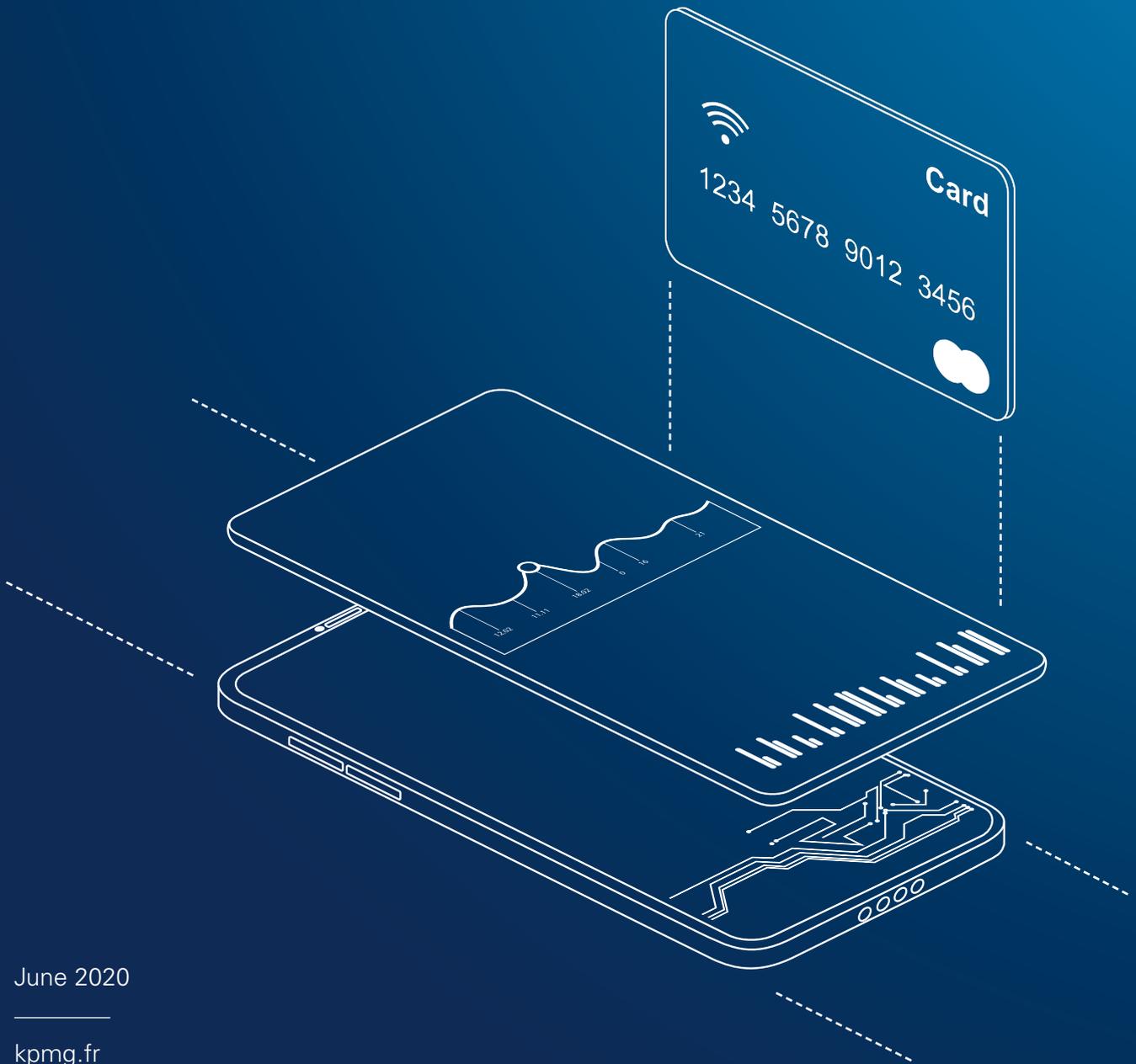




State of Open Banking

Benchmark of API Offerings & Platforms



June 2020

kpmg.fr

EXECUTIVE SUMMARY



OBJECTIVES

APIs are at the very heart of the future banking ecosystems that are being built in the Open Banking vision. Indeed, the ability to create new use cases, build new services, leverage new partnerships and generate new revenue depends upon the content offered by the bank's API portal and must be driven by a clear API strategy.

