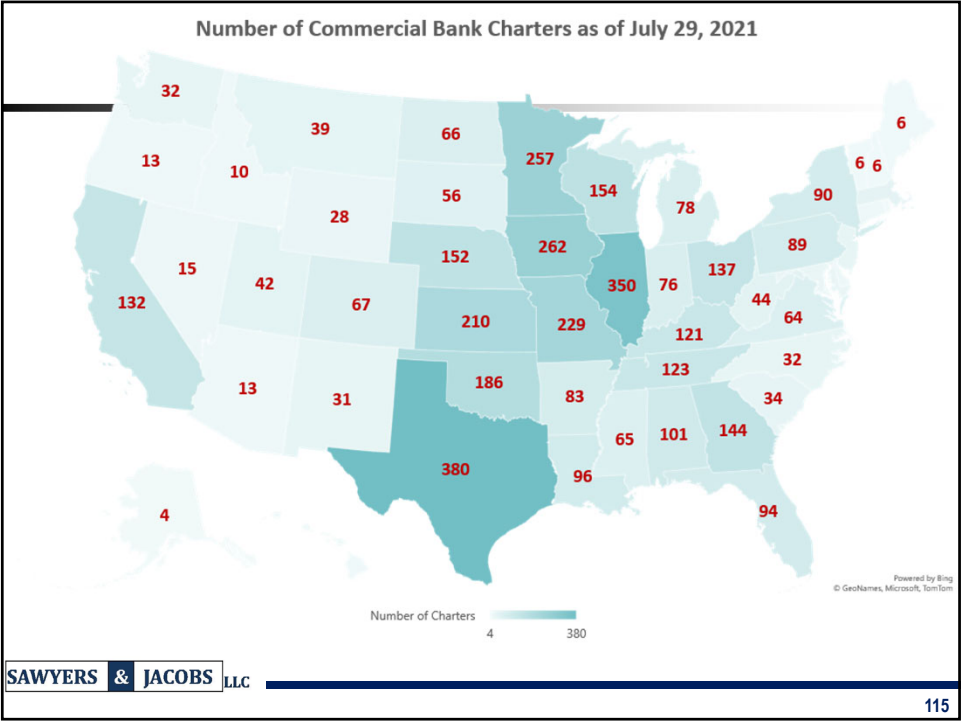
#8 The Death of Brick and Mortar Proves Greatly Exaggerated

FDIC-Insured Commercial Banks

	<u>Banks</u>	<u>Branches</u>
1987	13,823	45,851
2021	4,375	?

Source: fdic.gov (June 2021 data)





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#9

Bankers Learn the Power of Three as in the Three Phases of Digital Adoption

Should Banks Strive to be “Digital-Only” or “Digital-Too”?

Old Companies, New Delivery

- What digital service have you adopted as a consumer in the past two years?



Same Wants, Different Delivery



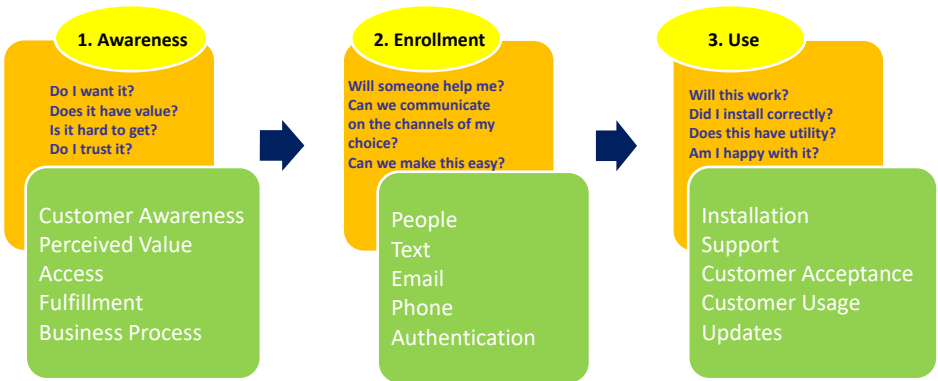
How to Remain Relevant

- Embrace the digital channels that are actually in demand
- Listen to your customers
- Think customer experience first and compliance second
- Business processes must keep up with tech capabilities
- Test digital channels for usability

How to Remain Relevant

- Don't worry what other banks or fintechs are doing. You do you! Leverage your bank's brand and unique abilities.
- Know your market
- Remember...one channel does not supplant all others.

