



**THE FUTURE OF OPEN BANKING:
HOW TO MONETIZE YOUR BANK'S APIs**

CAPCO

THE API-ENABLED FUTURE OF BANKING

Across industries, the recent growth of the API economy bears hallmarks of ‘creative destruction’. In retail, advertising, telecoms, leisure and hospitality, age-old operating models have been broken, services reinvented, market scope rapidly widened, and incumbent businesses challenged with new competitive pressures.

For financial services, the emergence of a new, API-enabled market is a complex proposition. APIs threaten to fragment banking products and services that large institutions have owned for centuries. Instead, a wide range of new providers will be able to offer a ‘buffet’ of financial products and services. White label banking operations – with seamless customer experience at the front end and multiple interconnected providers in the background – will become the norm in the near future.

The danger for incumbents comes not just from small startups eating market share one piece at a time. Once open APIs democratize banking information, internet giants such as Google, Amazon and Facebook would be well-positioned to take larger shares of the pie, and with the advantage of established customer bases, too.

However, APIs are equally likely to create significant new revenue streams for incumbent banks. Capturing the right opportunities, and early enough, will enable banks to grow their balance sheets through productizing and monetizing an array of core financial services. Making banks’ APIs attractive to developers could mean driving new business through their apps. In addition, high-friction elements of the current banking value chain that today require large efforts for low returns (e.g. customer interface) could tomorrow be pooled with competitors, outsourced to shared-service startups or bought off-the-shelf as APIs and incorporated into existing operations at minimal cost.

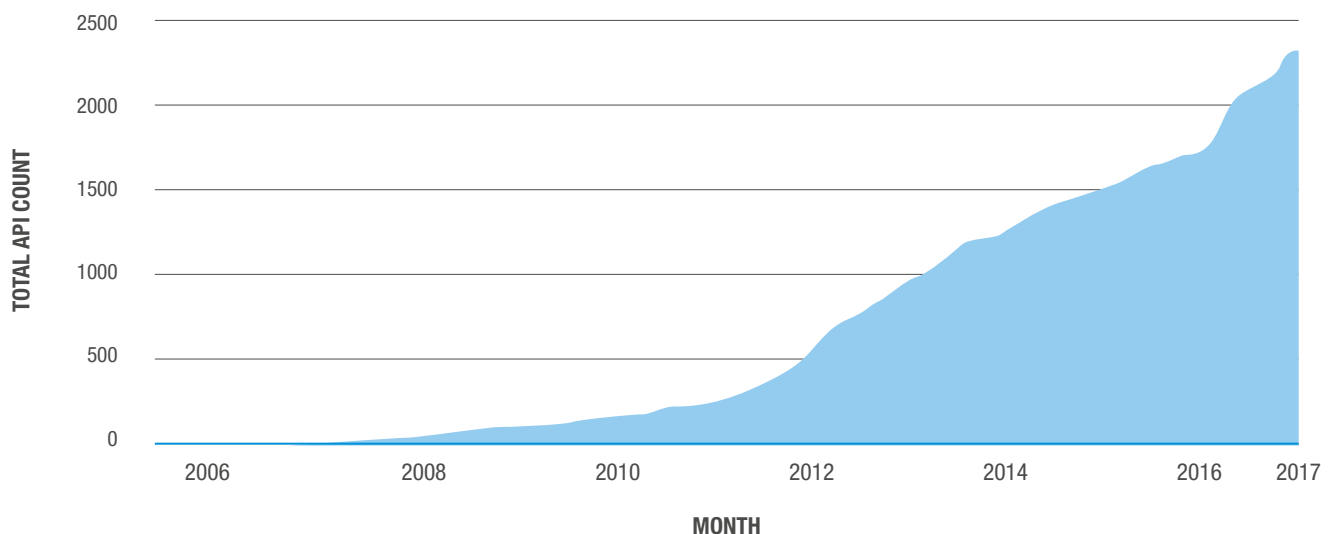
Finally, the API economy will open doors to the major growth markets of the 21st century. These include the unbanked and underbanked population of developing countries, which are particularly mobile-dependent societies. Future market capitalization here is very likely to go to those with the best global API banking ecosystems.

Indeed, to capitalize on APIs’ potential, the differentiator will be speed-to-market. The goal is to be the first to colonize this open terrain, first to build a loyal developer base, and, ultimately, first to set the industry standards.

