WHAT'S GOINGON INBANKING 2022

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EXECUTIVE SUMMARY

- 2022 will be the year of the revenue recession rebound. On a number of fronts, banks' and credit unions' revenue-generating efforts are getting hammered. It's a trend that's been growing over the past few years, but with the overdraft fee overhaul that will hit the industry in 2022, non-interest income will become a top focus for financial institutions.
- The economy—once again—is a question mark. Among bank and credit union execs, optimists outnumber the pessimists. But the pessimists might have a more compelling story. The end of the Paycheck Protection Program (PPP), non-transitory inflation, talent attraction and retention challenges, excess liquidity, and increasing regulatory burdens all add up to create significant challenges for the industry in 2022. At least we won't have to deal with Omarova.
- Real-time payments take center stage. Three in 10 banks and a quarter of credit unions plan to implement real-time payments in 2022. Many of the institutions planning to launch in 2022 haven't determined their strategy yet but are opening the door for vendors with real-time payment solutions and putting pressure on The Clearing House to accelerate new client implementations in 2022 before FedNow's planned launch in 2023.
- Crypto begins its march to mainstream status. About one in 10 financial institutions plans to introduce cryptocurrency investing/trading services in 2022. That's not a particularly large percentage, but it's a start—especially considering that another 13% plan to launch the service in 2023. Consumers want cryptocurrency from their banks. The reasons (i.e., excuses) for not providing the capabilities don't hold water anymore.
- **Digital transformation needs a reset.** We can't predict that digital transformation efforts will get reset in 2022—but they need to. Banks and credit unions are deluding themselves into thinking they're further along in their journey than they really are and that their efforts are having the impact they think they're having.
- Chatbots heat up. The percentage of financial institutions that deployed chatbots in 2021 grew significantly, and the percentage that plan to deploy the technology in 2022 will accelerate that adoption. It's about time. Banks and credit unions need chatbots—or better yet, conversational AI tools—to improve their data collection efforts.
- **Digital account opening systems are still hot.** For the past four or five years, digital account opening systems have been at the top of financial institutions' list of planned new selections/replacements. What's taking the industry so long to get this done?

THE OUTLOOK FOR 2022

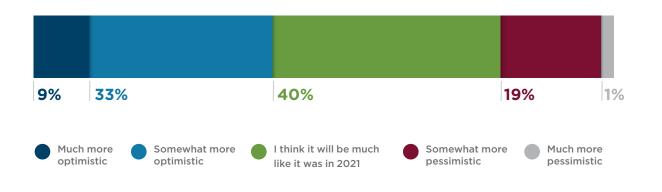
BANK AND CREDIT UNION EXECUTIVES' OUTLOOK

What do bank and credit union executives think about 2022?

The optimists outnumber the pessimists. A little more than four in 10 survey respondents are "somewhat" or "much more" optimistic about 2022 than they were going into 2021, while just one in five expressed a pessimistic view about the coming year (Figure 1).

FIGURE 1: Outlook for 2022

Relative to 2021, how optimistic are you about the prospects for the banking industry (not just your institution) in 2022?



Source: Cornerstone Advisors survey of 300 U.S.-based community financial institution executives, Q4 2021

Among our survey respondents, optimistic executives had this to say:

"Consumers are settling into our new normal with COVID and new variants being a part of our lives for the near future. There is significant pent-up demand with consumers who are ready to get back to traveling, buying goods and services, etc., that will come to fruition in 2022 if the supply chain issues are resolved. I'm optimistic the opportunity for auto lending will help drive portfolio growth in 2022, but competition will be fierce, and we will need to make the financing process seamless for our members."

-Jenna Lampson, President/CEO, Pacific Service Credit Union, Concord, California

"We are approaching the Golden Age of banking—wider margins, good credit, low cost of funds, a rally in bank equity and the application of technology that can make a difference."

- Chris Nichols, Director, SouthState Bank, San Francisco, California

"The Fed has announced tapering will occur over the next year. We're seeing some much-needed inflation, which should help make the case for an increase in interest rates sooner rather than later. Combine these with the further extinguishment of stimulus measures that have been killing off organic lending opportunities, and we just might see a decent year ahead of us."

- Tom Moran, President, Community Bank, Walla Walla, Washington

"While margin pressure and the loss of the PPP pop to earnings can cause less optimism, we are growing our LPOs/commercial lenders to expand our commercial footings and markets—that is a spark for our company and outlook."

-Bill Cable, Chief Operating Officer, People's Bank, Newton, North Carolina

"I'm optimistic that spending will increase in 2022. Travel sectors are returning to normal, and we should see a growing inventory of vehicles. Remote work has proved to be a great alternative for employees; productivity was our highest in 2021. While many credit unions are calling employees back to the office, we are supporting the remote work option for all non-branch positions. This requires new and more innovative ways to maintain a cohesive culture, but it keeps us agile."

- Geri LaChance, President/CEO, SESLOC Federal Credit Union, San Luis Obispo, California

"As consumers settle into how to deal with things longer-term coming out of the pandemic, they will adopt and exhibit longer-term behaviors in the areas of spending, borrowing, savings, and planning."

- Martin Carter, President/CEO, Astera Credit Union, Lansing, Michigan

"I'm very optimistic because: 1) businesses recovering and workers returning to work will continue to spur investment and borrowing; 2) the rising rate environment will help credit unions lengthen their portfolios; and 3) affordability of tech is allowing smaller credit unions to modernize and streamline their operations."

- Frank Wasson, Chief Executive Officer, CommonWealth One Federal Credit Union, Alexandria, Virginia

On the other side of the coin, execs explained why they're pessimistic:

"Inflation will become more of an issue for most consumers. The probability of rising interest rates will curtail mortgage lending and there will be no stimulus dollars next year to supplement the consumers pocketbook. Any one of these could lead to lower economic expectations in 2022."

- Alan Renfroe, President/CEO, First Federal Savings and Loan Association of Pascagoula, Moss Point, Mississippi

"The PPP money had a very positive impact on institutions. That will be absent in the upcoming year and banks will scramble to find other sources of revenue."

- Christa Owen, Chief Compliance Officer, Farmers National Bank, Danville, Kentucky

"Competition is pushing down lending rates and underwriting is moving towards more risky loans."

Personnel costs are going up and compliance/technology investments are becoming a drag on earnings."

- Russell Rosendal, President/CEO, Salal Credit Union, Seattle, Washington

"The trifecta of renewed regulatory pressure by an enforcement regime, interest rate environment (margin compression), and wage pressure due to inflation render 2022 seriously challenging."

-Len Devaisher, President and CEO, MidWestOne Bank, Iowa City, Iowa

"Margins will get even tighter, and banks will need to spend capital for automation, not just look for incremental process improvements."

-Kim Compton, Chief Strategy Officer, The Farmers Bank, Westfield, Indiana

"We still expect loan losses and bankruptcies to pick up as consumers assess the degree of financial wreckage and are expected to resume normal payment patterns. There will likely be a lot of suppressed payment problems and bankruptcies."

— Jonathan Krieps, Chief Operations Officer, North State Bank, Raleigh, North Carolina

"I have concerns about loan loss escalating as the year progresses and about the long-term effects of remote work as productivity begins to wane."

- Andy Grimm, President/CEO, Apple Federal Credit Union, Fairfax, Virginia

"Too much liquidity in a low-rate environment will not produce enough revenue relative to previous years."

- Jim Marcuccilli, Chairman & CEO, STAR Financial Bank, Fort Wayne, Indiana

CONCERNS AND THREATS

The big news for both banks and credit unions in 2022 is the jump in the percentage of executives concerned about their ability to attract qualified talent. Among bank respondents, 67% listed this as a top concern for 2022, up from 19% in 2021 (Table A). Among credit union respondents, 63% mentioned attracting talent as a concern, up from 19% in 2021 (Table B).