Three Stages of Digital Adoption



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#10 Customer Relationships Are Built Channel by Channel and Dollar by Dollar

It's All About the Channels

- Serve the customer on the channel of his or her choice (at that time)
- In the history of banking, one new channel has never completely supplanted another
- Customers actually touch the bank more and the level of convenience increases
- Channels are 80% complementary and 20% disruptive

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Five Questions

1. Does your bank have a strong and trusted brand?
2. What services are fintechs offering that you cannot?
3. When is the last time you reviewed your business processes?
4. What are your biggest obstacles, real or perceived, to offering world-class digital services?
5. Are your people devoting their hours to the right tasks?

Recommended Focus – Seven Areas

1. Mobile Banking
2. Mobile Deposit
3. Debit Cards (e.g., instant issue, increased usage, card freeze, better not tighter fraud controls)
4. Payments (contactless, digital wallets)
5. Mobile Workforce
6. Digital/E-Sign Capabilities (e.g., DocuSign)
7. Digital Lending (i.e., online applications, decisioning)

Top 12 Small Business Banking Requirements

- 1. Credit card (with strong app for controls but with alerts not denials)
- 2. Business checking (as many businesses still write a lot of checks)
- 3. Remote deposit (for convenience)
- 4. QuickBooks interface (for payroll, account recon)
- 5. Online treasury management that is secure and easy-to-use (with protection against CATO)
- 6. Secure file transfer (for updated financial statements, tax docs)
- 7. Access to line of credit when needed (for cashflow, new ventures)
- 8. E-sign capability (for convenience, especially for business travelers)
- 9. An excellent mobile banking app (for quick access)
- 10. Multiple communications channels (text, email, phone, contact center)
- 11. A personal banker who is accessible and who has a strong assistant
- 12. A convenient branch network when business must be done in person

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Payments

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What Percentage of Transactions are Cash?



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Proximity Payments Evolve

2005



Exxon SpeedPass Watch

2022



Apple Watch

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What Percentage of Transactions are Cash?

- Cash is used for 1/3 of transactions in the U.S.
- This translates to a \$2 trillion opportunity
- “Tap to Pay” will become more widely adopted in the coming years
- In the US, 63% of face-to-face transactions occur at contactless-enabled merchants
- Debit cards are tapped at a higher rate than Credit (4.9% to 2.8%)

Sources: AYTM (Ask Your Target Market) Survey on Contactless, March 2017 2. NilsonReport / Euromonitor Data, Q1 17, Visa

The P2P Payment Leaders

- Square Cash App
- PayPal's Venmo
- Both have amassed roughly 60 million users
- Should your bank fight this battle with a lesser P2P payment solution?
- Or, should your bank just be Square CashApp- and Venmo-friendly?



P2P Payments: DIY or Partner?

- Comparing PayPal, Venmo, Square Cash App, and Zelle
- Customer expectations
- Opportunity or threat to the checking relationship?
- Fraud concerns
- Risk-Reward of implementing a problematic solution

P2P Decisions



You say you want a “Revolut”?

- Revolut’s co-founders Nikolay Storonsky and Vlad Yatsenko, were born in Russia and Ukraine, respectively.
- Both also hold British citizenship.
- \$33 billion neobank
- Stopped supporting money transfers to or from entities in Russia and Belarus on March 4
- Founded in 2015
- 2,150 staff in Russia and Ukraine

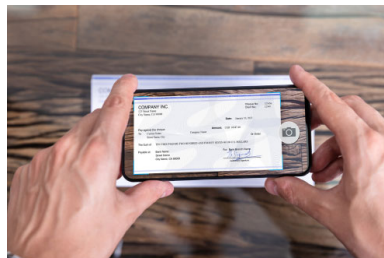
Non-Fungible Tokens (NFTs)

“Non-fungible tokens, often referred to as NFTs, are blockchain-based tokens that each represent a unique asset like a piece of art, digital content, or media. An NFT can be thought of as an irrevocable digital certificate of ownership and authenticity for a given asset, whether digital or physical.”

