



RETAIL BANKING TOP TRENDS 2022

Drivers, opportunities, and risks
shaping Financial Services



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INTRODUCTION

Upping the ante!



2020 was the banner year for the financial services sector. And 2021 was the year of transition as we moved towards the new era, Banking 4.X.¹ It is now becoming certain that cost, risks, and rewards all go up as FS players – incumbents and their challengers – prepare their war chest for an inescapable confrontation. Among the new-age players are emerging product and market juggernauts, the **Super FinTechs**. This evolved competitor has consolidated its customer base and market influence to disrupt and threaten what incumbents hold dear – market share, margins, and customer base.

Pandemic fallout in 2020 sparked the **cost transformation** wave in the FS sector. Banks quickly acted to fortify their reserves by restructuring their cost base and consolidating their global footprint. While we expect banks to continue their cost transformation agenda, solely pursuing it will fail to future-proof the business model. The new era demands platformification of the FS sector centered around **Banking-as-a-Service (BaaS)** offerings. There is unprecedented latent market potential left untapped, and BaaS could be the right tool for banks to identify and create long-term sustainable value. Successful platforms are underpinned by robust IT architecture, something that traditional banks are struggling to build. While banks have shunned their skepticism to board the **cloud transformation** express, it is time to beef up this journey! But one must not forget – Rome was not built in a day – an adage attesting to the need for time to create a long-standing enterprise. Banks must embrace a two-speed IT approach – internal digital transformation carried in parallel with launching **digital-only subsidiaries**. The stalwarts of the FS industry – from JPMorgan Chase to Goldman Sachs – are spinning off their digital subsidiaries to fend off FinTech competition.

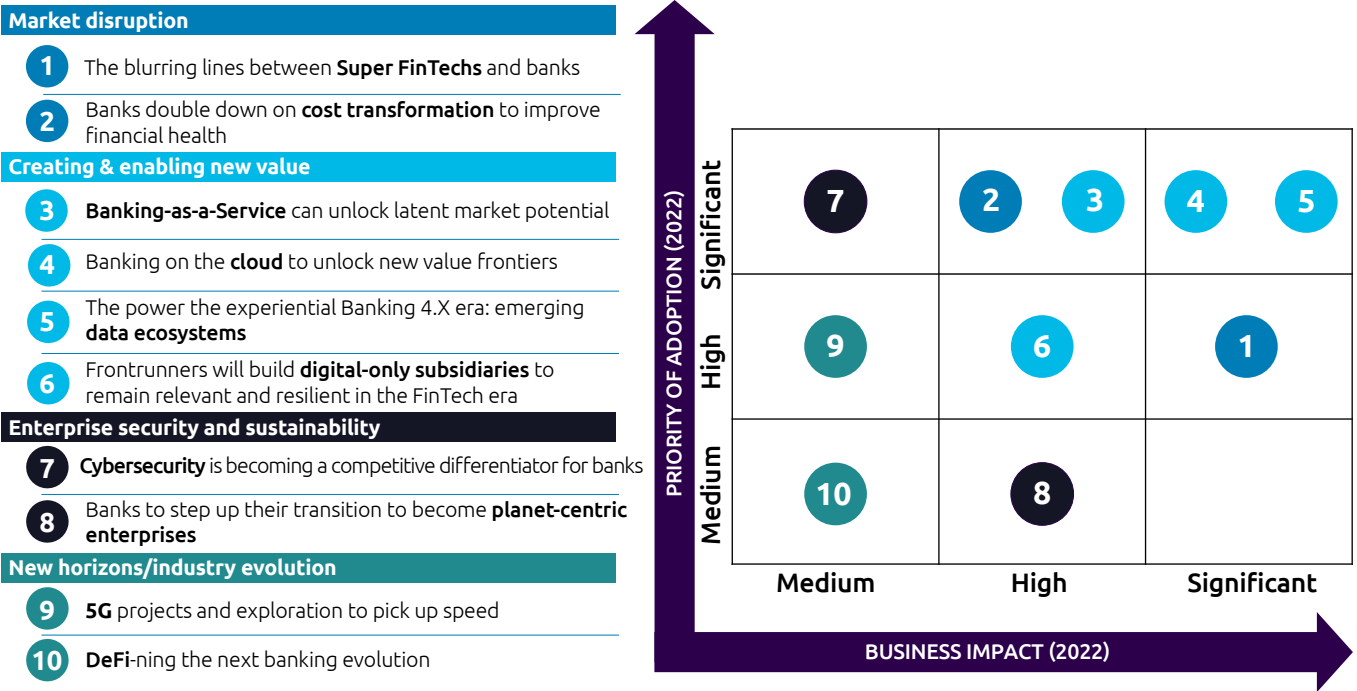
While digital technologies are the backbone, data remains the greatest yet underutilized asset of the banks. However, platformification allows the banks to orchestrate **data ecosystems** – an unprecedented opportunity to collaboratively share and manage information to create significantly greater value than they could develop unilaterally. The result? Hyper-personalized and contextual lifestyle banking embedded in customer journeys. But the same data can become an Achilles' heel if not secured! **Cybersecurity**, and more importantly intelligent identity and access management capabilities, are becoming a competitive differentiator.

As banks step into the new era, the focus should not be limited to shareholder value. The pandemic established the importance of building a **sustainable and green society**. Banks can lead the charge through their roles by financing suitable projects and empowering firms, society, and people who want to accelerate their green transition. Without the active participation of banks, the path to sustainability and social equality will be more complicated, if not impossible.

COVID-19 caught banks unprepared for the future. Lessons are learned and banks must keep exploring new horizons to make best use of emerging technologies. In the short term, **5G** is emerging as a next transformative force which can significantly improve the efficacy of existing systems and processes. Banks must initiate testing the potential of 5G and building use cases. Another disruptive force nurturing on the horizon is **Decentralized Finance (DeFi)** – while still at very nascent stage, it could usher an entirely new era of banking.

¹ **Banking 4.X** is an experience-driven platform-based optimum-channel banking, resilient to financial and non-financial threats, built around long-term sustainable growth, and where human interactions evolve from servicing to advising.

Exhibit 1: Top RETAIL BANKING trends 2022 – Priority matrix



Market disruption

- 1 The blurring lines between **Super FinTechs** and banks
- 2 Banks double down on **cost transformation** to improve financial health

Creating & enabling new value

- 3 **Banking-as-a-Service** can unlock latent market potential
- 4 Banking on the **cloud** to unlock new value frontiers
- 5 The power the experiential Banking 4.X era: emerging **data ecosystems**
- 6 Frontrunners will build **digital-only subsidiaries** to remain relevant and resilient in the FinTech era

Enterprise security and sustainability

- 7 **Cybersecurity** is becoming a competitive differentiator for banks
- 8 Banks to step up their transition to become **planet-centric enterprises**

New horizons/industry evolution

- 9 **5G** projects and exploration to pick up speed
- 10 **DeFi**-ing the next banking evolution

Sources: Capgemini Financial Analysis, 2021.

Priority of adoption refers to the urgency of adopting a particular trend to maximize value creation in 2022. This is a relative rating based on the identified trends for a large to mid-size retail bank operating in the current environment*.

Business impact represents the impact of an identified trend on the bank’s business in 2022. The impact could be on customer experience, operational excellence, regulatory compliance, or profitability.

*The matrix represents the view of Capgemini analysts for banks working in the current operating environment:

- Low interest rate
- New operating models triggered by COVID-19
- Intense competitive environment and increased focus on customer centricity due to new-age players
- Operational cost overruns and high capital lock-in
- Dynamic regulatory environment.

The matrix will vary for specific banks depending on their business priorities, geographic location, and several other factors. For specific requirements, please contact banking@capgemini.com

TREND 1

THE BLURRING LINES BETWEEN SUPER FINTECHS AND BANKS

Super FinTechs are reshaping the FS industry by disrupting three things dear to incumbents: market share, margins, and customer base.

Context

- In his April 2021 letter to shareholders, JPMorgan Chase chief Jamie Dimon said banks face significant competition from FinTechs and BigTechs. He described the situation as an “enormous competitive threat” and added that the role of banks within the financial system is shrinking. In 2020, the combined market capitalization of US and European banks was ~USD3.3 trillion. In comparison, BigTech (GAFA) and FinTech (private and public) market capitalization in 2020 stood at USD5.6 trillion and USD0.8 trillion, respectively.²
- Worldwide, FinTechs are championing digital banking products. They are building intuitive, easy-to-use, intelligent yet economical products at amazing speed to market. And traditional banks are struggling to catch up. The ability of these new-age players to leverage social media, integrate data, and orchestrate scalable platforms is helping them win significant market share. Some of these new-age players are enjoying a meteoric rise and wielding substantial influence over consumers’ everyday lives – *Super FinTechs*.

Catalysts

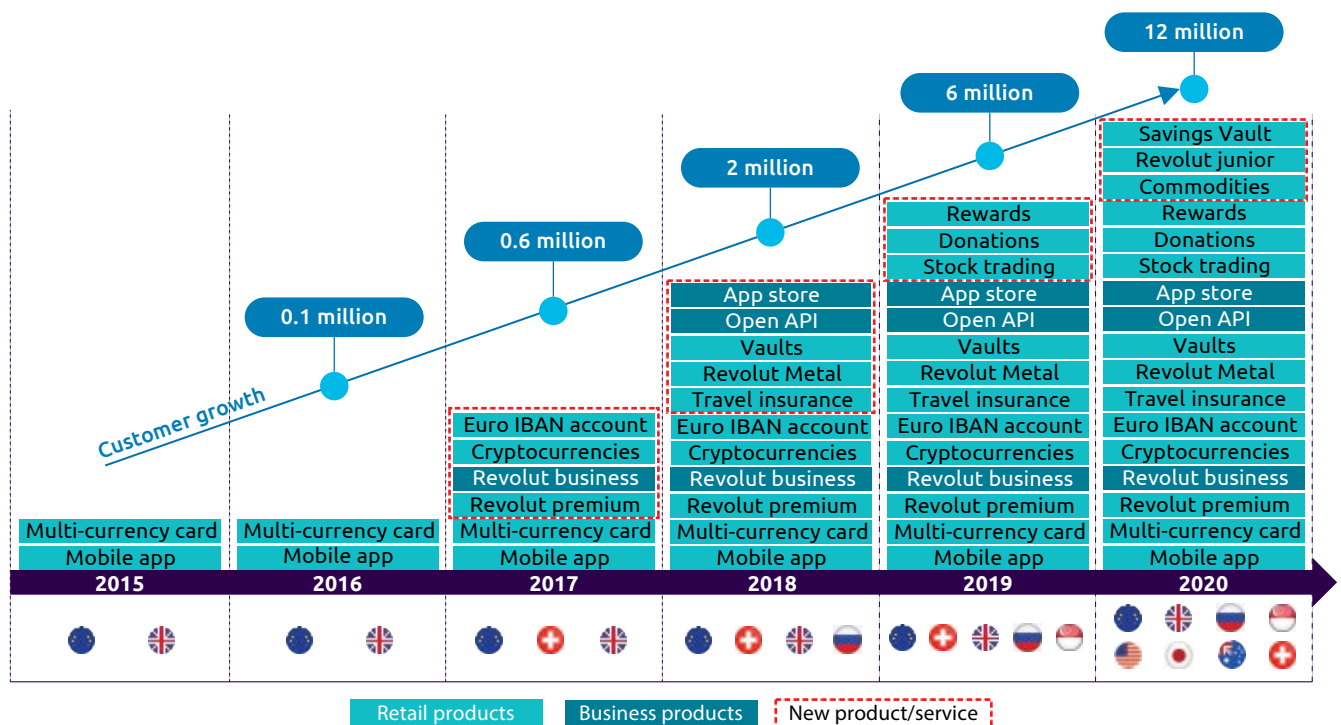
- Thanks to the influence of Amazon, Netflix, and other customer-centric service providers, superior digital experience has become table stakes, and these high-bar expectations now extend to banks. Moreover, the cultural shift as millennials steadily assume more significant roles in the global economy will fuel ongoing demand for seamless, wow-factor customer experience (CX). FinTechs armed with agile, contemporary solutions are well-positioned to ride this wave of change.
 - On average, 70% of customers agree that FinTechs provide faster delivery, personalized services, swift query resolution, and on-demand accessibility, according to the World FinTech Report 2021. On the other hand, ~one in three customers continues to face high friction with traditional banks across multiple banking interactions, according to World Retail Banking Report 2021.
- The rise of FinTechs (with some becoming *Super FinTechs*) is also enabled by lower regulatory barriers. Compared to a regulated bank, a FinTech has lower capital requirements set by the market, very low operational risk capital, no liquidity requirements, no FDIC insurance, low cost to compliance, fewer privacy restrictions, and less extensive AML/KYC or social (CRA) requirements. Regulatory arbitrage has become key to FinTech growth.
 - For instance, the Durbin amendment (within the Dodd-Frank Act) of 2011 capped the interchange fees charged by banks to merchants on debit card transactions. Banks used to make ~44 cents per transaction before the amendment, which is capped by ~50%. However, this applies only to banks with over USD10 billion in assets. While the amendment has limited the revenue opportunity for banks, interchange fees have become a major revenue source for FinTechs. The amendment alone cost JPMorgan Chase ~USD17 billion during 2011–2021 in lost revenue.²

² [JP Morgan Chase & Co](#), “Chairman & CEO letter to shareholders,” April 2021.

