

# The Current State of Banking-as-a-Service

## Open Banking

### Open banking and the era of the API

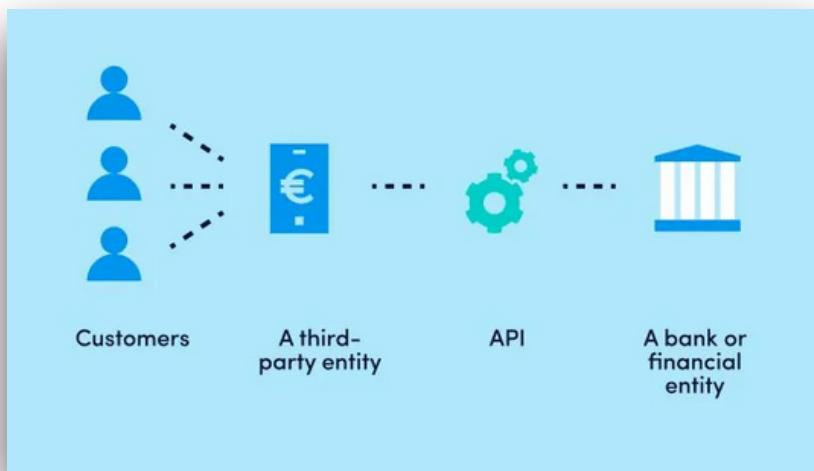
To understand open banking and banking-as-a-service we must understand what APIs are as they serve as the technological backbone enabling secure, standardized, and regulated data exchange between financial institutions, third-party providers, and customers.

"An application programming interface (API) is a connection between computers or between computer programs.

In a more simple way — API is a set of ways and rules for interaction and data exchange between different programs and computers. The API is used for other programs and information systems where information is exchanged in a strictly specified format, which allows systems with completely incompatible configurations to interact (written in different programming languages, located locally or remotely, etc.). An Application Programming Interface is like a messenger between different systems."

source: <https://medium.com/@data.science.enthusiast/what-exactly-is-an-api-explained-in-simple-terms-2a9015c1a1a1>

In the context of a bank an API enables secure and standardized communication between the bank's systems and external third-party providers, allowing them to access customer account information and initiate actions, such as payments or transfers, with the customer's consent.



This enables banks to offer a wider range of services, increase innovation, and improve customer experience, while maintaining control over their systems and data. By providing a standardized interface, banks can integrate with multiple third-party providers, fostering an ecosystem of financial services that can be easily accessed and utilized by customers.

source: <https://advapay.eu/api-in-banking-a-comprehensive-guide-to-bank-api/>

“Open banking uses technology like APIs to offer nonfinancial and financial businesses a network of financial products like accounts and transaction methods. This means third-party providers are allowed access to payment products so they can design and build new user experiences. From the bank perspective, Open Banking is like extending their banking charter to other companies.

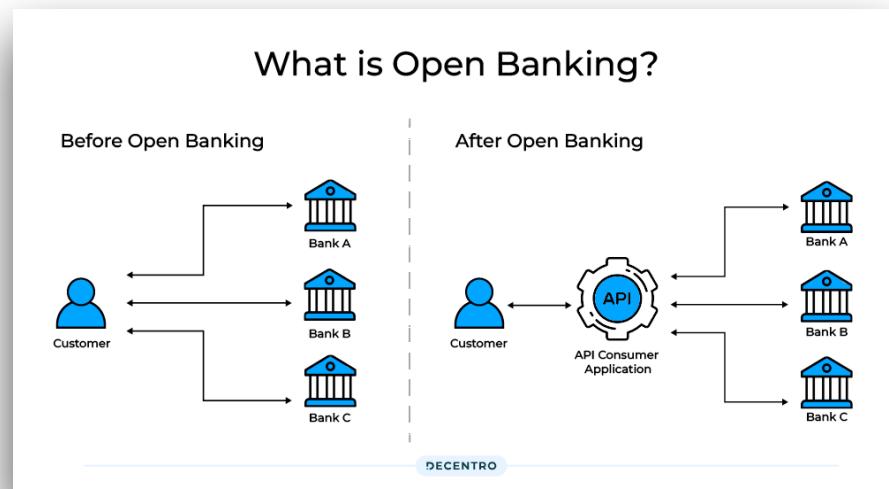
An example of open banking would be a personal finance app enabled by banking technology that lets customers view insights into their monthly spending online.”

source: <https://www.getevolved.com/openbanking/baas-vs-open-banking/>

**“Open banking is the ability to securely share your financial accounts’ data to access innovative financial experiences.**

Traditionally, only you and your bank could access your financial data. Open banking allows you to share that data with another financial service provider — either a different financial institution or third party, and empowers you to use

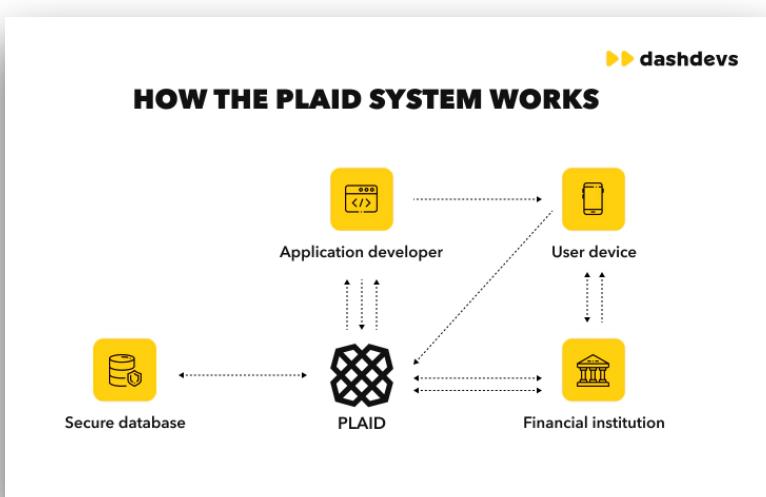
your own data for your own benefit. Third-party providers can include a wide range of fintechs, currency exchanges, merchants and other digital platforms.”



sources: <https://www.mastercard.com/news/perspectives/2024/open-banking-101/>, <https://decentro.tech/blog/open-banking/>

“Open Banking is a process of financial institutions exchanging information with third-party providers (TPPs) with the account holders’ explicit consent. The TPPs most often are fintech or fintech-related start-ups like mobile banking apps. The information is exchanged through API’s with the help of data aggregators like Plaid.”

source: <https://shanmukhaeti.medium.com/open-banking-vs-banking-as-a-platform-vs-banking-as-service-663e0a6e2be0>



“Plaid is a technology platform that allows applications to connect securely with users’ bank accounts, facilitating access to financial data.”

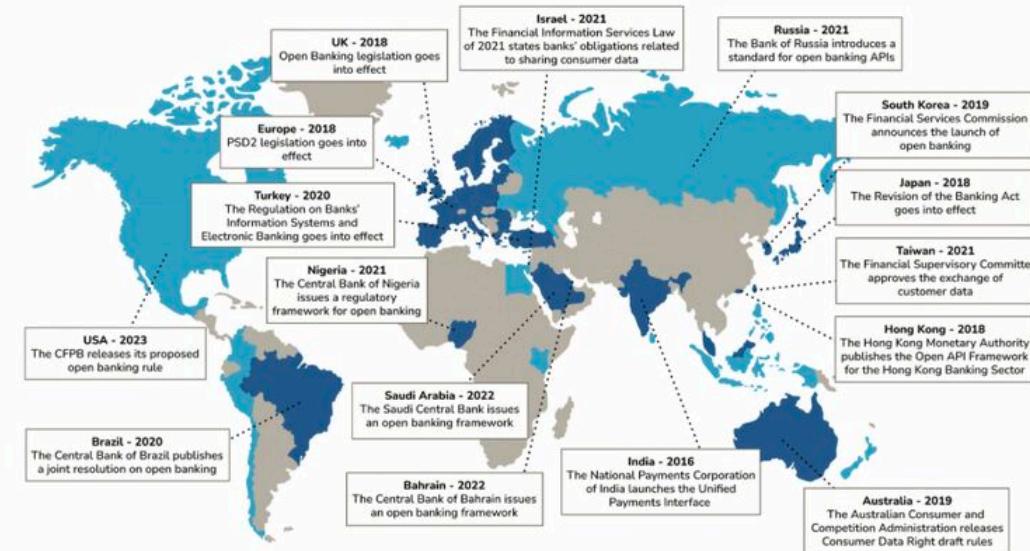
Source: <https://dashdevs.com/blog/the-value-of-plaid-in-the-fintech-industry-an-open-banking-player/>

# How we got here

## Timeline of the US Open Banking Ecosystem

Simple Albert Varo Kikoff klover venmo dailypay chime  
Current acorns cleo Robinhood coinbase ONE Empower Dave Webull

### RISE OF CONSUMER FINTECH



Source: Kontomatik, openbankingmap.com  
© CCG Catalyst

■ Regulated ■ In development

source: <https://www.linkedin.com/feed/update/urn:li:activity:7201656903607697408/>

## Banking-as-a-Service (BaaS) Overview

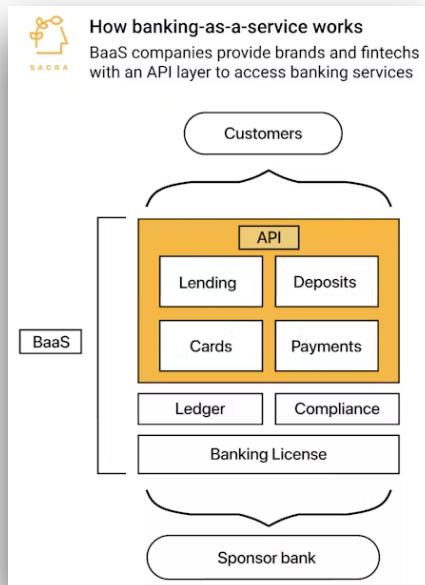
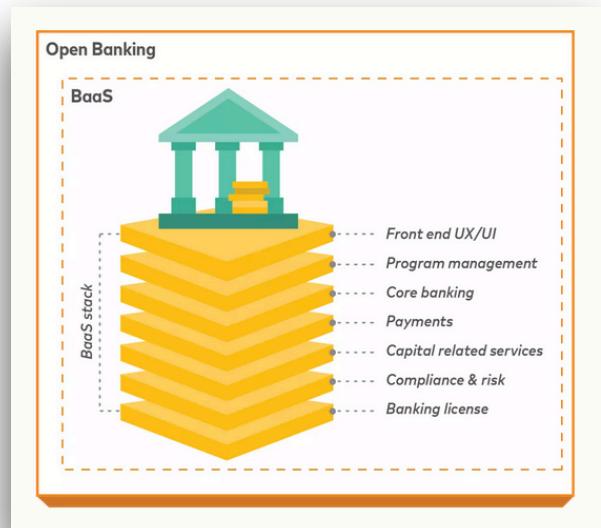
“BaaS is a component of Open Banking. BaaS is the products financial institutions offer to non-financial and financial companies to enable banking services. It facilitates bank functionality supported by the infrastructure provided by the licensed bank’s technology layer. Essentially, BaaS ecosystems allow non-banks to offer banking services.”

sources: <https://www.getevolved.com/openbanking/baas-vs-open-banking/>,  
<https://www.mastercardservices.com/en/advisors/sustainability-financial-inclusion-consulting/insights/its-all-turned-fintech-banking>

“A recent buzzword in the anything “as a service” trend. BaaS may be neatly defined as the opening up of banking capabilities to third parties. The concept is not new. White-label partnerships between banks and public-facing consumer brands go back more than a decade. But they were expensive to deploy until application programming interfaces (APIs) allowed banks to easily connect with third parties.

One definition of open banking is the permissioned opening up of access to account data and services via APIs. That compares with BaaS as the opening up of banking capabilities. Yet any data sharing is usually tied to other banking capabilities to create an effective value proposition. The relationship technically keeps BaaS as a subset of open banking, but it effectively accords almost all activity to BaaS.