TABLE A: Bank Execs' Top Concerns, 2020 to 2022

	2020	2021	2022
Ability to attract qualified talent	27%	19%	67%
Cybersecurity	23%	28%	51%
Interest rate environment	43%	56%	50%
Regulatory burden	22%	18%	44%
Efficiency, non-interest expenses, costs	32%	36%	39%
Weak economy/loan demand	24%	48%	36%
Non-interest income	11%	17%	29%
New customer growth	25%	25%	28%
Cost of funds	15%	8%	8%
Credit quality/problem loans	10%	42%	6%

TABLE B: Credit Union Execs' Top Concerns, 2020 to 2022

	2020	2021	2022
Ability to attract qualified talent	19%	19%	63%
Cybersecurity	19%	26%	43%
New membership growth	43%	40%	41%
Non-interest income	10%	27%	39%
Regulatory burden	16%	20%	39%
Interest rate environment	32%	53%	38%
Weak economy/loan demand	34%	57%	34%
Efficiency, non-interest expenses, costs	34%	25%	33%
Cost of funds	13%	8%	9%
Credit quality/problem loans	9%	33%	4%

Source: Cornerstone Advisors surveys of U.S.-based community financial institution executives, 2019-2021

Concerns regarding an ability to attract qualified talent were reflected in comments like this one from one of the survey respondents:

"We're concerned about finding and recruiting quality relationship managers that can understand both the deposit and lending sides of the bank in order to offer a client a complete banking relationship. Silo marketing just doesn't work for higher net worth clients."

Regulatory concerns are heating up from past years, as 44% of banks and 39% of credit unions cited this as a concern for 2022, again, a big increase from 2021 for both groups. Respondents had this to say about the regulatory burden:

"The government regulation impact is huge—the possibility of IRS reporting for certain transactions on a mass level is frightening."

"I have concerns about the regulatory agencies' focus in the coming years. For example, climate change regulation is one of their top priorities. These changes are directed at the larger financial institutions, but they always find their way down to the smallest of institutions."

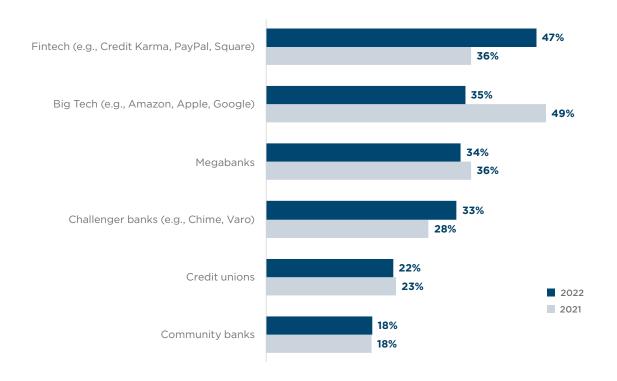
"Just say no to Omarova!"

The focus on cybersecurity is growing, as well. Only about a quarter of respondents put cybersecurity in their list of top concerns going into 2021. Heading into 2022, however, 51% of bankers and 43% of credit union execs cite cybersecurity as a top concern.

Bank and credit union executives' views of the competitive landscape continue to shift. The percentage of execs who see the Big Tech firms—e.g., Apple, Amazon, Google—as significant threats declined from 61% in 2020 to 49% in 2021 and drops to 35% in 2022. On the other hand, the percentage of respondents who see fintech companies like Square and PayPal as significant threats has increased from 36% in 2021 to 47% in 2022 (Figure 2).

FIGURE 2: Competitive Threats





Survey respondents told us:

"Is traditional banking dead? Given all the focus around fintech, it's a matter of time before digital loans come into effect and, with adequate regulation, fintech challenges traditional banking."

"Partner up or get bullied out by Square, Google, Amazon, Facebook, and Apple."

The shift in perceptions is spot on.

Google may have killed its planned Plex checking account product—leaving its bank and credit union would-be partners in the lurch—but the initiative sent a signal to financial institutions that it's more interested in partnering with (i.e., selling to) financial institutions than in disrupting them.

The Amazon threat seems overplayed, as well, as it has partnered with Goldman Sachs' Marcus unit to provide small business loans and merchant cash advances, and leaked wireframe designs of a marketplace that would enable other banks to compete for that business.

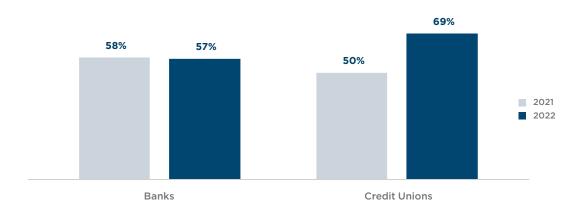
Meanwhile, Square (oops, we mean Block) has become a banking powerhouse with its consumer and merchant network; PayPal is embarking on a "super app" strategy; and other large fintechs like Shopify, Intuit, and Credit Karma threaten incumbent financial institutions' positions in the market.

NEW PRODUCTS: REAL-TIME PAYMENTS & CRYPTOCURRENCY

New product development will heat up among credit unions in 2022, as nearly seven in 10 of them have plans to launch new products or services, up from 50% in 2021. Activity among banks promises to be just as lively in 2022 as it was in 2021, with more than half planning new product launches (Figure 3).

FIGURE 3: New Product/Service Plans

Percentage of Financial Institutions Planning to Launch New Products/Services



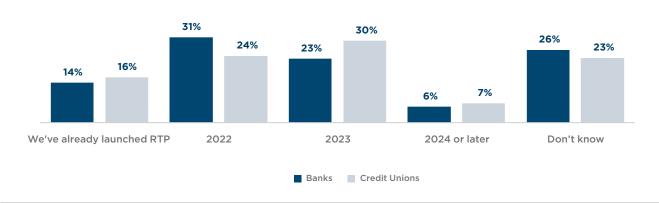
Source: Cornerstone Advisors surveys of U.S.-based community financial institution executives, 2020-2021

Two new product/service offerings—real-time payments (RTP) and cryptocurrency investing—will gain traction in 2022.

Three in 10 banks and a quarter of credit unions plan to implement real-time payments in 2022. This represents a 120% increase over the number of banks that have already rolled out RTP and 50% growth for credit unions. Looking ahead to 2023, adoption of RTP promises to stay hot (Figure 4).

FIGURE 4: Real-Time Payments Implementation Plans

When does your organization plan to implement real-time payments (RTP)?



Source: Cornerstone Advisors survey of 300 U.S.-based community financial institution executives, Q4 2021

How will financial institutions go about deploying RTP? Many don't yet—37% of banks and 42% of credit unions said they haven't determined their RTP strategy. About a quarter of banks and one in five credit unions say they'll wait for FedNow to deploy before rolling out real-time payments (Table C).

TABLE C: RTP Approach

Which statement best describes your organization's approach to providing RTP?

	Banks	Credit Unions
We haven't determined our RTP strategy	37%	42%
We will wait for FedNow to deploy	27%	21%
We will deploy both The Clearing House and FedNow	18%	6%
We have deployed The Clearing House's solution	7%	6%
We have already deployed another vendor's solution	7%	10%
We plan to deploy The Clearing House's solution	2%	4%
We plan to deploy another vendor's solution	2%	11%

Business-to-business (B2B) payments and account-to-account (A2A) transfers were the most-frequently cited use cases by banks. Among credit unions, A2A transfers, recurring bill pay, and last-minute consumer payments were the most-frequently mentioned use cases (Table D).

TABLE D: RTP Use Cases

What are – or will be – the 3 most important use cases for your organization's RTP strategy?