In a nutshell

- Super FinTechs are shaking up the banking industry, forcing the players to transform their legacy mindset and environment. Banks are heavily investing to bridge the digital gap they have built over the years to become customer-centric enterprises.
 - Super FinTech, **Nubank**, born in 2013 with just USD2 million seed capital, achieved 40 million customers and USD30 billion valuation in 2021. The Super FinTech operates in the Brazilian concentrated market ruled by five major incumbents and a high cost of banking despite unsatisfactory CX. While Nubank will not topple the incumbents, it did threaten the fat margins of banks by eroding their customer base. Nubank’s no-fee model has saved USD1.5 billion in fees customers would have otherwise paid to traditional banks. Also, its credit card rate ranges between 3–11%, significantly below what incumbents charge (~15–27%).^{3,4}
 - Major banks in Brazil have started to emulate the Super FinTech by launching digital banking products to attract and retain customers. They also started FinTech incubators to improve their innovation potential. Nubank alone started financial revolution in the Brazilian market and is steadily expanding its influence across other Latin American markets.
- In the US, **Square** was already disrupting the banking sector before it surprised the market with its USD29 billion acquisition of Australia-based BNPL FinTech **Afterpay**. With this acquisition, Square has risen to the Super FinTech category with significant market influence.
 - Square today is well positioned to not only displace cards volumes but also deposits, payments, and lending away from traditional banks. In 2Q 2021, Square managed USD42.8 billion in payments. The Super FinTech posted a USD204 million profit on revenues of USD4.7 billion in 2021.^{5,6}

Figure 1: Revolut’s journey to becoming a super fintech



Source: Capgemini Financial Services Analysis, 2021; [WhiteSight](#).

³ [Financial Times](#), "Nubank shakes up Brazil's banking bureaucracy," March 30, 2020. March 30, 2020.

⁴ [The Economic Times](#), "Buffet-backed Nubank to seek IPO valuation of \$55 billion: Sources," August 26, 2021.

⁵ [Financial Times](#), "Square to acquire Afterpay for \$29bn as 'buy now, pay later' booms," August 2, 2021.

⁶ [Forbes](#), "Square: Why its stock is soaring and how it's threatening banks," June 8, 2020.

- In July 2021, UK-based **Revolut** raised USD800 million at a market valuation of USD33 billion – higher than NatWest! With 16 million customers, the Super FinTech is aggressively expanding its global footprint. Steadily, Revolut is turning into a product juggernaut, a SuperApp, which is constantly expanding its product portfolio – including FS and non-FS services.⁷
 - In January 2021, large Irish banks, AIB, Bank of Ireland, Permanent TSB and KBC, came together to setup Synch Payments, a JV company to launch digital payments app to fend off the threat posed by Revolut to their card and payment operations.⁸
- The Super FinTech category is not limited to consumer banking. **Stripe**, with a valuation of USD95 billion, suggests that business banking is also under threat from Super FinTechs. Stripe, which started with payments software, has now expanded into payroll, cash management, treasury, and business lending (Stripe Capital).

Impact

- Banks are sitting on a hoard of cash – deposits from customers – which suggests customers are going to stay with their primary bank. However, the banking services and products (cards and credit) that drive revenue and margins for banks are shifting to Super FinTechs. Banks are not losing market share but wallet share!
- Super FinTechs are astute in creating, cultivating, and monetizing network effects through their digital-native platforms. While they may not be able to topple large banks, they could replace mid-size banks (community banks and credit unions), which are struggling to compete.
- To compete with the new age players, banks may acquire capabilities through M&As and strategic investments (through their venture arms) in FinTechs.



Credit unions face short-, mid-, and long-term concerns. In the short term, there is anxiety around business continuity. In the mid-term, the concern is about keeping the bank running and launching new products that will resonate with customers. Over the long haul, it is about where they will be five years from now and what success will look like.”



– **Arcady Lapiro**

CEO & Founder
Agora Services, US

⁷ [Reuters](#), “UK’s Revolut rockets to \$33 bln valuation after Softbank-backed fundraising,” July 15, 2021.

⁸ [The Irish Times](#), “Irish banks club together with new digital service to counter Revolut threat,” January 11, 2021.

TREND 2

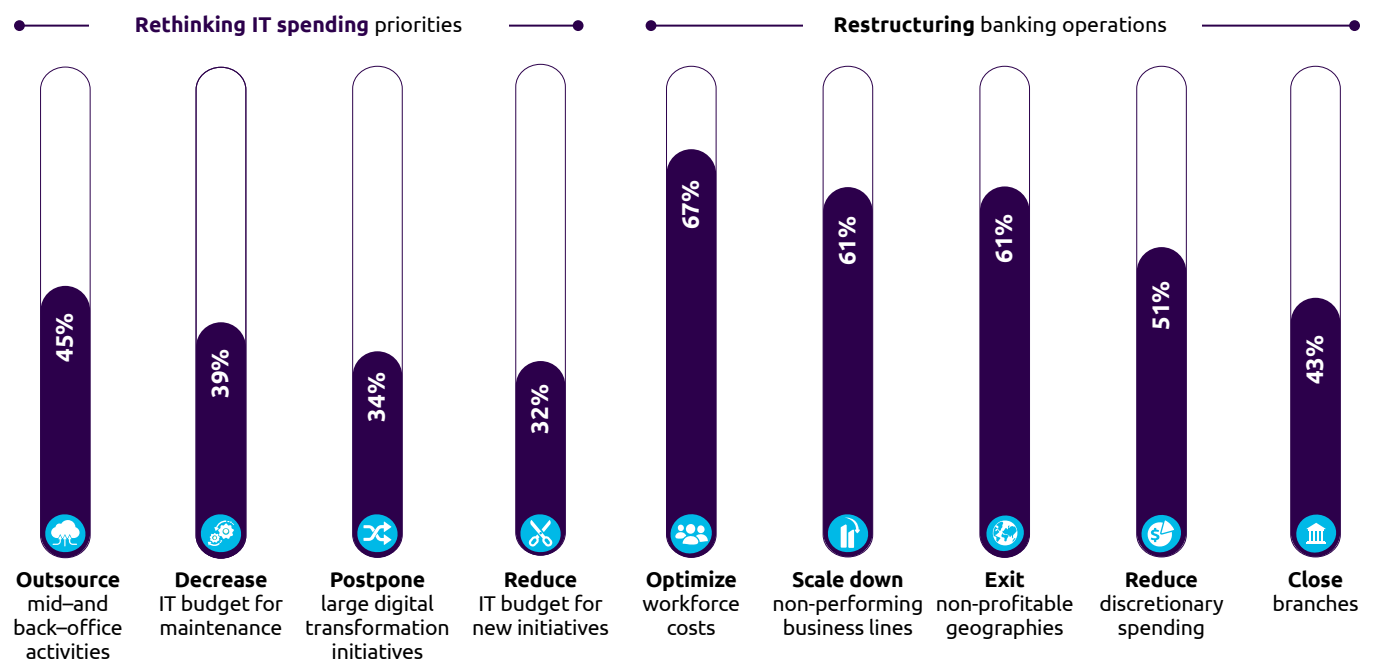
BANKS DOUBLE DOWN ON COST TRANSFORMATION TO IMPROVE FINANCIAL HEALTH

Financial institutions must focus on efficiency and productivity to prepare for the Banking 4.X era.

Context

- The pandemic forced banks everywhere to reexamine their cost base as a hedge against uncertainties. Firms reported steep profit declines as COVID-19-related expenses surged. In Q1 2020, US banks reported a ~70% YoY profit dip. The result? Full-throttle cost rationalization.⁹
- Banks continued to face cost pressure in 2021. Expenses surged faster than revenues due to the extended pandemic and accelerated digital banking initiatives. Moreover, ongoing revenue challenges due to ultra-low interest rates, tepid loan demand, and limited fee income opportunities pushed banks to focus on cost management to overcome margin pressure.

Figure 2: Bank executives cut costs on all fronts in a profit-sensitive environment



Sources: Capgemini Financial Services Analysis, 2021; World Retail Banking Report 2021 Executive survey, N=122.

Question: On a scale of 1 to 7, rate the cost optimization initiatives your bank plans to adopt in 2021, with 1 indicating the initiative is not a priority and 7 indicating a very high priority. Figure represents responses of executives who rated an optimization initiative of 5 or higher.

⁹ Reuters, "US banks profits plunge 70% on coronavirus loss provisioning," June 16, 2020.

Catalysts

- Banks need capital to invest in digital banking initiatives to meet increased online demands and new-age competition. As banks claw their way back to a sense of normalcy, cost-cutting measures are unavoidable. Banking sector IT spending is expected to recover and reach pre-pandemic levels at the close of 2021, indicating increased digital transformation demand.¹⁰
 - Digital initiatives in 2020 and 2021 were a knee-jerk reaction to manage contingencies, enable a remote workforce, and maintain business continuity. Now, banks are focused on driving innovation, which is sparking IT investments. For example, Milan-based international banking group UniCredit plans to increase 2020–2023 IT investments by 17%, fueled by USD1 billion in cost savings during the same period.¹¹
- In addition to expanding digital offerings, COVID-19-related expenses also increased. Several global banks reported a significant rise in non-interest outlays, such as Barclays' USD1 billion in unemployment insurance claims.¹²
 - An increase in expenses has contributed to the deterioration of efficiency ratios. In the US alone, the aggregate efficiency ratio was 59.2% in 2020 compared with 56.2% in 2019. Though this might become better by end of 2021 as Wells Fargo's efficiency ratio improved to 65.3% in Q2 2021, up from 77.7% in Q1 and 88.1% in Q2 2020.¹³

In a nutshell

- Banks have set ambitious 2022 cost rationalization targets. As of Q3 2021, **HSBC** had reduced risk-weighted assets in some of its unprofitable businesses by USD85 billion out of a targeted USD110 billion. In May 2021, HSBC sold out of mass-market banking in the United States and weeks later agreed to offload its unprofitable French retail business.¹⁴ And **Deutsche Bank** aims to bring down its cost-to-income ratio (CIR) to 70% by 2022 from its current level of 80% in 2021.¹⁵
 - To achieve its ambitious target, Deutsche bank is simplifying its IT systems and consolidating core platforms for smooth operations. The bank aims to reduce over 60% of its existing applications.¹⁶
 - The World Retail Banking Report 2021 highlighted that one in three bankers are contemplating IT budget cuts for new initiatives. The move appears inadvisable as efficiency and productivity cost savings will be powered by improving existing IT complexity.
- Australia-based **Westpac Bank** aims to reduce its cost base by AUD2 billion during 2021–2024 by digitalizing more services, offloading non-core businesses, rationalizing banking products by 50%, and reducing spending on contractors, head office roles, and office space.¹⁷
 - More Australian banks are expected to pursue cost reduction initiatives due to an increase in their expense base. As per an estimate, during 2017–20, Westpac's expense base increased by 14%, CBA's by 10%, NAB's by 10%, and ANZ's by 2%.¹⁸ Banks are rationalizing their branch networks and workforces. Media reports say CaixaBank may reduce branches by up to 27% and headcount by 19% following its March 2021 acquisition of Bankia. In 2020, Santander announced plans to downsize staff by 13% and close +1,000 branches. BBVA aimed to reduce 2021 operating expenses by negotiating layoffs for up to 16% of employees and closing ~20% of branches in Spain.¹⁹
 - However, not all banks are shuttering offices. Singapore-based **DBS** scaled up post-pandemic branch transformation to provide personalized customer experiences using self-service kiosks, face-to-face assistants, and financial planning consultants.²⁰

¹⁰ [TechGenix](#), "Global IT spending to rebound 8.4% in 2021: Gartner," April 8, 2021.