Source: [aws/amazon.com/blockchain/nfts-explained/](https://aws.amazon.com/blockchain/nfts-explained/)

Mobile Deposit Process Failures

- Does your bank...
 - Require restrictive endorsement?
 - Review every deposited check, regardless of amount?
 - Require the “Mobile Deposit” box to be checked on the check?
 - Have an early cutoff time for mobile deposits?
 - Have low mobile deposit limits?
 - Place unreasonable holds on mobile deposits?
 - Make mobile deposits more difficult than deposits made at a teller window?

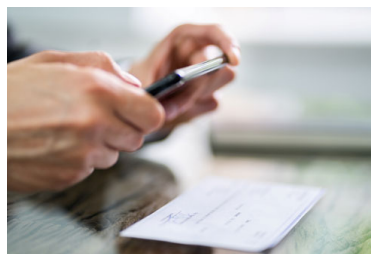


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Mobile Deposit Best Practices

- Design your mobile deposit business processes so that mobile deposits have the same or better utility as in-person deposits
- Use advanced data analytics to determine customer deposit history and set mobile deposit rules accordingly, by individual
- Do not review small dollar items
- Set late mobile deposit cutoff times to enhance the customer experience



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Cybersecurity

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What is the right balance of cybersecurity controls and more open, convenient digital services so your bank can manage the risk-reward proposition?

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The Balancing Act



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Risk Recognition

- Comptroller's Handbook:
 - “The OCC recognizes that banking is a business of assuming risks in order to earn profits.”

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“Because innovation always outpaces regulation by at least two years, waiting on a piece of paper from the government to tell your bank what to do regarding cybersecurity is a surefire recipe for disaster.”

- Jimmy Sawyers

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Ransomware

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Ransomware



Three Choices (RPK)

1. Restore from an
uninfected backup; or
2. Pay the ransom; or
3. Kiss your data goodbye



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**Check Your
Cybersecurity
Insurance Policy
for Ransomware
Coverage**

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Backups at Risk

- Be aware that some attackers are now corrupting the backups *before* launching the ransom request, effectively taking option one (restore) off the table.



City of Greenville Ransomware Attack

- April 10, 2019
- 800 computers “knocked offline”
- Did not pay the ransom
- Restored all systems
- Took several weeks
- Apparently, the intruders had been on the network...undetected...for some period of time

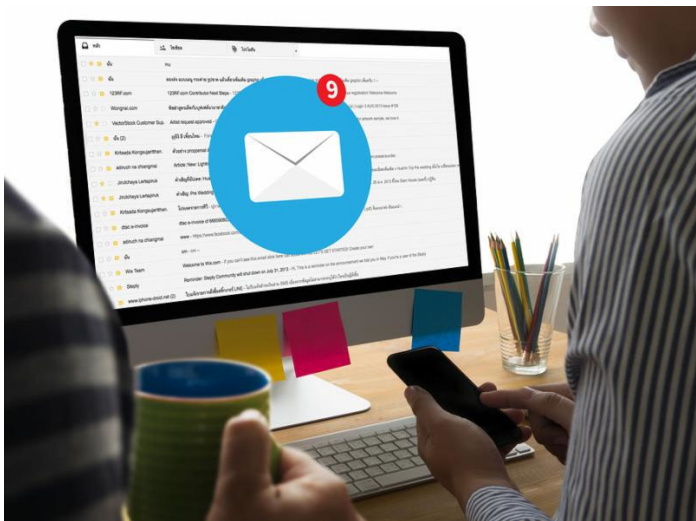


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Business Email Compromise (BEC)

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What's in Your Mailboxes?