Taking into consideration the importance of an API Strategy, KPMG conducted a study to assess the banks maturity-related Open Banking. Specifically, **the study covers all the aspects of the API portal by focusing on both the banks' developer portal experience and API catalog value.**

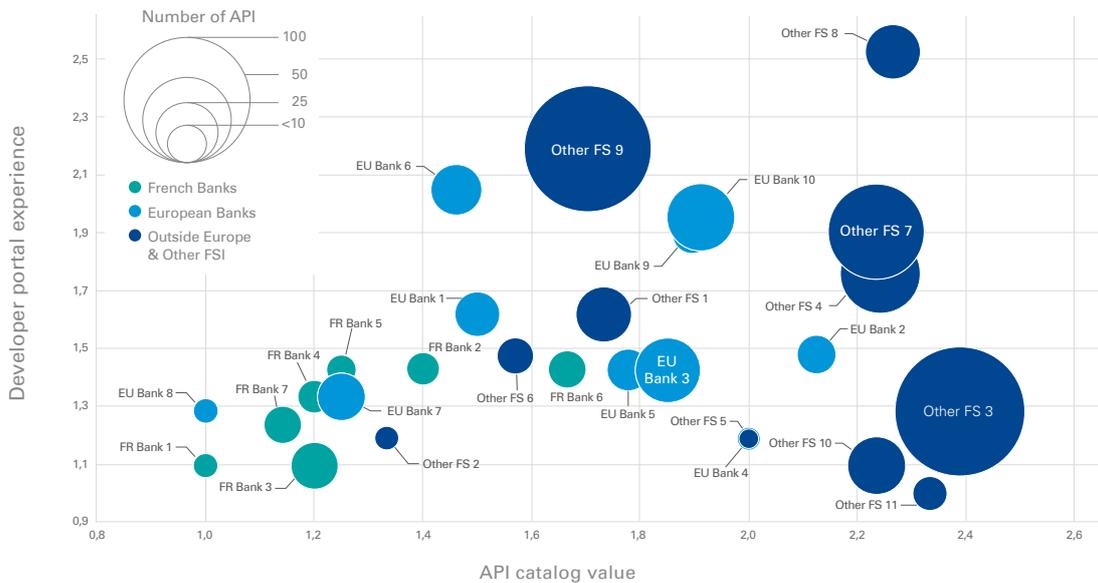


METHODOLOGY

The KPMG maturity assessment framework for Open Banking is based on the definition of 3 maturity levels: Comply, Compete, Innovate. We assessed the banks in our sample and determined in which profile they fit across 3 dimensions:

- **The size of the API catalog**
We counted the number of unique APIs into production on the portal.
- **The developer portal experience**
We rated each bank and positioned them on the maturity-level scale over 21 analysis criteria grouped under 5 themes supporting the core features of an API portal.
- **The API catalog business value**
We rated each banks' API catalog by analyzing both the richness of the data and the features offered through each type of API.

Comparison based on API portal capabilities analysis - catalog value analysis - number of APIs



KEY TAKEAWAYS

Our analysis of 28 banks and payment institutions, shows that nearly 50% of them have a “Comply” profile, 25% a “Compete” profile and 25% an “Innovate” profile.

The less mature institutions have implemented an Open Banking portal in order to meet compliance requirements but haven’t yet unlocked the capacities to leverage this industry-wide change at a competitive level. While more advanced financial institutions have proven that Open Banking is going beyond PSD2 by developing new use cases relevant for their customers. The one showing a high maturity on both the portal and API catalog are able to unlock new partnerships and create innovative use cases that help them generate additional revenues.

The most innovative banks in Europe appear to be in the United Kingdom, Spain and Northern Europe, with either a “Compete” or “Innovate” maturity level of both the portal experience and the API catalog value.

The French banks in our sample have mainly a “Comply” profile.

The results observed in the study are based on two dimensions of our maturity assessment framework for APIs. **The goal of this maturity assessment framework is to help banks to position themselves on a maturity curve and identify the required steps to reach the next level and then differentiate themselves from competition.**

The majority of regulatory delivery should be completed by 2020 in Europe and other parts of the world. **At this point, we believe that the market will begin to truly compete and drive consumer usage.**



SUMMARY

I. INTRODUCTION TO THE MATURITY
ASSESSMENT OF AN OPEN
BANKING PROGRAM

II. API CATALOG ANALYSIS

III. PORTAL ANALYSIS

IV. SYNTHESIS



01

Maturity
assessment of
an Open Banking
program

OUR MATURITY GRID

APIs are at the center of an ecosystem emerging around banks. APIs are the mechanism through which banks interact with other parties in the digital ecosystem and through which other companies can access some of the data collected by banks in order to create new products and services.

Taking into consideration the importance of an API strategy for Open Banking, KPMG designed a maturity framework which is composed of 6 themes and proposes several axes of analysis for each of these themes. Our framework builds upon previous KPMG publications, focusing on open banking strategies¹.

The goal of the maturity assessment framework is to help banks to position themselves on a maturity curve and identify the required steps to reach the next level and then, differentiate themselves from competition.