¹¹ [Reuters](#), "New UniCredit chief sees technology at core of every decision," April 16, 2021.

¹² [S&P Global Market Intelligence](#), "US banks focused on cost-cutting efforts as efficiency ratios deteriorate," December 16, 2020.

¹³ [S&P Global](#), "US banks' efficiency ratios come under pressure again in Q2," August 27, 2021.

¹⁴ [Bloomberg](#), "HSBC's CEO has his eye on China wealth beyond Xi's crackdown," September 3, 2021.

¹⁵ [Financial times](#), "Deutsche bank ditches cost-cutting target after bumper quarterly performance," July 28, 2021.

¹⁶ [Reuters](#), "Deutsche bank taps Oracle to simplify its IT, cut costs," June 24, 2021.

¹⁷ [The Sydney Morning Herald](#), "Westpac to slash \$2b in costs to head off low rates threat," May 3, 2021.

¹⁸ [Banking Day](#), "Banks fail to deliver cost savings," June 10, 2021.

¹⁹ [Fitch ratings](#), "Cost-cutting still a priority for Spanish banks," April 26, 2021.

²⁰ [Retail Banker International](#), "DBS undergoes branch transformation amid Covid-19," November 13, 2020.

- Banks are leaving non-core geographies to consolidate in key markets. In 2020, Australia’s Westpac bank exited China and other Asian markets to focus on core domestic and New Zealand businesses. In April 2021, Citibank announced plans to leave 13 non-core markets where it did not have the scale to compete.^{21,22}

Impact

- Strategic cost-transformation initiatives are helping banks improve cost-to-income ratio (CIR) while channeling savings into funding digital transformation. **Banco Santander’s** 2019–22 EUR20 billion IT spend is expected to eventually reduce annual costs by EUR1.2 billion. The bank also targeted to achieve a CIR of 42–45% from 47% in 2018. In H1 2021, the bank reported 45.7% CIR, best among its peer group, as a result of efficiency gains from IT and operations.^{23,24}



Banks will need to create provisions to fund their future growth plans, and this makes strategic cost transformation a high priority initiative in short-term. Simplifying IT and rationalizing applications will help banks to reduce costs, drive productivity and efficiency savings that could be channeled to fund new digital initiatives and innovations.”



– Niles Vaidya

Global Sector Leader for Retail Banking and Wealth Management,
Capgemini

²¹ [Reuters](#), “Australia’s Westpac to exit China, other Asia markets as focus swings to home,” October 14, 2020.

²² [BBC News](#), “Citigroup to exit consumer banking in 13 markets,” April 16, 2021.

²³ [Finextra](#), “Banco Santander earmarks EUR20 billion for digital spend,” April 3, 2019.

²⁴ [Santander](#), “Banco Santander reports attributable profit of €3,675 million for the first half of 2021,” July 28, 2021.

TREND 3

BANKING-AS-A-SERVICE CAN UNLOCK LATENT MARKET POTENTIAL

Embracing the BaaS platform approach will allow banks to leverage ecosystem capabilities to create and tap new value streams

Context

- Firms under pressure to improve their ROI reach for the lever that brings the fastest, surest result: the denominator. Executives are obsessed with denominator management (restructuring, reengineering, right-sizing, etc.) as a shortcut to improve financial KPIs. While these are essential tasks, they are more focused on improving today's business than on building future value chains.²⁵
- Solely pursuing such initiatives fail in making banks future proof. Cost transformation initiatives should always be accompanied by innovative ways of creating new value streams. Banking-as-a-Service (BaaS) platform approach is one such step towards generating long-term sustainable value.
- 85% of banking executives believe BaaS will have a notable impact by 2022, as per Finastra. The same study also indicates that 81% of banking executives agree that BaaS can help scale their business.²⁶

Catalysts

- While banks managed to improve their profitability in 2021 (compared with 2020), revenue growth remained muted due to the near-zero interest environment. As a result, banks need to scout for new value streams to revive top-line growth.
 - Bank of America (BoFA) Q2 2021 profit was USD9.2 billion – up from USD3.5 billion in Q2 2020 – despite a 4% YoY decline in revenue. Similarly, Citi Bank's Q2 per-share earnings exceeded analysts' expectations despite a 7% decline in consumer banking revenues. So, are banks inching toward a *revenue recession*?²⁷
- Low customer acquisition is also spurring BaaS adoption as traditional banks struggle to generate demand, increase product penetration, and distribute products quickly and economically. For instance, global bank deposits have reached record levels. In the United States alone, bank deposits grew by USD635 billion to reach a historical high of USD18.5 trillion in Q1 2021. Despite this surge in deposits, demand for loans was lackluster. Loans and leases were less than half (49.7%) of total assets – the lowest since 1973!^{28, 29}
 - In Q2 2021, BoFA reported a 12% decline in loans driven by a 30% slide in lending in its global banking division. Other US banks, such as Citi Bank and Wells Fargo, also reported a similar decline in loans and lending exercises. Banks need innovative lending models and low-cost distribution channels to increase lending at sustainable margins. These two factors, together, are driving BaaS adoption. Sixty-six percent of banks already use a BaaS platform (either in-house or third party), according to the World Retail Banking Report 2021.^{30, 31}

²⁵ [Harvard Business Review](#), "Competing for the future," August 1994.

²⁶ [Finastra](#), "Financial services: State of the nation survey 2021," June 28, 2021.

²⁷ [Forbes](#), "Banks' 2021 reality: A 'revenue recession' in the midst of an economic recovery", August 2, 2021.

²⁸ [The Financial Brand](#), "Community bank builds future on 'Banking-as-a-Service' & Google Plex," June 24, 2021.

²⁹ [Mint](#), "US banks' loans drop to another record low as deposits surge," March 22, 2021.

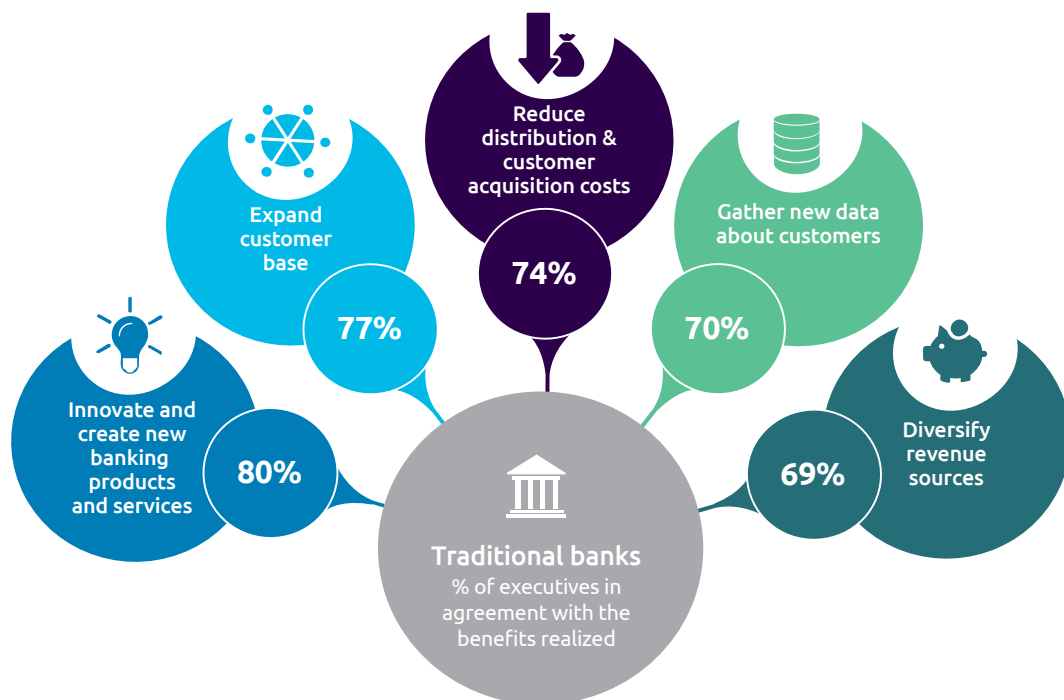
³⁰ [Financial Times](#), "Bank of America and Citigroup revenues decline as lending stalls," July 14, 2021.

³¹ [Capgemini](#), "World Retail Banking Report 2021," March 25, 2021.

In a nutshell

- BaaS is helping traditional banks to create new revenue models. Such models enable incumbents to monetize their banking stack (data, capabilities, and infrastructure) via revenue sharing agreements, one-time setup charges, subscription fees, or a combination of these. The result? A steady revenue stream fed by diverse sources.
 - US-based **Coastal Community Bank** started exploring BaaS potential as early as 2015 by creating a dedicated BaaS division, CCBX. The bank vetted ~900 firms (banking and non-banking) to onboard 21 partners by 2021. The bank earns fixed fees, volume-based fees, and cost reimbursements in exchange for providing these services. Between 2018 and 2020, the bank's income from BaaS offerings increased ~233%.^{32, 33}
 - Similarly, another community bank, **Evolve Bancorp** (Evolve Bank & Trust), reported a ~120% YoY increase in BaaS income in Q2 2021. In addition to several mid-size banks, community banks, and credit unions, large tier I banks also benefit from the BaaS platform. **BBVA US** (acquired by PNC Financial Services in June 2021) launched its BaaS platform, BBVA Open Platform, in 2019 to offer a full suite of BaaS offerings to third parties. The bank used various pricing strategies to monetize its banking stack.^{34, 35}

Figure 3: Incumbents can leverage BaaS to realize significant benefits



Sources: Capgemini Financial Services Analysis, 2021, World Retail Banking Report 2021 Executive survey; N= 122.

Question: What are the potential benefits of using a Banking-as-a-Service model? Rate benefits on a scale of 1 to 7, with 1 being no benefits and 7 being significant benefits.
Figure reflects responses from executives who rated a benefit at 5 or above.

³² [Coastal Financial Corporation 10-K report.](#)

³³ [The Financial Brand](#), "Community bank builds future on 'Banking-as-a-Service' & Google Plex," June 24, 2021.

³⁴ [Evolve Bancorp](#), "Shareholder letter," August 26, 2021.

³⁵ [BBVA](#), "BBVA launches first BaaS platform in the US", August 20, 2019.

- BaaS help banks to offer white-label banking services (embedded finance) to promote their products to a broader market. For incumbents, third parties act as low-cost distribution channels, and banks can access a large volume of customers.
 - One such example is the US-based community bank **Cross River**. Despite its limited scale, the bank has played an outsize role during the pandemic fallout by disbursing USD6.5 billion loans to more than 198,000 borrowers during the Paycheck Protection Program. The bank leveraged its BaaS platform to partner with dozens of FinTechs, which acted as a distribution channel. The result? Cross River was third among all banks by PPP loans made (trailing BofA and JP Morgan), and it was ranked 12 among PPP lenders in dollar volume.^{36, 37}
 - **Standard Chartered Bank** also launched its BaaS platform Nexus in 2020 and partnered with leading Indonesian e-commerce firm, Bukalapak, to offer digital financial services to more than 100 million customers and 13.5 million merchants.³⁸
 - **Goldman Sachs**, which recently forayed into consumer banking with the launch of Marcus, is pursuing a BaaS strategy to acquire more customers. The bank aims to replicate its Apple Card success by offering its APIs to third parties to embed the bank's product capabilities in their ecosystems. Moreover, it acquired GreenSky in September 2021, a point-of-sale loan provider, to boost its BaaS offerings by targeting GreenSky's network of 10,000 merchants.^{39, 40}

Impact

- Banks with a BaaS platform are well-positioned to harvest value from the burgeoning embedded finance market – an addressable market worth more than USD7 trillion by 2030, roughly double the market value of the world's top 30 banks today.⁴¹
- Moreover, the BaaS strategy can also help banks to optimize their asset utilization. An analysis of 30 banks (leveraging the BaaS platform) indicated a potential of two to three fold improvement in RoA and RoE over and above the industry average.⁴²



The top two priorities of a BaaS strategy are designing innovative products and reaching more customers. Therefore, banks need to forge partnerships with FinTechs to effectively and efficiently develop customer-facing solutions and leverage these partnerships to acquire new customers."