As “API first” becomes the rallying cry to replace “digital first,” a proliferation of BaaS will result. Initial BaaS partnerships were between banks and API-first fintech companies. More recently, API-first tech companies are entering into BaaS partnerships. These partnerships will potentially extend to all companies in the future that adopt API-based business models.”



source: <https://sacra.com/research/banking-as-a-service-the-twilio-of-embedded-finance/>

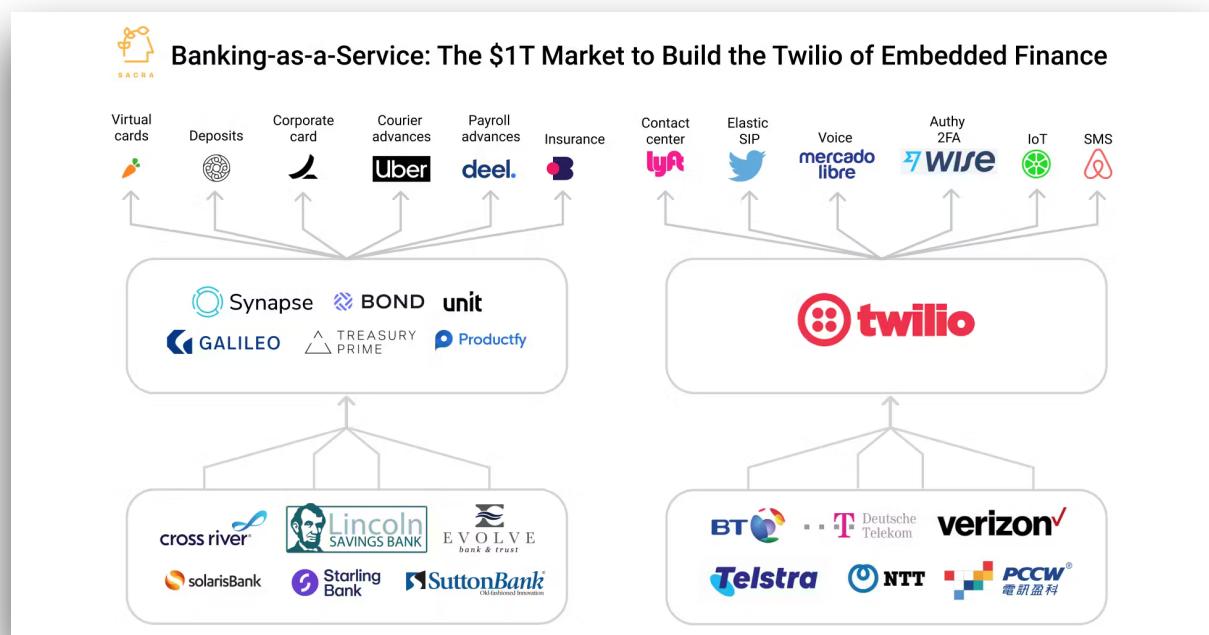
"The best way to explain Banking as a Service is by means of an example. Imagine for a moment that you are the manager of an airline. You are facing stark competition and you would like to strengthen your customer loyalty. If you could offer your customers, say, a debit card, you could award them loyalty points whenever they pay with their card. Then, each time your customers use their card, they would interact with your brand. By analyzing your customers' spending behavior, you could understand them better and offer them more tailored services.

Or what about if you could offer your customers an online loan for their flight tickets directly on your website? This way, your customers could finance their holiday without ever having to interrupt their customer journey. You could increase the number of flight tickets you sell and directly influence the amount your customers spend. A loan also represents a much closer customer relationship with far more touchpoints than just a single sale.

There are dozens of ways of how non-banks can improve their customer experience and boost their revenue by offering their own banking services. However, if you want to offer banking services, effectively every government in the world requires you to hold a banking license. And due to the systemic relevance of banks to the functioning of the economy, such a licence is difficult to obtain. Acquiring a licence imposes not only significant capital requirements, but more importantly compliance with strict regulations on money laundering, banking secrecy and deposit protection, to name a few. This is where Banking as a Service comes in.

Banking as a Service (or BaaS for short) describes a model in which licensed banks integrate their digital banking services directly into the products of other non-bank businesses. This way, a non-bank business, such as your airline, can offer its customers digital banking services such as mobile bank accounts, debit cards, loans and payment services, without needing to acquire a banking licence of their own.

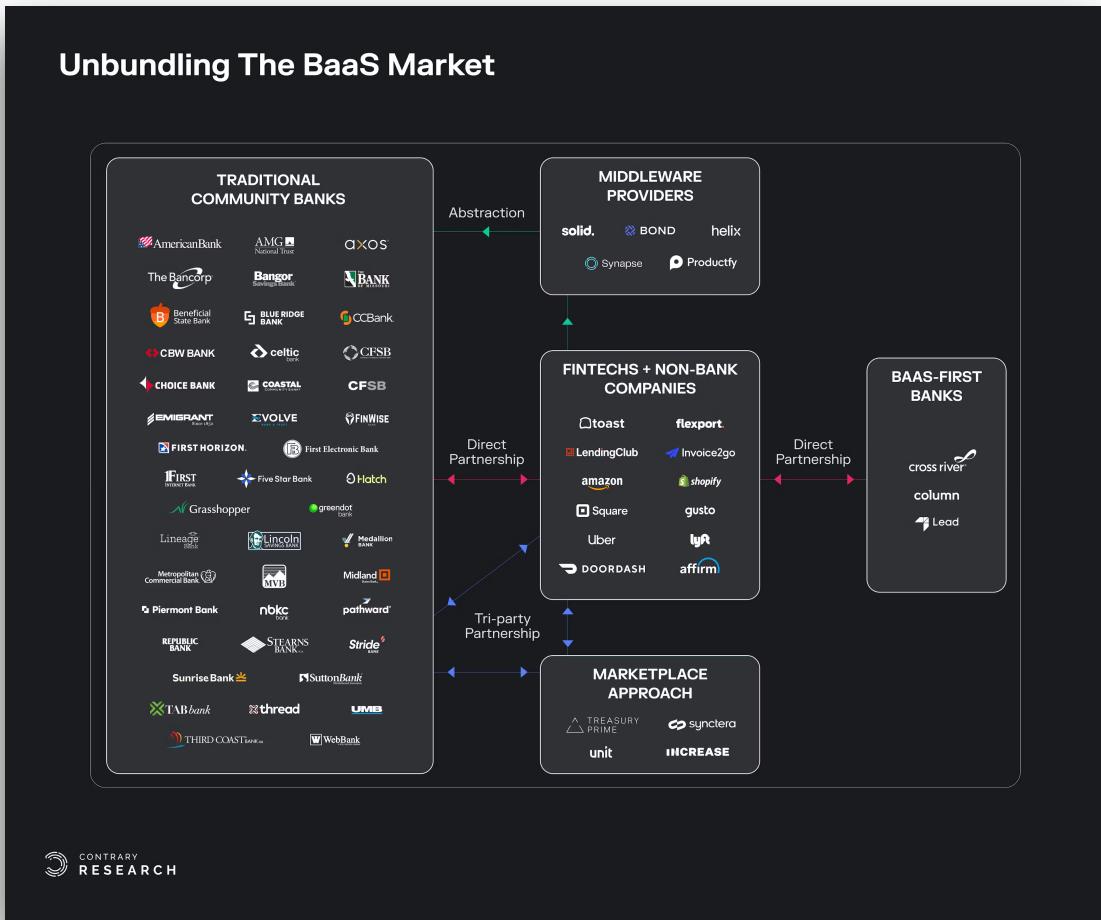
The bank's system communicates via APIs and webhooks with that of the airline, enabling your customer to access banking services directly through your airline's website or app. Your airline



source: <https://sacra.com/research/banking-as-a-service-the-twilio-of-embedded-finance/>

never really touches the customer's money, it acts simply as an intermediary, meaning it is not burdened by any of the regulatory duties a bank has to fulfil. Thus, with BaaS, pretty much any business can become a banking provider with nothing but a few lines of code. That's why BaaS is also often referred to as white-label banking, since the banking services are delivered through the branded product of the non-bank. Next to Solarisbank, other providers in Europe's growing BaaS landscape include ClearBank, RailsBank and Starling Bank. Across the pond, established banking giants are also launching BaaS projects next to their existing offering, such as BBVA in the US."

source: <https://www.finextra.com/blogposting/20099/what-the-hell-is-banking-as-a-service-and-what-is-it-not>



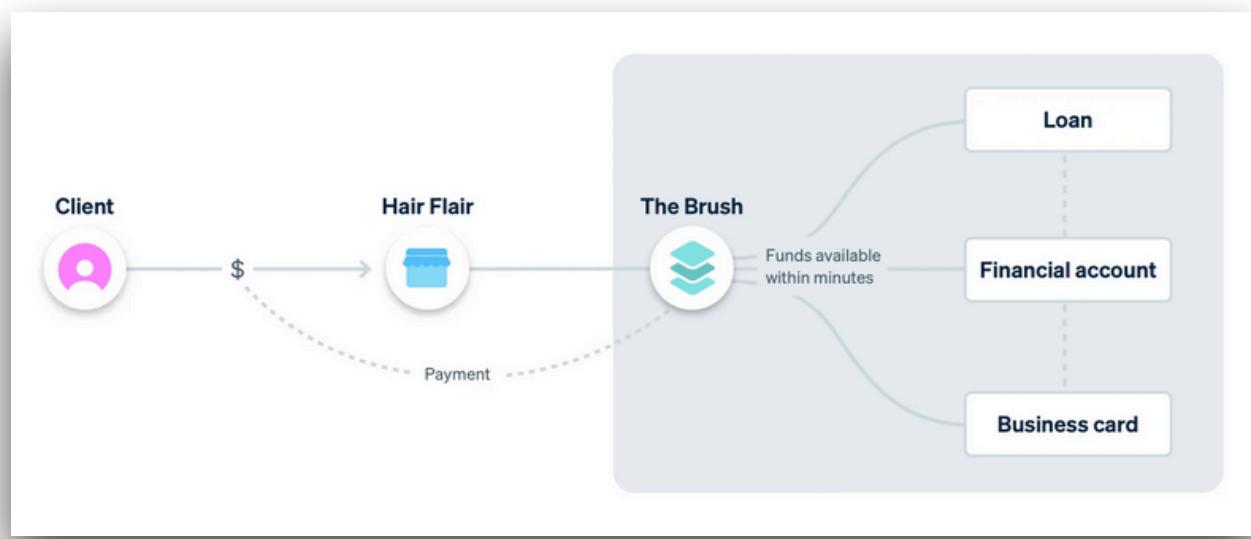
source: <https://research.contrary.com/deep-dive/great-bank-unbundling>

## Hair Flair Case Study

"Here's a specific example of how BaaS works for platforms: Imagine a platform that offers appointment software and payment processing for salons and barbershops (let's call them The Brush).

Let's take one of The Brush's customers, Hair Flair. Hair Flair has used The Brush for three years to manage appointments and collect payments from clients. When Hair Flair wants additional financial services to run their business, they could have two options: 1) work with banks directly or 2) access the financial services via The Brush.