The capacities to create new use cases, integrate new services, unlock new partnerships and generate revenues are directly related to the content offered on the API portal. For this reason, we have undertaken the following study based on the assessment of the API portal capacities and the API catalog.



Banks should consider their API strategies and capabilities to go beyond regulatory standards, by introducing enhanced API services and content that allow them to meet their strategic objectives and compete in this emerging digital banking ecosystem. The ones able to innovate will be more likely to stay ahead of the competition and capture the maximum value that Open Banking can offer.

¹ *Open banking opens opportunities for greater customer value* and *Get set for Open Banking* published by KPMG.

KPMG'S MATURITY ASSESSMENT FRAMEWORK¹

API STRATEGY	OPERATIONAL MODEL	API PORTAL CAPACITIES	ARCHITECTURE AND SOLUTIONS	RISKS AND COMPLIANCE
Strategic planning	Organisation	Developer enrollment & accessibility	Technology architecture assessment	Mitigating the risks involved
API as a product	New Roles / Core skills	Developer accelerators	API Platforms	Cyber security in an open world
Industry engagement and leadership	API life cycle	Support & Community	API Security	Data privacy requirements
Monitoring and Analytics	API team governance	API operations	API Management	Financial crime
Monetization	API portfolio governance	API documentation & discovery	Back-end Integration	Fraud management

API CATALOG

PSD2 enablement API	Open Data API	Customer knowledge API	Banking services API	Other technical or system API	BtoB API
---------------------	---------------	------------------------	----------------------	-------------------------------	----------

¹ Extended upon the publication *Seizing the open banking advantage* published by KPMG.

OUR EVALUATION LEADS TO 3 MATURITY PROFILES

The KPMG maturity assessment framework is based on the definition of 3 maturity levels. The goal of these levels is to identify the steps that are required in order to fully benefit from the Open Banking ecosystem.

HOW READY ARE YOU FOR OPEN BANKING?

1. **Comply.**

Do you have comprehensive capacities covering PSD2, incorporating full systems and data requirements?

2. **Compete.**

Do you have an implemented defense strategy supported by appropriate operations that enable you to avoid large-scale customer disintermediation?

3. **Innovate.**

Do you have the resources and the analytical capabilities to conduct a major assessment of opportunities? And are you ready to align your operating model and technology to these new opportunities, possibly in partnership with one or more fintech?

MATURITY PROFILES FROM KPMG'S MATURITY ASSESSMENT FRAMEWORK¹



COMPLY

As an organization we view PSD2 and Open Banking as a regulatory requirement and have implemented a regulatory action plan. Although we recognize the disruptive elements, at this stage we do not have any ambitions to leverage this industry-wide change at a competitive level.



COMPETE

We have implemented an Executive-sponsored strategy to defend ground against new challengers and traditional banks seeking to disintermediate us from our customers. We are transforming elements of our operational functions that needed to change but have not assessed our organizational design and interdependencies in their entirety.



INNOVATE

Our organization is deploying a strategy to extract a competitive advantage from this change. Open Banking is an opportunity to assess and re-align our operating model and technology capabilities to this new strategy, ensuring we are able to respond as an agile and innovative organization.

¹ Extended upon the publication *Seizing the open banking advantage* published by KPMG.

OUR SAMPLE

SAMPLE

The sample consists of 28 banks or financial Institutions, which were selected based on size, region and expected level of maturity.

The sample is made of 17 European Banks including 7 French Banks and 11 other banks or payment institutions based in Asia and North America.

TIMELINE

The information has been captured from the banks public API portals during Q1 2020 and then updated in June 2020.

API PORTAL SELECTION

Some banks have several API portals dedicated to specific entities or activities. For instance, a bank could have three different portals: one for investment / market activities, one for personal finance, one retail banking. In those cases, we have chosen to study the portal dedicated to retail banking.

17 EUROPEAN BANKS FROM THE FOLLOWING COUNTRIES

UK	
Spain	
France	
Germany	
Netherland	
Finland	

11 BANKS OR PAYMENT INSTITUTIONS FROM THE FOLLOWING COUNTRIES

USA	
Canada	
Hong-Kong	
Singapore	
Australia	
Thailand	



02

API Catalog Analysis

ASSESSING THE API CATALOG BUSINESS VALUE

OBJECTIVES AND DEFINITION

The goal of the API catalog analysis is to assess the content offered to customers, partners and 3rd parties, and rate the banks of our sample based on the maturity of their catalog.

To this end, we defined 20 API categories, which can be grouped into 6 types (PSD2 enablement, Customer knowledge, Banking services, Open Data, Other technical or system API, BtoB).