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Corporate Account Takeover (CATO)

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Recent CATO Incident

- Local small business lost \$200,000
- Hackers infiltrated their network, gained access to their online banking accounts, and originated 41 ACH credits (direct deposits) totaling \$200,000
- Credited accounts were across the US, mostly in major cities at large banks



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Elder/Online Dating Scams

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Love Hurts (and often costs)



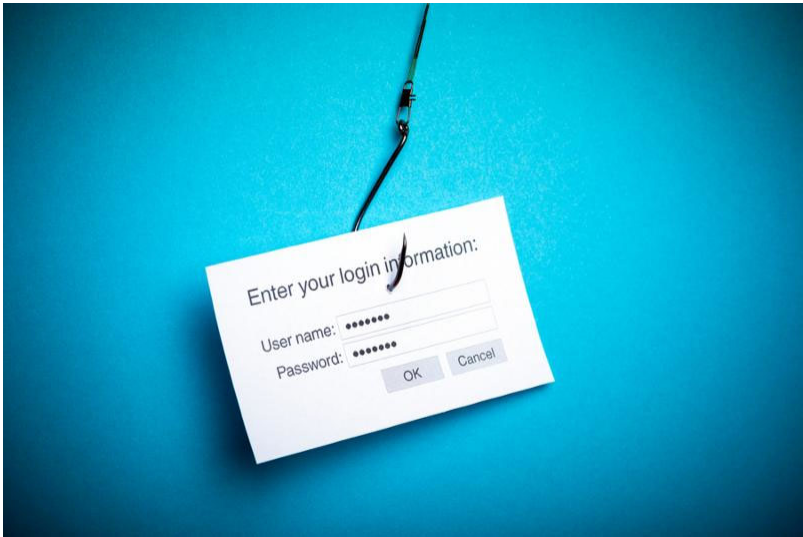
Cybersecurity Misinformation to Avoid

Who Are First Responders?



- FBI?
- Secret Service?
- Local Law Enforcement?
- Lawyers?
- Insurors?
- Consultants?
- Tech Support?
- Security Monitoring Firms?
- Others?

Phishing Frequency and Results



Anyone can be tricked!



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***Design Your Bank's Security
Systems to Assume Some Phishing
Emails Will Be Opened, Some Links
Will Be Clicked, and Some PII Will Be
Given to the Bad Guys***

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*Invest Security Dollars in Testing
What Happens AFTER the Phishing
Email Link is Clicked*

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“It takes 20 years to build a
reputation and five minutes to
ruin it. If you think about that,
you’ll do things differently.”

- Warren Buffet

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Summary

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Summary

- Monitor fintechs, but do not strive to emulate them entirely.
- Make the customer experience as frictionless as possible by reviewing your business processes.
- Think critically and vet vendors properly.
- Protect the payments franchise.
- Provide digital services on par with your favorite apps.
- Devote the right resources to cybersecurity preparedness.
- Develop a Strategic Technology Plan to align the bank's technology with its business goals.
- The future of community banking is bright.

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*Don't Try to be a
Fintech...
Just be a Better Bank!*

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"Competition whose motive is merely to compete, to drive some other fellow out, never carries very far. The competitor to be feared is one who never bothers about you at all, but goes on making his own business better all the time."

-- Henry Ford

Jimmy Sawyers



Jimmy Sawyers
Chairman & Co-Founder
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Jimmy Sawyers helps banks tackle issues ranging from strategic technology planning to IT risk management.

Prior to starting his own firm, Jimmy worked as a community banker, in the consulting division of a CPA firm, and at a tech startup. A graduate of Christian Brothers University in Memphis, Tennessee, Jimmy's 35 plus years of experience in the financial services technology field includes nine years directing the operations and technology division of a fast-growing bank and 26 years as a consultant to the financial services industry.

Jimmy is on the faculty of the **Barret Graduate School of Banking** at Christian Brothers University, **The Southeastern School of Banking** at Belmont University, the **Virginia Bankers School of Bank Management** at the University of Virginia, the **Mississippi School of Banking** at the University of Mississippi, and the **Southwestern Graduate School of Banking** at Southern Methodist University, where he teaches the technology and/or risk management courses at all five schools.

Jimmy has written two books on technology and risk management in community banks, is a frequent contributor to industry publications, and is a regular on the banking industry speaking circuit.

Known as one of the most independent and informed voices in the industry, and nationally recognized for his entertaining presentations that engage, inform, and educate, Jimmy delivers valuable takeaways, practical advice, and a fresh perspective to complex issues.

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