	Banks	Credit Unions
B2B payments	54%	16%
A2A transfers	42%	62%
Payroll (or expedited payroll) payments	36%	22%
Recurring bill pay	30%	41%
Last-minute consumer payment	22%	40%
Ad-hoc bill pay	19%	25%
Consumer retail purchases	15%	16%
eCommerce	10%	12%
Sweep account	10%	10%
B2C disbursements (e.g., rebates, returns)	9%	4%
Government tax and fee payments	3%	2%
Cash pooling/concentration	3%	1%

Source: Cornerstone Advisors survey of 300 U.S.-based community financial institution executives, Q4 2021

Cornerstone Advisors **Senior Director of Payments Tony DeSanctis** observes:

"The use cases center on B2B and B2C for real-time payments. Whether companies pay employees, customers, or vendors, the primary benefit of faster payments is getting money out faster than checks and ACH. Cards continue to be the primary solution for C2B [consumer to business]. While real-time offers benefits to commercial clients, it is more important to have a robust cash management offering that replaces manual and paper processes with automated, integrated, and real-time data and processes."

Risk is at the top of both banks' and credit unions' concerns for real-time payments, followed by cost and core functionality (Table E).

TABLE E: RTP Concerns

Which of the following are—or will be—the most important concerns for your organization's real-time payment strategy? (select up to three)

	Banks	Credit Unions
Risk	61%	53%
Cost	43%	30%
Core functionality	38%	34%
Implementation burden	25%	23%
Embedded risk controls	21%	30%
Network governance/ownership	15%	6%
Number of providers	14%	12%
Network reach	10%	8%
Payment limits	10%	9%
Breadth of 3rd-party support	9%	11%
Brand recognition	3%	11%
Connectivity burden	2%	7%

Source: Cornerstone Advisors survey of 300 U.S.-based community financial institution executives, Q4 2021

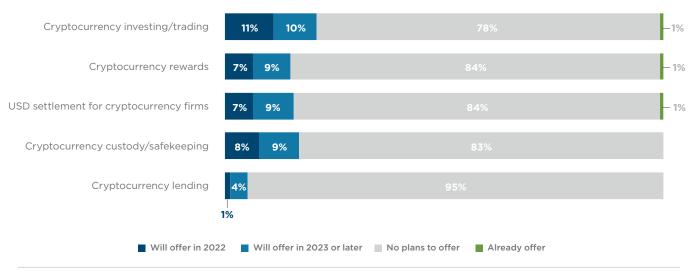
According to SouthState's Chris Nichols:

"The number of new products that can be spun off of RTP can make an innovator's head spin. It's the data in the messaging of RTP that will alter a bank's trajectory. While instantaneous payments are life altering, it's the data in the messaging of RTP that will alter a bank's trajectory. Another reason why RTP is important is that it is a gateway drug to the crypto rails."

Speaking of cryptocurrency, roughly one in 10 banks and credit unions plans to launch cryptocurrency investing/ trading services in 2022. Today, just 1% (and that's rounding up) of banks offer the service and virtually no credit unions do. Among banks, 7% plan to offer cryptocurrency rewards and 8% will provide crypto custody and safekeeping services (Figure 5). Among credit unions, 5% expect to offer crypto custody and safekeeping services (Figure 6).

FIGURE 5: Banks' Cryptocurrency Plans

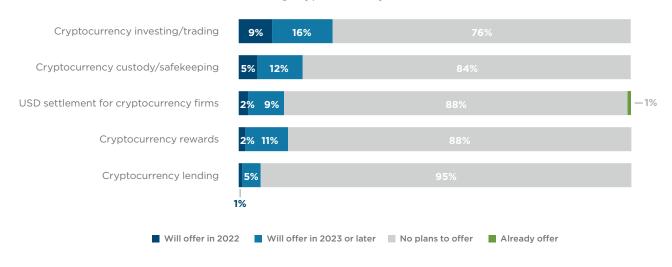




Source: Cornerstone Advisors survey of 300 U.S.-based community financial institution executives, Q4 2021

FIGURE 6: Credit Unions' Cryptocurrency Plans

Which best characterizes what your organization is doing (or has done) with the following cryptocurrency-related services?



According to Cornerstone Advisors Partner Quintin Sykes:

"Despite receiving positive guidance on cryptocurrency activities from regulators in 2021, financial institutions largely remain on the crypto sideline. For credit unions, partnering with a firm like NYDIG or Bakkt to offer cryptocurrency trading is the most likely path. Banks also see an opportunity to offer custody/safekeeping and USD settlement activities offered by banks like Silvergate and Signature today."

There are crypto-skeptics among bank and credit union execs. Two survey respondents commented:

"Why are there more cryptocurrencies than U.S. banks and credit unions combined? When is the consolidation and fallout going to occur? Who will be the winners/losers?"

"I would like to see less focus on crypto and how consumers are demanding it be used for ALL things. It's not stable enough to be a legit payment mechanism as the value could fluctuate during the transaction. Instead of pushing crypto ATMs and ways to create your own currencies, it would be great to see more focus on how to solve issues like unaffordable housing and the student loan crisis and start making banking products and services that work for the upcoming generations."

Another respondent, however, remarked:

"We need to accept that cryptocurrency is here and we should be planning TODAY on how we will approach this topic and not wait until it's too late and we are reacting versus planning."

Cornerstone agrees with the latter comment. Granted, the numbers don't quite portend an onslaught of banks getting into crypto, but we anticipate faster adoption in 2022 due to:

- **Demand.** According to a Cornerstone Advisors survey of U.S. consumers, 60% of crypto owners would use their bank to invest in cryptocurrencies. Just 4% of current crypto owners said they wouldn't use their bank to invest in crypto because they wouldn't switch from the exchange they currently use.
- **Supply.** The Big 3 bank tech vendors—FIS, Fiserv, and Jack Henry—have all partnered with NYDIG, making it easy (OK, easier) for mid-size institutions to integrate crypto services into their core and digital banking platforms. The payment networks are getting into the act, as well. Visa announced the launch of a crypto advisory service for its banking and merchant clients.
- **Pressure.** Banks and credit unions will experience: 1) FOMO as they see their peers jumping on the crypto bandwagon, and 2) pressure from board members who will tell their management teams about their grandchildren's Bitcoin investments and want to know how the institution plans to respond.

M&A OUTLOOK

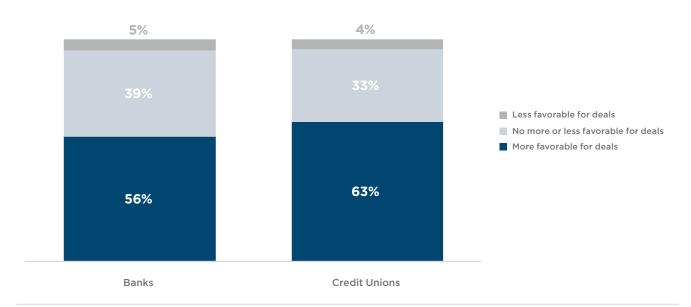
According to Bloomberg:1

"U.S. banks, which have been combining at levels not seen since before the global financial crisis, are now facing the near-term hurdles of stalled approvals and mounting opposition from Democrats in Washington. All of that is unlikely to keep the string of deals from ultimately continuing. Anemic loan growth and competition from larger or more technologically savvy rivals are likely to force banks to keep seeking out combinations even amid the obstacles."

Our survey respondents tend to agree. More than half of bank execs and nearly two-thirds of credit union execs expect the environment to be more favorable for deals in 2022. Just a handful expect it to be less favorable (Figure 7).