Each API category is associated with a maturity level: Comply, Compete, Innovate. The “comply” category includes APIs required for PSD2 and basic APIs related to open data.

The association between the maturity level and the category of the API is based on the expected richness of the data and features offered by an API belonging to this specific category.

ANALYSIS METHODOLOGY

We assigned respectively 1, 2 or 3 points according to the level established: Comply, Compete, Innovate.

Then, we analyzed each API in production for all the banks of our sample, and determined in which category the API fits.

From there, we are able to determine:

- how many APIs are in each category, and which API types and categories are more often available on bank portals;
- how many Comply, Compete, Innovate APIs each bank has made available;
- a score between 1 and 3, for each bank based on the mean maturity level of its APIs.

LEVEL	CATEGORY	DESCRIPTION	TYPE
COMPLY	SECURITY / AUTHENTICATION	Mechanism for user authentication, token handling, alerts and notifications related to authentication	PSD2 enablement
	ACCOUNT INFORMATION	Consolidated information on payment accounts held by the user	PSD2 enablement
	PAYMENT INITIATION	Allows to initiate a payment order at the request of the payment service user with respect to a payment account held at another payment service provider, includes confirmation of available funds	PSD2 enablement
	FUNDS CONFIRMATION FOR PAYMENT INSTRUMENT	Allows to initiate a payment transaction by a card-based payment instrument issuer, includes confirmation of funds availability	PSD2 enablement
	CUSTOMER CONSENT	Collection of customer consent	PSD2 enablement
COMPETE	ADDITIONAL PROFILE INFORMATION	Additional existing information such as addresses, social media accounts, preferences, events, credit limit, requests, on boarding status, round-up parameter function, etc.	Customer knowledge
	CARDS / PRODUCTS OWNED BY THE CUSTOMER	List of cards owned, information related to cards, financial product owned (life insurance, saving account, insurance, etc.)	Customer knowledge
	REWARDS AND FIDELITY POINTS	Manage rewards / fidelity points and special offers for purchasing	Customer knowledge
	OPERATIONS / MONEY MOVEMENT	Transfer, money movement (internal and external account), management of beneficiaries, dedicated API to specific payment solution (ex Alipay)	Banking services
	BANK PRODUCT OFFERS	List and description of bank products	Open Data
	TECHNICAL / HELP FOR DEVELOPER	Allows to test API, provides showcases of the service capacity, status on technical component such as sandbox, data warehouse, etc.	Other technical or system API
	ATMS AND BRANCHES	Localization and information regarding ATMs and branches	Open Data
	FINANCIAL DATA	Public financial information (ex FX rates, etc.)	Open Data
INNOVATE	CUSTOMER ANALYSIS / BEHAVIOR	Advanced statistics regarding the customer, such as spending analysis and categorization, saving capacity computation, other profiling	Customer knowledge
	COMPLIANCE / KYC SERVICES	Provide KYC information for third-party (includes providing age certificate or other personal information for data collection and verification)	Customer knowledge
	CREDIT SERVICES	Provide pre-approval, credit rate simulation	Banking services
	ACCOUNT FEATURES SERVICES	Capacity to trigger actions and events such as handling customer messages, appointments, claims management, notifications, account creations, subscriptions to services	Banking services
	OTHER ANALYTIC DATA AND STATISTICS	Global data and statistics collected by the bank but not related to a specific customer (ex: ATM and cards usage statistics)	Open Data
	BIOMETRIC AUTHENTICATION	Mechanism for user authentication through Innovate methods such as biometric	Other technical or system API
	SALES	Opportunities / prospects identification and campaign management, API to help a service provider to operate its business	BtoB

RESULTS AND OBSERVATIONS

The following graph presents:

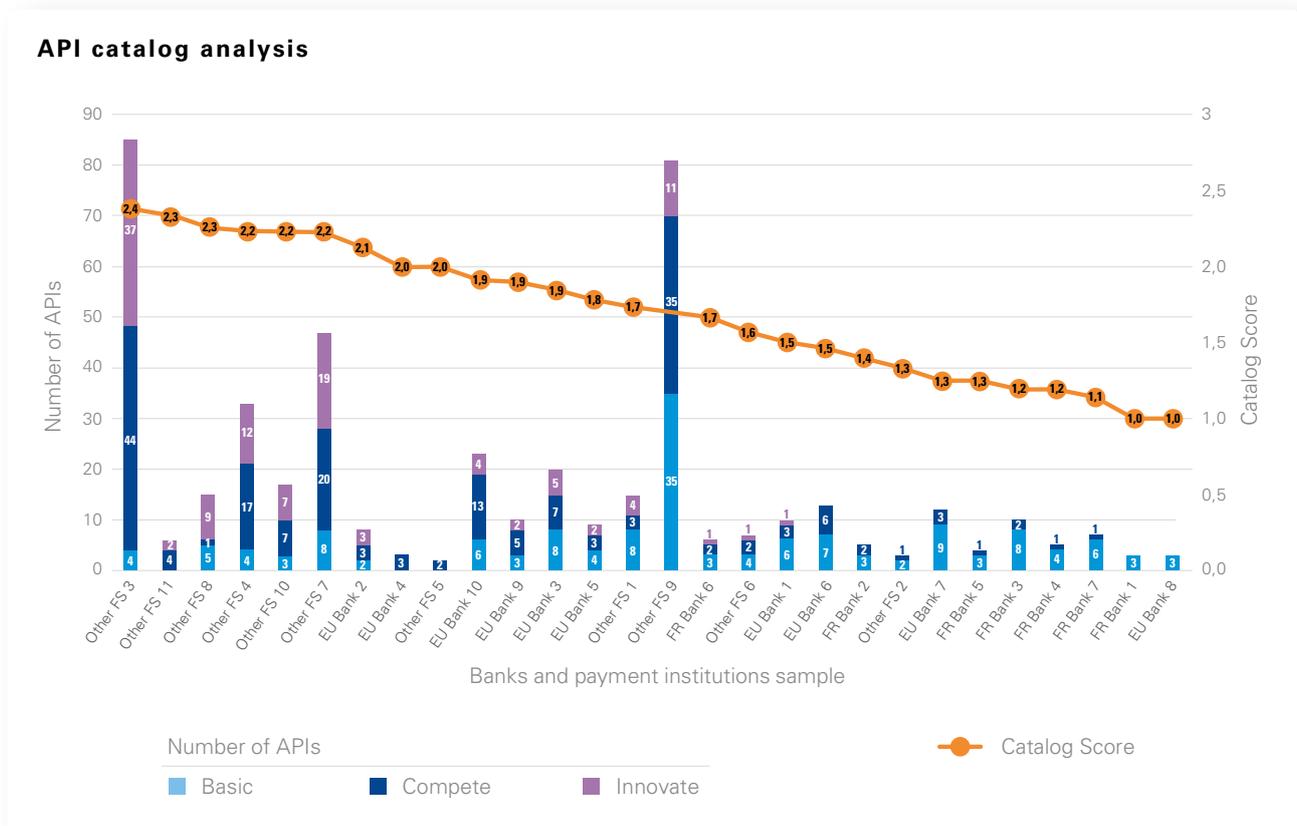
- the number of Comply, Compete, Innovate APIs for each bank;
- the average score obtained by the bank for the maturity of its APIs.

Remarks regarding the API counting:

- some banks organize their API catalog by countries, thus splitting their catalog. In these cases for our study, we have taken into account only one country in order to avoid counting APIs duplicated for the different regions several times.

We chose the country where the bank has its headquarters as this was often the most complete catalog;

- some banks have duplicated APIs for AISP to address each type of client. For instance, a bank can have 3 different AISP APIs: one for their private customers, a second one for their business customers, a third one for their corporate customers. In these cases, we counted only one AISP API.



KEY TAKEAWAYS

- Some banks offer a limited number of APIs but with high value in terms of services. Their scores are boosted thanks to customer data analysis, credit services API or market investment features for individuals.
- Payment instrument issuer institutions show a high maturity in terms of services offered through their APIs. Their investments in Open Banking are prior to the regulations such as PSD2. They also address a larger variety of consumers (merchants, banks, other financial institutions) and therefore offer more APIs to cover a broader scope of use cases.
- The number of APIs is strongly linked to the richness of services and data offered by the banks. However, some banks have split their services into a large number of APIs, sometimes APIs with one or very few endpoints, while others have gathered more endpoints in the same API, reducing their number.

BEST PRACTICES

Leading banks are already applying the benefits of Open Banking to banking transformation aspects with innovative use cases.

CATEGORY	OBJECTIVE	DESCRIPTION
Distribution channels	Acquire new customers by allowing external providers to initiate a card application.	Provides features to retrieve and manage cards of a customer. For example, submit card application, retrieve card details, statements and application status.
Banks as a service	Leverage on existing AML and KYC base to get additional revenue by providing third parties with KYC results.	Provide automated AML and KYC results to third parties.
Open data	Get new revenue streams by leveraging on the bank aggregated data while respecting GDPR obligations.	Provides anonymized and aggregated statistical data from millions of transactions performed with bank cards and any other cards in bank's POS terminals , creating a virtual map comprised of consumer habits, demographics and origins.



03

Portal Analysis

EVALUATING THE DEVELOPER PORTAL EXPERIENCE

OBJECTIVES AND DEFINITION

The goal of the API portal analysis is to assess how the services offered to partners and 3rd parties who will consume the APIs are developer friendly.

