

WITH A FOREWORD BY EYAL SIVAN



# **API Strategy for Open Banking**

Insights and case studies from leading open banking experts and API strategists.

### Nordic APIs

This book is for sale at http://leanpub.com/API-Strategy-for-Open-Banking

This version was published on 2020-06-16



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# **Contents**

Foreword: Embracing Open Banking	i
Preface: APIs Support the Open Banking Movement	iv
The Premise of PSD2 And Open Banking Open Banking: The Premise and Promise	<b>1</b>
What PSD2 Means For Banks	3 <b>4</b>
1. Compliance	5 5
Premium API Products	6 7
5. Potential for Collaboration	7 8
Conclusion	8 9
NUI UIL APIS RESUUI LES	9

# Foreword: Embracing Open Banking

#### by **Eyal Sivan**

It is with great pride that I write this foreword, for it is no exaggeration to say that Nordic APIs played a pivotal role in my journey, which led me to dedicate my life to **open banking**.

The first time I ever heard of open banking was while presenting at the Nordic APIs Summit event in Stockholm, where I met Gunnar Berger from Nordea, featured here in this book. After listening to him speak, describing large banks as battleships and fintechs as speedboats, I discovered he had a curious title that I had never heard of before: Head of Open Banking.

After speaking to Gunnar, doing some reading, and listening to European politicians argue about PSD2 on YouTube, I became immediately fascinated with open banking and its seeming contradictions. Here was a situation where governments were the ones driving innovation while market forces were slowing it down, a situation where regulation was trying to reduce barriers to entry instead of erecting them. In open banking, there seems to be an attempt to create a financial system that is both more competitive and healthier at the same time. In short, a better way to handle money.

Upon further research, it became clear open banking activity was taking place everywhere, not just in Europe. Moreover, regardless of whether the approach being taken was driven by regulation or by the market, the aim seemed to be the same: to develop a **common standard**, enabling all the players in the

financial ecosystem to communicate with each other seamlessly and universally, acting as a foundation not only for great innovation but also for the establishment of modern data rights.

So, what exactly does this common standard called open banking look like? If you are reading this book, you probably already know that open banking standards are implemented as **a set of open APIs**. Today, in most open banking implementations, there are two main types of APIs: one to get information about you or your banking activity and another to move money around using payments. But that is just the beginning. Already, based on those two basic functions, we are seeing moves into premium APIs, data-driven aggregation, and AI-powered smart money. Mature markets like the UK are seeing exponential growth in usage. Despite some bumps in the road, open banking has already proven that a strong standard acting as a base can lead to explosive innovation, increased competition, and a modernized financial market. Make no mistake: open banking is here now, and it is here to stay.

To those building the APIs that power open banking, understand that you are building the future. The APIs you build will form the digital economy's roads and bridges, the bedrock of the 21st century. Your APIs will control how all of us trade, save, and invest to build ourselves better lives. In this book, you will find articles by some of the smartest open banking pioneers out there, like Chris Wood, who was one of my early teachers. But rest assured, much of this story has yet to be written, and much of open banking has yet to be built. Perhaps you will be the next one to add a piece of the puzzle.

Open banking appears to be a rare opportunity to raise all boats if done right - a true nonzero-sum gain. Creating a common standard for the financial services ecosystem means that: Consumers win through better, cheaper, more innovative financial products; governments win through effective regulation that defends both competition and consumer data rights; technology

companies, large and small, win because they can create and build on open standards; and banks win (although many don't know it yet) because there is more banking activity overall. A win-win-win.

Today, I am fortunate enough to hold the same title as my friend Gunnar, Head of Open Banking, and I cannot help but smile at the thought of it. Not merely because I have a good job at a great company, but because it feels like I am helping to build something bigger.

It is my distinguished pleasure to assist Nordic APIs in spreading knowledge of open banking. I sincerely hope that you come away from this book as excited as I am about the possibilities of open banking and the open data future it makes possible.

– Eyal SivanHead of Open Banking at AxwayMr. Open Bankingmropenbanking.com

# Preface: APIs Support the Open Banking Movement

#### by Bill Doerrfeld

Since Nordic APIs ran our first story on open banking and FinTech in 2016, our writers have been carefully attuned to the world of banking software architecture.