FIGURE 7: M&A Outlook for 2022



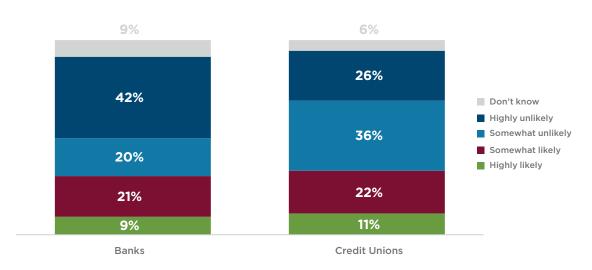


Source: Cornerstone Advisors survey of 300 U.S.-based community financial institution executives, Q4 2021

Roughly a third of bank and credit union execs said they're either "somewhat" or "highly" likely to make an acquisition in 2022 (Figure 8). Very few respondents anticipate that their institution will be acquired in 2022, however (Figure 9).

FIGURE 8: Acquisition Expectations

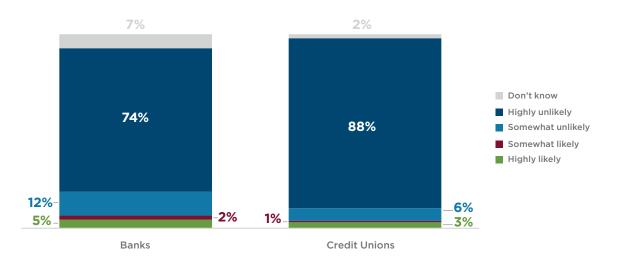
How likely is your institution to acquire another institution in 2022?



Source: Cornerstone Advisors survey of 300 U.S.-based community financial institution executives, Q4 2021

FIGURE 9: Expectations To Be Acquired

How likely is your institution to be acquired by another institution in 2022?



Growth opportunities, market expansion, and economies of scale are the predominant drivers of M&A activity for both banks and credit unions (Table F).

TABLE F: M&A Drivers

What are your organization's primary drivers for seeking an acquisition or merger, or being acquired?

	Banks	Credit Unions
Growth opportunities	70%	85%
Market expansion	68%	72%
Economies of scale	62%	61%
Revenue recession	16%	2%
Succession planning	14%	7%
Regulatory costs	10%	4%
Obtain funds for capital investment	4%	4%
Other	4%	4%

Source: Cornerstone Advisors survey of 300 U.S.-based community financial institution executives, Q4 2021

According to Cornerstone Advisors Managing Director Vincent Hui:

"The revenue recession continues to drive industry consolidation through cost efficiencies via economies of scale and/or inorganic growth to offset depressed loan volumes in existing markets. Interestingly, most financial institutions don't see themselves involved in a transaction. This suggests that valuations are too rich, currency to do deals (e.g., stock) is depressed, and/or institutions can't spare resources from key initiatives like digital transformation—meaning the most well-run institutions (as reflected in stock valuation) will be at an advantage in the merger environment and will get even stronger."

John Meyer, Senior Director at Cornerstone, adds:

"Rohit Chopra, the new head of the CFPB, is pushing the agency to focus on Fair Lending regulation including the Equal Credit Opportunity Act, the Fair Housing Act, and the Consumer Financial Protection Act in 2022. This means that there will be extra scrutiny on branch closures as a means for generating non-interest expense savings post acquisition. Regulatory burden concerns jumped 26% year-over-year to land in the top five concerns for bankers, which is a problem for smaller banks as they just cannot keep up with the new pressures. Couple that concern with the fact that no 2021 M&A deals greater than \$1B in deal value have been approved by regulators as of yet, and 2022 is shaping up for more deal activity in the sub \$1B segment."

LENDING PRIORITIES

Commercial and industrial (C&I) loans stay at the top of the list of banks' lending priorities for 2022, although the percentage of respondents listing them as a high priority continues to decline. The big priority shifts between 2021 and 2022 will be for home equity loans, which were cited as a priority by twice as many banks for 2022 than for 2021, and in loan participations, listed as a high priority by three times as many banks in 2022 versus 2021 (Table G).

TABLE G: Banks' Lending Priorities, 2020-2022

Percentage of Banks Citing Loan Type as a High Priority

	2020	2021	2022
Commercial C&I loans	70%	63%	57%
Small business loans	66%	60%	56%
Commercial real estate loans	76%	45%	53%
Mortgage/refi loans	56%	47%	37%
Home equity loans/lines of credit	39%	9%	20%
Loan participations	NA	5%	15%
Auto loans	13%	6%	9%
Other personal loans	15%	5%	6%
POS/BNPL loans	3%	1%	5%
Student loans	1%	0%	1%

As with prior years, mortgages and auto loans are top lending priorities for credit unions. Small business and commercial loans increase in importance to credit unions for 2022 after a decline from 2020 to 2021 (Table H).

TABLE H: Credit Unions' Lending Priorities, 2020-2022

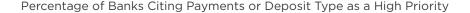
Percentage of Credit Unions Citing Loan Type as a High Priority

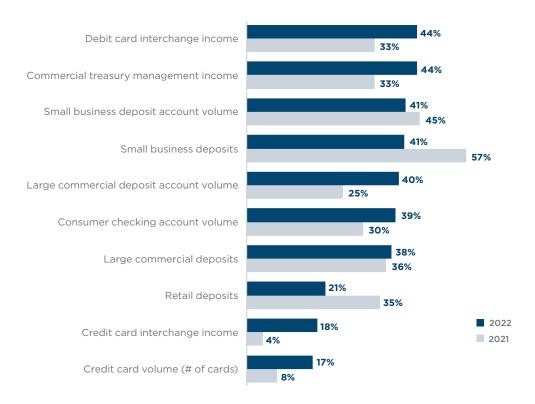
	2020	2021	2022
Mortgage/refi loans	84%	79%	75%
Auto loans	69%	72%	63%
Home equity loans/lines of credit	64%	41%	56%
Commercial real estate loans	57%	30%	45%
Small business loans	33%	23%	34%
Loan participations	NA	16%	27%
Other personal loans	43%	16%	21%
Commercial C&I loans	21%	6%	20%
POS/BNPL loans	5%	3%	6%
Student loans	12%	1%	1%

PAYMENTS AND DEPOSITS PRIORITIES

With the influx of deposits resulting from the pandemic and government stimulus programs, retail deposits continue to decline as a high priority for banks. The focus shifts to revenue growth as debit card interchange and commercial treasury management income are cited as high priorities by a growing percentage of banks (Figure 10).

FIGURE 10: Banks' Payments and Deposits Priorities for 2022



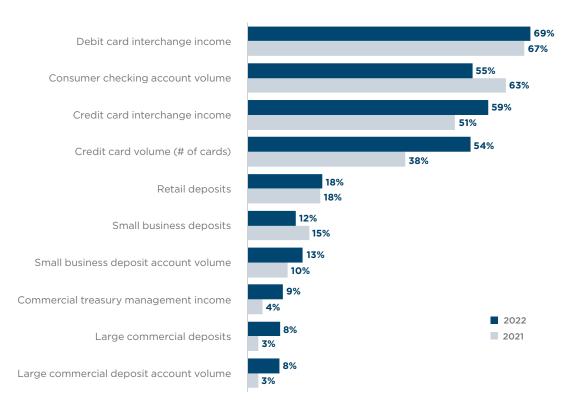


Source: Cornerstone Advisors surveys of U.S.-based community financial institution executives, 2020-2021

Credit unions, on the other hand, will increasingly look to credit card volume and interchange as high priorities in 2022 (Figure 11).