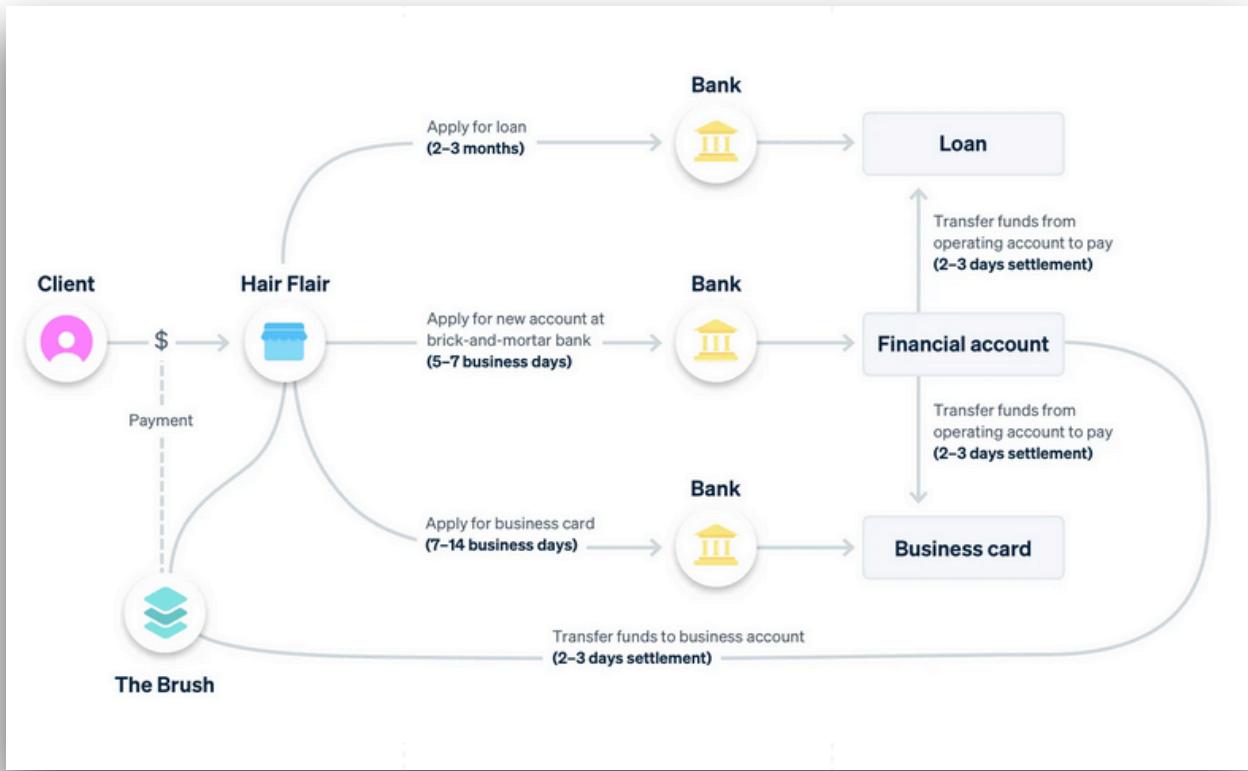
Hair Flair just opened their second location and the salon owners first need a place to store the funds they use to pay their stylists. To open a bank account, they have to go to a financial institution, like a local brick-and-mortar bank, and share their business information.



If Hair Flair isn't approved for a business account, they'll have to open a personal bank account, intermingling their business and personal finances. In this case, their account is created at the brick-and-mortar bank, but they now need to manage the flow of funds, moving money from their income on The Brush to their new account—and constantly waiting between two to three business days for money to settle before paying their employees.

The salon owners also need capital to invest in marketing and studio renovations. They could apply for a loan from the same financial institution where they opened their bank account, but they end up finding a lower interest rate loan from another local bank. They apply for the loan in person and fill out a lengthy application with their business information. Unfortunately, since the bank isn't familiar with Hair Flair, or the typical cash flow that's expected for salons, Hair Flair isn't approved for the loan. They apply for a loan at two more banks and are approved for one a few months later.

Hair Flair also has a lot of expenses with their new location. Rather than using their personal card, they decide to apply for a business credit card to purchase new equipment and supplies.



They look for a card with low interest rates and end up getting their card at yet another bank, separate from where they applied for the loan and opened an account. They share all of their information again and now need to figure out how to manage money on the card with the funds from The Brush or from their financial account.

Beyond setting up accounts at different banks, the owners at Hair Flair spend time each week reconciling finances across these accounts to track their money, pay bills, and avoid bounced checks. It also means a significant portion of their earnings may be tied up in transfers before they're able to spend it.

The Brush, which started as appointment software for salons, now allows customers to access banking features, including the ability to process payments, access capital, get business cards, and open financial accounts—all in one place. All these benefits are on top of The Brush's core scheduling and appointment-booking features.

Because Hair Flair processes all client payments on The Brush, The Brush has a complete understanding of the salon's financial history, and the platform inherently understands the salon industry and typical capital needs. This time, when Hair Flair applies for a loan, The Brush's bank partner determines Hair Flair's eligibility based on Hair Flair's payment volume and history on their platform and approves the loan the next day. The capital becomes available on Hair Flair's financial account they have through The Brush, without having to submit extra paperwork.

And Hair Flair can easily spend that extra capital on their business card they have through The Brush. The card is tied to their financial account and can access all of their funds (earned and borrowed) in one place. Funds are immediately available, so they can use their card as soon as clients pay for their services. They can use the card to pay for business supplies and expenses.

and, if the platform decides to do so, they can earn rewards as they spend (like getting money back on salon-related purchases or receiving a free month of The Brush).

And lastly, the owners at Hair Flair save hours each month reconciling finances. With all financial activity (customer payments, loans, and business expenses) in one place on The Brush's platform, the owners can always access up-to-date financial reports without bouncing between different tools and systems. They also don't have to worry about forgetting a transfer or missing a payment on a loan. The Brush is Hair Flair's one-stop shop to run their whole business."

source: <https://stripe.com/guides/introduction-to-banking-as-a-service>

## Open Banking vs. Banking-as-a-Service

"So, Banking as a Service is the same as open banking?

No, not really. The two models often get confused, as open banking also involves banks connecting to non-banks via API. However, the models serve entirely different purposes. In BaaS models, non-bank businesses integrate complete banking services into their own products. In open banking models on the other hand, non-bank businesses merely use the bank's data for their products. In the industry, these non-bank businesses are called third party service providers (TPPs)."

source: <https://www.finextra.com/blogposting/20099/what-the-hell-is-banking-as-a-service-and-what-is-it-not>

"Sometimes confused, Open Banking and Banking as a Service refers to two different models.

Having become mandatory in January 2018, Open Banking consists of opening banks' information systems. Customer data can thus be shared with third parties and financial service providers.

This model promotes collaboration between banks and new partners. This is how the fintech in our example can connect to the bank's feeds to offer banking services to its customers.

In short, Open Banking has paved the way for BaaS: the bank now can offer third parties the possibility of integrating banking products on their platform or application."

source: <https://skaleet.com/en/blog/banking-as-a-service-what-is-baas>

	Banking as a Service (BaaS)	Open Banking
Driving Force	 Market demand "pull"	 Regulatory driven "push"
Overview	The provision of financial products as a service to third parties	Grant regulated third parties' access to customer account or account data and payment initiation
Products	Accounts, issuing, payments, lending, brokerage, crypto, KYC etc.	Account-to-account payments and data aggregation
Licensing Requirements	<ul style="list-style-type: none"> <li>• E-money license</li> <li>• Credit institution / bank license</li> </ul>	<ul style="list-style-type: none"> <li>• Payment initiation service provider(PISP)</li> <li>• Account information service provider(AISP)</li> </ul>
Reference Fintechs (non-exhaustive)	     	      
Impact to Date		

source: <https://globalfintechseries.com/banking/benefits-of-baas-for-fintech-and-non-fintech-companies/>

## Embedded Finance

“BaaS is known as embedded finance when it is inserted into customer journeys as financial products. Providers may be banks, or they may be fintech companies acting as distributors with banks on the backend. The term embedded finance reflects the evolution of open banking into open finance, which represents more than just open banking with a broader scope.”

source: <https://www.mastercardservices.com/en/advisors/sustainability-financial-inclusion-consulting/insights/its-all-turned-fintech-banking>

“Embedded finance is the concept of taking BaaS solutions and embedding them into a non-financial business’ mobile application or website. With embedded finance, any business could have a financial component incorporated into its business.

For example, a department store would like to issue a branded credit card for their store with different features, rewards, and perks. The department store can partner with a bank to issue the card and obtain end users without becoming a financial institution themselves. The department store would still be heavily involved in compliance and regulatory obligations, but the banking piece is managed by the bank.

The concept of embedded finance can create a personalized financial experience for dedicated end-user bases of existing businesses that adds value to the customer.”

source: <https://www.getevolved.com/openbanking/baas-vs-open-banking/>

“How do companies make money from embedded finance powered by BaaS?

Embedded financial products can be a great way to drive acquisition, engagement, and retention. But what’s most appealing for many companies is the revenue it generates.

There are five ways to make money from embedded banking. If you're looking for a way to project what that might look like for your company, check out our revenue calculator and full revenue projection tool.

**Interchange fees.** These are fees you earn when your customers make purchases with their debit, credit, and charge cards. These card payments typically return between 1.5–3% of every transaction as interchange revenue. Companies typically keep the revenue, return it to their customers in the form of rewards, or some combination thereof. Learn more in our interchange revenue guide.

**Financing revenues.** Embedded finance comes in many forms; some of the most common are credit and charge cards, term loans, and revolving lines of credit, cash advances, and invoice factoring. We expect that lending will emerge as a primary source of revenue for tech companies in coming years. To learn more about how you can make money from offering lending products, check out our lending guide.

**Deposit fees.** In some cases, companies may be eligible to earn fees on the deposits they generate for their bank partner through their marketing efforts.

**Platform fees.** These are often overlooked as a source of revenue associated with embedding banking and lending products. Some companies may choose to offer access to their embedded banking products at an extra cost. For example, you may be able to charge a monthly fee for customers who opt into your embedded financial products. Alternatively, you could adopt a “freemium” model, giving customers access to basic financial products for free, then charging a monthly fee for access to more advanced features.

**Payment fees.** Using banking as a service, you build many different payment methods into your product; these include ACH, cards, wires, and book transfers. Your customers will expect some kinds of payments (e.g., ACH, transfers between accounts at the same bank) to be free, but it's possible to charge for others (e.g., wire transfers, push-to-card).

source: <https://www.unit.co/guides/the-ultimate-guide-to-banking-as-a-service>

## Beyond the API: The Accounting of BaaS (FBO vs. On-Core)

While APIs are the technical backbone connecting BaaS providers to banks, the ecosystem can use various accounting structures to interface as BaaS partners. The most common types are the For-Benefit-Of and the On-Core accounts. There are technical, regulatory and business implications depending on the type of accounting structure chosen.

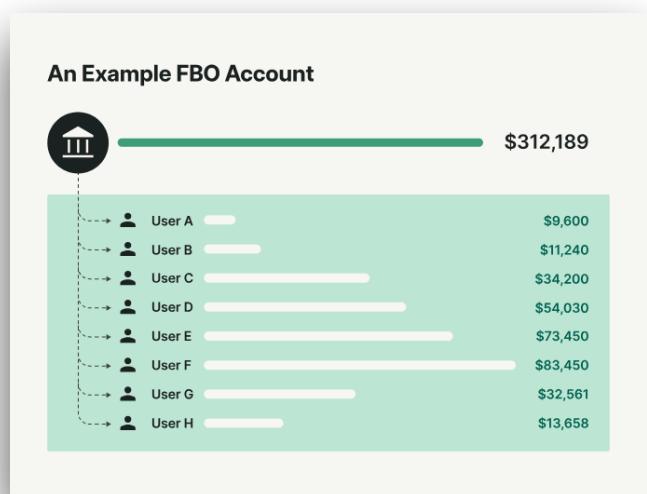
“What is the difference between FBO and on-core banking?

At a high level, on-core accounts allow you to leverage the bank's existing infrastructure in a meaningful way and lead to potentially less work or obligations to open and maintain. However, the clear offset to this is a potentially limited ability to customize certain features of a product offering. A great on-core use case could be a white-labeled or co-branded non-fintech embedding bank accounts in their product as a side perk, or just offering one or a couple of peripheral financial tools.

FBO accounts, on the other hand, require more responsibility from the company managing the account, but also allow for greater customization. The FBO route can be attractive for companies offering bank accounts and various financial tools as central features in their product.”

source: <https://www.treasuryprime.com/blog/whats-an-fbo>

## The For-Benefit-Of Accounting Model:



“An FBO account, or a For Benefit Of account, allows a company to manage funds on behalf of—or for the benefit of—one or more of their users, without assuming legal ownership of the account.

What does that mean for business owners? At a high level, FBO accounts enable businesses to manage their clients’ money without the costly regulations that can come with certain types of money transmission.

While FBOs now include the digital transfer of funds, the concept dates back to fiduciary agreements around feudal land ownership in the twelfth century. Since then, managing an asset of value on someone else’s behalf has

evolved into many modern legal arrangements, including bank accounts for children on behalf of their parents, wills, trust funds, and more.

Before a company decides to open an FBO account, it’s important that they do their due diligence. This includes clarifying their needs with legal counsel first and more.