The standardization process has already begun. APIs are one of the fastest growing business-influencing technologies in the financial services industry today (see Figure 1). In Europe, PSD2 is setting API standards for payments – the most intrinsic banking process. Open Banking will do the same in the UK from 2018. On a global level, several countries within the International Organization for Standardization (ISO) have recently begun standardization of digital payments.

Beyond payments, APIs are already reaching into many areas of banking. In this paper, we look at how banks should begin to capitalize by developing their internal APIs into a suite of public products. We also provide a detailed step-by-step analysis of monetization models for banks to pursue.

GROWTH IN FINANCIAL SERVICES APIS



Growth in financial, banking, payments and monetization APIs (source: ProgrammableWeb, 2017)

FROM ENABLERS TO PRODUCTS AND PROFIT-EARNERS

“For the first time, APIs have entered the marketplace as products. They can now turn entire business processes into discrete consumable entities”.

In most industries, including financial services, APIs have already begun to replace service-oriented architectures (SOAs) as key enablers of internal organizational processes. Truly progressive companies however, are not just building their APIs to service operational needs. They are allowing outside parties to consume their APIs – and the business processes they support – for a profit.

This is a strategic shift. The enabling technology is progressing fast – network and processing speeds grow exponentially, data security and encryption standards continuously improve, cloud computing and storage facilitate unprecedented scalability. Through these developments, APIs can now turn entire business processes into discrete consumable entities. For the first time, APIs have entered the marketplace as products.

The result is that companies no longer need to reinvent the wheel – or even build the wheel – to create innovative commercial vehicles. Instead, they can access all the components they need as APIs from current providers, combining, reconfiguring and building them up in various ways to create entirely new offerings.

Google Maps is the perfect example of an API that many use as a component for their products and services. Companies, individuals, and governments have found many ways to ‘layer’ onto the Google Maps APIs to deliver - on their own websites and apps - bank branch locators, traffic reports and even embedded directions to NORAD’s (North American Aerospace Defense Command) Santa Tracker (<http://www.noradsanta.org>).

For businesses, productizing API-based technologies in this way allows them not just to monetize their business functionality but also to reach more markets with less investment, and to diversify into new markets faster. Failure to capitalize on the potential of this new environment or satisfy its basic needs leaves banks susceptible to disruption.

“Failure to capitalize on the potential of this new environment or satisfy its basic needs leaves banks susceptible to disruption”.

WHY TURN BANKING APIs INTO PRODUCTS?

Although there is almost unlimited potential in transforming banking APIs into a portfolio of commercial products, certain primary benefits stand out.

MONETIZING EXISTING BUSINESS CAPABILITIES

This is perhaps the most important reason for offering APIs as products.

A credit reporting agency, for example, will have a well-functioning internal API for assessing credit scores and other metrics of consumer credit histories. If this product is only used internally, its profit potential is limited. However, if the API were exposed to the marketplace, a wide range of banks, loan companies, insurance firms and solicitation companies would happily 'consume' it, i.e. pay to use it. Exposing the API would allow these secondary markets to incorporate its functions into their applications, without the need to develop and maintain the API themselves. For the credit reporting agency, it would mean a fast route to new revenues.

COMMODITIZING OPERATIONAL PROCESSES FOR PROFIT

Once a bank's APIs become consumable products, the API economy can also create additional distribution opportunities.

Amazon and Alibaba are perfect examples of this. Amazon originated as an online bookstore but has now become the world's largest online general retailer. Like Alibaba, it achieved this transformation by using APIs to extend its provisioning, entitlement, enablement and fulfillment processes to thousands of other retailers and service providers. Everyone wins. Amazon commoditizes its marketplace for profit, while businesses partners can use Amazon's distribution and marketing to position their own storefronts and grow their businesses.

A similar model in banking could provide commoditization of account-based operations. Startups and fintechs will compete to deliver apps offering savings, checking and investment accounts with bespoke customer-oriented services (e.g. setting personalized interest rate or fee structure). This could be happening under the hidden auspices of a large traditional bank which would offer the actual banking foundation (holdings, book of records, banking license, etc.). For startups, the freedom to handle the customer interface would offer the best opportunity for business growth, allowing them to make a name for themselves as customer-oriented entities. The incumbent bank would meanwhile be liberated from the front-facing elements of retail banking - where most costs and problems occur - while profiting from facilitating transactions.

ACCELERATING MARKET GROWTH

Central to understanding the benefits of the API economy is the exponential business growth it creates, with suppliers, partners and developers all building on each other's work to create value – and accelerate growth – for all.