FIGURE 11: Credit Unions' Payments and Deposits Priorities for 2022

Percentage of Credit Unions Citing Payments or Deposit Type as a High Priority



Source: Cornerstone Advisors surveys of U.S.-based community financial institution executives, 2020-2021

According to Cornerstone Managing Director Sam Kilmer:

"The competitive value propositions of fintech challengers and megabanks made their mark, tearing into the consumer and business market and wallet shares of banks and credit unions. The pandemic caught so many bank and credit union delivery systems off guard and the catch-up exercise created a spike in the demand for self-service sales delivery tech. The spike led to every consumer and commercial loan origination system vendor building or acquiring payments origination solutions, point-of-sale solutions, or both with every major deposit/payments origination system company now also a loan origination system company. The table stakes and survival guide for digital banking now include a competency around growing payments and loans relationships, not simply improving user experience."

TECHNOLOGY PRIORITIES AND PLANS

TECHNOLOGY PRIORITIES

Banks' and credit unions' technologies don't tend to change too dramatically year-over-year, but one shift worth noting is the increase in the percentage of financial institutions listing fintech partnerships as an important priority. The percentages are still relatively small, but the percentage of banks listing partnerships as a priority tripled from 5% in 2021 to 15% in 2022 (Table I). Over the same period, the percentage of credit unions mentioning partnerships as a priority grew from 9% to 23% (Table J).

TABLE I: Banks' Technology Priorities, 2021-2022

What are your institution's most important technology priorities for the coming year? (select up to three)

	2020	2021	2022
Improve customer experience/service delivery	67%	67%	61%
Get more value from tech and vendor relationships	51%	53%	43%
Improve efficiency	36%	41%	41%
Invest in new systems	29%	30%	28%
Increase revenue generation opportunities	17%	25%	23%
Better address fraud and risk management	15%	13%	23%
Invest in infrastructure upgrades	21%	17%	19%
Pursue partnerships with fintech startups	NA	5%	15%
Evaluate and possibly replace critical systems	12%	17%	14%
Internal system development and integration	12%	14%	14%
Migrate applications and systems to the cloud	10%	7%	12%

TABLE J: Credit Unions' Technology Priorities, 2021-2022

What are your institution's most important technology priorities for the coming year? (select up to three)

	2020	2021	2022
Improve efficiency	47%	40%	69%
Get more value from tech and vendor relationships	34%	43%	36%
Improve member experience/service delivery	78%	70%	36%
Invest in new systems	31%	30%	32%
Increase revenue generation opportunities	17%	31%	29%
Pursue partnerships with fintech startups	NA	9%	23%
Better address fraud and risk management	13%	16%	18%
Internal system development and integration	21%	15%	15%
Invest in infrastructure upgrades	12%	13%	13%
Evaluate and possibly replace critical systems	5%	15%	12%
Migrate applications and systems to the cloud	16%	12%	11%

TECHNOLOGY SPENDING

Roughly a quarter of banks and credit unions will increase their technology spending by more than 10% in 2022 from 2021, with about six in 10 growing their tech budgets by 1% to 10% (Table K).

TABLE K: Banks' and Credit Unions' Technology Spending Change

How will your institution's tech spending change in the upcoming year compared to the prior year?

	Banks			Credit Unions		
	2020	2021	2022	2020	2021	2022
Significantly higher (>10% higher)	16%	22%	23%	25%	19%	25%
Somewhat higher (1%-10% higher)	56%	51%	60%	63%	58%	61%
No change	19%	22%	14%	6%	15%	12%
Somewhat lower (1%-10% lower)	9%	5%	2%	5%	5%	2%
Significantly lower (>10% lower)	0%	1%	1%	1%	2%	0%

Source: Cornerstone Advisors surveys of U.S.-based community financial institution executives, 2019-2021

EMERGING TECHNOLOGIES

A Cornerstone colleague of mine tells me I shouldn't list cloud computing and application programming interfaces (APIs) as "emerging" technologies anymore. He's probably right, but taking them off the list would obscure the fact that 41% of banks are still either discussing APIs at the board or exec team level, or don't even have APIs on their radar. At 27% of banks, cloud computing is still being discussed or not on the radar. The comforting news is that 26% of banks plan to invest in or implement cloud computing in 2022, and 22% plan to deploy APIs.

In addition, if banks' plans for 2022 come to fruition, the percentage that will have implemented chatbots will more than double going into 2023, and the percentage of banks that will have implemented machine learning technologies will have tripled (Table L).

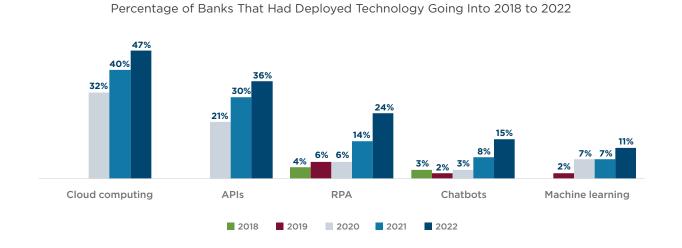
TABLE L: Banks' Emerging Technologies Plans for 2022

	Have already deployed	Planning to invest and/or implement in 2022	Have discussed at board or exec team level	Not on the radar
Cloud computing	47%	26%	16%	11%
Application programming interfaces (APIs)	36%	22%	16%	25%
Robotic process automation (RPA)	24%	12%	16%	47%
Chatbots	15%	19%	32%	35%
Machine learning	11%	22%	26%	41%
Voice technologies (e.g., Alexa)	3%	5%	32%	59%
Blockchain	2%	7%	43%	48%
Virtual (or augmented) reality	2%	3%	14%	82%

Source: Cornerstone Advisors survey of 300 U.S.-based community financial institution executives, Q4 2021

Looking at the percentage of banks that have deployed emerging technologies year-over-year shows the rapid growth in 2021—and planned growth for 2022—of robotic process automation (RPA) and chatbots, (Figure 12).

FIGURE 12: Banks' Deployment of Emerging Technologies, 2018-2022



Compared to banks, credit unions have been faster adopters of the list of emerging technologies. If things go as planned, credit unions' adoption of machine learning tools, chatbots, RPA, and voice technologies will grow significantly in 2022 (Table M). The year-over-year view shows the growing adoption of these technologies (Figure 13).

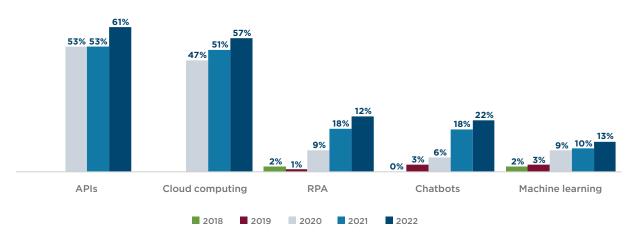
TABLE M: Credit Unions' Emerging Technologies Plans for 2022

	Have already deployed	Planning to invest and/or implement in 2022	Have discussed at board or exec team level	Not on the radar
APIs	61%	16%	16%	8%
Cloud computing	47%	22%	23%	9%
Robotic process automation	23%	24%	26%	27%
Chatbots	22%	28%	36%	15%
Machine learning	13%	29%	38%	21%
Voice technologies (e.g., Alexa)	6%	16%	47%	31%
Blockchain	2%	4%	61%	33%
Virtual (or augmented) reality	1%	3%	26%	70%

Source: Cornerstone Advisors survey of 300 U.S.-based community financial institution executives, Q4 2021

FIGURE 13: Credit Unions' Deployment of Emerging Technologies, 2018-2022

Percentage of Credit Unions That Had Deployed Technology Going Into 2018 to 2022



The interest in chatbots is encouraging. An article in Finextra argues that chatbots have become a competitive necessity:²

"The magic behind voice banking isn't just the convenience of the device; it's the artificial intelligence that powers intelligent customer self-service. New enhancements including AI combined with voice biometrics will unlock a new level of loyalty among financial institution customers."