– Charles Potts

Senior VP and Chief Innovation Officer,
Independent Community Bankers of America (ICBA), US

³⁶ [The New York Times](#), "The tiny bank that got pandemic aid to 100,000 small businesses," June 23, 2020.

³⁷ [American Banker](#), "Cross River chief prepares for PPP encore," December 28, 2020.

³⁸ [Standard Chartered](#), "Standard Chartered partners with Bukalapak to launch digital banking solutions," January 14, 2021.

³⁹ [Brain Station](#), "Goldman Sachs seeks to replicate Apple Card with BaaS offering," October 28, 2020.

⁴⁰ [American banker](#), "GreenSky deal accelerates Goldman's consumer banking ambitions," September 15, 2021.

⁴¹ [Simon Torrance](#), "Embedded Finance: a game changing opportunity for incumbents," August 10, 2020.

⁴² [a16z](#), "The partner bank boom," June 11, 2020.



TREND 4

BANKING ON THE CLOUD TO UNLOCK NEW VALUE FRONTIERS

Cloud computing is enabling banks to embrace the NEW and decode the NEXT evolution of banking – Banking 4.X

Context

- The COVID-19 pandemic impact caught banks unprepared. However, the urgent need for business continuity and disaster management forced firms to overcome cloud skepticism. As a result, cloud adoption is gaining momentum in an industry that has historically lagged.
- Cloud transformation success stories have instilled confidence among incumbents that are now strategically stepping up to maximize cloud transformation potential. More than half (56%) of the executives interviewed as part of the World Retail Banking Report 2020 said they were ready to implement cloud at scale by 2022.⁴³

Catalysts

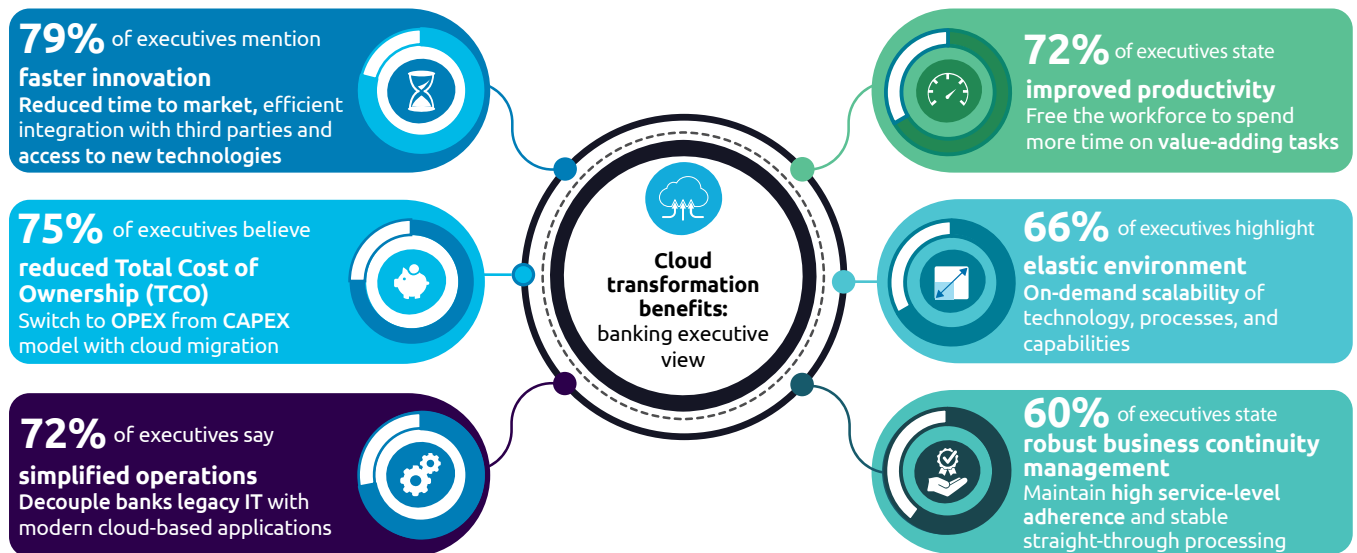
- In the Banking 4.X era, platform-supported banks can monetize diverse ecosystem capabilities.⁴⁴ However, cumbersome legacy infrastructure inhibits swift business model transformation. Of the executives we polled for the 2020 Retail Banking Report, 77% said legacy systems are a deterrent to bank platformification.
 - Yet, the cloud offers the necessary elasticity, agility, and robust computational horsepower to develop plug-and-play capabilities. Moreover, banks empowered by the cloud can collaborate and innovate with trusted third parties – a cornerstone of successful platform strategy.
- Traditional banks seeking to switch from transactional relationships to personalized engagements will build a data-centric culture. However, the same survey found that +70% of banks do not have the capabilities to manage and use data. Thus, building data capabilities on the cloud is a precursor to achieving personalization at scale.
 - Cloud offers a comprehensive approach throughout the entire data lifecycle – from capturing data, eliminating silos, assimilating data with analytics, AI, and ML capabilities that support decision making, and delivering data-centric products and services.

⁴³ [Capgemini](#), “World Retail Banking Report 2020,” April 2020.

⁴⁴ Banking 4.X is an experience-driven platform-based optimum-channel banking, resilient to financial and non-financial threats, built around long-term sustainable growth, and where human interactions evolve from servicing to advising.

In a nutshell

Figure 4: Execs are impressed by the cloud's impact on TCO and time to market



Sources: Capgemini Financial Services Analysis, 2021; World Retail Banking Report 2021 Executive survey, N=122.

Question: Rate how well the following perceived benefits support your bank's cloud transformation on a scale of 1 to 7, with 1 being not at all important and 7 being very important.

- As banks race to platformification, decoupling from legacy infrastructure remains critical. A cloud-first approach to digital transformation helps incumbent banks achieve desired outcomes by reducing technical debt while simultaneously modernizing applications.
 - Lloyds Banking Group** is piloting cloud migration to simplify its IT environment. By 2023, the bank plans to migrate ~30% and decommission ~20% of apps and services.⁴⁵
- Data volume is growing exponentially. Significant computing resources and effort are required to get the most from vast data. Banks often spend more time managing the infrastructure to handle data rather than using the data to create value. And some firms avoid migrating sensitive data to the cloud because they don't want to lose control, fear security risks, and worry about compliance with data sovereignty regulations.
 - Major cloud vendors (such as Google, AWS, and Microsoft) are bridging gaps and addressing data-handling concerns. In 2019, HSBC servers held 169 petabytes, which was on track to grow at 69% YoY! The situation compelled HSBC to migrate its data to the cloud, including sensitive customer and market information. The move helped the bank reduce processing and reporting times significantly.^{46, 47, 48}
- Artificial intelligence, IoT, robotic process automation (RPA), and blockchain enable banking sector growth, agility, and innovation. And these emerging technologies work in symbiosis with the cloud. For instance, IoT captures the data, and AI powers the insight while leveraging cloud scalability and computing power. As a result, cloud improves technological efficacy.
 - Cloud vendors now offer built-in automation capabilities. For example, Microsoft Cloud for Financial Services allows banks to automate the retail lending process from end to end. Historically, retail lending has been siloed, opaque, and disparate, with the average US bank taking up to 45 days to originate a home loan. Intelligent automation on the cloud could significantly reduce origination time and effort for banks and borrowers.⁴⁹

⁴⁵ [Lloyds Banking Group](#), "Annual Report and Accounts 2020," February 23, 2021.

⁴⁶ 1 petabyte = 250 bytes of information (or 1 million Gigabyte).

⁴⁷ HSBC had 169 petabytes of data in 2019 compared with 100 petabyte in 2018. Hence 69% YoY increase in volume of data.

⁴⁸ [Digfin](#), "HSBC goes cloud-first," April 2, 2019.

⁴⁹ [Bank automation news](#), "Microsoft cloud for financial services incorporates retail lending automation," February 26, 2021.

- US-based BBVA collaborates with Google Cloud to leverage AI and machine learning (ML) models to predict and prevent infrastructure cyberattacks.⁵⁰
- Beyond business benefits, cloud adoption also offers positive societal implications. For example, according to the World Economic Forum, cloud computing and SaaS delivery models are keys to financial inclusion. The WEF estimated that 60% of Latin America’s unbanked population faces financial exclusion because of the high cost of banking. Now, banks can pass on cost savings from cloud and SaaS to customers to make banking affordable while serving new populations at sustainable profit margins.⁵¹
 - Moreover, cloud computing positively impacts the green IT revolution by reducing carbon footprints and energy consumption. Cloud is helping to potentially prevent more than one billion metric tons of CO2 emissions from 2021 through 2024, according to research group IDC.⁵² Hyperscaling cloud computing is expected to reduce emission levels further.⁵³
 - In 2021, Banco Santander migrated 60% of its IT infrastructure to the cloud and set a 2023 deadline to complete the transformation. The move helped the bank reduce its energy consumption by 70%.⁵⁴
- Banks must also be wary of risks associated with cloud computing. Regulations associated with data sovereignty, migration complexities, third-party risks, and security vulnerabilities are not rare to cloud transformation. Moreover, the scale at which banks are moving critical operations to the cloud has led to cloud concentration. The US Treasury, the EU, the Bank of England, and the Bank of France are stepping up their scrutiny of cloud technology to mitigate risks of banks relying on small group of tech firms. However, the benefits outweigh the concerns or implementation issues.⁵⁵

Impact

- Deploying applications and infrastructure in the cloud deliver flexibility, scalability, and agility across the organization. However, full-scale benefits go way beyond the technical and operational. Cloud deployments are financially efficient, enabling substantial savings while allowing organizations to benefit from new functionalities in terms of innovation and time to market for products and services.
 - According to World Retail Banking Report 2021, more than 70% of banking executives agree that cloud adoption enhances innovation potential, reduces TCO, simplifies operations, and improves productivity.⁵⁶

⁵⁰ [Google Cloud](#), “BBVA and Google cloud form strategic partnership to drive security innovation in financial services,” February 23, 2021.

⁵¹ [World Economic Forum](#), “Cloud and SaaS technology can drive inclusive banking. Here are 3 reasons how,” December 10, 2020.

⁵² [IDC](#), “Cloud Computing Could Eliminate a Billion Metric Tons of CO2 Emission Over the Next Four Years, and Possibly More, According to a New IDC Forecast,” March 8, 2021.

⁵³ [GCN](#), “How cloud can cut carbon emissions,” March 16, 2021.

⁵⁴ [ComputerWeekly.com](#), “Banco Santander moving more than 200 servers to cloud per day,” April 20, 2021.

⁵⁵ [Economic Times](#), “For bank regulators across the world, tech giants are now too big to fail,” August 20, 2021.

⁵⁶ [Capgemini](#), “World Retail Banking Report 2021,” March 25, 2021.

TREND 5

THE POWER BEHIND EXPERIENTIAL BANKING 4.X: EMERGING DATA ECOSYSTEMS

Firms that engage in data ecosystems will be future frontrunners by offering customers contextual and lifestyle banking experiences.