We've traced the EU's Payment Services Directive 2.0 (PSD2) regulation, and the rise of Application Programming Interfaces (APIs) to help externalize personal data for end consumers. We've also followed the modularization of banking components, as valuable infrastructure becomes reusable through modern microservices designs.

Not only are financial institutions opening up with APIs to meet global regulations, but innovative banks are finding success in fully-fledged API-driven banking products, supplementing core business models. Though there are many new opportunities, banks must apply a keen strategy to accel in this new paradigm. New entrants must be made aware of open banking pitfalls and marketing gaps.

At Nordic APIs, we live for new strategies and technologies and strive to introduce the benefits of API-first platforms to technical and non-technical audiences. In our volume, *API Strategy for Open Banking*, we compile our top articles on open banking from the Nordic APIs writing team.

Within each chapter of API Strategy for Open Banking, a Nordic APIs blogger digs into a niche aspect of open banking, covering PSD2, open banking benefits, developer experience tips,

frameworks for high-grade security and access management, and more. We've featured best practices as well as case studies from our conference speakers, who represent some of the largest open banking initiatives in the world.

So, please enjoy API Strategy for Open Banking, and let us know how we can improve. If you haven't yet, consider following Nordic APIs and signing up to our newsletter for bi-monthly blog updates and event announcements. We also accept blog contributions from the community - if interested, please visit our Create With Us page to submit an article.

Thank you for reading!

- Bill Doerrfeld, Editor in Chief, Nordic APIs

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# The Premise of PSD2 And Open Banking

### by Thomas Bush





Open banking brings agility to modernize the financial sector

There's a particularly apparent trend in today's economy: we're moving away from large, centralized systems towards collaborative, access-based ones. It's changed the way we shop with websites like eBay, the way we travel with apps like Uber, and the way we get a good night's rest with portals like Airbnb.

One industry that's been slow to change in this global movement is banking, where it's all the more critical. We still use massive institutions, like JPMorgan Chase, Citi, and HSBC, to manage our finances — and what's more, we use them to manage all aspects of our finances, from investment to insurance to mortgages.

However, it's somewhat of a double-edged sword with banking: we want the trustworthiness and reliability of a big bank, but with the agility and innovativeness of a hundred startups.

The solution? — open banking.

# **Open Banking: The Premise and Promise**

The premise of open banking is to put the power of financial institutions in the hands of others. On the one hand, this means increased transparency. It also means the development of APIs to allow third-party developers to build their own financial services and platforms using all the data and functionality that banks usually keep to themselves.

While open banking may not sound so attractive for big banks or the major payment service providers like Mastercard and Visa, it's mostly good news for everyone else. Consumers get a better choice of financial services without sacrificing on security, FinTech startups get to explore otherwise impossible ideas, and governments get to tackle the issue of having large, hegemonic financial organizations.

In fact, most governments in Europe — and even the European Union itself — are already pushing for open banking. The UK has its own Open Banking momentum while the EU has passed *PSD2*, the second edition of the Payment Service Directive, which will encourage APIs that "unlock customer data" and "enable consumer choice."

### What PSD2 Means For Banks

The original Payment Service Directive was enacted in 2007 to regulate payment services across the European Union and encourage competition across borders. The revised edition — PSD2 — was passed in 2015 and shifts the directive's focus from broad safety regulation of the financial world to the development of more **innovative** and transparent financial services.

So what exactly does PSD2 mean for European banks? To be compliant with these new rules, they'll have to implement a significant amount of specific, robust functionalities, which will ultimately require an overhaul of much of their technical infrastructure, including security concerns associated with doing so.

Fintech group Difitek compiled this PSD2 compliance checklist for banks, which includes, among other things:

- An API function allowing users to grant others access to their data
- An API authentication process which verifies both the user and application
- API documentation, developer SDKs, code samples, and tutorials

# 6 Reasons to Embrace an API Strategy for Open Banking

#### by Thomas Bush





Outside of compliance, there are many business reasons to adopt an API-first open banking.

Open banking is an initiative that allows third-party financial services companies to access users' banking data. The primary goal of open banking is to put power back into the hands of customers, enabling them to securely use third-party financial products and services that rely on banking data or functionality. Web APIs are the technology underpinning much of this new ecosystem.