## How do FBO accounts work?

Imagine your FBO account as a hotel building. From the outside, there are many windows that represent your different clients with their own sub-accounts, also known as virtual accounts.

For example, say you want to send money to Olivia in the penthouse suite by attaching a check to a paper airplane and sending it through Olivia’s window. Think of her floor and room number as her account and routing number—in other words, they’re unique to her virtual account under the FBO.

Now imagine that all the money that comes through these separate windows exists in a large pile on the lobby floor, in what’s known as a pooled account. Olivia is only concerned with the money she receives in her virtual account. From the bank’s perspective, however, all the money from these different virtual accounts is available in one place. In other words, all the money in the FBO account is fungible.

That said, it’s the bank’s responsibility to track money that comes and goes from this pooled account. This tracking system is like a doorman, who functions as a ledger, by organizing funds and providing visibility. If funds are distributed to any one room, or virtual account, the

doorman makes a deduction. He knows how much money is coming and going from the entire hotel, or the account at large.

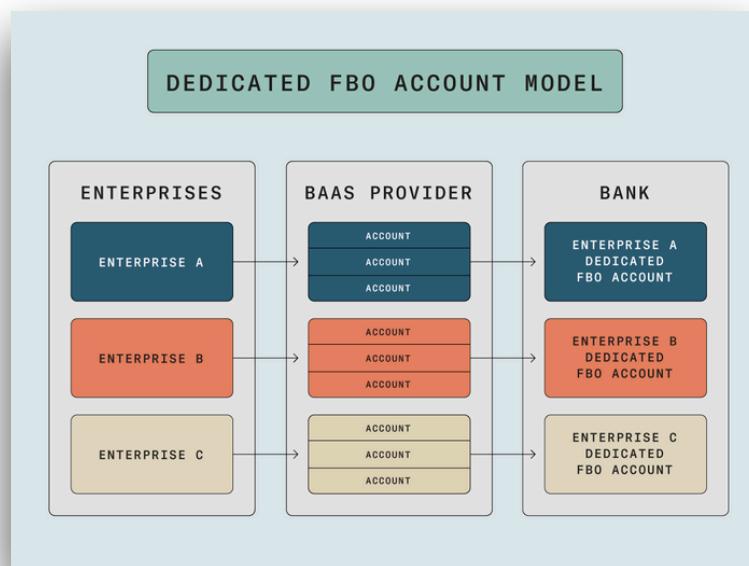
### What does an FBO account look like in practice?

Let's say a neobank, Peanut Butter, opens an FBO account at a bank called Jelly. Jelly is holding the money on behalf of Peanut Butter. Think of it as Peanut Butter managing the hotel, while Jelly technically owns the hotel, or the FBO account.

Now, Peanut Butter can provide individual virtual accounts to all of their clients. Each client has their own unique room and floor number, or virtual accounts complete with individual account and routing numbers. Peanut Butter is able to stay organized and keep track of their clients' payment operations with a ledger software."

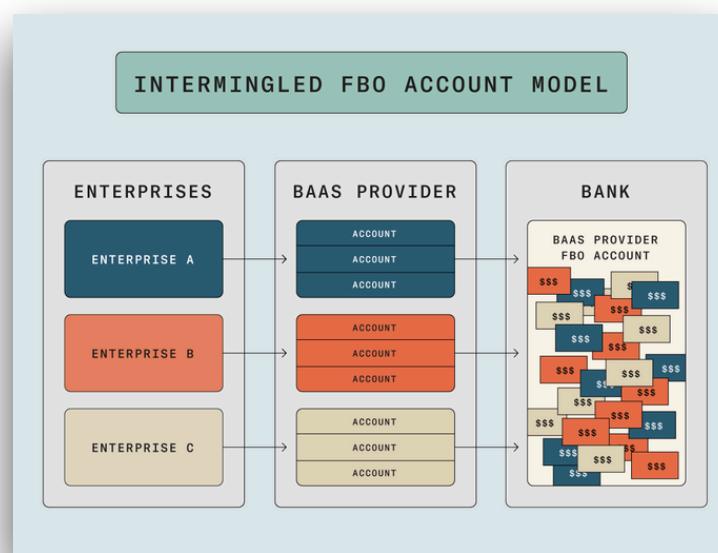
source: <https://www.moderntreasury.com/learn/what-is-an-fbo-account>, <https://www.moderntreasury.com/questions/what-are-the-benefits-of-an-fbo-account>

"There are two ways to operate an FBO setup depending on your BaaS provider.

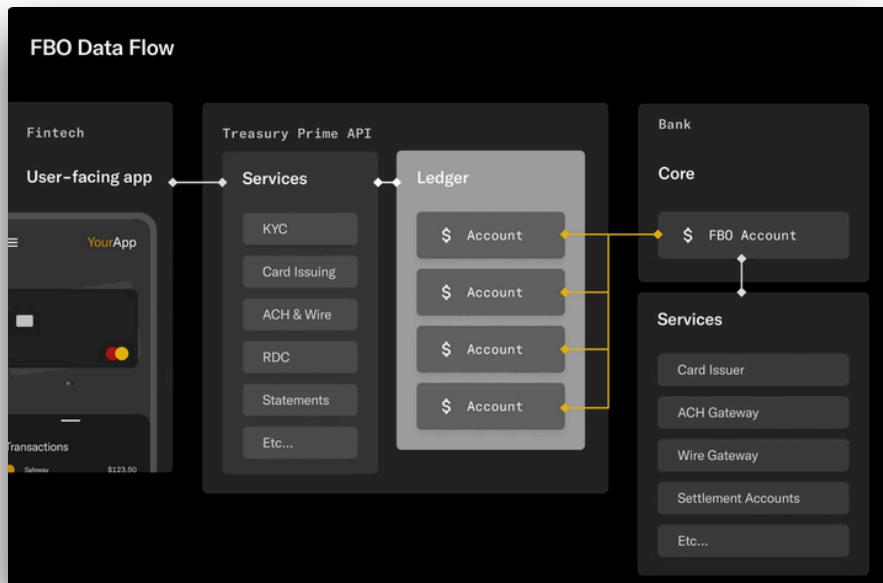


Traditional "dedicated FBO" approach: The traditional and less risky approach is for the BaaS provider to open a discrete FBO account for each company it partners with. Under this approach, you have your own dedicated FBO account from which to carve virtual accounts for your customers. This is the approach Treasury Prime uses.

Alternative "intermingled FBO" model:  
Some BaaS providers offer an intermingled FBO model. In this alternative model, the BaaS provider opens one FBO account to service all of its company clients, rather than have each company open an FBO account with the partner bank directly. This arrangement basically means you are sharing risk with other companies, and also that you are all subject to the same one-size-fits-all KYC and compliance operations. In short, this second option can come with higher risk.



## FBO Data Flow



In an FBO setup, users interact with their accounts through the user-facing app you have built. The app connects to a banking API layer, which contains a ledger where records of user account activity are held. The ledger is built on top of an FBO account. That FBO account exists on the bank's core and attaches to the bank's services."

source: [https://www.treasuryprime.com/  
blog/whats-an-fbo](https://www.treasuryprime.com/blog/whats-an-fbo)

## "Benefits of an FBO account

- More control over KYC & account approvals: In an on-core setup, your partner bank performs essentially all typical bank services. That means the bank decides whether to approve certain customers, not you; and the bank decides what forms of identification it will accept for KYC. This can limit who you can accept as a customer. In an FBO model, those services can be performed by you with support from the BaaS provider and other compliance partners, and you have more flexibility based on your specific user base and customer risk profiles.
- Faster account opening: Because you have control over the process for opening your customers' virtual accounts, you can do so faster.
- Can be less expensive than on-core
- More latitude to customize and innovate: Your FBO account holds your customers' virtual accounts, which means you and your BaaS provider can collaborate on what features you want to offer.
- Easier to mitigate bank partner risk: No one wants to pick a bank partner and build a successful program with them just to rip it all down to move banks. However, sometimes this hard truth is a reality for many reasons that you may not always be able to control. Treasury Prime accounted for this possibility and built its technology to be bank agnostic. So if you need to switch banks you would not need to rebuild your tech stack, change bank account numbers or learn new procedures. While some things just can't be automated, like a change in routing number or end-client acknowledgment of the change, we have made it as painless as possible.

## Drawbacks to FBO account

- Increased support responsibility: Because your FBO account holds your customers' virtual accounts, you are responsible for servicing them. If your customers opened accounts directly on your partner bank's core, the bank could fully service them.
- Increased reporting requirements: Similar to having increased responsibility for supporting customers' accounts, you will also be responsible for staying in compliance by reporting information and activity to authorities such as the FDIC.
- Greater responsibility for fraud prevention: Your partner bank can't see what's happening within your customers' virtual accounts. That means it's up to you to monitor accounts for potential fraudulent activity."

source: <https://www.treasuryprime.com/blog/whats-an-fbo>

## The On-Core Accounting Model

### How on-core accounts work

"When you opt to offer on-core accounts in your app, the accounts exist directly on the bank's back-end system for processing daily transactions. That means accounts can potentially do everything the bank's core allows — and also only what that core allows. Some examples of settings that are commonly global across a bank's platforms are KYC decisioning, onboarding procedures, incoming funds holds times/rules, overdraft settings, account fees or incoming ACH decisioning. Additionally, the bank has greater visibility into account activity, which allows the bank to participate in customer support and simplifies compliance. Compliance refers to processes that help fintechs and banks stay in line with any number of laws, regulations, or rules imposed by regulators or industry self-regulating organizations.

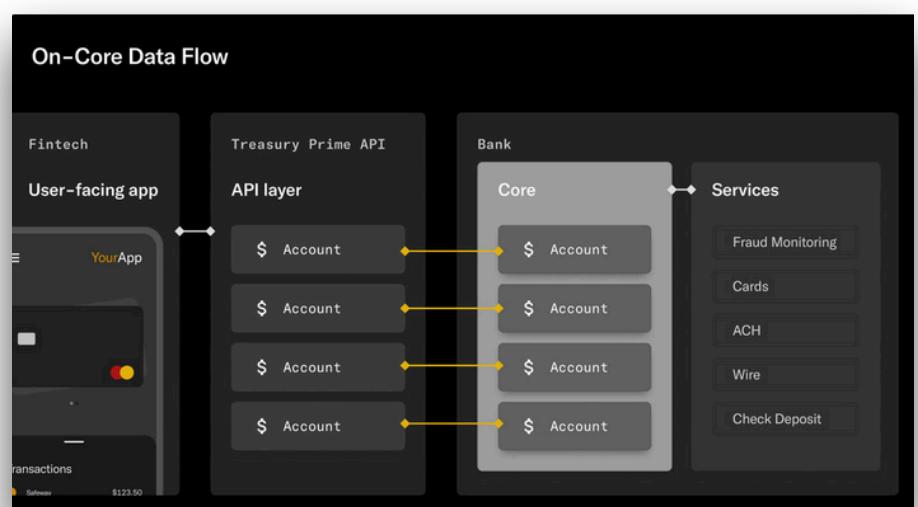
In an on-core setup, users interact with their accounts through the user-facing app you have built. The app connects to a banking API layer, which interfaces directly with the bank's core and, in turn, the bank's services."

source: <https://www.treasuryprime.com/blog/whats-an-fbo>

### On-Core Data Flow

"On-core accounts require less maintenance from you as an app developer and allow you out-of-the-box access to all of your partner bank's account services. That said, your features may be limited with this setup. But if you're embedding financial tools to enhance your app, rather than making them central, on-core accounts can get the job done with less hassle."

source: <https://www.treasuryprime.com/blog/whats-an-fbo>



## **"Benefits of on-core accounts**

- All of the bank's account services out-of-the-box: Your customers essentially have traditional accounts with your partner bank, granting them all the bells and whistles that come with that, without you having to build out those features.
- Bank-grade KYC and fraud detection: You can leave the process of approaching applicants for accounts and monitoring accounts for fraudulent activity up to your bank.
- Extra customer support: Because customers have accounts directly with the bank, they can go to the bank for customer support needs that involve account-level issues.
- Maintained by the bank partner: The bank maintains accounts and updates them as needed.