This process begins with API marketplaces - the app stores - where developers can access the catalog of banks' APIs, utilize them, report bugs, provide feedback, join discussion forums and potentially put in requests for new features. Many forms of marketplace have evolved, with business models varying from public to private and business-partner exchanges. (Business-partner exchanges are an example of a 'multi-tenant' model, where multiple parties can access API catalogs based on the authorization of the owner).

Through marketplaces, participants create a virtuous circle where there is a constant attempt to increase business capabilities, simplify functional access and create new vertical markets for the benefit of all. The exceptional brand affinity Amazon has created, for example, has enabled the growth of the Amazon Web Services (AWS) Marketplace. This API marketplace attracts not only developers and partners looking to exploit Amazon's APIs, but also other vendors - who expose their own APIs on AWS (e.g. Oracle) – to provide analytics and database APIs for additional value.

“Through marketplaces, participants create a virtuous circle where there is a constant attempt to increase business capabilities, simplify functional access and create new vertical markets for the benefit of all”.

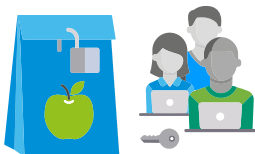
API DELIVERY MATURITY

A bank's journey towards participating in the API economy begins with producing APIs for internal consumption, prioritizing re-usable and company-wide functions such as anti-money-laundering. They can then progress to the deployment of affiliate (trusted partner) programs and opening their APIs for public consumption. These steps are detailed below.



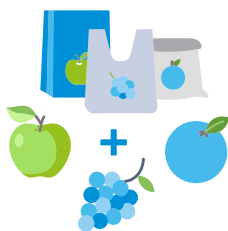
BANK CHANNEL

At this stage, banks build out APIs for their own development teams' ease of use in web, mobile, and other internal applications. This will improve development processes, speed time-to-market and enhance user experience with apps and websites. This is the first step in establishing API maturity for a bank. Many banks are already looking at this model as part of their digital strategies.



API MARKETPLACE

The next step for banks in their API journey will be to open some of their APIs to trusted third party developers. This will begin to build the larger ecosystem around banking services beyond banks' own apps. Through this ecosystem, third parties can offer apps that drive transactions to the banks' API offerings. There are many revenue models here (they will be addressed in the next section). Capital One DevExchange is an example of a bank's API marketplace.



API DISTRIBUTOR

This model extends a bank's API marketplace by listing third party financial services API offerings from partners and fintechs alongside the bank's own. Banks can deliver best-in-class products and best-fit solutions to customers by using data and services from other providers. There are several revenue sharing options available through this style of API maturity (these are discussed in the next section).



API AGGREGATOR

Going further, banks may take another logical step by aggregating APIs across multiple financial institutions through a single API of their own design. Instead of offering third party APIs alongside native APIs, an organization could offer an API that orchestrates a combination of native and third party APIs into a more robust API offering to developers.



OPEN BANKING APIs

The final level of maturity is to offer a set of open banking APIs that enables developers to integrate banking products and services into their own apps. Smaller banks could use these APIs to extend their product and service offerings using APIs offered by a larger bank. Alternatively, banks can offer white label products and services for external providers to use under their own brands.

MODELS FOR MONETIZING APIs

Once a bank begins demonstrating maturity on any of the above levels, there are several methods for monetizing APIs that they should consider. In most cases, organizations will likely implement a variety of these methods based on the type of APIs and how the APIs are offered to developers.



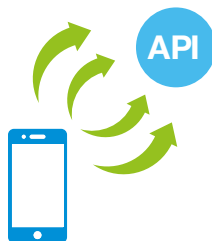
DATA MODEL

Data for data exchange is one of the most common API models and is the core of Facebook's GraphQL API offerings (which rely on data-oriented ways of working with content). For banks pursuing a data-based business model, the rule of thumb is to create a two-way data feed where the bank receives data every time a third party consumes their API. The monetization here could simply be the sharing of data regarding an API request, such as the details of a potential prospect looking for mortgage rates or a mortgage pre-approval. The other option is a paid model, in which there is a charge based on the volume or types of data provided.



TRANSACTION MODEL

Transaction-based models are similar to traditional transactional banking services. The main difference in an API context is the way companies such as PayPal and Stripe allow third parties to integrate and utilize their services through plug-and-play APIs. This allows PayPal and Stripe to reach broader audiences and drive higher transaction volumes to their services. This model assumes that the API is being called to complete some sort of transaction, like paying a bill or transferring money. Users are only charged a fee when the transaction completes.