As part of the KPMG maturity model for Open Banking, we identified 5 themes covering the main aspects of an API portal. Those aspects include features used by developers to access, use and interact with the portal and

with other developers (Developer enrollment & accessibility, Developer accelerators, Support & Community), while others are related to the usage and manipulation of the APIs.

Then, we defined 21 criteria of analysis within those themes. For each criterion of analysis, we defined three description levels: Comply, Compete, Innovate (see appendix for details).

DEVELOPER ENROLLMENT & ACCESSIBILITY

CRITERIA	DEFINITION
Portal walkthrough	Quality and comprehensiveness of the materials available for new registered developers to help them discover the portal and learn how to use it
Enrollment procedure	Ease of registration to the portal for developers
User permissions and definition of roles	Ability to manage multiple team structures and ability to configure users, roles and permissions
Registration of payment solution information	Process of registration of a payment solution in the portal
Portal user authentication	Authentication processes which secures the user access to the portal

DEVELOPER ACCELERATORS

CRITERIA	DEFINITION
Libraries and toolkits	Completeness of SDKs and start-up toolkits to facilitate integration and development time
Sandboxes and dataset	Provisioning of a dedicated environment with dataset to test API and Apps
Collaboration facilitators	Features facilitating collaboration among developers and between developers and the financial institution
API Product bundle	Existence of API bundling in order to facilitate integration

ANALYSIS METHODOLOGY

We assigned respectively 1, 2 or 3 points according to the level observed: Comply, Compete, Innovate.

Then, we analyzed each bank portal through our 21 criteria and positioned the bank on maturity level for all the criteria.

From there, we are able to compute:

- a score between 1 and 3, for each criterion based on the mean maturity level observed over our bank sample;
- a score between 1 and 3, for each bank based on the mean maturity level of its portal according to the 21 criteria.

API OPERATIONS

CRITERIA	DEFINITION
Security information	Comprehensiveness of security information
API monitoring and usage analysis	Monitoring of API traffic and status. Analytic capacities regarding user metrics and consumption
Authentication mechanisms	Security level of the inputs and outputs of the users applications through APIs
API invoicing	Ability to access and analyze the customers bills

SUPPORT & COMMUNITY

CRITERIA	DEFINITION
Developer assistance and feedback	Accessibility and performance of the support for developers. Possibility for developers to provide feedback and suggest new services or products
Developer community	Support and information sharing among developers and with the provider about best practices, news, issues, through blog posts, newsletters and collaborative forums
Meet up / Hackathon / Conference	Organization and promotion of meet-ups, competitions, conferences and other API-related events
Developer recognition	Capacity to provide recognition toward developers and endorse them