## **Drawbacks of on-core accounts**

- Inflexible: Customer accounts opened on-core must follow all bank policies, and can only offer features the bank permits. Ultimately account offerings are dependent on the bank's existing services and processes.
- ***Less control over KYC & account approvals: When customers open accounts directly with the bank on-core, it's up to the bank what forms of identification to accept and which account applicants to approve.***
- Slower account opening: Whereas with an FBO account you can just issue a virtual account when ready or necessary, with an on-core account your customer must go through the full process your partner bank uses to open accounts.
- Bank core technology limitations: When accounts are opened on-core, their features are limited to what the bank's core can handle from a technology standpoint."

source: <https://www.treasuryprime.com/blog/whats-an-fbo>

## **Regulatory**

### **Open Banking Regulation Explained**

"What are open banking regulations?

Open banking regulations are rules and guidelines that regulatory bodies establish to govern how banks and third-party providers share financial data. The purpose of these regulations is to increase market competition, promote innovation, and improve consumer choice in the financial services industry while ensuring consumer data remains private and secure. Here are the key elements of open banking regulations.

- Consumer consent: The principle that consumers own their financial data governs open banking regulation. Regulations require that banks can share customer data with TPPs only after obtaining explicit consent.
- API standardization: Open banking regulations often require the standardization of APIs, which makes it easier and safer to share and access data across different systems and platforms.
- Access rights and responsibilities: Regulations define the rights and responsibilities of all parties involved in open banking, including the conditions under which TPPs are allowed to access bank data, what they can do with the data, and the data security and integrity standards they must meet.
- Security protocols: Open banking regulations require rigorous security requirements to prevent data breaches and fraud. This includes the use of strong encryption, authentication methods, and regular security audits.
- Regulatory oversight: Open banking regulations often require businesses to practice regular reporting, adhere to operational standards, and participate in security audits."

### **"Who regulates open banking?"**

United States: Currently, there is no comprehensive federal regulation for open banking in the US. In October 2023, the Consumer Financial Protection Bureau (CFPB) proposed a rule to

implement Section 1033 of the Consumer Financial Protection Act, which would give consumers the right to access and share their financial data. This rule, if finalized, will establish a federal framework for open banking, and the CFPB will oversee its implementation. Meanwhile, several states have introduced or are considering their own open banking legislation, and industry-led organizations such as the Financial Data Exchange (FDX) have established voluntary data-sharing standards."



source: <https://www.bloomberg.com/news/articles/2021-09-30/biden-cfpb-pick-chopra-confirmed-to-lead-consumer-watchdog>

### **What are open banking standards?**

"Open banking standards are a set of technical specifications and guidelines that enable safe and effective data sharing between banks and authorized TPPs. These standards ensure interoperability, security, and consumer protection in the open banking process.

Key components of open banking standards

- APIs: APIs provide a standardized way for different software systems to communicate with each other. In open banking, open data API specifications allow TPPs to access customer financial data from banks.

- Data formats: Open banking standards define the structure and format of the data that banks and TPPs exchange, so different applications can easily interpret and use the data.
- Security protocols: Open banking standards require strong security measures such as encryption, authentication, and authorization to protect consumer data from unauthorized access and misuse.
- Customer authentication: Open banking standards also specify the methods for customer authentication so that only authorized individuals can access and share their financial data.
- Error handling and reporting: Open banking standards provide mechanisms for error handling and reporting issues that might arise during data exchange."

source: <https://stripe.com/resources/more/open-banking-regulation-explained-a-guide>

## Regulators ramp up pressure on BaaS banks

"Banks that operate banking-as-a-service programs are facing heightened scrutiny from bank regulators, as examiners scramble to get a handle on the size and scale of lenders' partnerships with fintechs, said Konrad Alt, a partner at financial services advisory and investment firm Klaros Group."

This increased pressure follows this spring's banking crisis, which saw the collapse of three regional lenders that were all closely bound to the fintech sector.

Silicon Valley Bank and First Republic Bank both catered heavily to the VC and startup space, while Signature Bank was known as a crypto-friendly firm. Those lenders' close ties to technology haven't escaped the attention of regulators, Alt says.



"For banks that are in the BaaS space today that haven't gone through an exam in a while, they are going to be in a shell shock for what's coming there," Amesbury, Massachusetts-based BankProv Executive Vice President and COO Joseph Mancini told S&P Global Market Intelligence in May.

Mancini said his bank has noticed increased scrutiny from regulators looking into whether the firm is taking ownership of actively managing its fintech tie-ups.

Alt said the heightened scrutiny comes as regulators attempt to recalibrate their supervision of banks that operate BaaS programs.

Banks that partner with fintechs tend to have smaller balance sheets, meaning they don't necessarily fall under regulators' lists of firms that deserve heightened scrutiny, Alt said.

## **Middleware under the microscope**

While operating a BaaS program allows banks to grow their assets, often on a national scale, the arrangement creates a layer between traditional banks and deposit holders, as fintechs like neobanks take on the front-facing aspect of the client relationship.

In some cases, an additional platform sits in between the bank and fintech, providing the middleware that helps connect the two parties. These partnerships are also coming under increased scrutiny from regulators, as the dynamic creates an additional layer of risk, Alt said.

"It puts a distance between the banks and the fintechs and complicates questions about knowing who you're dealing with," Alt said. "I think [middleware providers] are probably even less well understood by the regulators than the fintech sector generally, because they're not consumer facing in any way."

While third-party BaaS providers can help bridge the connectivity gap between fintechs and their banking partners, a fintech will often opt for a direct partnership with its BaaS bank once it reaches a certain level of maturity, Alt said.

More robust, larger and mature fintechs are generally going to think they're better off minimizing the number of players in their banking relationship," said Alt, speaking broadly about the relationship between fintechs and their middleware providers. "It's better to have direct dialogue with your bank than to have that intermediated by some platform, even if the platform's pretty good.”"

source: <https://www.bankingdive.com/news/regulators-pressure-baas-banks-fintech-partner-occ-fdic-konrad-alt/696325/>

## **Lawmakers push for crackdown on fintech, ban on false claims**

"Two Democratic senators have urged regulators to ban the use of the Federal Deposit Insurance Corp. name or logo by firms that provide products only eligible for pass-through FDIC insurance and establish clear rules for banking-as-a-service companies.

In a letter sent Wednesday, Sens. Elizabeth Warren, D-MA, and Chris Van Hollen, D-MD, highlighted that the partnerships between banks, BaaS providers like Stripe, Finastra, Synapse, and Marqueta and fintechs like Venmo, Cash App, Yotta, and Chime pose a threat to consumer safety and soundness.

They asked the heads of the Federal Reserve, Office of the Comptroller of the Currency, and the FDIC to exercise their power under the Bank Service Company Act and the Federal Deposit Insurance Act to directly monitor the organizations and bring enforcement action against the companies if they violate the established rules.

"The rapid growth of these partnerships risks harming consumers while posing a broader threat to the stability of our banking system and the economy," the senators wrote. "The risks are clear."

Revenue from BaaS is expected to reach \$17.3 billion in 2026, according to the letter.



Warren and Van Hollen pressed the heads of the federal agencies to prohibit the use of misrepresentations related to FDIC insurance. Companies like Yotta, they wrote, put more emphasis on “FDIC-insured” in large text on their websites while explaining what the term means – that the money is held in an account eligible for pass-through FDIC insurance of up to \$250,000 through the partner bank – in smaller text.

source: <https://www.bankingdive.com/news/lawmakers-warren-van-hollen-push-crackdown-fintech-ban-false-claims/727005/>

They clarified that pass-through deposit insurance refers to a process by which deposit accounts are established by a third party for the benefit of one or more other principal parties.

In March, the FDIC demanded three companies and certain associated parties cease making false and misleading statements about FDIC deposit insurance. The senators commended the FDIC’s enforcement actions against banks like Evolve Bank & Trust and Blue Ridge Bank, pushing those lenders to better monitor their third-party relationships.

“The growing integration of the services offered by apps such as Venmo, CashApp, and PayPal into bank infrastructure through BaaS intermediaries such as Synapse requires additional oversight by your agencies — and the establishment of clear rules instead of the ad-hoc enforcement approach that you have used to date,” the lawmakers asserted.

They also applauded the Consumer Financial Protection Bureau for recognizing the growing importance of nonbank financial technology companies, some of which now handle over 5 million transactions annually. The lawmakers applauded the CFPB’s expanded oversight under the Consumer Financial Protection Act and backed its proposal for stricter enforcement of consumer protection laws across the fintech industry.”

source: <https://www.bankingdive.com/news/lawmakers-warren-van-hollen-push-crackdown-fintech-ban-false-claims/727005/>

## Banks mindful of outsourcing duties in fintech partnerships

“Banks are increasingly underscoring the importance of working directly with their financial technology partners, rather than relying heavily on outside program managers when implementing banking-as-a-service.

The rise of banking-as-a-service (BaaS) has produced a group of fintech vendors, such as Treasury Prime Inc., Unit Finance Inc. and Synapse Financial Technologies Inc., to help banks and fintechs set up partnerships. They typically act as the middleware, assisting both sides on technology implementation and program management.

Regulators appear to be examining banks’ reliance on those middleware vendors when providing BaaS and expect them to actively engage in their fintech partnerships as opposed to letting the middleware vendors take over critical duties, especially compliance.

Supervised by the Federal Deposit Insurance Corp., Amesbury, Mass.-based BankProv has noticed increased scrutiny, gauging whether it is taking ownership of actively managing those partnerships in its most recent exam, said Joseph Mancini, executive vice president and COO at BankProv.

Some of the recommendations that came out from our recent exam were very specific to what's coming down the line in BaaS," Mancini said in an interview. "They want the bank to manage, versus [using] the middleware model."

The FDIC's emphasis on banks being the main managers could have broader implications, prompting some banks to adjust their pricing models with fintech partners, or change the allocation of resources in the back office, Mancini said. For instance, banks would ideally have the in-house resources to monitor the activities of fintech partners and conduct know-your-customer procedures on every client, he noted.

BankProv, which works with Treasury Prime to manage fintech partnerships, did not get the impression that regulators discourage banks to work with middleware vendors, Mancini said. No matter what tools banks want to use, the goal is to work diligently to keep third-party risks under control.

Rogersville, Tenn.-based Thread Bank is following the approach of engaging with its fintech partners directly even though it works with Unit Finance to help manage those programs, said John Bearden, chief banking officer at Thread Bank.

"When we got started with them, our approach from day one was we're going out in the relationship with the fintech," Bearden said in an interview.

Thread Bank supports fintechs to offer depository and payments services to their end customers, primarily small businesses. The bank started focusing on the BaaS model after a group of investors recapitalized the Tennessee-chartered bank in May 2021.

Still, Unit's technology is valuable to Thread Bank since it enhances the bank's capabilities in areas like account ledging, Bearden said. Unit also provides Thread Bank access to compliance tools to either use them on its own or find third-party service providers.

With Unit's "frontline diligence," Thread Bank is in fact doubling up on some of the compliance work to ensure sufficient transaction and fraud monitoring, Bearden said.

"For us, it's kind of a tri-party relationship between the fintech, bank and unit. It's a little bit different than some of the other BaaS relationships that I've seen in the marketplace," Bearden said."