PER CALL MODEL

Charge-by-call is the most straightforward monetization model, in which third parties pay each time the API is used. To succeed with this model, the service behind the API needs to offer a clear value proposition. Before setting up a direct monetization model, banks should talk to their customers to find out if they would be willing to pay for the service and how much. As an example, the default price per API query for IBM Watson is \$0.0025. This differs from the transaction-based model in that every call to the API is chargeable and may or may not be tied to transactional operations.



Subscriptions

OR



Usage

SUBSCRIPTION MODEL

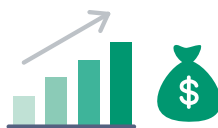
Subscription-based models for API access can be either fixed or dynamic. A fixed model is straightforward and offers full API access for a fixed monthly cost. A pay-as-you-go approach is more dynamic and pricing is determined by metered usage. For example, a cloud computing platform usage-price could be determined on an hourly basis by the operating system and platform size. Another dynamic subscription model is a tiered model. Developers sign-up to and pay for a particular usage tier, based on the number of API calls over a fixed period of time. While the cost increases per tier, the cost per API call usually drops. For example, Vertical Resources (a process-as-a-service company) uses the tiered business model. Prices per usage drop with consuming higher volumes of API calls and users can adjust their tier based on an analysis of usage over a time period. A subscription could be automatically upgraded to the next tier if developers want to continue using the API service after they have reached their subscription limits.

MODELS FOR MONETIZING APIs CONTINUED



FREEMIUM MODEL

Freemium is a good way to get started for both API owners and third party developers curious to connect and explore. It could serve as a stepping stone towards subscription-based or charge per-API-call alternatives. In this model, companies offer developers some of their APIs capabilities for free and then charge for additional functionality. For example, a web mapping service could allow a low number of calls to be made to their API for free and charge for calls above a certain limit. As a motivator to upgrade to a higher package, providers could offer enhanced API access to premium subscribers (which would allow end-users to customize their experience and workflow, for example).



BALANCE SHEET GROWTH MODEL

Balance sheet is an important strategic resource for banks opening their APIs to third parties. Many fintechs are seeking bank partners to provide core financial infrastructure for new products and services. This could benefit banks by increasing assets under management and providing deposits for capital requirements. It could also mean additional interest margins where credit is involved. This model would be similar to how Fidor Bank offers white label banking to third parties.



REVENUE-SHARING MODEL

Revenue-sharing is an option to encourage open innovation and co-creation with third parties. In this model, it is often the third party who gets paid based on the popularity of the their application. A revenue-sharing model offers incentives for both the API owner and the third party community and should also provide additional scaling incentives. This works best on products or services that have monthly or annual fees. Portions of those fees would be paid to the third party for elements such as credit card sign-ups, insurance policies initiated, etc.



REBATE MODEL

Rebates or cashback can also be used for APIs that have a revenue-generating transaction fee to the end-user, for example open APIs for executing equities trades or processing payments. Banks can choose to pass on a portion of the fee to the consumer. In areas such as payments, where competition for volumes is high, providing a cashback option for using a specific API may be a good incentive. Retailers could also tie discounts or cashback coupons to purchases made through the API of a specific payments network.

LESSONS FROM OTHER API MARKETS

API trends have begun to emerge in various industries. These can serve as indicators for how the banking sector's API marketplace will develop, regardless of the chosen models for growth.

- **Increased pressure on product pricing**

In the travel industry, the vast majority of revenue today is being driven by API calls from web search sites such as Expedia to back-end hospitality providers (e.g. hotels, rental car providers, airlines). The result has been better analytics for discounting (based on travel habits and time logistics) and, subsequently, fierce competition. A similar model in banking would lead to pressure on all components of banking operations – downward pressure on fees and costs, and upward pressure on interest percentages. Having API products capable of generating enough new revenue to outweigh the profit squeeze will be crucial.

- **Simpler online payment models**

Mobile applications are primarily focused on payment-based API capabilities. For example, Stripe, PayPal, and Chargefly are all developing better and more secure ways to pay via mobile devices. Per-transaction fees are usually the norm for this type of business model, with some mobile payment vendors charging up to 2.9 percent of the transaction value. A quick online payment API, allowing consumers to purchase goods online and pay directly from their bank account – in the same way they do today with a PayPal button – would seem an obvious near-future win for retail banks.

“Banks must also look beyond product APIs for ways to use this technology to build a wider web presence”.