Context

- The Banking 4.X era concept – in which leading FS firms aggressively harvest data to create experiential customer journeys through intelligent and personalized engagements – was introduced in the World Retail Banking Report 2021.⁵⁷
- Banks are awash with data but will leverage its value only by assimilating it within the value chain. Data ecosystems offer firms (banking and non-FS) an unprecedented opportunity to collaboratively share and manage information to create significantly greater value than they could develop unilaterally.
- A Capgemini Research Institute (CRI) report found that 73% of banks plan to launch new initiatives around data ecosystems during 2022–2024. The survey of industry executives, experts, and academics in 12 markets also suggests that >40% of banks will invest more than USD50 million annually on data ecosystem initiatives.⁵⁸

Catalysts

- Changing customer behaviors sparked initial interest in data before the impact of COVID-19, albeit at a less zealous pace. Pandemic fallout accelerated urgency, however. Lockdowns, social distancing, and remote work drove consumers to become increasingly digital and connected. And, as a result, they now demand customized products and services. For banks, that means prioritizing hyper-personalized customer experience (CX).
 - But before the deep dive into hyper-personalization, banks need a comprehensive view of their customers. Therefore, the most strategic firms are collaborating with non-banking organizations to enrich their databases and build shared data ecosystems.
- What's more, the rapid global proliferation of open banking initiatives is encouraging banks to become data ecosystem orchestrators as billions of customers worldwide use or consider agile, new-age banking products.
 - In the UK alone, 2.5 million customers and businesses adopted open-banking-related products and services in 2020 to generate more than 4 million payment transactions (13x more than in 2018) and 5.8 billion API calls (87x more than in 2018).⁵⁹ An API call is when an individual logs on to an app or asks a question via a browser.

⁵⁷ [Capgemini](#), "World Retail Banking Report 2021," March 25, 2021.

⁵⁸ [Capgemini Research Institute](#), "Data sharing masters," July 7, 2021.

⁵⁹ [Open Banking](#), "Three years since PSD2 marked the start of open banking, the UK has built a world-leading ecosystem," accessed August 29, 2021.

In a nutshell

- Customers expect their banking interactions to be simple, intuitive, and seamlessly connected across physical and digital environments. And they want banking to fit within the context of their daily activities. Enter hyper-relevant *lifestyle banking* personalized for each user.
 - **Flybits**, a contextual data company, aims to transform data into an ecosystem that provides real-time insights. **Citibank**, **HSBC**, **Mastercard**, **Westpac Banking**, and **TD Bank** partnered with the Toronto-based FinTech to leverage its customer experience platform. A Latin American bank that partnered with Flybits achieved a 164% increase in offer redemptions, while a US-based bank reported 43% user engagement growth after implementing the Flybits platform.^{60,61}
- Beyond improving customer experience, data ecosystems also help banks manage non-financial risks by sharing and modeling climate change data. **The Climate Service** (TCS), a US-based climate risk modeling and analytics provider, joined the **Wells Fargo** startup accelerator in 2019. As a result, the bank embeds climate-risk data into its decision-making processes via the scalable TCS SaaS platform.⁶²
 - In addition to non-financial risks, data ecosystems also help identify and prevent financial risks. For example, banks can collaborate with several financial and non-financial firms to gather and analyze behavioral data to avoid fraud and social engineering scams.
- Banks leveraging a data ecosystem can develop innovative products by recalibrating their existing processes and business models.
 - Tokyo-based **MUFG** and Singapore-based super-app **Grab** built a lending score model based on data from each others' customers. The partnership enabled MUFG to access vast customer data along with Grab's advanced AI capabilities. The data ecosystem will also benefit Grab as customers' income, spending habits, and lifestyle statistics will help it target customers with hyper-personalized offerings.⁶³
- Orchestrating a data ecosystem that includes FinTech specialists can help banks drive the financial inclusion agenda. By leveraging new data types and credit analysis, banks can target underserved customers who lack financial identity and have no history with traditional credit scoring models (e.g., Experian, Equifax, SCHUFA).
 - UK-based **CreditLadder** enables customers to use their rent payment history to improve their Experian and Equifax credit scores.
 - Singapore SaaS company **Lenddo** and London-based FinTech **Credit Kudos** leverage alternative data (social media activity, browsing behavior, geolocation, and behavioral analytics) to build credit profiles for customers with thin credit files. Moreover, US-based FinTechs Tala and Branch use alternative data to evaluate the creditworthiness of underbanked customers seeking loans.⁶⁴



Digital without data is similar to an empty shell! It is imperative that banks are building right technologies and capabilities that unleashes the full potential of data. Thanks to APIs, cloud and advancement in AI/ML, banks today have unprecedented opportunity to become truly data-centric."



– Neha Punater

VP and Global Lead – Banking & Capital Markets Transformation
Capgemini

⁶⁰ [Finextra](#), "Mastercard and Citi invest in Flybits," July 16, 2019.

⁶¹ [Flybits](#), "Flybits named one of Canada's top 50 FinTech companies by digital finance institute," July 18, 2019.

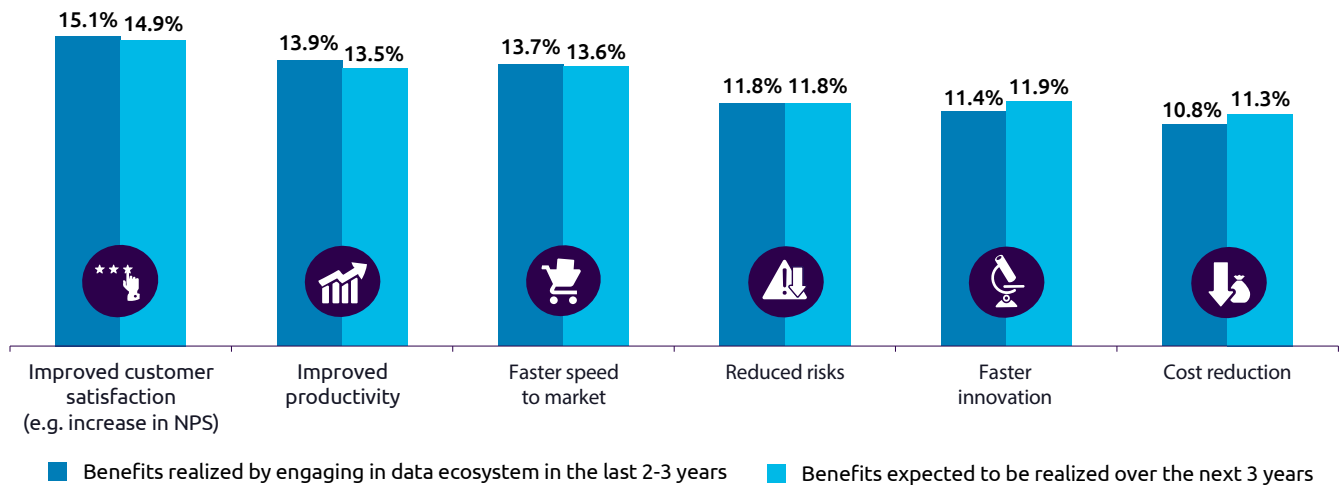
⁶² [Wolfpack Investor Network](#), "The Climate Service helps companies manage the risks of climate change," October 10, 2019.

⁶³ [Nikkei Asia](#), "MUFG bank decided on Grab tie-up based on three surprises," April 27, 2020.

⁶⁴ [Finextra](#), "Credit scoring: Going alternative," May 4, 2020.

Impact

Figure 5: Potential benefits from data ecosystems



Sources: Data Sharing Masters; Capgemini Data Ecosystem survey; N=750 organizations, April–May 2021.

Note: Percentages indicate annualized benefits realized three years prior or expected three years from now.

- Engaging in a data ecosystem can significantly improve a bank’s innovation potential and speed to market while boosting customer engagement and satisfaction metrics.⁶⁵
 - Additionally, organizations that use more than seven external data sources exhibit superior financial performance. A firm can bolster its fixed asset turnover by 14x and market cap by 2x.⁶⁶
 - Moreover, firms involved in the most collaborative data ecosystems can potentially outperform organizations in less complex and collaborative ecosystem models. Expect these collaborative leaders to drive an additional 10 pp of financial advantage (including new revenue, higher productivity, and lower costs) within the next three years (by 2024).⁹

⁶⁵ [Capgemini Research Institute](#), “Data sharing masters,” July 7, 2021.

⁶⁶ Analysts measure operating performance using a fixed asset turnover ratio (FAT) to compare net sales (income statement) to fixed assets (balance sheet).

TREND 6

FRONTRUNNERS WILL BUILD DIGITAL-ONLY SUBSIDIARIES TO REMAIN RELEVANT AND RESILIENT IN THE FINTECH ERA

To deliver fast, economical, and experiential FinTech-inspired digital journeys, traditional banks are launching digital-only subsidiaries

Context

- While customers are willing to try novel products and services from new-age players, the World FinTech Report 2021 customer survey also highlighted that 68% of customers would try a digital-only bank operated by an incumbent, signaling trust in traditional banks. Therefore, incumbents may view customer loyalty as an impetus to build and operate a digital-only entity.
- Throughout the last decade – and particularly since 2015 – several traditional banks, including Leumi (IL), NatWest (UK), JP Morgan (US), Equitable (CA), UOB (SG), Goldman Sachs (US), BNP Paribas (FR) and Société Générale (FR) built digital-only subsidiaries. These incumbents leveraged their customer data, risk management expertise, and governance capabilities while adding new functionalities focused on mobility and hyper-personalization.

Catalysts

- New-age players (challenger banks, neobanks, and FinTechs) have significantly altered the banking operating model and are actively targeting the traditional customer base of incumbents. According to a World Retail Banking Report 2021 survey, 66% of bank executives cited new-age players as a competitive threat.⁶⁷
 - From 2010 to August 2020, ~320 neo and challenger banks across regions attracted more than 39 million customers. In the United States alone, 53.7 million customers (~20% of the US population) are expected to have at least one account at a digital-only full-service bank by 2025.^{68, 69}
- Moreover, for incumbent banks, decades of operational patches have created intertwined layers of legacy technologies. Digital transformation of these tangled systems is critical but time consuming. That's why a digital-only subsidiary may help incumbents remain in the game.
 - 55% of banking executives, on average, said a digital-only subsidiary enables ubiquitous banking, drives new products to market faster, and encourages collaboration, thanks to plug-and-play functionality, as per the World FinTech Report executive survey 2021. The same study also indicated that 57% of banks are considering building a digital-only entity.⁷⁰

⁶⁷ Capgemini, "World Retail Banking Report 2021," March 25, 2021.

⁶⁸ Exton Consulting, "Neobanks 2021 – Shifting from growth to profitability," November 2020.

⁶⁹ Insider Intelligence, "What neobanks are, how they work and the top neobanks in the US & world in 2021," August 4, 2021.

⁷⁰ Capgemini, "World FinTech Report 2021," May 2021.

In a nutshell

- For incumbents, digital-only entities can act as a gateway to diversify their business lines and geographical presence. In 2016, Goldman Sachs launched the Marcus brand to enter the consumer banking market and later in 2018 expanded its presence in the UK.
 - In September 2021, **JP Morgan Chase** officially launched its UK digital bank, offering a fee-free current (checking) account that combines money management features with cashback rewards. Chase said it would expand into personal lending, investment, and even mortgages. Earlier in 2021, the US giant spent a rumored USD957 million to acquire digital wealth platform **Nutmeg** to bolster the launch.⁷¹
 - Leading Argentina-based insurer Sancor Seguros launched digital-only **Banco del Sol** in August 2020. The new entity attracted +130,000 clients within eight months and aims to become one of Argentina's top-10 banks.⁷²
- In addition, digital-only banks help incumbents orchestrate an ecosystem of FS and non-FS services through collaboration to enable seamless customer experience. According to the World FinTech Report 2021 executive survey, one of two bankers said that having a digital-only entity supports efficient collaboration with non-FS firms.
 - In 2020, Standard Chartered launched its virtual bank **MOX** in partnership with PCCW-HKT telecom service provider and Trip.com in Hong Kong. The bank aims to fortify its market position by offering mobile-savvy Hong Kong residents lifestyle banking and non-FS services.⁷³ Standard Chartered also acquired a full banking license in Singapore in December 2020 and entered a JV deal with Singaporean National Trades Union Congress to launch a digital-only bank.⁷⁴
 - In Vietnam, **VPBank**, in partnership with Be Group (ride-hailing app), launched digital-only bank **Cake** in January 2021 to target +10 million Be Group customers and drivers with convenient and experiential FS and non-FS products. Be Group and VPBank are actively upgrading and expanding the Cake partner ecosystem to offer lifestyle products and services throughout the long term.⁷⁵
- With a digital-only entity, incumbents can target customer segments that a traditional one-size-fits-all approach might otherwise overlook. For instance, in 2020, Vietnam's **Maritime bank** (MSB) launched its digital-only subsidiary, **TNEX**, to target Vietnam's large underbanked and unbanked population.
 - Italian incumbent, **Banca Mediolanum**, launched digital-only bank **Flowe** to cater to consumers who seek a sustainable financial lifestyle and conscientiously purchase local, ethical, and environmentally friendly products. Flowe offers recyclable wooden Mastercard-issued bank cards. It also collaborates with green startups – **ZeroCO2** that plants trees in Guatemala to compensate for carbon dioxide and support local families. And Swedish **Doconomy** allows Flowe card users to estimate the CO2 emissions created by each card purchase.⁷⁶
- The digital-only trend may have started with tier I banks, but now it is cascading to mid-size firms and credit unions. In 2021, **FirstOntario Credit Union** launched its digital-only greenfield bank Saven to offer a high-interest savings account and other FS services with a seamless digital experience.⁷⁷

Impact

- With digital-only subsidiaries at their side, incumbents can consolidate their market position and fortify their value streams against emerging competition from new-age players.
 - BNP Paribas launched digital-only **Hello Bank** in Belgium in 2014. Since then, Hello Bank has become a pan-European brand with millions of customers. BNP Paribas continued with this strategic approach in 2017 and (through acquisition) launched digital-only subsidiary **NiCKEL**. From October 2020 to March 2021, NiCKEL opened on average 40,000 accounts per month in France to cross the two million mark. The brand aims to double its customer count in France and become a pan-European brand in six European countries by 2024.⁷⁸

⁷¹ [Finextra](#), "Chase digital bank launches in the UK," September 21, 2021.