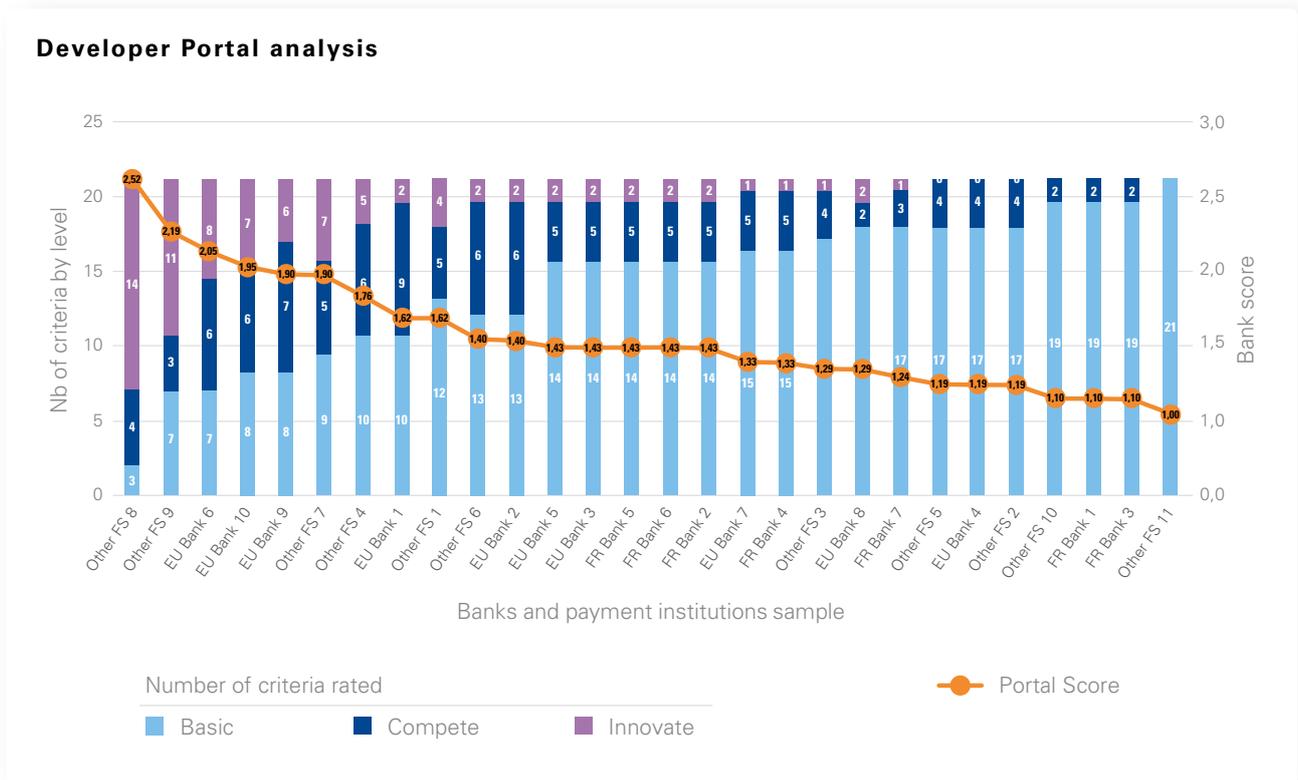
API DOCUMENTATION & DISCOVERY

CRITERIA	DEFINITION
API resources	Completeness and diversity of documentation available for each API
API versioning	Comprehensiveness of the description of each API new version and details of the changes implemented in the new release
Pricing	Description of pricing options regarding the usage of APIs
API introduction	Convenience and ease to access APIs and identify their purpose or value

RESULTS AND OBSERVATIONS

The following graph presents:

- the number of criteria rated Comply, Compete, Innovate for each financial institution;
- the average score obtained by the institution over the 21 criteria.



KEY TAKEAWAYS

The following profiles were observed among the leading financial institutions of our sample:

- payment service platforms which have implemented their API portals before banks who usually waited for PSD2 regulation to implement it. For most of them, they have released their current API portal version before 2016/2017. Therefore, they benefit from more experience regarding developer servicing;
- regional players with a strong “digital profile” which have also launched their Open Banking services earlier than other banks.

BEST PRACTICES

Leading banks are providing advanced capacities on their portal to enhance the developer experience. In this way, they facilitate the integration work and the maintenance of the apps supporting innovative use cases.

CRITERIA	OBJECTIVE	ILLUSTRATION OF ADVANCED CAPACITIES
Sandboxes and dataset	Facilitate the test of an API for developers and help them to cover all the test cases.	Sandbox pre-filled with comprehensive datasets allowing to cover all testing cases, including dynamic dataset (evolution of the data to cover the full life cycle of an action/event).
Developer assistance and feedback	Help third-party developers in their coding and integration works. Allow developers to provide feedback such as identifying bugs, suggesting improvements and new services desired.	Extensive support via many tools like chatbots, videos, Q&A live streaming and ticketing. Support covering external platforms (github, stackexchange etc.). Open and regular discussions with providers to talks about improvements and developer needs.
API monitoring and usage analysis	Provide monitoring of API traffic and status and as well capacity to analyze user metrics for third-party providers.	Dashboard customization , real-time monitoring of API usage with large number of metrics and analytic features in order to perform business / technical analysis .