- **Greater web traffic and brand promotion opportunities**

Within the organization, APIs need to be treated as products, and that means they require appropriate levels of marketing, sales, and support to be effective. APIs are not just tools for core banking and data; they can be a valuable driver of the brand. For example, most of the traffic in Twitter's feed occurs not from posts on their website or mobile app but through Twitter APIs. These APIs are embedded in news articles and social-media sites and inject content into the Twitter platform at the click of a button. Banks must also look beyond product APIs and investigate ways to use this technology to build a wider web presence.

- **Declining customer loyalty with one-click switching**

In addition to conveniently consuming banking APIs, customers and clients can easily disconnect the API if a better one comes along. This highlights a crucial strategic differentiator in an API economy - the ability for consumers to quickly subscribe to (or unsubscribe from) a business functionality. For banks, the implication is that they will need to become more agile to be able to face the pressure of healthy competition.

CHECKLIST FOR LAUNCHING APIs

Before launching APIs, banks must carefully assess the following:

BUSINESS CONSIDERATIONS:

API objectives

- What is the bank trying to achieve with the API?
- How will the business position and sponsor it?

Legal conditions

- What are the terms and conditions of the API usage?
- What are the risks and liabilities to the organization in case of the API misuse?
- How will the bank protect itself from intellectual property infringement?

Business assets to expose through APIs

- What business functions should be made available, and at what level of granularity?

KEY TECHNICAL CONSIDERATIONS:

Creation of APIs

- How will the API fetch or transform information?
- What is the rationalization for the API?
- Does the API require calling out to other APIs to transform data, or to fetch a special security credential?

Consumption of APIs

- How will developers discover the API?
- Will the API be listed in a catalog?
- What are the access rights for discovering the API?
- Will the API be consumed as part of a larger composition of APIs that each provide distinct functionality?
- How is the API deployed and versioned, and how is this information communicated to users?

THE FUTURE OF BANKING DEPENDS ON VALUE-ADDING APIs

“Competition in this market is based not on APIs’ technological capabilities but on their ability to deliver business value”.

Competitive pressures are driving industry sectors, including financial services, to adopt API-based technologies to monetize their business functionality and make provisioning of business processes more frictionless. For consumers, the revolution in API products has resulted in a fundamental shift in expectations. Where once they saw websites and apps as mechanisms for accessing information, now they see them as an ecosystem in which to consume business services. Quality expectations have risen in tandem. Efficient interfaces, swift services, and interconnected devices have all become the norm.

To achieve true growth with APIs, banks must focus their energy in the right direction. The lesson of the last few years is that competition in this market is based not on APIs’ technological capabilities but on their ability to deliver business value. To succeed, banks must view their APIs as products and, as such, develop them from a demand-led perspective. First and foremost, they must meet an untapped consumer need and be invaluable to their distributors (i.e. developers, startups and fintechs). APIs built to satisfy banks’ own needs will fail to generate business growth.

Beyond strategic and operational factors, banks need to give considerable thought to the planning, business definition and technical architecture of API design. The high-performance financial applications of the future will rely on highly responsive and reliable API architectures to compete.

Capco has experienced knowledge workers in API and the associated microservices architecture development for financial institutions. Engage Capco today to discuss how to accelerate your API strategy.

“Banking APIs must meet an untapped consumer need and be invaluable to their distributors - developers, startups and fintechs”.

CONTACT:

Bhanu Kohli, Partner
bhanu.kohli@capco.com

AUTHOR:

Craig Borysowich, Senior Consultant

ABOUT CAPCO

Capco is a global technology and management consultancy dedicated to the financial services industry. Our professionals combine innovative thinking with unrivalled industry knowledge to offer our clients consulting expertise, complex technology and package integration, transformation delivery, and managed services, to move their organizations forward. Through our collaborative and efficient approach, we help our clients successfully innovate, increase revenue, manage risk and regulatory change, reduce costs, and enhance controls. We specialize primarily in banking, capital markets, wealth and investment management, and finance, risk & compliance. We also have an energy consulting practice. We serve our clients from offices in leading financial centers across the Americas, Europe, and Asia Pacific.

To learn more, visit our web site at www.capco.com, or follow us on **Twitter**, **Facebook**, **YouTube**, **LinkedIn** and **Xing**.

WORLDWIDE OFFICES

Bangalore	Hong Kong	Singapore
Bratislava	Houston	Stockholm
Brussels	Kuala Lumpur	Toronto
Chicago	London	Vienna
Dallas	New York	Warsaw
Dusseldorf	Orlando	Washington, DC
Edinburgh	Paris	Zurich
Frankfurt	Pune	
Geneva	São Paulo	

CAPCO.COM     

© 2017 The Capital Markets Company NV. All rights reserved.

CAPCO