I wouldn't recommend telling that to a bank's executive team or board of directors, however. Ignore what the vendors say about "unlocking new levels of loyalty." There are three requirements driving the need for chatbots in banking:

1) The need for speed. Abandonment rates for digital product applications in banking are horrendously high. According to a recent study from Cornerstone Advisors, roughly half of banks surveyed said that in 2020, half of their checking account applications on digital channels were abandoned. The abandonment rates for unsecured and secured loan applications were even higher.

Even more troublesome is the finding that just a minority of institutions follow up with would-be applicants within a business day. That's unacceptable. Banks need chatbots integrated into digital account opening systems to close that gap. Banks need to make chatbots components of critical business processes (like account opening)—not just generic sales and service tools.

2) The need for data. Chatbot vendors like to use "providing advice" as a use case for deploying chatbots. It's an over-sold justification of chatbots. Personal financial management (PFM) tools have been trying to provide advice to bank customers for years with little success. The problem isn't the user interface. That is, providing advice through a chatbot versus an email or a pop-up in a PFM tab or tool isn't a silver bullet.

The problem is lack of data. Banks need chatbots to collect data, not display it. Attempts to codify and store "data" collected through human interactions—and even from clickstream data—is incomplete, generally inaccessible to other applications that could benefit from the data, and hard to analyze.

3) The need for personalization. Many banks recognize the importance of personalization in customer interactions. Some, unfortunately, think of it too narrowly, in terms of personalized messages. The smart banks understand that good personalization requires personalized conversations. They still wrestle, however, with two things: 1) getting the data to deliver good personalization, and 2) creating opportunities to have personalized conversations.

NEW SYSTEM SELECTION AND REPLACEMENT

Digital account opening systems have been at the top of the list of planned new selections/replacements for so many years, I bet if you added up the percentage of financial institutions that planned to choose a new system in the past five years, you'd find that 200% of institution have chosen a new system.

Digital loan origination systems—for both consumer and commercial customers—will be hot systems for new selections and replacement among banks in 2022. (Table N).

TABLE N: Banks' New System Selections/Replacements

	Select new or replace in 2022	Selected new or replaced in 2019-2021
Consumer digital account opening	29%	30%
Consumer digital loan origination system	28%	16%
Commercial/small business digital loan origination system	24%	11%
Commercial/small business digital account opening	23%	12%
Customer relationship management (CRM)	15%	23%
Fraud/BSA/AML	15%	19%
Consumer online banking platform	14%	19%
Person-to-person (P2P) payments	14%	27%
Consumer mobile banking platform	13%	21%
Commercial/small business online banking platform	13%	15%
Commercial/small business mobile banking platform	13%	14%
Call center system	13%	11%
Data analysis/business intelligence	12%	16%
Marketing automation	12%	11%
Debit card processing	10%	14%
Online bill payment	8%	13%
Document imaging/workflow	8%	13%
Core integration/middleware platform	8%	8%
Payments hub	7%	5%
Credit card processing	7%	11%
Core processing system	7%	12%
Mobile bill payment	7%	14%
Card self-service	7%	8%
Interactive teller system	7%	8%
ATM processing	6%	11%
Enterprise risk management	3%	11%
None	15%	19%

Credit unions also have consumer digital account opening systems at the top of their planned new selection or replacement systems for 2022, but unlike the banks, CRM and P2P payment systems are also high on the list (Table O).

TABLE O: Credit Unions' New System Selections/Replacements

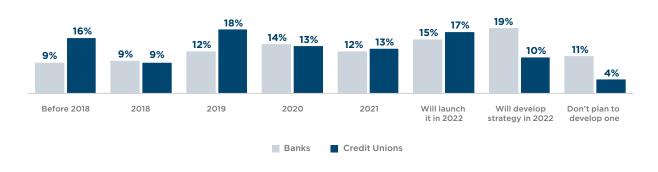
	Select new or replace in 2022	Selected new or replaced in 2019-2021
Consumer digital account opening	32%	30%
Customer relationship management (CRM)	28%	16%
Person-to-person (P2P) payments	26%	30%
Consumer digital loan origination system	21%	25%
Call center system	21%	14%
Consumer online banking platform	16%	30%
Data analysis/business intelligence	15%	20%
Commercial/small business digital loan origination system	14%	5%
Commercial/small business online banking platform	14%	13%
Marketing automation	13%	22%
Consumer mobile banking platform	12%	30%
Commercial/small business mobile banking platform	12%	12%
Online bill payment	11%	19%
Credit card processing	11%	22%
Commercial/small business digital account opening	10%	4%
Payments hub	10%	4%
Card self-service	10%	9%
Interactive teller system	10%	10%
Debit card processing	9%	23%
Enterprise risk management	9%	12%
Document imaging/workflow	8%	13%
Mobile bill payment	6%	18%
Core integration/middleware platform	6%	5%
Fraud/BSA/AML	5%	17%
ATM processing	4%	21%
Core processing system	4%	12%
None	12%	12%

DIGITAL TRANSFORMATION

Credit unions got a head start on banks with 16% launching a digital transformation strategy in 2018 or earlier, versus 9% of banks that had launched a strategy by then. By the end of 2022, just 11% of banks and 4% of credit unions will not have launched a digital transformation strategy (Figure 14). Overall, 5% of financial institution executives say that they've completed, or are almost done, with their digital transformation strategy (Figure 15).

FIGURE 14: Digital Transformation Strategy Launches

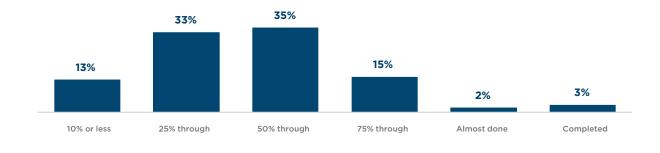
When did your institution launch its digital transformation strategy?



Source: Cornerstone Advisors survey of 300 U.S.-based community financial institution executives, Q4 2021

FIGURE 15: Digital Transformation Strategy Progress

How far along in your digital transformation strategy is your institution?



Progress should be viewed through the lens of when an institution launched its digital transformation strategy, however. From that perspective, it's hard to believe that, of institutions that launched a digital transformation strategy in 2021, 11% are three-quarters done and another 3% are almost done (Table P). That has to be the fastest "transformation" in the history of mankind.

TABLE P: Digital Transformation Progress by Start Date

How far along in your digital transformation strategy is your institution?

	Digital transformation strategy launched in				
	2021	2020	2019	2018	Before 2018
10% or less	34%	16%	7%	4%	3%
25% through	37%	38%	34%	38%	18%
50% through	14%	32%	51%	38%	35%
75% through	11%	14%	7%	15%	26%
Almost done	3%	0%	0%	4%	3%
Completed	0%	0%	0%	0%	15%

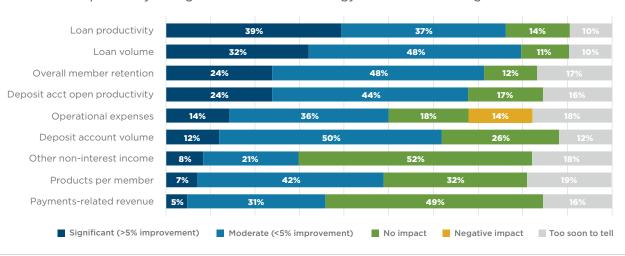
Source: Cornerstone Advisors survey of 300 U.S.-based community financial institution executives, Q4 2021

DIGITAL TRANSFORMATION IMPACT

Loan productivity and volume have been the primary beneficiaries of credit unions' digital transformation efforts, followed by overall member retention (Figure 16).