With the introduction of new regulations like the European Union's Second Directive on Payment Services (PSD2), many banks have no choice but to open up, giving others access to their users' data for not much in return... or so it may seem! In reality, there are plenty of strong reasons for banks to embrace open banking, with concrete financial incentives. Let's look at six of them.

# 1. Compliance

Of course, the main reason banks are implementing open banking practices is compliance — or at least preparation for compliance. While the European Union's PSD2 is the best example of a sweeping regulation that requires banks to share customer data with third parties (this is known as X2SA — *Access to Account*), it's not the only one. For example, Hong Kong has its *Open API Framework*, while Australia has the *Consumer Data Right* (CDR) act. Other major jurisdictions are moving in the same direction: the US Treasury has recommended the introduction of financial data sharing regulations, despite the country's hitherto market-driven approach.

**How it affects the bottom line:** Of course, compliance isn't about driving additional revenue: it's about staying in business. Compliance improves profitability by avoiding unnecessary fines and fees.

# 2. Improved Digital Agility

A major challenge of open banking is being able to share data securely, quickly, and efficiently. As a result, many banks are having to redesign their entire data architectures, often employing an API-based microservices approach to make data more accessible. Greater digital agility, then, is both a necessity and benefit of open banking.

In turn, improved digital agility has its benefits. Not only does open banking improve security and transparency, but it also makes it easier for banks to leverage their own data internally — e.g., for service personalization or to create frontend applications — where it may have been impractical, or even impossible, to do so previously.

**How it affects the bottom line:** An improved digital infrastructure enables data to be better used internally to improve the customer experience, thereby increasing customer lifetime value.

## 3. Premium API Products

One particularly exciting benefit of open banking is the potential to create new, revenue-generating API products with relative ease. For an example, look no further than Nordea's developer program. Nordea used the open banking shift as a springboard from which to create paid banking APIs for its corporate customers. Offering API-driven payments, instant reporting, and various foreign exchange tools, these "Premium" APIs go well beyond compliance, building on the hard work that was involved in opening up their systems for open banking.

**How it affects the bottom line:** By developing and selling access to new API products, banks are able to create additional direct revenue streams. These premium APIs can also be used as up-sells or cross-sells for other banking products (such as certain corporate accounts).

## 4. Increased Customer Satisfaction

Open banking gives customers huge amounts of freedom as to the number and scope of financial services available to them. On the one hand, this appears to be a clear negative for banks, as it allows third-party organizations to capitalize on user data, where previously only they could. However, a greater selection of financial service integrations — whether or not they are the bank's own — ultimately improves the customer's banking experience, making them less likely to seek alternatives. As they say, a rising tide lifts all boats!

**How it affects the bottom line:** Since the customer is more satisfied with their banking experience, they are less likely to look for alternatives. This increases customer lifetime value, improving long-term profitability in a predictable way.

# 5. Potential for Collaboration

As mentioned earlier, open banking is designed to make it possible for third-party financial services companies to gain access to customer data. If banks are willing to take this a step further, they can actively assist these third-party companies in doing so for a whole host of benefits. For example, banks can offer additional functionality, dedicated support, or even developmental collaboration to chosen third parties. In exchange, these third parties can return the favor with various non-monetary offerings, such as additional product functionality for the bank in question or cross-branding.

**How it affects the bottom line:** By building collaborative relationships with third-party financial services companies, banks are able to create unique value propositions and employ creative marketing strategies, thereby winning new customers.

## 6. Wider Client Base

Until now, we've focused on the benefits of *sharing data* with others. However, it's important to recognize that open banking is a two-way street: in other words, it will allow banks to gain access to user data from other participating financial institutions (especially other banks). This creates a massive opportunity for banks to create their own integration-based financial products and services.

"Banks able to move fast to develop a modular business and technical architecture can leverage their brands to dominate parts of the value chain - whether front, middle or back, while dynamically integrating offerings and data from other players." - PWC

**How it affects the bottom line:** Whereas banks could previously only offer additional financial products and services contingent on banking data to their own customers, they can now serve customers of other banks, with the potential for significantly more revenue.

## Conclusion

It may be compliance that has pushed banks to invest in open banking, but there's no doubt that the movement has numerous other benefits with tangible financial impacts. Many of these benefits, such as direct improvements to customer satisfaction and digital agility, result in increased customer lifetime value. However, open banking also improves security, opens new doors for collaboration, and allows banks to make bigger plays with additional financial products and services of their own.



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