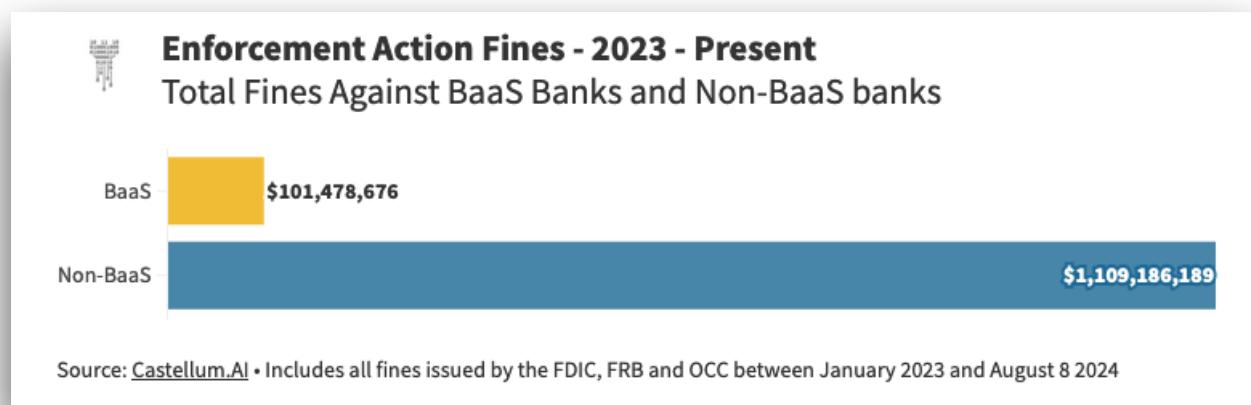
source: <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/banks-mindful-of-outsourcing-duties-in-fintech-partnerships-75804984>

## **BaaS is Not in Crisis: BaaS Banks Less Likely to Be Fined Than Non-BaaS Banks**

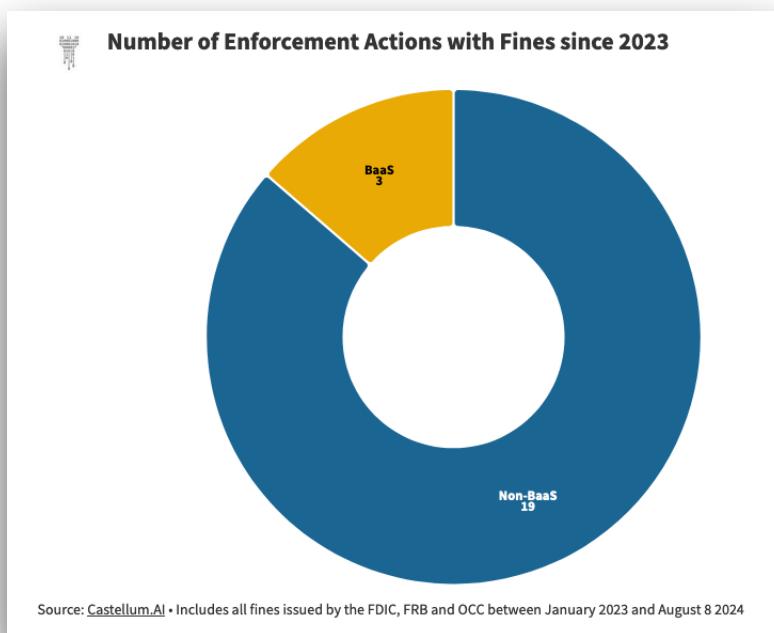
"A wave of overwhelmingly negative coverage of Banking as a Service (BaaS) has focused on enforcement actions and consent orders against sponsor banks, painting a bleak picture of the future of embedded finance in the United States.

However, a data-driven review of enforcement actions issued between January 2023 and July 2024 by the three main federal banking regulators — the Office of the Comptroller of the

Currency (OCC), Federal Reserve (FRB), and Federal Deposit Insurance Corporation (FDIC) — shows continued regulatory support for BaaS and financial innovation.



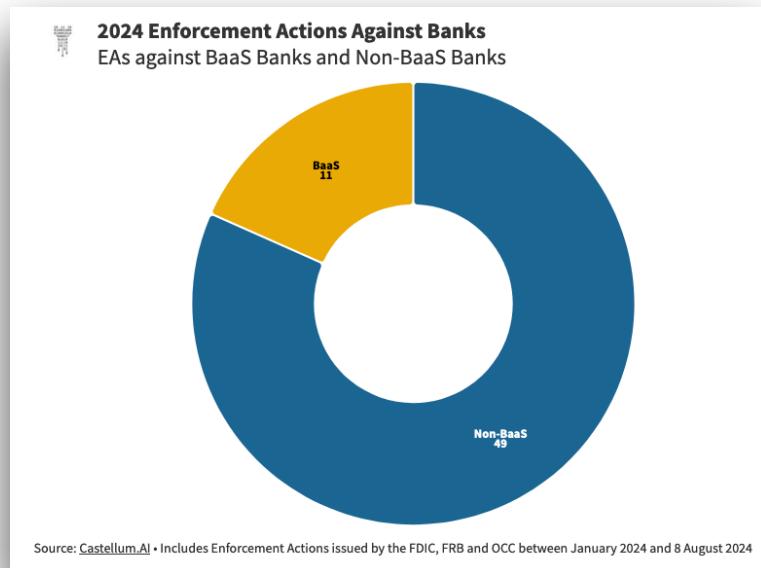
In total, fines against non-sponsor banks were 10 times larger than those targeting BaaS sponsor banks. Moreover, 42% of BaaS-related civil monetary penalties relate to one fine targeting a bank offering crypto services: Silvergate. Silvergate's collapse and associated consent order and fine is best viewed in the context of the FTX collapse and regulatory scrutiny on decentralized finance, not the broader BaaS ecosystem.



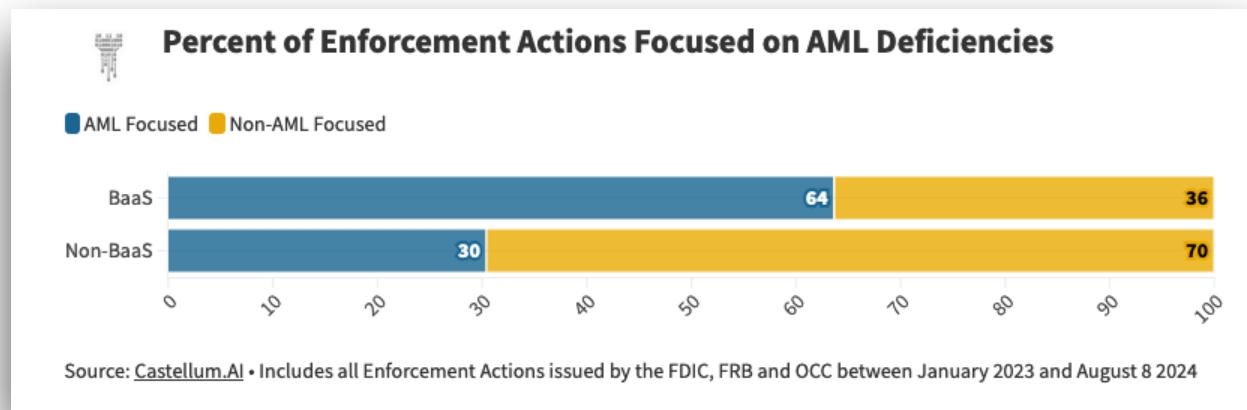
Fines against non-sponsor banks are also more frequent. 18% of enforcement actions against non-sponsor banks included civil monetary penalties (CMPs), while only 13% of enforcement actions against banks involved in BaaS activities included fines.

The lower value and frequency of CMPs targeting banks in the BaaS space reinforces the view that regulators emphasize remediation and corrective action to improve compliance, not simply penalize the industry.

Since January 2024, 18.3% of enforcement actions have targeted BaaS banks. This represents an increase over 2023 when S&P Global noted that 13.5% of enforcement actions targeted BaaS. However, the rise has been modest, given the industry's rapid growth and the increased regulatory focus.



Regulators have consistently highlighted Bank Secrecy Act (BSA) and Anti-Money Laundering (AML) deficiencies in BaaS banks. 64% of all enforcement actions against BaaS sponsor banks have focused on AML shortfalls, compared to 29% for non-BaaS banks.



This high proportion of AML-related actions underscores the challenges banks face when expanding to new markets, customers, and products through fintech partnerships, often without scaling their compliance programs to compensate for new risk exposure.

Regulators have routinely identified the following AML deficiencies:

- KYC Procedures and Technology: Insufficient due diligence processes, including onboarding screening, inadequate customer identification programs (CIP), failure to identify beneficial owners, and ineffective monitoring of high-risk accounts. This is especially prevalent among sponsor banks that lack effective customer information sharing with fintech partners.

- Transaction Monitoring and SAR Filings: Inadequate monitoring systems that fail to detect suspicious activities. Enforcement actions also highlight untimely or incomplete Suspicious Activity Report (SAR) filings.
- Governance and Oversight: Inadequate authority granted to BSA officers and weak board and management oversight of third-party risk and compliance programs.
- Staffing and Training: Inadequate staff training on BSA/AML compliance and insufficient updates to compliance-related programs.
- Risk Assessments: Failure to conduct comprehensive and timely BSA/AML risk assessments, and failure to adjust them based on evolving risks associated with customers, products, geographies, or transactions.
- Independent Testing: Deficiencies in independent audits and BSA/AML program reviews, including insufficient scope, lack of depth in testing, and failure to address audit findings.

There is no doubt that sponsor banks are under regulatory scrutiny, but the above makes clear that regulators are balancing their primary objective of ensuring consumer safety with enabling financial innovation.

Regulators have put an emphasis on evaluating the efficacy of compliance programs at sponsor banks that have quickly scaled up their fintech partnership programs. The absence of widespread fines and instead a focus on remediation reinforces that the objective is to address compliance deficiencies, not discourage innovation.

To that end, regulators are shifting their approach and addressing BaaS and fintechs directly. Whereas regulatory guidance has often addressed broad “third-party risk management” in its advisories or enforcement actions, recent actions have started to make specific reference to fintechs (such as the FDIC’s May 2024 Consent Order with Thread Bank).

To mitigate the risk of consent orders, sponsor banks should adopt best practices that align with regulatory expectations.

- Strengthen AML Technology and Procedures: Invest in compliance technology that can handle new risks associated with onboarding new customers and offering new products through fintech partners. Ensure that policies are updated and strong information sharing processes enable effective KYC and transaction screening associated with services offered by your fintech partners.
- Enhance Transaction Monitoring: Invest in advanced systems that can identify suspicious transactions in real-time and ensure timely, complete Suspicious Activity Reports (SAR) filings.
- Improve Governance and Oversight: Grant greater authority to BSA/AML officers and ensure strong board-level oversight of compliance programs and require fintech partners to similarly invest in their AML compliance programs.
- Conduct Regular Independent Testing: Implement comprehensive audits and BSA/AML program reviews to address any gaps before regulatory scrutiny.

- Adjust Risk Assessments: Regularly update risk assessments and ensure that risk assessments include adequate scope and depth to account for changes in customer profiles, products, and market conditions.”

source: <https://www.castellum.ai/insights/analysis-baas-enforcement-actions-2024>

## Current Trends in BaaS

### The Great Bank Unbundling

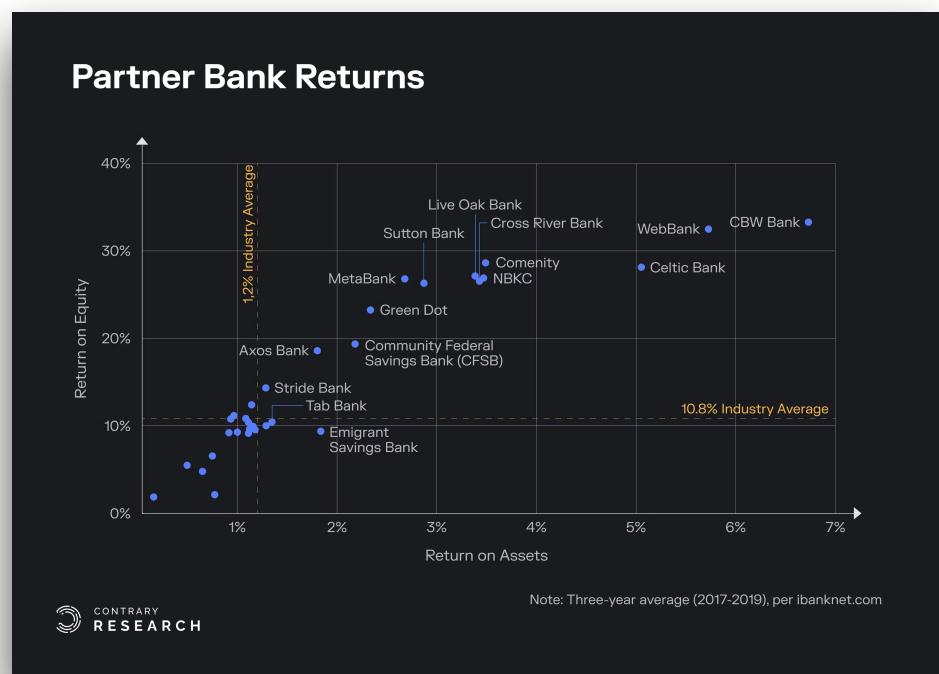
"Since the emergence of the first BaaS providers, some of the world's largest companies, from Amazon to DoorDash\*, have worked directly with BaaS providers to launch financial products for their customers. As a result, the market has experienced significant growth, with some estimating that BaaS will represent a \$7 trillion opportunity by 2030.