FIGURE 16: Impact of Credit Unions' Digital Transformation Strategies



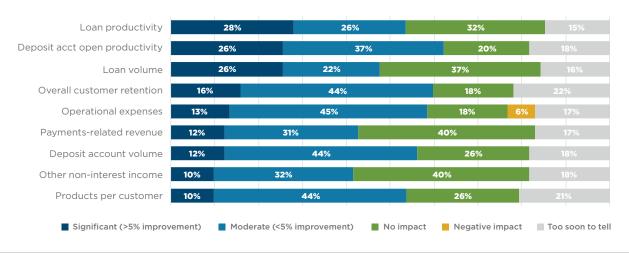


Source: Cornerstone Advisors survey of 300 U.S.-based community financial institution executives, Q4 2021

Because they generally launched digital transformation strategies later than credit unions did, fewer banks have reported significant improvements in most of the performance metrics. One exception, however, is payments-related revenue, where 12% of banks claim to have achieved significant improvement, in contrast to 5% of credit unions (Figure 17).

FIGURE 17: Impact of Banks' Digital Transformation Strategies

What impact has your digital transformation strategy had on the following business metrics?

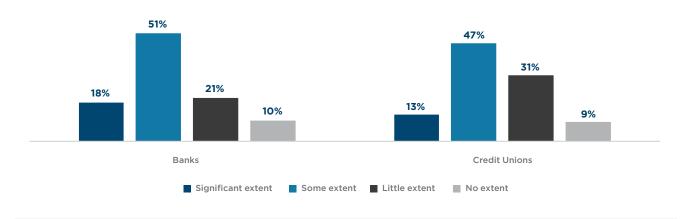


VENDOR SUPPORT FOR DIGITAL TRANSFORMATION EFFORTS

Banks and credit unions differ in their perceptions regarding the contributions of their core system vendors to their digital transformation efforts. Executives from just less than one in five banks (18%) said their core vendors have made "significant" contributions in contrast to 13% of credit unions (Figure 18). On the other hand, nearly six in 10 executives from credit unions said their digital platform vendor has significantly contributed to their transformation compared to just a third of banks (Figure 19).

FIGURE 18: Core System Vendors' Contributions to Financial Institutions' Digital Transformation

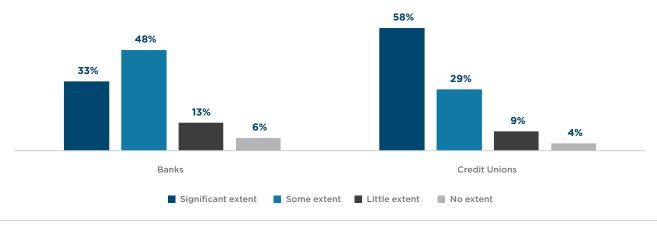
To what extent is your core system vendor contributing to the digital transformation of your business?



Source: Cornerstone Advisors survey of 300 U.S.-based community financial institution executives, Q4 2021

FIGURE 19: Digital Platform Vendors' Contributions to Financial Institutions' Digital Transformation

To what extent is your digital platform vendor contributing to the digital transformation of your business?



According to **Brad Smith, Partner** at Cornerstone Advisors:

"Digital transformation is forcing a core system decision at many financial institutions: Double down on digital with our core vendor or go with a best-in-class digital platform? Increasingly, many choose to go best-in-class because they believe the core vendors can't keep up on innovation, user experience, and integration. And many are now choosing next-generation, digital-first cores to run their digital banks with an eye towards eventually converting their legacy bank over to these next-gen cores."

Survey respondents had no shortage of complaints to share about the core vendors (but we'll only share three of them):

"Vendors continue to state that they can do all the magical things, until implementation/integration begins. Then the finger pointing occurs. Even if you update your core to the newest and best, you still don't get all the things you would like, and are dependent on the vendor's roadmap, while also paying a good chunk of change."

"The future is not monolithic platforms that the Big 3 continue to try and shove down our throats. The shift towards the cloud and open APIs is inevitable. We need core solutions with fully documented and open REST APIs without needing to spend an additional seven figures on platforms like Mulesoft. We also need core vendors that are willing to start to put together their own low-code/no-code software factories so we can easily extend the core. I would rather the core vendors charge me per API call and make it simple to integrate with fintech partners and have an active list of 'pre-built' integrations so I can more cost effectively go with best-of-breed solutions."

"While fintechs and other vendors tout that even small Fls can compete digitally, we are handcuffed by the slowness and unwillingness of core providers to support integrations. And we have found that what's in the sales pitch is often impossible to accomplish."

There's a clear divergence of perceptions: financial institutions are frustrated with the core providers' pace of innovation, but the technology providers counter that with examples of their innovative progress.³ Why the divergence?

According to **Steve Williams, President** of Cornerstone Advisors:

"The differing perceptions stem from the fact that institutions below \$50 billion in assets aren't really positioned to 'go it alone' and merely consume technology from big players. As the core providers have grown, it feels like there is less 'roll up the sleeves' time between banks and vendors dealing with thorny issues of execution. The core providers should create a 'service/execution ecosystem' that can grow profitably around their solutions when they don't have the financial flexibility to invest in the transformation and executive assistance needed by smaller institutions."

DIGITAL TRANSFORMATION DELUSIONS

I'm not calling anyone a liar, but it's hard to believe that banks and credit unions are as far along in their digital transformations as they say they are. One survey respondent commented:

"The slowing of branch traffic has expedited the use of mobile technology for our members. We're struggling to determine branch strategy and the investments into ITMs if folks don't want to visit branches."

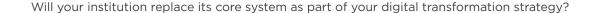
Another remarked:

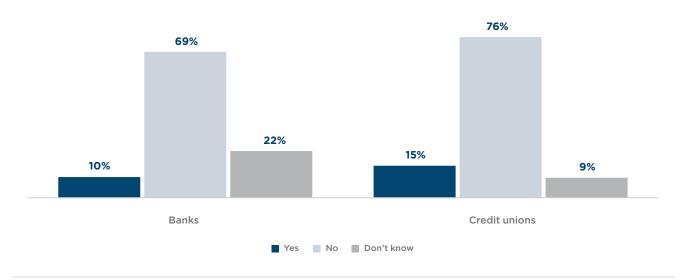
"We're launching a new commercial bank with a digital focus and strong CX, including online account opening, automated lending platform, robust mobile app, etc. We will have limited branch locations. In our opinion, the platform alone (digital) will put us ahead of 95% to 98% of community banks that still have a legacy mindset."

Digital transformation requires:

1) Replacing legacy technology. In another Cornerstone survey of bank and credit union execs, nearly 70% of respondents said that their institution's current technology infrastructure was a barrier to digital transformation (the other 30% must have misunderstood the question). Yet, seven in 10 banks and three-quarters of credit unions don't plan to replace their core systems as part of their digital transformation (Figure 20).

FIGURE 20: Intention to Replace Core System as Part of Digital Transformation





There are, of course, innovative approaches available in the market to help integrate with and build on top of existing core systems, but as shown in Table N and Table O, few financial institutions have deployed—or plan to deploy—core integration/middleware platforms or payment hubs. Without these platforms and without replacing the core system, it's hard to see how digital transformation can be achieved.

2) The maturation of AI. Is there anyone who thinks artificial intelligence (AI) won't have a big impact on banking? I doubt it. But the reality is that AI—in a banking context—is not very mature. AI in fraud and risk management has made significant gains—but keep in mind that AI has been used in systems supporting those functions for decades. AI for marketing and customer support is far less mature. How can banking "accelerate" digital transformation when a key transformational technology isn't very good?

Still think your bank or credit union has completed—or is near completing—its digital transformation journey? Think again.