⁷² [The Chronicler](#), "Banco del Sol, the digital proposal that in less than 8 months is already a protagonist in the financial industry," April 27, 2021.

⁷³ [Global Brands](#), "Standard Chartered officially launched a new virtual bank MOX in Hong Kong," accessed September 9, 2021.

⁷⁴ [CNBC](#), "Standard Chartered strikes deal to launch digital-only bank in Singapore," September 6, 2021.

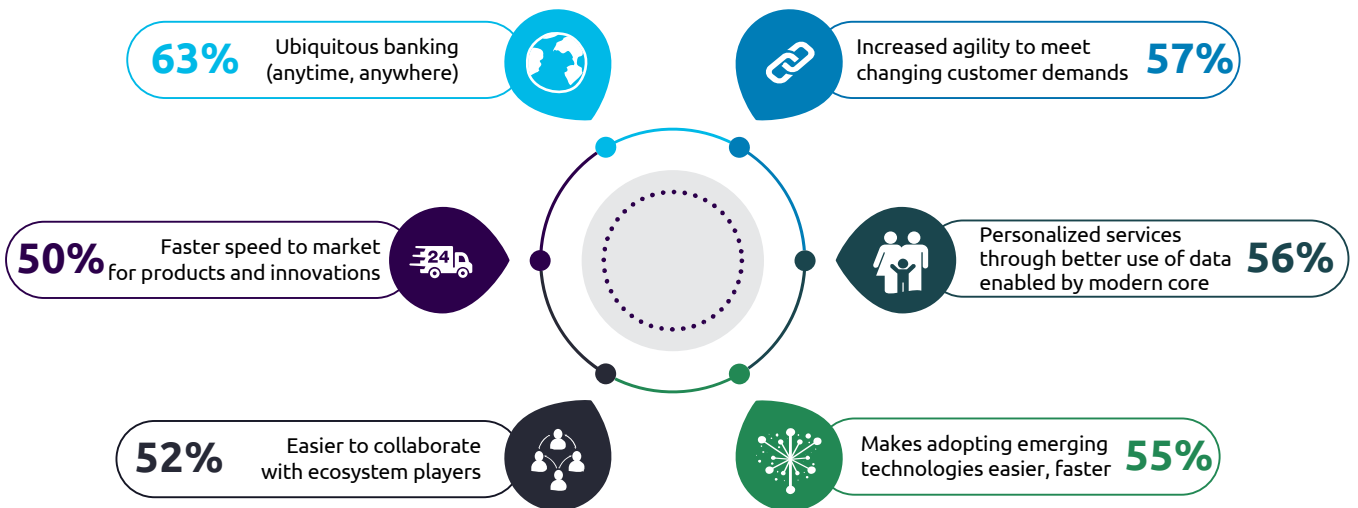
⁷⁵ [Vietnam Investment Review](#), "Be Group partnering up with VPBank to launch Cake digital bank," January 12, 2021.

⁷⁶ [FinTech Futures](#), "Italy's Banca Mediolanum launches sustainable challenger Flowe," July 20, 2020.

⁷⁷ [Finextra](#), "FirstOntario Credit Union launches digital-only offshoot with Temenos," May 25, 2021.

⁷⁸ [EFMA](#), "NiCKEL reaches 2 million customers in France," April 12, 2021.

Figure 6: Why should incumbents create digital-only subsidiaries? (Banking executive view)



Sources: Capgemini Financial Services Analysis, 2021; World FinTech Report 2021 Executive survey, N=122.

Question: What can be the potential level of benefits of a digital-only bank across business priorities? Please rate on a scale of 1 to 7, with 1 = low benefits and 7 = high benefits. Figure reflects responses from executives who scored 6 or above.



A benefit of being a digital bank backed by an incumbent is that it gives you the best of both worlds. One can extract the best aspects of the innovative FinTech ethos of a startup and combine that with the expertise and brand of an established bank."



– **Marieke Flament**

Global Head, CEO, Mettle, UK

TREND 7

CYBERSECURITY IS BECOMING A COMPETITIVE DIFFERENTIATOR FOR BANKS

Intelligent Identity and Access Management (IAM) solutions becoming the foundation for experiential digital banking services

Context

- Are you familiar with the 1993 New Yorker cartoon featuring a dog typing on a computer, telling his canine protege, “[On the internet, nobody knows you are a dog](#)”? The cartoon was the most reprinted in the magazine’s history, and after nearly three decades, it is as applicable as ever!
- Now, in light of post-pandemic fallout, cybercriminals brazenly exploit internet anonymity as consumers’ use of online channels spikes. In the United States alone, breaches containing usernames and passwords increased 450% YoY in 2020, and 43% of these breaches were unauthorized access. Moreover, the average cost of a breach also increased 5.5% YoY, making the country the costliest place in the world to recover from a breach.⁷⁹
- This steady increase obligates banks to adopt a comprehensive Identity and Access Management (IAM) strategy to thwart cyber threats arising from changing consumer behavior, remote workforces, and changing market structures.

Catalysts

- The banking sector is undergoing rapid digital transformation to address business continuity concerns and changing consumer behavior. With more brick-and-mortar branches closing, banks rely on mobile apps and net banking to onboard customers. However, assessment research by Swiss application security specialist ImmuniWeb found that 92% of mobile banking applications of the top global-100 banks contain at least one medium-risk security vulnerability enabling hackers to steal sensitive data.⁸⁰
- An increasingly distributed and remote workforce with bring-your-own-device (BYOD) accessibility creates cybersecurity grey areas. Cybercriminals are exploiting these vulnerabilities to gain unauthorized access.
- Banks are orchestrating an ecosystem, building a marketplace, or pursuing a super-app strategy to offer one-stop shopping for FS and non-FS services. Banks rely on third parties (FinTechs, retailers, and tech vendors) to either borrow a capability or deliver non-FS services. As a result, banks no longer operate within a defined perimeter, and traditional cybersecurity measures centered around protecting these perimeters fail.
 - The SolarWinds data hack was a terrifying and timely reminder that third-party risk management is critical to cybersecurity. A single weak link (entity) within the banking ecosystem could act as a door for adversaries. Therefore, banks must now protect a perimeter that extends far beyond their networks.⁸¹

⁷⁹ [ForgeRock](#), “2021 ForgeRock Consumer Identity Breach Report,” June 7, 2021.

⁸⁰ [ImmuniWeb](#), “State of application security at S&P global world’s 100 largest banks,” July 10, 2019.

⁸¹ [Guidepoint security](#), “Lesson from SolarWinds attack: It’s time to beef up IAM,” March 4, 2021.

In a nutshell

- Banks are steadily shifting from existing knowledge-based and binary authentication to risk-based authentication (RBA) centered around three common factors:
 1. Something customers know (such as password or pin)
 2. Something customers have (such as OTP)
 3. And something customers are (biometric verification).
- Also known as adaptive authentication, this multi-factor authentication (MFA) prevents unauthorized access, theft of data, account takeover, and other fraud attacks.
 - Banks developing super apps are prioritizing cybersecurity with biometric authentication and risk analysis. In mid-2021, **Belfius** (the third-largest Belgian bank) partnered with Chicago cybersecurity firm **OneSpan** to integrate the tech firm's Mobile Security Suite into its super app. The goal is to secure mobile app transactions for the bank's 1.5 million customers.⁸²
 - London-based **iProov**, offering secure biometric authentication technology, reported a 15x YoY increase in the number of people verified using its technology, with verifications growing at a consistent rate of 25% per month globally. ING and Rabobank are among the banks using iProov technology.⁸³
- Banks are also switching to MFA authorization due to the rising volume of internet logins and digital transactions. In late 2020, **Bank of America** expected a boom in digital transactions post pandemic and quickly deployed MFA to prevent attempts to hijack customer accounts.⁸⁴
 - Other banks that have implemented MFA and biometrics verification include **Bank Australia** (voice biometrics technology), Singapore's **OCBC bank** (facial biometrics for ATM transactions), and Banco Santander, which partnered with **FacePhi** for remote onboarding processes.^{85, 86, 87}
 - To further strengthen their identity verification framework, firms are leveraging AI and machine learning to build intelligent adaptive authentication. Mobile-only **Orange Bank** integrated intelligent adaptive authentication with risk analytics to help fight online and mobile fraud.⁸⁸
- As banks adopt new technologies and pursue digital transformation, legacy identity management systems will prove less functional. Indonesian foreign exchange commercial bank **BTPN** made the switch to 100% digital in response to demand from retail and business customers. The bank migrated its disparate systems onto a single IAM platform and improved time to market, reduced operating costs, and created frictionless UX.⁸⁹
 - Similarly, Standard Chartered centralized its customer IAM into one platform to reduce implementation and roll-out time for new services. The bank has an aggressive digital banking strategy and aims to launch multiple digital-only banks (such as MOX in Hong Kong) across regions. Robust, modern, and centralized IAM is the cornerstone for successful digital banking.⁹⁰

⁸² [Banking Exchange](#), "Super Apps prompt cybersecurity investment from banks," June 7, 2021.

⁸³ [iProov press release](#), "iProov achieves record-breaking growth as demand for Genuine Presence Assurance™ soars," July 29, 2021.

⁸⁴ [Techgraph](#), "Adaptive multi-factor authentication (MFA) in BFSI," December 8, 2020.

⁸⁵ [Find Biometrics](#), "Nuance provides gatekeeper security for Bank Australia," March 6, 2021.

⁸⁶ [IBS Intelligence](#), "OCBC bank launches facial verification system at ATMs," March 19, 2021.

⁸⁷ [Find Biometrics](#), "Banco Santander chooses FacePhi as benchmark supplier," August 16, 2021.

⁸⁸ [Bright Talk](#), "Intelligent adaptive authentication as a solution for Orange Money customers," January 12, 2021.

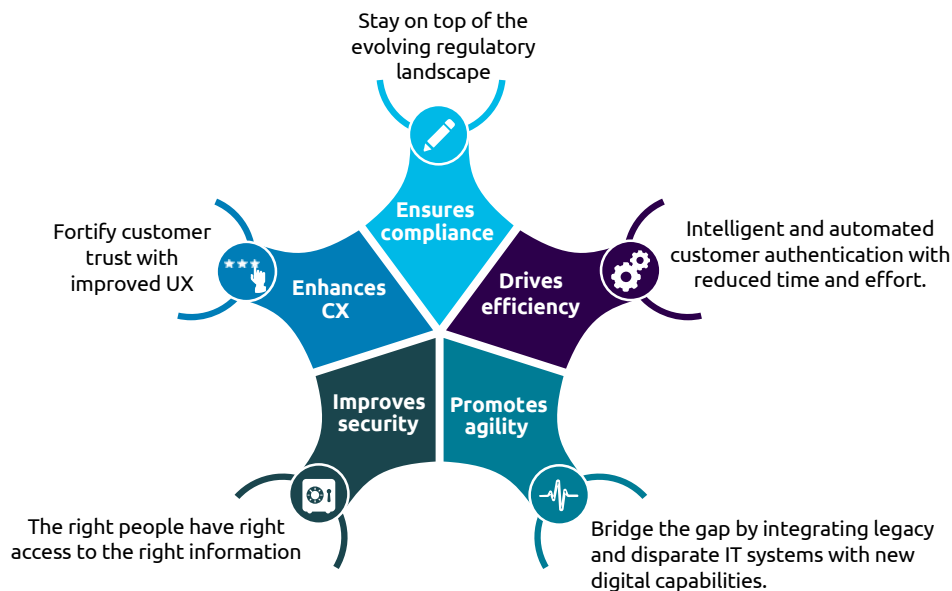
⁸⁹ [ForgeRock](#), "PT bank Tabungan Pensiunan Nasional Tbk (BTPN) grows its business by going fully digital," accessed September 7, 2021.