As the demand for embedded financial products has risen, it has also been met by an increased supply of partner banks engaging in BaaS. For example, in 2020, there were already more than “30 partner banks representing hundreds of fintech relationships and financial services.” In 2024, that number has already grown to ~120 partner banks.

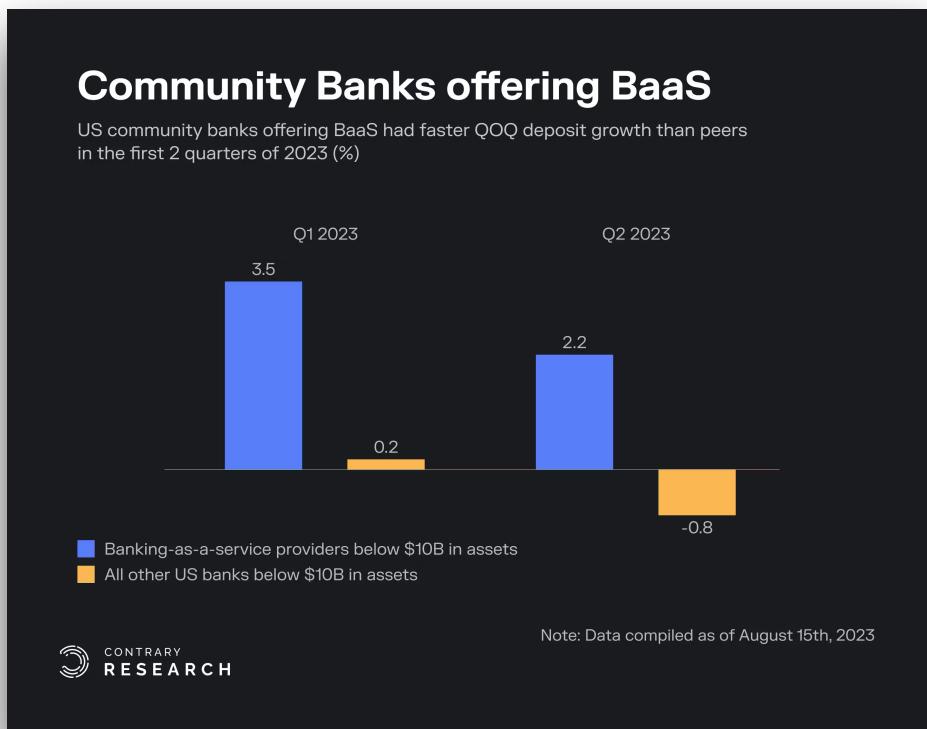
### Allowing Community Banks To Win

So far, community banks that are engaged in BaaS, like Green Dot and Cross River Bank, have benefited significantly from a rise in loans and deposits, as well as falling customer acquisition costs. This has enabled them to outperform the return on assets (ROA) generated by traditional banks. Between 2017 and 2019, partner banks in BaaS were operating “at profitability levels two to three times above average.”

The core driver behind this improved ROA is that community banks engaging in BaaS are outcompeting their peers as a result of their direct access to millions of customers via non-bank partnerships. The biggest revenue drivers are commercial loans and deposit growth. In fact, some of the highest ROA banks (WebBank, Celtic, CRB) are driven by lending, and often can't even offer deposit accounts.



The data also reinforces the growth opportunity for community banks in BaaS. For example, in Q2 2023, community banks that supported BaaS experienced a median sequential deposit growth rate of 2.2%. In contrast, community banks that did not support BaaS experienced a decline in the growth of deposits by 0.8%.



This rise in deposits and higher ROA for community banks providing BaaS have ultimately made customer acquisition more affordable, allowing for growth where there had previously been stagnation. Each partner bank has varying revenue streams from BaaS depending on whether they support lending, consumer or commercial accounts, or large-scale card programs that drive interchange.

By acting as card issuers, BaaS banks receive a cut of interchange from the merchant's bank on every transaction. While the amount of interchange varies between banks, according to Syncetera, non-bank companies typically receive 70% in BaaS partnerships, while the BaaS provider and partner bank share the remaining 30%.

### Commercial BaaS Revenue Assumptions

REVENUE SOURCE	UNITS	MONTHLY UNITS PER ACCOUNT	PER UNIT REVENUE
Ledger	# ledgers generated	1.00	\$0.312
Remote deposit capture	# mobile checks deposited	0.25	\$0.150
ACH	# ACH transactions originated	2.00	\$0.200
Know your business (KYB) checks	# KYB checks performed	0.10	\$0.406
KYB monitoring	# KYB accounts monitored	1.00	\$0.065
Account identity	# identity calls	0.10	\$0.215
Account authentication	# authentication calls	0.10	\$0.236
Account balances	# balance calls	0.10	\$0.080
Account transactions	# transaction calls	0.25	\$0.009
Fraud	# card transactions	10.00	\$0.007
Card processing	# ACH + card transactions	11.00	\$0.015
Interchange	\$ interchange generated	\$24.00	\$0.200

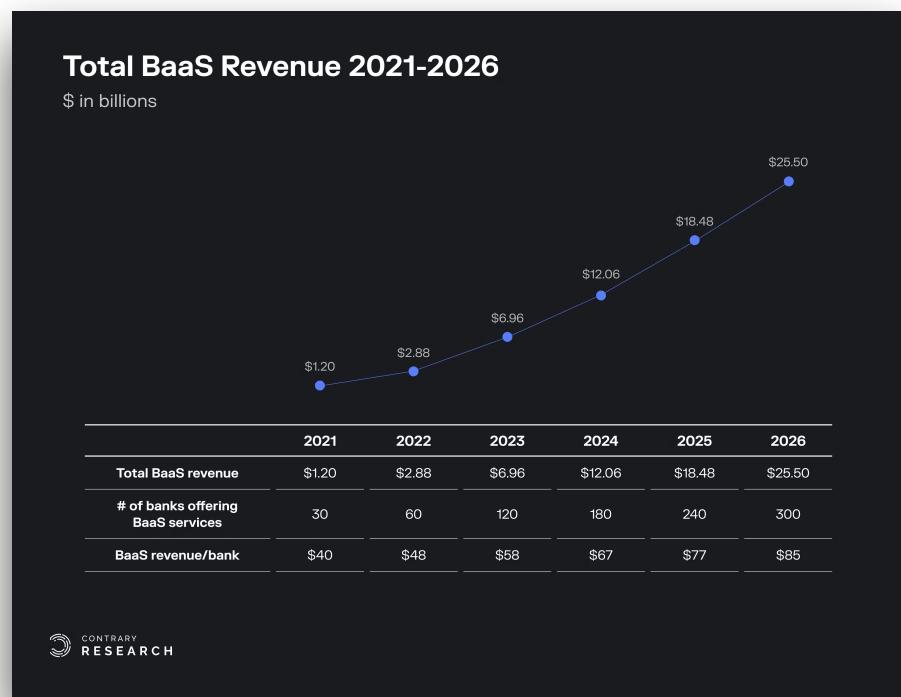


Many of these prices can differ significantly depending on a business's scale or pricing structure. As modeled by Cornerstone Advisors, with these commercial BaaS revenue assumptions, a monthly growth rate of 2%, and 300K commercial accounts, a typical sponsor bank could generate roughly \$24 million in annual revenue from BaaS alone.

a typical community bank. In 2023, US community banks generated a total net income of ~\$26.8 billion and there were ~4K community banks. That means the average community bank generated ~\$6.7 million in annual income in 2023. In 2022, Coastal Financial Corp generated 49% of its total net income from BaaS alone. Therefore, with 300 community banks projected to offer BaaS in 2026, BaaS revenue is expected to reach \$25.5 billion by 2026.

Further, many of the benefits that community banks receive from engaging in BaaS arise from second-order effects unrelated to interchange. While most community banks have struggled to attract deposits due to consolidation among national banks like Chase, partnering with non-bank companies that are national in their marketing allows these community banks to gain national reach. This means that they can compete on a national scale.

As a result, community banks across the US are considering whether to engage in partnerships with fintechs and non-bank companies by adding BaaS to their core offering. In a 2022 report, 85% of banking executives stated that they were already implementing or planning to implement BaaS solutions. Since the release of that report, BaaS deployments have jumped globally by 37%.”



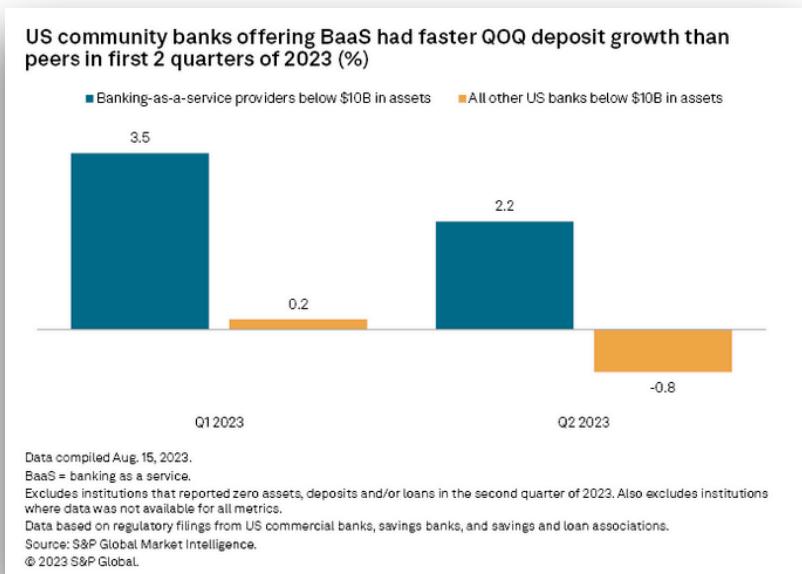
## Banking as a service still boosts banks' deposits but has its risks

"In general, banking as a service (BaaS) seems an ideal partnership. Financial technology companies have proven their ability to innovate and create modern, user-friendly interfaces, with the rapid deposit growth of direct-to-consumer neobanks attesting to this. The banks they partner with have things fintechs often lack, including the back-end architecture for account management, Federal Deposit Insurance Corp. insurance and deep regulatory knowledge.

BaaS has proven highly successful for some, but there are also costs to consider. The business might require significant up-front tech investment and, as real-life examples have shown, it can take a few years to build and become profitable. Banks might also need to increase their spending substantially on compliance to ensure their fintech partners are adhering to banking regulations.

### Consequences of BaaS Adoption:

#### Low-Cost Deposits



Community banks offering banking as a service once again outpaced peers on quarterly deposit growth, with a median sequential growth rate of 2.2% for BaaS banks in the second quarter and a decline of 0.8% for the rest of the US banks below \$10 billion in assets.

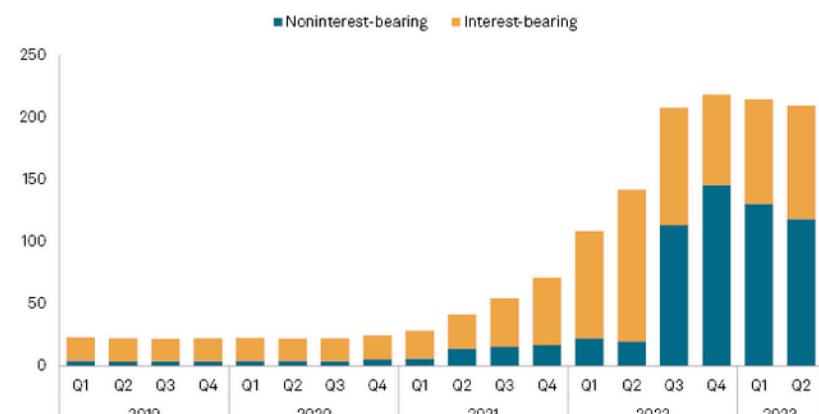
Our analysis focuses on banks below \$10 billion in assets, since they account for the majority (more than 75%) of the US banks we have identified as offering BaaS.