2022: REBOUNDING FROM THE REVENUE RECESSION

Banks reported spectacular profits in 2021. The results, however, mask a deeper problem: a "revenue recession." Consider the following:

- Bank of America's Q2 2021 profit was \$9.2 billion—up from \$3.5 billion in Q2 2020—thanks in part to releasing its reserves. Revenue, however, was down 4% YoY and fell short of analysts' expectations.
- Citi's Q2 per-share earnings of \$2.85 exceeded analysts' expectations by 89 cents. But consumer banking revenue declined 3% in Q2 2021 from the prior quarter and was down 7% from the same period a year ago.
- Mortgage banking revenue at Citizens Financial Group fell sharply during the second quarter. Fee
 income from mortgages totaled \$85 million in the second quarter, compared with \$276 million in
 the same quarter last year.

Overall, revenue outlooks have been cautious and core profitability will likely remain pressured relative to prepandemic levels according to Fitch Ratings. What's at the root of this revenue recession? The yield curve.

According to Cornerstone's **Steve Williams**:

"In less than three years, the 10-year bond yield has dropped nearly 200 basis points even as the economy rebounded in 2021. This drop happened just as banks became flush with deposit liquidity from a COVID flight-to-safety coupled with government relief checks hitting bank accounts."

A revenue recession is occurring on three fronts:

1) THE PAYMENTS DISPLACEMENT EFFECT ON REVENUE

The flat-lining of revenue comes at a time when banks are experiencing displacement in payments volume —and interchange revenue—from:

• Merchant mobile apps. Three-quarters of consumers with a smartphone have at least one merchant's mobile app installed on their device. Among consumers who load funds on a merchant's mobile app, about two-thirds put money on the app at least once a month. In total, roughly \$3.2 billion moves in and out of the 10 leading merchants' mobile apps every week. The loads generate interchange fees for banks, but the banks lose the revenue on the subsequent purchase transactions.

- Buy now, pay later. Americans made \$100 billion worth of retail purchases using buy now, pay later (BNPL) services in 2021. Among BNPL users, 80% have at least one credit card—meaning that the choice to use a BNPL service cannibalizes debit and credit card use, reducing interchange revenue for banks and credit card issuers.
- Cryptocurrencies. Crypto owners used Bitcoin to make \$3 billion in retail purchases in 2020 (that banks didn't collect interchange fees on). Looking ahead, that number will grow because: 1) 63% of current cryptocurrency holders plan to use Bitcoin to make purchases in the next year or two, and 2) 50% of consumers who plan to invest in cryptocurrencies intend to use them to make purchases.

2) THE COMING MORTGAGE REVENUE DROP

Banks' share of the mortgage market has dropped sharply over the past few years. According to *The Wall Street Journal:*⁴

"Americans took out more mortgages than ever before in 2020. Most of them didn't come from banks. Non-bank mortgage lenders in the U.S. issued 68.1% of all mortgages originated in 2020, up from 58.9% in 2019."

This has been a decade-long trend, of course, but the non-banks' percentage growth in 2020 was the largest one-year jump since 2014. With an expected cooling off in the mortgage market, banks will feel a revenue pinch in 2021.

3) THE OVERDRAFT FEE FREE-FALL

In June 2021, following Ally Bank's announcement that it would no longer charge its customers an overdraft fee, I published an article titled "It's Time To End Overdraft Fees (And Chase Bank Is Just The Bank To Do It)" speculating that:

"Banks and credit unions will wait and see who else eliminates overdraft fees. If nobody blinks, the issue goes away. But if a few make the move, there will be a rush, because no one will want to be the last financial institution with overdraft fees."

Well, the big guys blinked:

- PNC added a feature called Low Cash Mode enabling accountholders to see what charges will
 hit their account and—if a shortfall is anticipated—to change the order in which transactions are
 processed to avoid overdrafts.
- Bank of America launched Balance Connect, a service that allows customers to avoid overdraft
 fees by automatically transferring money from another of the user's accounts with the bank for
 a \$12-per-transaction fee.

- Capital One said it will eliminate overdraft and non-sufficient funds (NSF) fees for all bank customers, foregoing \$150 million in annual revenue.
- JPMorgan Chase announced that it will give customers more leeway on overdrafts before charging fees by allowing them to restore overdrawn balances and access funds from direct deposits of paychecks two days early.

In 2022, community banks and credit unions will have to revisit and overhaul their overdraft policies and strategies to address the coming decline of overdraft fees.

THE REVENUE RECESSION REBOUND

The "revenue recession" has been building over the past few years, and some banks and credit unions "get it." Among banks, the gap between those most concerned with costs/expenses versus non-interest income has closed over the past few years. And among credit unions, non-interest income has been cited as a concern by more execs than those citing expenses for the past two years. For both types of institution, this is a big shift from 2020 (Table Q).

TABLE Q: Bank and Credit Union Execs' Top Concerns, 2020 to 2022

	2020	2021	2022
BANKS			
Non-interest income	11%	17%	29%
Efficiency, non-interest expenses, costs	32%	36%	39%
CREDIT UNIONS			
Non-interest income	10%	27%	39%
Efficiency, non-interest expenses, costs	34%	25%	33%

System enhancements and digital account opening systems aren't going to significantly shift the needle on revenue—they're mostly moves needed to catch up in the market. Banks and credit unions need new products and services, and they need to serve new customer and geographics markets, to successfully rebound from the revenue recession.

It's also going to require a renewed strategic focus. Affinity (not geography) is the new community. Community financial institutions—threatened by fintech startups with narrow target markets like Aspiration, Daylight, and Panacea Financial—will need to determine (or recommit to serving) the segments of the market they can best serve.

The "troublemakers" are doing it.

Thanks for reading this year's *What's Going On In Banking* study. Got a comment, question, or complaint? Let me know through your channel of choice below.

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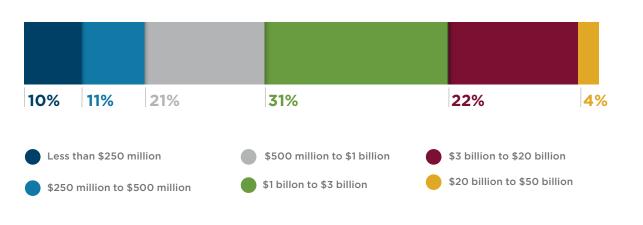
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ABOUT THE DATA

In December 2021, Cornerstone Advisors surveyed 300 senior executives at U.S.-based mid-size financial institutions (FIs), 55% from banks and 45% from credit unions. One in five respondents are from FIs with \$500 million to \$1 billion in assets; three in 10 are with FIs with \$1 billion to \$3 billion in assets; and 22% are from FIs with assets between \$3 billion and \$20 billion (Figure 21).

FIGURE 21: Asset Distribution of Survey Respondents

Asset Distribution of Survey Respondents



Source: Cornerstone Advisors survey of 300 U.S.-based community financial institution executives, Q4 2021

ENDNOTES

- www.bloomberg.com/news/articles/2021-11-22/bank-m-a-in-u-s-poised-to-slow-from-fastest-pace-since-2007
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As Chief Research Officer at Cornerstone Advisors, Ron Shevlin heads up the firm's research efforts and authors many of its commissioned studies. He has been a management consultant for more than 30 years, working with leading financial services, consumer products, retail, and manufacturing firms worldwide. Prior to Cornerstone, Ron was a researcher and consultant for Aite Group, Forrester Research, and KPMG. Author of the Fintech Snark Tank blog on Forbes, Ron is ranked among the top fintech influencers globally and is a frequent keynote speaker at banking and fintech industry events.

ABOUT CORNERSTONE ADVISORS



At Cornerstone Advisors, our goal is to deliver tangible business impact to financial institutions and fintechs. We know that when institutions improve their strategies, technology, and operations, enhanced financial performance naturally follows. Because we live by the philosophy that businesses can't improve what they don't measure, we show banks, credit unions, and fintechs how to use laser-focused measurement to make smarter technology

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