⁹⁰ [ForgeRock](#), "Standard Chartered bank embraces digital identity to grow," April 28, 2021.

Impact

- IAM allows banks to create a single digital identity for each customer's authentication. It improves and enhances CX by providing seamless, omnichannel access for all applications with one secure identity, rather than requiring separate credentials for each service.
- In light of pandemic fallout and increased cyber threats, banks must comply with various regulatory initiatives such as SCA, PCI, DSS, and SOX. IAM solutions help firms meet governance requirements and ensure compliance.
- Moreover, modern IAM solutions with intelligent capabilities (AI and ML) also speed up customer onboarding by automating critical customer journey processes and eliminating the need for human supervision, thereby driving efficiency improvements.
 - As per iProov estimates, banks can reduce onboarding costs by as much as 90% with biometric checks and other digitally enabled processes.⁹¹

Figure 7: How does Identity and Access Management benefit banks?



Source: Capgemini Financial Services Analysis, 2021.

⁹¹ [Biometricupdate.com](https://www.biometricupdate.com), "Most US banks need biometrics to stand up mobile onboarding, iProov report finds," October 28, 2020.

TREND 8

BANKS TO STEP UP THEIR TRANSITION TO BECOME PLANET-CENTRIC ENTERPRISES

Banks are progressing from greenwashing to comprehensive sustainable business strategies with equal focus on the environment as well as social responsibility

Context

- The topic of sustainability has been at the forefront of discussion among global leaders as a critical component to societal progression. More so because of the pandemic fallout! The financial sector has both the unique opportunity and responsibility to support sustainable and green society development.
- Banks act as key intermediary in the quest for net zero by establishing sustainable offers, financing mechanisms, and investment principles. Banks can lead the charge through their roles by financing the right projects and empowering firms, society, and people who want to accelerate their green transition. Without the active participation of banks, the path to sustainability and social equality will be more complicated, if not impossible.

Catalysts

- Conscious consumerism is rising, and banks cannot afford to underplay this segment. As per a survey, ~40% of consumers believe in linking their purchase decisions to a prospective brand's environment-friendly sourcing, production, packaging, and distribution processes, in addition to ethical values.⁹²
 - The World Retail Banking Report 2021 customer survey also highlighted that, on average, 65% of customers want their banks to reduce its carbon footprint by following paperless processes, consuming renewable energy, and offering biodegradable cards. The same survey also indicated that nearly a third of consumers are willing to pay an additional charge for green banking products and services or shift to a new provider for environmentally and socially friendly products.⁹³
- The world is moving from the “nice to have” era to the “necessity” era. Sustainability incentives (such as tax breaks and awards) are soon expected to become regulatory obligations. 2021 could be an inflection point beyond which FS firms could feel increasing pressure from regulators to comply with “green” norms.
 - The EU launched its “Strategy for financing the transition to a sustainable economy” in July 2021 with an aim to put in place tighter measures on banks and credit rating agencies to prevent greenwashing. The strategy also helps to reduce the systemic risks from climate change. Other major markets, such as the UK, the US, Germany, and APAC region, have also introduced similar steps.⁹⁴

⁹² [Capgemini Invent](#), “Sustainable banking,” February 1, 2021.

⁹³ [Capgemini](#), “World FinTech Report 2021,” May 2021.

⁹⁴ [Bloomberg](#), “EU targets greenwashing, financial risks in strategy draft,” June 30, 2021.

In a nutshell

- Many banks have started embedding sustainability with innovations such as recyclable cards and loyalty points to incentivize a low-carbon lifestyle for retail banking. For instance, BBVA launched a card made of recycled plastic. In a similar approach, **Caixa bank** launched a biodegradable line of gift cards.⁸³
 - **Islandsbanki** (Iceland) partnered with **Meninga** to provide its customers with a precise carbon footprint for each transaction. To create green propositions, ESG data can also be embedded in banking products, such as loans, checking accounts, and payments. **Bank of the West** (by BNP Paribas) in the US launched a green checking account. There are also several green mortgages available from leading banks, such as Barclays, ING, Nordea, Société Générale, along with easy financing products for electric vehicles.^{83, 95, 96}
- Banks pursuing sustainability agenda are also establishing responsible operations and processes. For instance, **ING** is working towards having only “green” buildings in its portfolio by 2023. ING’s own office in Netherland has received the highest sustainability rating. The bank is targeting to reduce CO2 emissions from buildings and data centers by 80% by year-end 2022 and reduce energy consumption by 65% by year-end 2030.^{97, 98}
- IT also has a significant environmental impact, responsible for 6–9% of total electricity consumption. That is why green IT and computing initiatives have set in motion ecofriendly innovations such as algorithmic efficiency, asset and resource optimization, virtualization, server consolidation, and smart recycling.
 - Deutsche Bank launched a green IT initiative that resulted in energy savings of ~76% per person. The initiative has helped save 4.5 million kWh of electricity a year, reduce the quantity of paper by 25%, and increase energy efficiency in the bank’s data centers four-fold.⁹⁹
 - In addition to green IT, banks must also build AI that is efficient and sufficient. While AI models can help us reduce CO2 emissions, they have a CO2 footprint and can increase power costs if they are computationally intensive. Green AI maintains a balance between model accuracy and sustainability that delivers cost competitiveness and is more inclusive in line with SDG.¹⁰⁰

Figure 08: Six field of play to drive sustainability agenda



Sources: Capgemini Financial Services Analysis, 2021; Capgemini Invent.

⁹⁵ [Forbes](#), “Icelandic bank is first to provide customers with new carbon footprint tracker,” March 4, 2021.

⁹⁶ [Banking Dive](#), “Bank of the West rolls out climate-conscious checking account,” July 22, 2020.

⁹⁷ [ING](#), “ING’s new office receives highest sustainability rating,” June 26, 2020.

⁹⁸ [ING](#), “ING will only finance ‘green’ office buildings in the Netherlands after 2017,” December 15, 2016.

⁹⁹ [Deutsche Bank](#), “Green IT: Energy efficiency at work,” accessed September 20, 2021.

¹⁰⁰ [Capgemini Green AI](#)

Impact

- Banks that prioritize transition towards green and sustainable business operations are more resilient to market disruption and could recover faster from a crisis.
 - An analysis of 613 shares of global public companies where climate solutions generated at least 10% revenues and 140 stocks with the highest ESG scores indicated that climate-focused and ESG-focused stocks performed better during the COVID-19 crisis.¹⁰¹
- In another study, global 100 most sustainable companies have consistently outperformed and outlasted the average company in the MSCI ACWI index.¹⁰²



Building a green and sustainable banking, financial services & insurance value chain will require transition to green IT – environmentally sustainable computing practice. Embracing eco-friendly innovations around algorithmic efficiency, virtualization, asset and resource optimization will help to balance between ongoing rapid digital transformation and sustainability.”



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¹⁰¹ [HSBC](#), “ESG stocks did best in Covid-19 slump,” March 27, 2020.

¹⁰² [Visual capitalist](#), “Mapped: Where are the world’s most sustainable companies?,” March 6, 2020.

TREND 9

5G PROJECTS AND EXPLORATION TO PICK UP SPEED

5G will power the new age of hyper-connectivity featuring real-time banking and instant customer gratification

Context

- 5G is the latest iteration of mobile broadband (G standing for generation). It is expected to revolutionize multiple sectors of society. With 10x faster speed and near-zero latency, 5G is already being tested in self-driving cars, remote surgery, smart cities, and industrial robots. However, the true potential of 5G lies in using it in concert with other digital technologies such as cloud, AI, IoT, big data analysis, and AR/VR immersive experience.
- 5G adoption will help banks achieve their desirable customer objectives – ease of access, personalization, and on-demand availability.

Catalysts

- Mobile operators in 125 countries have already invested in 5G technology. As of May 2020, 42 countries have launched 5G services. During 2019–2025, the number of 5G subscriptions is expected to top 2.6 billion, driven by sustained momentum and a steadily developing 5G ecosystem.¹⁰³
 - 5G will be handling ~45% of global mobile data by 2025. At this scale, it will become imperative for banks to start exploring the use cases around 5G.¹⁰⁴
- 5G-powered superior connectivity and the ability to support millions of devices per square kilometer area without compromising the quality of service can boost the digitalization of banks. This, coupled with low latency of less than 10 milliseconds, can help banks significantly reduce the inefficiencies of their applications. With 5G, firms can achieve 99.9999% of reliability for mission-critical applications.¹⁰⁵

In a nutshell

- 5G, with its increased bandwidth and very low latency, could enable untethered augmented reality (AR) and virtual reality (VR). Banks will be able to deliver immersive experiences across channels. Banco Santander has partnered with Telefónica to develop 5G use case around VR and 360-degree video. The immersive reality service allows customers to remotely visit co-working spaces such as Santander Work Café located in Madrid.¹⁰⁶
 - In 2020, DBS Bank and telecom operator M1 partnered to build new 5G-enabled features for digital banking, such as facial recognition, AR, and smart devices. They also plan to develop digital tools to deliver bundled services to enterprise clients.
 - Other players, such as Westpac Bank, Citibank, CapitalOne, and Visa, exploring AR/VR possibilities could harness 5G technology to further improve their use cases.¹⁰³
- 5G technology can also help to reimagine physical bank branches. Bank branches can be converted into smart branches by implementing video analytics, VR/AR, facial recognition, etc. China is at the forefront of launching 5G-enabled smart branches.

¹⁰³ SunTec, "The impact of 5G on banking," accessed September 17, 2021.

¹⁰⁴ Ericsson, "Ericsson mobility report: 5G subscriptions to top 2.6 billion by end of 2025," November 25, 2019.

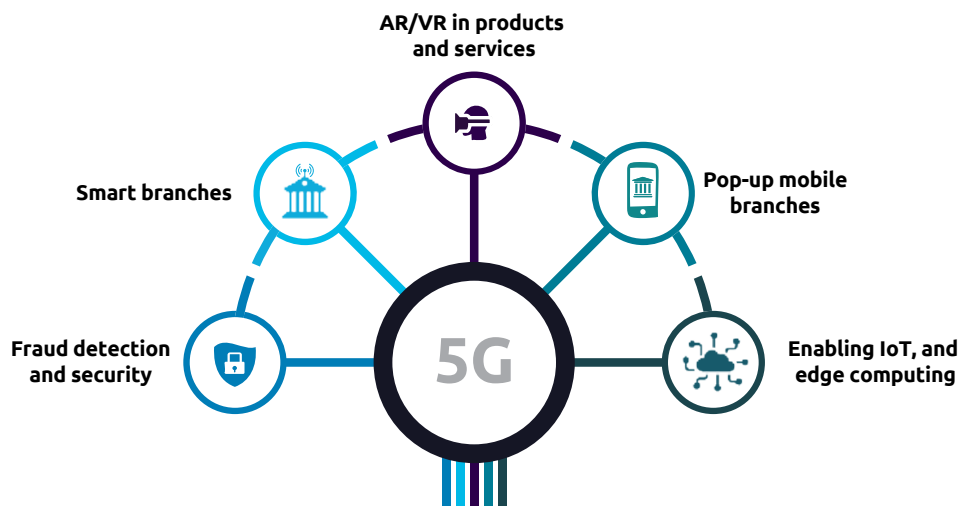
¹⁰⁵ Capgemini, "Back to the 5G future," October 2020.