Given the expectation for deposit pricing pressures to persist, BaaS seems a particularly enticing proposition, as it can potentially bring in low-cost, non-interest-bearing deposits. Pathward Financial Inc. offers a prime example. As of June 30, 96% of its total deposits were non-interest-bearing and its total cost of deposits was 0.01%, according to an investor presentation. The Sioux Falls, SD-based bank's BaaS segment has a heavy focus on prepaid cards, which it issues through BaaS partnerships with payments companies.

That said, BaaS banks are not immune to changes in customer behavior and competitive pressures. Depositors in non-interest-bearing accounts could switch to interest-bearing accounts at any point.

Often we cannot tell how much of a bank's business comes from BaaS. But in some cases, we assume that large changes in the overall bank's results are due to BaaS. Data from Lineage Bank, based in Franklin, Tenn., shows the impact we would expect: Non-interest-bearing deposits jumped from \$19.9 million in the second quarter of 2022 to \$113.4 million in the third quarter of that year.

Lineage Bank saw large influx of noninterest-bearing deposits in Q3 2022 (\$M)

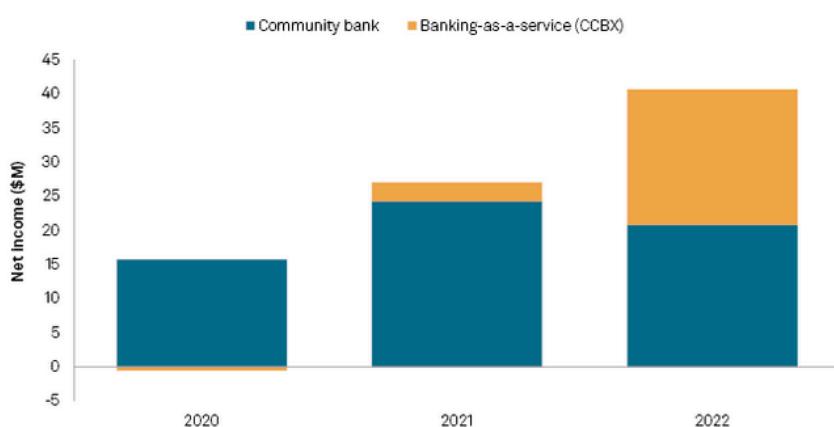


Data compiled Aug. 16, 2023.  
Data based on regulatory filings.  
Source: S&P Global Market Intelligence.  
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## Fee Income

BaaS can provide new revenue streams for banks. There are different varieties of such revenue, but interchange fees are a common one. BaaS banks that serve as the issuing bank of credit and debit cards receive interchange fees from the merchant's bank (known as the acquiring bank) when customers use them to pay for transactions. Typically, the issuing bank gets 30% of the revenue and the fintech partner receives 70%, according to Synctera Inc., a company that helps banks and fintechs create BaaS programs.

Coastal Financial's BaaS segment lost money in 2020 but became highly profitable 2 years later



Data compiled April 7, 2023.  
BaaS = banking-as-a-service.  
Net income calculated by S&P Global Market Intelligence using segment-level disclosures and the effective tax rate of the entire organization in each period.  
Source: S&P Global Market Intelligence.  
© 2023 S&P Global.

BaaS can meaningfully add to a bank's bottom line, judging by Coastal Financial Corp.'s results. The Everett, Wash.-based bank generated \$19.8 million in net income in 2022 from its BaaS division, dubbed CCBX, which was 49% of its total net income for the period, according to S&P Global Market Intelligence calculations.

## Balance Sheet Diversification

BaaS partnerships might offer deposits and loans outside a bank's traditional customer base. For instance, MVB Financial Corp. has built a sizable deposit base of gaming deposits through relationships with online sports betting sites. The Fairmont, W.Va.-based bank's gaming deposits increased from less than 4% of total deposits at the end of 2018 to about 12% as of June 30.

On the asset side of the balance sheet, BaaS can lead to new lending channels. In the case of Coastal Financial, its BaaS segment has a much different loan portfolio composition than its community bank. About 65% of the BaaS division's gross loans receivable were classified as consumer and other as of June 30, whereas 68% of the community banks were commercial real estate."

source: <https://www.spglobal.com/market-intelligence/en/news-insights/research/banking-as-a-service-still-boosts-banks-deposits-but-has-its-risks>

## **Banking-as-a-service providers grow deposits despite Q1 turmoil**

"A group of 42 community banks focused on banking-as-a-service outperformed peers across some key metrics in the first quarter and showed signs of deposit growth resiliency.

The group's median net interest margin was 4.11%, compared to 3.41% for all US banks with under \$10 billion in total assets, according to data compiled by S&P Global Market Intelligence.

During the first quarter, banks focused on banking as a service (BaaS) recorded median deposit growth of 4.0% and median loan growth of 3.4% sequentially, while all community banks posted median deposit growth of 0.2% and median loan growth of 1.2%.

Overall, the US banking industry experienced accelerated deposit outflows with a 3.4% quarter-over-quarter decline, but analysts said the BaaS banks are unlikely to face deposit outflows similar to what caused the failures of Silicon Valley Bank, Signature Bank and First Republic Bank.

"Our research shows that BaaS banks are growing deposits generally through this industry turmoil," Michael Perito, an analyst at Keefe Bruyette & Woods Inc., wrote in an email.

## Deposits of High Quality

In addition to the outgrowth, the non-brokered deposits sourced from financial technology company partnerships can be stickier and more cost-efficient, analysts said.

### **Community banks offering BaaS outperformed peers on several metrics in Q1 2023**

	Median values, Q1 2023							
	ROAA (%)	NIM (%)	Efficiency ratio (%)	QOQ change (%)		YOY change (%)		
				Deposits	Loans	Deposits	Loans	
Banking-as-a-service providers below \$10B in assets	1.47	4.11	61.08	4.0	3.4	18.1	18.0	
All other US banks below \$10B in assets	1.04	3.41	64.46	0.2	1.2	0.0	11.7	
Difference (pps)	0.43	0.70	-3.38	3.77	2.14	18.13	6.29	

Data compiled June 8, 2023.

BaaS = banking as a service; NIM = net interest margin; ROAA = return on average assets.

Excludes institutions that reported zero assets, deposits and/or loans in the first quarter of 2023. Also excludes institutions where data was not available for all metrics.

Calculations based on US commercial banks, savings banks, and savings and loan associations.

Net interest margin and efficiency ratio calculations are on a fully taxable equivalent basis.

Source: S&P Global Market Intelligence.

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BaaS providers that specialize in payments, such as Pathward Financial Inc. and The Bancorp Inc., typically set up highly transactional accounts that store smaller balances for payment purposes,

said Frank Schiraldi, an analyst at Piper Sandler. This makes the majority of their deposits qualified to be insured by the Federal Deposit Insurance Corp.

"I would double down on that notion that they really have little- to no-run dynamics. Because the end users are not really trying to get a return, they're just looking for payment solutions," Schiraldi said in an interview.

The deposit base of Pathward primarily consists of accounts with an average balance of less than \$1,000, the bank has disclosed. At The Bancorp, the bank had \$6.70 billion in total deposits as of March 31, and an estimated \$643.9 million of it, or less than 10%, were not insured by the FDIC, according to a Form 10-Q filed in May.

The Bancorp's deposit base represents about 50 fintech programs, including those with PayPal Holdings Inc. and Chime Financial Inc., said President and CEO Damian Kozlowski. The deposit base is relatively small, but it can drive a high volume of transactions, Kozlowski said. "There's a lot of throughput through all [our] programs. It's not like the deposits are all parked here," Kozlowski said in an interview.

Keefe Bruyette & Woods' Perito also noted that the cost of those deposits are under contractual rates that both parties have agreed to. While other banks are racing to win customers with high yields, BaaS providers are less impacted by competitive market forces, even with stiffer competition for deposits.

"They've got pretty good negotiating power with the partners just because there are such limited banks that really do this," Schiraldi said.

Stride Bank NA, Lead Bank, MVB Bank Inc. and Column NA were the BaaS providers who grew deposits by over 20% sequentially in the first quarter, according to Market Intelligence data.

#### BaaS providers with largest deposit increases in Q1 2023

Limited to institutions with less than \$10B in assets

Company (top-level ticker)	City, state	Total deposits (\$B)	QOQ change (%)
Stride Bank	Enid, OK	3.15	24.99
Lead Bank	Kansas City, MO	0.82	22.30
MVB Bank (MVBF)	Fairmont, WV	3.17	21.76
Column NA	Chico, CA	0.41	20.46
CBW Bank	Weir, KS	0.07	19.76
WebBank (SPLP)	Salt Lake City, UT	1.85	18.22
Grasshopper Bank NA	New York, NY	0.65	17.59
Cholce Financial Group	Fargo, ND	4.45	16.72
Piermont Bank	New York, NY	0.44	15.81
Emigrant Bank	New York, NY	5.66	14.95
FinWise Bank (FINW)	Murray, UT	0.32	14.62
Thread Bank	Rogersville, TN	0.44	14.10
Capital Community Bank	Provo, UT	0.56	12.21
Blue Ridge Bank NA (BRBS)	Martinsville, VA	2.76	10.31
Celtic Bank Corp.	Salt Lake City, UT	1.66	9.94
Median of banking-as-a-service providers below \$10B in assets		3.96	
Median of all other US banks below \$10B in assets		0.19	

Data compiled June 8, 2023.

BaaS = banking as a service.

Source: S&P Global Market Intelligence.

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#### A Unique Focus on Fee Income

Potential new regulatory rules requiring banks to strengthen their capital positions should not be a concern to many BaaS providers, Piper Sandler's Schiraldi said. BaaS providers often have excess capital that they do not want to use to significantly grow the balance sheet because they are incentivized to stay under \$10 billion in total assets, to be exempted from the Durbin amendment, which limits interchange fees.

"I don't think they'll be impacted

to the degree of others," Schiraldi said. "Their business model in general would make them less susceptible to concerns over capital."

Unlike the traditional banking model that focuses on asset and deposit growth to boost net interest margin, BaaS providers like Rogersville, Tenn.-based Thread Bank deploy more resources to pursue noninterest income to drive returns on equity, said John Bearden, chief

banking officer at Thread Bank. By processing payments for fintech partners, Thread Bank earns interchange fees that are not necessarily correlated to the size of its balance sheet.”

source: <https://www.spglobal.com/market-intelligence/en/news-insights/research/banking-as-a-service-providers-grow-deposits-despite-q1-turmoil>

#### BaaS providers with largest loan growth rates in Q1 2023

Limited to institutions with less than \$10B in assets

Company (top-level ticker)	City, state	Total loans and leases (\$B)	QOQ change (%)
Thread Bank	Rogersville, TN	0.15	37.85
CBW Bank	Weir, KS	0.02	22.98
Stride Bank	Enid, OK	2.20	16.72
WebBank (SPLP)	Salt Lake City, UT	1.85	16.52
Community FSB	New York, NY	0.21	15.97
FinWise Bank (FINW)	Murray, UT	0.30	14.58
Evolve Bank & Trust	Memphis, TN	0.93	10.70
Celtic Bank Corp.	Salt Lake City, UT	1.71	9.37
Coastal Community Bank (CCB)	Everett, WA	2.86	9.03
Pathward NA (CASH)	Sioux Falls, SD	3.75	6.34
Emigrant Bank	New York, NY	4.62	6.17
Beneficial State Bank	Oakland, CA	1.20	6.05
Grasshopper Bank NA	New York, NY	0.48	5.74
Capital Community Bank	Provo, UT	0.59	5.57
Sunrise Banks NA	Saint Paul, MN	1.30	5.46
<b>Median of banking-as-a-service providers below \$10B in assets</b>			<b>3.36</b>
<b>Median of all other US banks below \$10B in assets</b>			<b>1.22</b>

Data compiled June 8, 2023.

BaaS = banking as a service.

Source: S&P Global Market Intelligence.

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