04

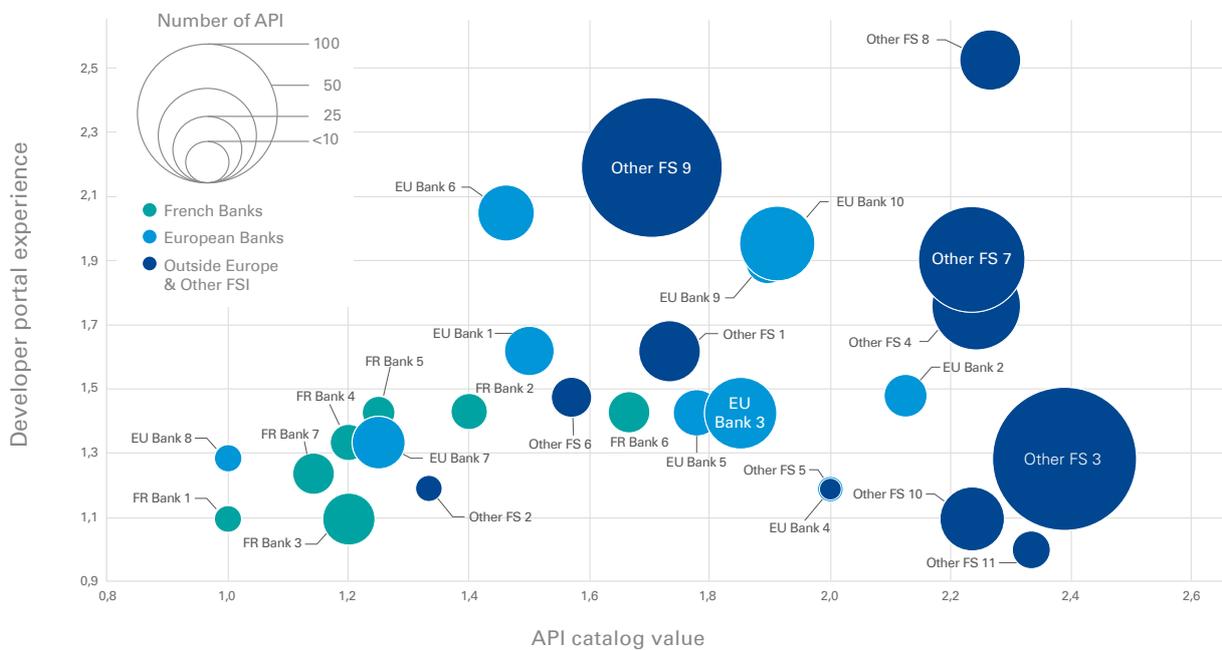
Synthesis

KEY TAKEAWAYS OF OUR BENCHMARK

We assessed the financial institutions Open Banking Maturity by combining the dimensions introduced previously:

- developer portal experience (horizontal);
- API business value (vertical);
- the number of APIs available on the portal (circle size).

Comparison based on API portal capabilities analysis - catalog value analysis - number of APIs



The results observed in the study are based on two dimensions of our maturity assessment framework for APIs which allowed us to profile the banks of our sample.

Nearly 50% of the institutions in our sample have a “Comply” profile

for both the portal experience and the catalog value (lower left corner of the graph). They are the institutions which also have fewer APIs. Their catalog is usually limited to 2 or 3 APIs required by PSD2. They have implemented an Open Banking portal in order to meet compliance requirements but haven't yet unlocked the capacities to leverage this industry-wide change at a competitive level.

More advanced financial institutions with a “compete” profile, around 25% of our panel,

have proven that Open Banking goes beyond PSD2 by developing new use cases relevant to their customers. They are also often providing more mature capacities through their portal and are actively managing their developers community. The required features that facilitate integration work and API creation are more complete and mature most of the time (comprehensive and dynamic datasets, extensive support, etc.).

The so-called “Innovate” institutions, around 25% of our panel,

show a high maturity on both the portal and API catalog. They have also more APIs in their catalog allowing them to create more opportunities for third-party providers that will consume those APIs and offer services to the bank's clients. Unlocking new partnerships

and creating innovative use cases helps them generate additional revenues. Use cases cover a wide range of services from credit pre-approval based on their customers data to automated AML and KYC provided to third parties.

Those “Innovate” institutions have launched their Open Banking services earlier than the other banks. Therefore, they are more likely to stay ahead of the competition and capture the maximum value that Open Banking can offer.

In Europe, the most innovative banks, with either a “Compete” or “Innovate” maturity level of both the portal experience and the API catalog value, appear to be in the United Kingdom, Spain and Northern Europe.

French Banks in our benchmark, have a limited catalog of APIs. They mainly have a “Comply” profile and focus mainly on PSD2 requirements.

The high score observed for Financials Services institutions outside of Europe can be partially explained by our selection, focusing on leading institutions which can be considered as “best in class”.

CONTACT

Yann Camenen

Partner, IT Financial Services, KPMG
E-mail : ycamenen@kpmg.fr
Tel: 06 86 28 38 38

CONTRIBUTORS

Emmanuel Papadacci

Director, Banking & Fintech, KPMG
E-mail : epapadacci@kpmg.fr
Tel: 07 77 30 33 51

Sébastien Denoual

Director, Technology Transformation, KPMG
E-mail : sdenoual@kpmg.fr
Tel: 06 08 56 68 23

We would like to thank the companies **Linxo** and **Budget Insight** for sharing their experience and feedback on API portals.



[kpmg.fr](https://www.kpmg.fr)

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation. KPMG S.A. refers to a group of French legally distinct entities. KPMG S.A. is the member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative, a Swiss entity ("KPMG International"). KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any memberfirm.

© 2020 KPMG S.A., a French limited liability entity and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative, a Swiss entity. All rights reserved. The KPMG name and logo are registered trademarks or trademarks of KPMG International Cooperative (KPMG International). Printed in France.
Conception: Advisory - OLIVER - June 2020

Photo Credit: Istock