- Agricultural Bank of China, Bank of East Asia China, Bank of China, Industrial and Commercial Bank of China, China Construction Bank, and Shanghai Pudong Development Bank have successfully launched 5G use cases around smart branches.^{107, 108}
- In addition to smart branches, banks are also experimenting with pop-up branches powered by 5G. AT&T business worked with a leading global bank to deploy a mobile branch prototype powered by 5G. This trial helped to assess how to reduce costs and time-to market for an improved, video-centric customer-centric experience. The speed and responsiveness of 5G could enable simultaneous wireless functionality of ATM and other self-service kiosks, employee telepresence, teller systems, WiFi, video surveillance, and entertainment systems for serving the customer at remote locations.¹⁰⁹
- In addition to improving customer experience, 5G will also facilitate real-time fraud detection. Securities vulnerability identified by banks can be updated in real time without compromising the banking services. Moreover, banks will no longer require to depend on a single form of authentication. The high speed and receptiveness of 5G will enable multi-factor and multi-dimensional biometric security procedures with facial recognition and geolocation to deliver instant verification.
- In addition to the private sector, governments are also extending technical support. The Institute for Development and Research in Banking Technology (IDRBT), an arm of the Reserve Bank of India, has launched a 5G Use Cases Lab for the banking and financial services sector.¹¹⁰

Impact

- Digital transformation has shifted the banking services on the cloud. With 5G, banking services can be delivered on edge by reducing end-to-end latency. By complementing 5G technology with edge computing, data processing could be brought closer to data sources, i.e., devices and customers.
 - This will significantly improve the efficacy of emerging technologies such as AI, ML, and big data analytics, facilitating faster decision making. This will simplify cumbersome processes associated with loan origination and processing and assessing credit risk. Moreover, it enables banks to comb customer behavioral and financial data to optimize offers and hyper-contextualize advice and recommendations.
 - Westpac bank aims to achieve the next phase of digital transformation labeled “ambient intelligence” by leveraging IoT and 5G technology. This will allow the bank to become invisible while embedding intelligent banking in customers’ everyday lives.¹¹¹

Figure 9: How will banks use 5G network capabilities?



Source: Capgemini Financial Services Analysis, 2021.

¹⁰⁶ [The Straits Times](#), “Keppel, DBS ink deal to work on 5G and other digital business solutions for clients,” September 23, 2020.

¹⁰⁷ [Yicai Global](#), “BEA opens China’s first-foreign funded 5G bank branch in Shanghai,” December 13, 2019.

¹⁰⁸ [China Plus](#), “Agricultural Bank of China launches 5G smart bank in Shenzhen,” November 5, 2019.

¹⁰⁹ [AT&T](#), “The 5G future of financial services,” accessed September 18, 2021.

¹¹⁰ [The Times of India](#), “banking on 5G: Talking ATMs, touchless tech on the cards,” February 1, 2021.

¹¹¹ [Zdnet](#), “Westpac readies for new tech dubbed ‘ambient intelligence’,” November 15, 2019.



TREND 10

DEFI – NING THE NEXT BANKING EVOLUTION

Traditional banks must overcome their state of inertia to collaborate and develop DeFi propositions anchored to a robust compliance framework

Context

- Decentralized finance (DeFi) leverages distributed ledger technology that aims to recreate and rewire the existing traditional financial services industry. DeFi holds the promise and the potential to overhaul conventional inefficiencies. As a new disruptive technology, skeptics are already on the frontline. However, DeFi adoption by incumbents could unlock value frontiers over the long term.
- In 2020, Goldman Sachs named the new head of digital assets with an eye on DeFi as the future of financial markets. The new leader envisions a future where all of the world's financial assets reside on electronic ledgers while activities such as IPOs and debt issuances are largely automated. As more financial stalwarts continue to test the waters, DeFi will start to emerge as an opportunity.¹¹²

Catalysts

- Two major DeFi growth catalysts are smart contracts and the crypto market.
 - Smart contracts are self-executing contracts where terms and conditions are coded. As more regulations brought smart contracts under legal purview and financial institutions launched PoCs, smart contracts began to gain early adoption in 2020.¹¹³
 - During Q4 2020–Q1 2021, the crypto market entered its early stages of mainstream adoption, driven mainly by increasing institutional adoption of altcoins (such as Cardano and Binance). Pandemic-induced economic uncertainty also made the crypto market attractive to investors. In August 2021, the total market capitalization of cryptocurrencies reached the USD2 trillion mark.¹¹⁴

In a nutshell

- One of the key applications of DeFi is the creation of liquidity pools. This innovation could disrupt lending and deposit by introducing a way to utilize idle capital. Smart contracts form liquidity pools (pools of liquid capital), allowing DeFi applications to offer financial services.
 - Yield farming is the process of providing liquidity (or liquidity mining). It could allow the consumers to leverage their deposits (idle capital) to be put to work and generate yield (return) opportunities – in the range of less than 5% to over 50% – that far outweighs the returns that customers can earn through a traditional savings account.¹¹⁵

¹¹² [CNBC](#), "Goldman names new head of digital assets in bet that blockchain is the future of financial markets," August 6, 2020.

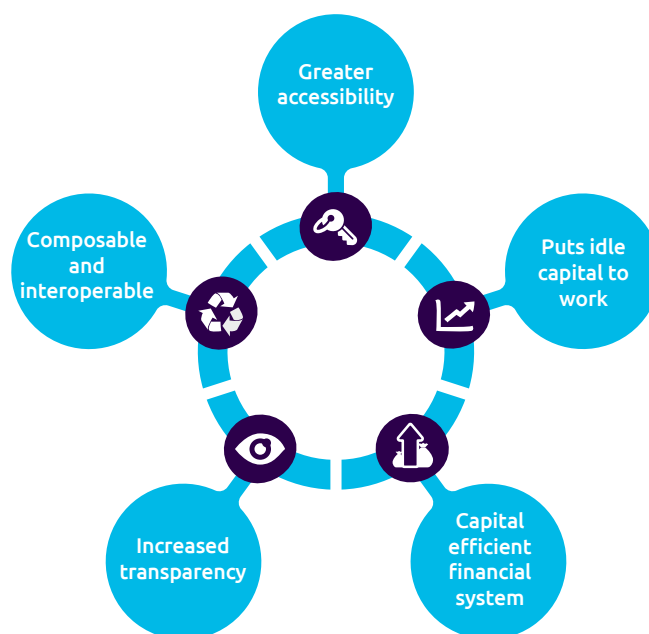
¹¹³ [Capgemini Consulting](#), "Smart contracts in financial services: Getting hype to reality," August 2017.

¹¹⁴ [Mint](#), "Crypto market capitalization tops \$2 trillion level for the first time since May," August 13, 2021.

¹¹⁵ [Medium](#), "DeFi: The next frontier in consumer banking infrastructure," July 27, 2021.

- In early 2021, ING bank selected DeFi lending platform **Aave** to carry out a case study on the characteristics of DeFi. ING observed that Aave could automate associated business processes resulting in higher accuracy, transparency, and speed. However, DeFi comes with new types of technical risks that must be monitored and adjusted.^{116, 117}
- Another banking business line that faces disruption is payments. There has been a rush to launch cards by leading firms. In 2020, US cryptocurrency exchange platform **Coinbase** launched its Coinbase Card. Then in January 2021, a DeFi project based out of Singapore, **KingSwap**, launched a **Visa** debit card at no annual fees or foreign transaction fees, with rewards on deposits.¹¹⁸
 - Visa, which partners with Circle, BlockFi, and Coinbase, reported that consumers globally spent over USD1-billion worth of cryptocurrencies on retail goods and services through these cards in H1 2021.¹¹⁹
 - While the current cards use an intermediary, some firms are attempting to overcome this barrier. For instance, the **Plutus** Mobile App is an all-in-one finance app (currently available only in Europe) that uses a built-in decentralized exchange to facilitate the conversion of cryptocurrencies into fiat currencies. This capability will limit (or possibly eliminate) the need for a trusted third party for conversion.¹²⁰
- DeFi not only disrupts business lines but could potentially benefit several banking processes. Digital identity is one of them. Self-sovereign digital identity enabled by smart contracts could minimize data theft, reduce counterparty liability to hold sensitive data, and improve the KYC process.
 - **Kiva Protocol** (launched by the 501(c)3 US nonprofit Kiva) is Africa’s first decentralized identity platform. The protocol aims to provide digital identity to millions of unbanked and underbanked people.
 - Sierra Leone, a west-African country with a seven-million population, launched the *National Digital Identity Platform* (NDIP) powered by Kiva protocol to enable cheap, fast, and secure identity verification for its citizens.¹²¹

Figure 10: DeFi potential to rewire consumer banking



Sources: Capgemini Financial Services Analysis, 2021; Medium.

¹¹⁶ [ING](#), "Lessons learned from Decentralized Finance," accessed September 21, 2021.

¹¹⁷ [CoinDesk](#), "DeFi more disruptive to banks than bitcoin, says ING," May 6, 2021.

¹¹⁸ [Intrado](#), "DeFi project KingSwap launches Visa Debit card globally," January 18, 2021.

¹¹⁹ [CNBC](#), "You can be taxed for buying a cup of coffee with bitcoin using a crypto credit card, but there are ways around it," August 9, 2021.

¹²⁰ [Finance Magnates](#), "Crypto fund, Alphabit, invests \$5m in DeFi solution for Visa Card payments," May 13, 2021.

¹²¹ [Hyperledger](#), "Kiva protocol, built on Hyperledger Indy, Ursa and Aries, power's Africa's first decentralized national ID system," January 20, 2021.

Impact

- While DeFi is at the very nascent stage of development with several startups and FinTechs exploring a viable product, progress depends on the convergence of centralized financial institutions (CeFi) and DeFi. DeFi could provide an unprecedented opportunity for banks for creative destruction and to build a more efficient and customer-centric enterprise.
 - Traditional banks could help build regulatory frameworks for DeFi, without which it will be challenging for DeFi to achieve critical mass. DeFi is highly volatile and requires high-risk tolerance to venture in. Incumbents participating in orchestrating DeFi ecosystems will speed the adoption level.
 - Total value locked (TVL, primary metric to measure DeFi growth) reported a 39x increase in value YoY in 2021. The number of unique users interacting with DeFi applications has rose 12x YoY from 2020 to '21. While these numbers are not threatening for banks, they deserve consideration.¹²²
- Moreover, smart contracts (key ingredient for DeFi) could have a significant impact on banking processes. For instance, mortgage loan origination enabled by smart contracts can save USD480–960 per customer per loan in processing fees and USD3–11 billion per year for banks in the form of lower operational costs.¹²³
 - The scale of these cost savings could be significant if traditional banks are able to replace their back-end banking infrastructure with DeFi.

¹²² [Medium](#), "DeFi: The next frontier in consumer banking infrastructure," July 27, 2021.

¹²³ [Capgemini Consulting](#), "Smart contracts in financial services: Getting from hype to reality," accessed September 21, 2021.

CONCLUSION

COVID-19 caught banks off guard and shook legacy mindsets to the core. With 20/20 (2020) hindsight, firms are more aware, digitally resilient, and financially stable as they head into 2022. Customer-centricity remains at the top of most FS agendas and is a 2022 focal point. Banks will focus on achieving operational excellence as diligently as delivering superior CX.

The trials of the past 18 months forced firms to shore up existing business and consider new models and revenue streams. But, while cost containment has been necessary, it must not limit banks' innovation potential. In 2022 and beyond, it will be paramount for FIs to explore and invest in new technologies to remain relevant and resilient.

Banking 4.X will arrive in full force in 2022 with platform-supported firms monetizing diverse ecosystem capabilities and aggressively harvesting data to create experiential customer journeys through intelligent and personalized engagements. The new era will compel future-focused banks to finally abandon legacy infrastructure and collaborate with third-party specialists to solidify their best-fit, long-term roles. Increasingly, open platforms will make banks invisible as banking becomes embedded into customer lifestyles. At the same time, banks will shed asset-heavy models and shift to the cloud for greater agility, speed to market, and faster innovation. The shift will act as a precursor to adopting new technologies on the horizon – 5G and Decentralized Finance.

The recent past was filled with extraordinary lessons for financial institutions. Now is the time to act on those learnings and move forward profitably.

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